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Would I Eat This? Negotiating the Boundaries of Risk and Service in the Kitchen

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Would I Eat This?

Negotiating the Boundaries of Risk and Service in the Kitchen

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Abstract

Foodborne illness represents a significant threat in the modern food system as an estimated 1 in 6 people in the United States get sick with a foodborne illness each year, resulting in approximately 3,000 deaths. These statistics seem to only confirm the fear among foodie-circles that the average person is too far removed from their own food and too much at the mercy of cooks and packaged foods. In the wake of the Food Safety Modernization Act of 2011, hailed as the most important food reform since the 1970s, where do we find the gaps and discrepancies that continue to enable illness and outbreak? Is food simply inherently risky, and if so what do we do to mitigate those risks? The goal of this thesis is twofold: first, this thesis considers the current accepted system of food safety rules with an anthropological eye in order to better characterize these rules and understand the cultural significance behind them. Secondly, this thesis claims that cooks, both professional and informal, are generally not putting consumers at risk, ultimately suggesting that any major food safety discrepancies will be found in the broader levels of the industrial food system.

Chapter I: Introduction

In April of 2011, food blogger and cookbook author Michael Ruhlman posted what became probably the most controversial recipe for one of the most basic dishes: "Easy Chicken Stock." The online backlash stemmed not from Ruhlman's ingredients or techniques, but instead from his method of storing the stock, namely, leaving it in a pot on his stovetop all week for use in other dishes. This post became a breeding ground for arguments about food safety, some constructive and others simply petty. One commenter, "Carole," posted: "I agree with Lisa. Remind me not to have the chicken stock at your house. That's disgusting." Later, "Dana" wrote to Ruhlman: "You do what you want to do, I guess it is still a free country, but don't cast aspersions on other people's characters because they don't want to be as risky as you are." The recipe was clearly about much more than just chicken stock, as Ruhlman's own ethics and character came under attack as well as some of the most fundamental premises of US food safety. Ruhlman's post antagonized the so-called "germaphobes," suggesting they were simply too blinded by their love of facts and numerical evidence of the dangers of bacteria and viruses to understand the culinary merit of Ruhlman's stock habits. But who was ultimately right in this debate? Was it safe or unsafe for Ruhlman to leave his stock out and how do we know? While science tells us that this stock was likely to be full of bacteria or the toxins from their waste, and government guidelines advise against keeping hot foods out for more than four hours, Ruhlman and his family have the experiential evidence of remaining healthy despite consuming the broth. Though food safety might be concerned with statistics and standards, Ruhlman's stock demonstrates the imperfect and complex nature of contemporary U.S. food safety practices.

This small online drama piqued my interest because it illustrated perfectly my own confusion around the perception of food safety in the US. After spending time in France and experiencing a different cultural relationship with food, I could not help but wonder why we had to keep our eggs refrigerated at home while the French people I knew kept not only eggs on the counter but also bottles of milk. Having grown up in the US, practices like refrigerating eggs and milk, avoiding eating raw eggs and undercooked meat, and throwing away food that had passed its "expiration date" were commonplace for me. Being forced out of this culture of food safety gave me the space to view these practices from afar, inciting me to actually ask myself why I did these things, and how I knew they were the right thing to do. How could something as seemingly straightforward and basic as food safety be called into question? As Ruhlman's controversy illustrates, the subjective definitions of risk and purity can come into conflict with the guidelines of law and science that we tend to perceive as steadfast and reliable. This tension ultimately muddies our grasp on what it truly means to be safe with food.

This issue of food safety, I realized, is not only one of science and law, but also wrapped up in how we define risk and even purity. I had my first glimpse into this as a teenager very enamored of baking cookies and reading food blogs. Jane, a close friend of my mother's, appreciated my interest in food and invited me to help her cook *boeuf bourguignon* for a dinner party she was hosting. Jane was always stylish, always ate well, and was the only person I knew who was really involved in the food world (her stepmother had been a successful cookbook editor). I was fascinated to see how she cooked in her classy and spotless kitchen. Charmed by the idea that Jane was some sort of an expert in food, I paid very close attention to everything she did, drinking up every bit of culinary wisdom she imparted. The most mundane advice seemed to have a special aura of authority coming from her. She told me, for example, that really,

mushrooms did not need to be washed in water and that it was better to just wipe any dirt off with a towel to avoid adding any extra moisture. For whatever reason, this was the cooking tip that stuck with me, and later that same week while cooking a stir-fry with my mom I repeated it to her as the great new trick Jane had showed me. Probably stressed about getting dinner on the table for her four children my mom was not impressed, and told me that just wiping the dirt off might be good enough for whatever fancy mushrooms Jane was using, but in our house the mushrooms had to be sufficiently washed. Incidentally the mushrooms we had used at Jane's house were from the same conventional grocery chain, not locally sourced or organic. I was bothered by my mom's assumption that the food we bought was inherently dirty and that Jane's food was inherently cleaner and more pure. How did mushrooms from the same exact store magically become more pure when in Jane's kitchen as opposed to ours? The suggestion seemed to be that higher socioeconomic class afforded a higher level of purity. What exactly made food pure or impure though? And was our food riskier if it was less pure?

This thesis is my attempt to confront the culture of food safety in the US today, exploring the role of law and science in US society and considering how our perceptions of risks and quality inform "safe" practices. On the surface, food safety practices may not seem as socially urgent as hunger or food justice, but looking more closely at how we in the US understand the boundaries of safe and unsafe, pure and impure, or good and bad allows for deeper insight into our relationship with food in a broader sense, and potentially informs how we approach some of the pressing issues in national and global food culture today. That being said, food safety in the US is not guaranteed, and remains an issue that impacts millions of people each year. The Centers for Disease Control estimates that "each year, 1 in 6 Americans gets sick by consuming contaminated foods or beverages" and "roughly 48 million people [get] sick from a foodborne

illness, 128,000 are hospitalized, and 3,000 die." Food recalls, though always alarming, are not uncommon in the US. According to the FDA, in April 2017 companies like Hunt's, Season's Choice and Whole Foods Market issued recalls on products from sweets peas to "chili kits." How then does the modern consumer in the US maneuver the potential for contamination that would appear to be omnipresent throughout the food system?

This thesis will address the current methods of food safety management, focusing specifically on the beliefs and practices of cooks, both professional and informal. As foodie moralists like Michael Pollan love to point out, much of the US today does not prepare their own food and depends instead on food cooked by chefs in a restaurant or prepared by other commercial food service providers, perhaps a dining hall or grocery store. This being the case, are the consumers of the US putting themselves at greater risk by entrusting someone else with the safety of their food? Keeping in mind the staggering numbers of foodborne illness in the US each year, we might look towards the practices of those cooking and preparing our food as a potentially hazardous link in the food chain where foodborne pathogens can be introduced. Through observing professional and informal culinary training, I hope to answer the question of what food safety practices are common amongst cooks and how these practices are shared and understood. My goal in this inquiry is not to demonize the "germaphobes" or dismiss the years of research that have gone into food safety science. Rather, I argue that the culture at play behind these practices is a way to better understand and address the flaws in the current food safety system.

Chapter II: Contextualization of Food Safety

Before delving into the cultural norms and values that dictate our ideas about and practices of food safety, we need to establish an understanding of what is meant by "food safety," looking back on the history of food safety practices in the United States. Ensuring the safety of the food supply has been the concern of all agriculturally centered societies throughout human history. Anthropologist Jack Goody documents this dilemma in Ancient Greece as "complaints against the adulteration of food are as old as the sale of foodstuffs itself. In Athens protests about the quality of wine led to the appointment of inspectors to control its quality" (Goody, 2013). Historically, the shift in human groups away from more nomadic modes of livelihood like foraging and pastoralism, and toward agriculture, intensified the distribution and storage of food, further complicating the relationships between humans and their food. A large food supply becomes inherently collective, falling under the control of the governing body of the agricultural society. In this section, I will explore the origins of food safety in the US, and how our government and other powers have steered the course of today's food system.

Industrialization and centralization as forces for food safety

With the industrialization of manufacturing, the labor force of societies like Britain and the US moved away from the farm and into the cities. The food systems of these nations mirrored the shift, as the decrease in farm workers and increase in overall population required the intensification, or industrialization, of agriculture. The Industrial Revolution, or the period of intense economic growth especially in manufacturing, is generally considered to fall between the late 18th century and the mid-19th century. Dr. Elaine McIntosh argues that "by 1830, industrialization was affecting not only urban areas and its factories. It also was changing the face of agriculture" (McIntosh, 1995). These changes came in the form of "better tools, along

with farm mechanization and specialization and fertilization, [which] all combined to bring about great improvement in American agriculture. These advances, along with the increased use of business methods by farmers, significantly increased the supply of food" (McIntosh, 1995). Along with this mechanization and expansion of the food system came new challenges to food safety, exemplified in the legal efforts to "[prohibit] the adulteration of milk" as bottling milk grew in popularity (McIntosh, 1995). This eventually led to the creation of safety standards in the milk industry, introducing the idea of "certified" milk. Later, the 20th century saw the Fair Packaging and Labeling Act in 1975, which authorized the Food and Drug Administration to create standards for labeling and packaging in the new industrialized food processing system (McIntosh, 1995). The new industrial food system intensified and mechanized food production, demanding an increase in control over foods produced and consequently requiring legal definitions of proper food handling and selling procedures.

Additionally, the food industry has become more centralized throughout U.S. history. Farms grew over the course of the 20th century thanks to multiple improvements in farm technologies and veterinary care, however, the population of farmers diminished. While the general population continued to increase with industrialization, the population of farmers decreased from 95 percent in the 19th century to fewer than three percent one hundred years later (McIntosh, 1995), with roughly five million farmers in the national population of 241.1 million in the 1980s (New York Times, 1988). This means that farms were producing more food but a smaller population was controlling production. This suggests the beginning of centralization in farming that can be seen today in many food industries. For example, sociologists Mary Hendrickson and William Heffernan report that 83.5 percent of all processing and packing of beef has been concentrated into four firms, including Tyson, Cargill, Swift & Co. and National

Beef Packing Co. (Hendrickson, Heffernan, 2007). It is precisely this industrialization and centralization that influences our food safety policy.

Over the past two centuries, the scale and concentration of the US food system has directly impacted our need for food safety. Anthropologist Tim Lang argues that while the state is in favor of a large industrialized food system, it must also create a trustworthy system. Lang cites the examples of foodborne illness crises in Europe that drew attention to government actions that marginalized consumers in favor of industrial efficiency (Lang, 2012). Anthropologist Jack Goody argues that "adulteration is a feature of the growth of urban society, or rather of urban or rural society that is divorced from primary production" (Goody, 2013). This suggests that food systems that rely on industrialized processing and centralization can lead to issues of food safety by potentially creating distance between food and both growers and consumers. Furthermore, this has been exacerbated by the value for cheap food in the US. Estimates from the USDA show that in comparison to other countries like France and Japan, US citizens spend about half as much on food, or in other words, we pay about half of what our food is worth. This drive for cheap food favors those industrialized and centralized food systems that can minimize costs while maximizing outputs, ultimately encouraging stresses on the system that inevitably lead to complications.

Dealing with the results of an industrialized food system remains a struggle for lawmakers and food producers in the US today. One consequence of an intensified food system has been an increase in food waste. In an effort to encourage the donation of food to nonprofit organizations like food shelves, President Bill Clinton signed the Bill Emerson Food Donation Act into law in 1996. This law protects donors who have given in good faith from civil and criminal liability, provided there is no suggestion of gross negligence. This law has been

extremely important for food shelves and programs that make use of donated and salvaged food. Later, in 2011, President Obama signed the Food Safety Modernization Act (FSMA) into law, a piece of legislation intended to put to rest many of the persistent safety issues facing the modern food system. With the FSMA, the Obama administration hoped to create a system that focused more intensely on preventing food safety hazards as opposed to waiting for outbreaks to demand action. The bill includes rules and guidelines for food processors on the best methods of prevention and requires things like record availability and a hazard analysis and critical control points (or HACCP) plan that addresses food safety "through the analysis and control of biological, chemical, and physical hazards from raw material production, procurement and handling, to manufacturing, distribution and consumption of the finished product" (FDA, 2017). By stressing the importance of prevention, this law introduced new limits on producers as effective prevention requires more intensive prerequisites for food that is to be sold and consumed.

Where does food safety fit in with current food movements?

Upton Sinclair famously brought the public's attention to the horrors and injustices of the industrial food system, particularly the meat packing industry, in the 1906 classic, *The Jungle*. Depicting the conditions of a sausage factory, Sinclair writes:

> The meat would be shoveled into carts, and the man who did the shoveling would not trouble to lift out a rat even when he saw one–there were things that went into the sausage in comparison with which a poisoned rat was a tidbit. There was no place for the men to wash their hands before they ate their dinner, and so they made a practice of washing them in the water that was to be ladled into the sausage. There were the butt-ends of smoked meat, and the scraps of corned beef, and all the odds and ends of the waste of the plants, that would be dumped into old barrels in the cellar and left there. (Sinclair, 1906)

With his gruesome depiction of the food industry, Sinclair inspired public outrage over the poor quality and unsanitary nature of the meat industry, and further sparked a general distrust of the industrial food system. It is interesting, and perhaps a bit depressing, that accounts like Sinclair's are still seen today in films such as *Food Inc.* and *Fast Food Nation*, both of which expose a risky and unjust food system in the US. The sentiments of Sinclair are echoed in many current food movements, such as the local food movement and the food salvage movement, that strive to question the industrial food system of the US and offer potential alternatives.

These food movements suggest an acute distrust of today's food system. The local food movement, which explicitly rejects industrial scale food production, is one such alternative that clearly demonstrates the distrust of the current food system. Anthropologist Chad Lavin argues the shift toward local foods "reflects more than anything else a deep suspicion of conventional politics and the wholesale colonization of the political imaginary by the logic of the market" (Lavin, 2012). Strategies like Community Supported Agriculture (CSA) reject the industrialized model by encouraging connections between the farmer and consumer. Anthropologists Betty Wells, Shelly Gradwell and Rhonda Yoder state: "CSA as a community-focused food systems model transcends the conventional boundaries between producer and consumer and rural and urban" (Wells, Gradwell, Yoder, 2012). Gleaning and dumpster diving have become alternatives for some. These methods both challenge the industrialized food system by making use of food waste. Anthropologist Joan Gross cites communities like "freegans" who "prefer to opt out of the economic system entirely ... consuming only what society throws away, or what they can gather from other people's gardens, along roads, or in the wild" (Gross, 2012). Anthropologist Dylan Clark also cites groups of "punks" from Seattle who seek out food that is rejected by mainstream culture, arguing that: "industrial food fills a person's body with the norms, rationales, and moral

pollution of corporate capitalism and imperialism" (Clark, 2013). Through their rejection of industrialized food products, this group shows a deep distrust of the food system and the capitalist ideals that drive it.

While current food movements have worked to expose issues within the industrial food system, these movements have narrowed their focus to certain parts of the food chain while ignoring others. These movements have mostly concentrated on the production and distribution within the food system, focusing on how consumers can challenge their role within the food chain by changing their consumption habits. However, by dedicating their attention to the aspects of production and distribution, these movements have forgotten the next important step in the food chain: cooking. In order to question the impacts of the industrial food system, it is critical to follow the food chain down to the most intimate relationship between the cook and their food. This thesis focuses on the role of cooking in extending and challenging the industrial food chain, showing the ways in which cooking adds new meaning to food.

The two culinary training courses in this study both engage with different forms of these current food movements. The instructor and students working together in the intimate classroom at a local health food store participate visibly in the local food movement. Much of the food featured in these classes is chosen specifically for its connection to Vermont and small-scale production. Meats, for example, often came from Vermont farms and were usually butchered in the store itself, giving students the opportunity to support local farmers and the small scale production within the store. The other key field site of this study was found in a vocational program run in connection with a local food shelf. This program not only supported the community by offering culinary job training but also by making use of donated and salvaged foods which were then served to hungry community members through the food shelf. The foods

used by this program were often donated simply because they did not meet sellable standards anymore. This included things like a large box of celery about to go bad (so much so that a student had to pick through the container, saving what she could), day old breads that would not be sold, and even pounds of cheddar from Shelburne Farms that had grown mold on the outside and so were unfit for sale.

While both programs were highly conscious of food safety, they were also influenced by current food movements that question the current food system in the US. This tension between standards and personal food choices allowed me to consider not only the official rules of food safety but also how those rules are complicated and places where cooks assert their own authority over the rules.

Food Safety in the Service Industry

Much of this study will be centered on food safety practices in the foodservice industry, looking into the underlying cultural assumptions that inform these practices. While the values that drive food safety practices are essentially the same in home and professional kitchens, these practices become more standardized in the foodservice industry through training and certification. ServSafe, a certification program run by the National Restaurant Association since 1987, is a widely recognized safety training for food service employees and managers. This certification is achieved through a short course in food safety followed by a standardized exam. For the average food service employee however, this training is not required to work. According to the ServSafe website, only nine out of the fifty states impose state required safety training for employees handling food. In Vermont, this certification is voluntary for an employee at the level of "food handler" but mandatory for those in managerial positions. Students participating in the food shelf's vocational program receive ServSafe training through the class. This entailed a

week-long course that included ServSafe's five major sections: Basic Food Safety, Personal

Hygiene, Cross-Contamination and Allergens, Time and Temperature, and Cleaning and

Sanitation. The food shelf instructor explained to me that this week is particularly difficult for

his students because the course focuses specifically on the microbiology behind foodborne

illness and pathogens and how to prevent them. This type of certification exemplifies some of

what it means to participate in the food service industry as a certain submission to the rules will

be vital to the success of these cooks.

Chapter III: Methods

As a student of anthropology, research methods based in participant observation, interviews, and interactions with people were extremely important to me as I formulated this project. Studying a broad concept like food safety in the United States does not seem to immediately lend itself to deep and personal ethnographic research nor is it particularly easy to identify one specific group who can best report on this subject. I eventually turned to cooks, focusing on students who had signed up to take cooking classes in the Burlington area. However, I soon discovered the difficulties of establishing rapport with strangers who might not have much to gain from actively participating in my research. Ultimately, I found it was much more fruitful to focus in on those who were teaching classes or who provided a food service for others. This eventually included a chef instructor at a local vocational culinary program housed within a food shelf, a chef instructor at a local health food store, and a group of student volunteers who cooked at a local food shelf. Through observation and interviews, I came to understand how food safety is communicated and accounted for by cooks, both professional and informal.

In the spring of 2016 I submitted a research proposal to the Honors College. After my proposal was approved, I worked with my advisor, Dr. Teresa Mares, to apply for "Exempt Review" from the Institutional Review Board. While my research did involve human subjects, my methods of observation and optional interviews did not present any particular risk to the research subjects. After responding to a few questions on the specifics of my study such as what types of questions I would ask and how many interviews I planned to conduct, I was granted approval from the IRB to begin my research in May 2015. I had initially hoped to begin research that summer, however I ran into issues of scheduling and timing. My original goal was to observe three to four different culinary programs, with several observational sessions each, and

to interview not only instructors but also the culinary students. Unfortunately most of the programs were on a break for the summer and one had actually ceased to exist. I used the summer to continue my literature review, and eventually connected with two programs in late August, beginning my observations by September.

My two main research sites included classes at a local health food store and classes of the vocational program at a local food shelf. While I was often able to observe classes at the health food store for the whole three hour duration, I generally spent one to two hours observing only part of the food shelf classes, which were approximately six hours each day. I visited each class four times over the course of four months, and attended the final graduation ceremony at the food shelf. During observations I generally sat or stood off to the side, recording field notes of the classroom dynamics, observing how people interacted with and talked about food, and on occasion participating in classroom conversations and speaking with students. I recorded all of my notes in a journal and later coded and analyzed these observations. Over the course of four months I conducted approximately 20 hours of participant observation.

I also conducted five interviews with three different representative parties. I spoke at length with the instructor from the health food store, the instructor from the vocational program, and three student volunteers. These interviews all took place in Burlington, either on UVM campus or in either instructor's respective classroom. Interviews generally lasted between 30 and 60 minutes and I was able to have multiple sessions with both chef instructors. All the interviews were conducted between November 2016 and February 2017. I recorded all the interviews on a digital voice recorder and later transcribed them on a computer in order to analyze them. To make sense of the data I compiled in field notes and interviews, I read back through everything I had recorded looking for distinct themes that might be present throughout

the material. After some preliminary readings of my material, taking note of any moments of interest, I was able to start forming conceptual links throughout and between the data, moving from open to selective coding. This coding process allowed me to ground my theory in my data as I analyzed the patterns and outliers that I found. I ultimately used a color coding system to trace the four key concepts of legal and scientific influence, culinary capital and cultural risk perception, through my ethnographic data.

Description of field sites:

This study will refer to two main field sites: a culinary classroom at a local health food store, and the culinary classroom of a vocational program housed within a local food shelf.

Health food store classroom: upon entering the large grocery store, the classroom is a bit difficult to find as it is tucked away amidst the dairy coolers. However, the room is highly visible once you do find it with an entrance made almost entirely of glass, revealing the bright and cheery interior. The room is small, and yet not overly cluttered so it still feels spacious. One wall is lined with shelves that hold various pieces of kitchen equipment, from mixing bowls to utensils, artfully arranged. At the front of the room is the main kitchen, equipped with a Kitchen Aid dishwasher, two ovens, a large kitchen sink and one smaller sink to the side, and more shelves containing a supply of dried foods. The largest piece of this kitchen is the island countertop, complete with a gas stove and a refrigerator drawer that conveniently slides out from the island. During one of the classes taught here, the counter space is usually a bit cluttered: trays of prepared ingredients for the featured dish, pots and pans, a cutting board, a vase filled with kitchen utensils, and another vase filled with flowers. In the center of the room are four or five smaller stainless steel work benches, each equipped with cutting boards, a mason jar of utensils, ingredients, a small gas burner, pots, a bowl for compost, and a smaller vase of flowers. The

space does not appear dusty or soiled in any way. Near the door there are two carts with plastic tubs for dishes. Throughout the class these tubs are filled with dirty pots and utensils and are eventually carted off by a store employee. This class was taught by Chloe, a young chef and mother who, although not a culinary school graduate, had years of culinary experience and training.

Food shelf classroom: the workspace for this culinary program is located just adjacent to the food shelf and food donation drop off center. The space is sometimes roped off, but otherwise very open and accessible. One single room has been organized into a classroom area for lectures and discussions and a kitchen work area where the students will practice what they have learned. While the space is large, several students mention to me that they are cramped, and some tasks are moved outside of the kitchen space into the classroom space. The classroom space features a large table at the center and a single table at the head of the room. The students belongings are spaced around the table, including their knife and kitchen sets, other classroom materials like pens and paper, and drinks and snacks they have brought in with them. One wall of the classroom area serves as a pantry stocked with dried and canned goods. Between the two spaces are a sort of lunch-line counter where people are served during free meal times, and a dish drop off window with a sign explaining how to compost. The actual kitchen space is roughly divided into three distinct parts: to the side of the main area is the dish room, where one student will act as the designated dishwasher during class, equipped with a large industrial sanitizing dishwasher, a spray hose, and several very deep sinks; at the end of the main kitchen area is a room/hallway with a walk-in refrigerator. The largest space is the kitchen. The center of the room is filled by a long island countertop, above which pots and pans and utensils hang, and which must also serve as counter space for multiple students at any given time. On the right side

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of the kitchen a window opens up the wall into the washroom and hold several more large sinks where students are able to wash fruits and vegetables. To one side of this is a stainless steel rack with bowls and cambro containers, either turned upside down or on their side, on the other side is another counter where students can work. The back wall of the room features a smaller sink designated for hand-washing, as indicated by a sign hung overhead instructing users on proper hand-washing. The final wall of the kitchen holds the rest of the kitchen appliances: a gas stovetop, two ovens and a large stainless steel vat, called a tilt skillet. Students are spaced out throughout the kitchen and make use of any space that is available. The space seems used, but remains clean and well kept. This course was taught by Chef B, an older man with years of experience in the food industry, having worked for several large food service providers. Similarly to Chloe, Chef B was not a culinary school graduate but had had extensive culinary and safety training through working for large food service companies.

Acknowledging Personal Bias

Through this project I discovered that a key part of ethnography is a constant self-reflective awareness of your own ideas and biases as the researcher. As I hope to make a few large claims about cooking and food safety in the US, I think it is pertinent that I acknowledge the influence of my own opinions at the outset.

I first became interested in food safety as a research subject after experiencing food safety in a different culture, namely that of France. While living in France for four months, I noticed subtle differences in the way they handled their food: eggs were always kept on the counter, bakers handed over baguettes with their bare hands, and cheese was best when it smelled putrid and had been aged in a damp cave. Through speaking with French people I learned that some of these idiosyncrasies were due to the fact that they simply had a different

relationship to their food than what I had experienced in the US (and our country's differences in valuing quality versus price of food). And while I do not claim to know everything about food safety in France, it is important to acknowledge the influence this experience had on my own ideas about food safety. I came away from France and back into the US with the sense that my culture was lacking that special relationship with food and so our food safety approaches were certainly different, and in my eyes, somewhat worse.

It is also important to situate my two main field sites. I noted before that both were local to Burlington, Vermont, a city that has become well known for "foodie" culture. A few of the main attractions in this city include the open air farmers market held every summer, and the numerous breweries that have popped up around town. This food culture and high value of food has undeniably influenced not only my attitude but also those of my informants. Additionally, Vermont is one of the "whitest" and least diverse states in the country, and Burlington certainly follows that trend. And, as will be discussed later on, there is quite a bit of economic disparity within the city. This is reflected in the two field sites as one caters to the more affluent members of the city and the other to the working class. This lack of diversity and economic disparity have both influenced and been reflected in my research. I would also like to note that I am a white, middle class college student, and while my family has never been particularly well off, we have always had the ability to feed ourselves, even growing some of our own food. As such, I grew up not having to rely on food service provided by outside sources (aside from the grocery store) and consequently I place a high value on cooking and being connected with food. The research that follows will explore the spaces in which US culture is simultaneously connected and disconnected from their food and how the food system has critically shaped safety practices with food.

Chapter IV: The Culture of Food Safety

Cultural Risk Perception

When I was thirteen my family went on a weeklong holiday to a small island off the coast of Mexico. One day while out enjoying the beach we were approached by a tall scraggly man roaming around with a huge yellow boa constrictor coiled around his neck and arms. He invited me and my brothers to touch the snake and then to let her wrap herself around our bodies while my mom anxiously snapped photos from the sidelines. At the time, my main concern was having an amazing souvenir to show off to my friends and to prove that I had done something cool and dangerous. It turned out this man was traveling around with his snake to talk with people about fear and perception, the gentle snake serving as an example of the disconnect between perceived danger and reality. We affectionately remembered him as "perception-snake-guy" and photos of my brothers with the snake still adorn the walls of our home. He comes to mind all these years later because while he was certainly eccentric, he did have a point. The things we are afraid of are culturally constructed and our perceptions of danger and risk are created and reinforced by the society in which we live. My attempts to delve more deeply into the culture of food safety

have shown me that the same is true of how we approach food as the perceived risks associated with certain foods are culturally constructed and reinforced.

The Stanford Encyclopedia of Philosophy defines risk many different ways, getting at both qualitative and quantitative senses of the word. For the purposes of this research, I will consider the qualitative sense of risk, which might be defined as: "an unwanted event which may or may not occur" or "the cause of an unwanted event which may or may not occur" (Hansson, 2014). In the realm of food safety, risks might include illness that can take the form of food poisoning, or the cause of food poisoning (risky foods). In my research I attempted to define what made a food risky or otherwise, but while it was always easy for cooks to tell me what was risky, it became more difficult when I pushed them on *why* it was risky. Before further discussing these risky foods, it is important to consider how risks are determined and approached in US culture today.

The first point made by many scholars who write about risk is the fact that risk is inherently hidden and exists as an unknown. The Stanford Encyclopedia of Philosophy approached the epistemology of risk saying: "when there is risk, there must be something that is unknown or has an unknown outcome. Therefore, knowledge about risk is knowledge about lack of knowledge" (Hansson, 2014). The objects or activities we label as risky will always have a degree of mystery about them as this is what makes them risky. Anthropologists Mary Douglas and Aaron Wildavsky develop the inherent hidden quality of risks further, arguing that risk is also characterized by a boundary between those that are voluntary and others that are involuntary. Douglas and Wildavsky demonstrate that the line between voluntary and involuntary is hazy and unfixed. Perceived risk is inconsistent between people and cultures due to factors like rewards or benefits and that lives are unequally risky, often as a result of different

identities including socio-economic, gender, racial and ethnic. For Douglas and Wildavsky, the key difference comes in the aspect of control:

> voluntary/involuntary is a movable boundary, capable of turning every constraint on choice into injustice. The distinction only stands up to criticism if one assumes a petrified social system with a fixed pattern of cultural values and fixes rules of accountability. Under this assumption, which is strictly internal to a particular culture at a particular point in time, one could allocate all known dangers on a standard set of principles between those that are individually chosen and therefore acceptable to the individual...and those that are involuntary, unjust, and therefore to be mitigated by law (Douglas, Wildavsky, 20:1982)

While risks are hidden, there are some risks (voluntary) that we accept, often because of the rewards or benefits they offer, and these are risks over which we generally have some sense of control or choice. Other risks (involuntary) are dangers in which we do not have much choice, meaning an outside party is accountable for the damages of these types of risk. Entering into the realm of food safety, this distinction between voluntary and involuntary risks becomes important as food service providers take on a degree of accountability for hidden risks that consumers might encounter when eating food cooked or prepared by others. So while in Western society we acknowledge that risks are inherently hidden and unknown, there are some risks we are more willing to accept than others, and the degree to which we can exercise choice and control in the face of these risks is what ultimately determines how we perceive them and how we respond to them.

In the field of risk assessment and risk management, another key topic of discussion is the disconnect between the general public and experts. In exploring the psychological elements of the risk assessment process, psychologist Dr. Paul Slovic and his colleagues Dr. B. Fischhoff and Dr. Sarah Lichtenstein assert that "[risk assessment] is inherently subjective and prone to distortion due to judgement limitations," limitations that arguably arise out of one's cultural

background (Slovic et. al. 1981). Slovic et. al. go on to discuss the discrepancies between experts and "laypeople" in evaluating risks, demonstrating that the two groups are often at odds with one another in determining levels of risk. Slovic et. al. suggest that this is a result of persistent biases within a population that result from anecdotal or inferred evidence and persist simply because "people's beliefs change very slowly, and are extraordinarily persistent in the fact of contrary evidence" (Slovic et. al. 1981). This disconnect in evaluating risk demonstrates the power of the cultural construction of risk as even those in the position of expert are unable to break down widely held risk perceptions. These discrepancies also complicate our understanding of risks: as much as we would like to assert that the risks we perceive are based in sound knowledge, it is also clear that the culturally constructed risk often persists independently of reason and knowledge and may depend more heavily on individualized reasoning and experience.

The top-down approach to assessing and addressing risk

In the realm of food safety, much of how consumers in the US assess and address risk is determined through guidelines and rules set up by their government, creating a top-down approach not only in managing risk but also in defining it. Food safety in the US is regulated by legislation carried out by multiple government agencies including the US Department of Agriculture, the Food and Drug Administration, the Centers for Disease Control, the Department of Health and Human Services, the National Institutes of Health, and the Administration for Children and Families to name a few. Each of these government agencies is involved in some capacity in the "National Prevention Strategy," an approach to national health that focuses on taking measures to promote health and safety as prevention to sickness and disease. Although risks are felt at a very intimate and personal level, the personal truly is political when it comes to

risk management. This power dynamic between government and citizens can be characterized through anthropologist Heather Paxson's conception of "microbiopolitics:" individuals and institutions "acting on recognition that human social relations are frequently threaded through microbial bodies" (Paxson, 2013). Not only is the personal political, but the microbiological is also political, serving as a "means of social regulation carried out through microbial life" (Paxson, 2013). The US government regulates the lives of its citizens by actively attempting to control even the smallest units of life: microbes. Paxson considers cheese making, specifically artisanal raw milk cheese, as an example of microbiopolitics in action as government institutions set limits and rules to regulate certain microbes, effectively setting limits to what people can eat and to the livelihood of cheesemakers. Microbiopolitics can also be seen in such mundane regulations as "sell-by" dates, which attempt to place a broad regulation on the freshness of all types of food. Acting on the smallest unit of life, governmental institutions attempt to control the risks presented by the microbes present throughout the production and consumption of any food product: "care of the cheese, care of the animals, care of the land, and care of the consuming human self - all must consider the microbe" (Paxson, 2013). Through this regulation of risk, these institutions also assert dominance over their citizens.

Risky food: negotiations of what is subjectively good and what is subjectively safe

With food and food safety, we enter into a realm of comparing two subjectives: taste and risk. This also means that consumers and cooks constantly tread the boundary between voluntary and involuntary risks. While consumers are advised against consuming undercooked meat, many people still opt for a steak or burger that is less than done. This suggests there is some friction between eating what is potentially risky and eating for taste. During one of her classes at the local health food store, the instructor Chloe provided a cheese plate for a group that

would only be making candies. While the cheese was all fresh and had come directly from the store, Chloe told the students that she personally preferred a certain type of cheese once it was past its "sell-by" date, as she claimed the extra time made the cheese softer and gave it a better flavor. Thus taste creates another layer of ambiguity in evaluating the risks of food. Risks like undercooked meat or old cheese might normally be considered involuntary risks for the consumer, holding the food provider accountable, but because many of these risks are a voluntary act of taste, the consumer then assumes partial accountability (although this is not upheld in a court of law).

The cheese plate that Chloe served suggested other interesting determinants of risk perception in the kitchen. For one, the cheese plate was a sort of manifestation of the low level of risk assigned to the food at the health food store. Several times Chloe told me that she and her students shared the opinion that the food at the store was some of the best food around: "everyone's always coming in with the mindset that like their food is like the very best and this is probably some of the nicest food." This illustrates Douglas and Wildavsky's point about the influence of unequal distribution of life chances influencing the impacts of risks. This particular store certainly caters to a higher socioeconomic class level, and as Chloe told me, they uphold a certain standard by maintaining a high level of cleanliness and freshness throughout the store. Because of the socioeconomic class level associated with this store, the students in Chloe's class act under the assumption that the food will be safe. Another interesting factor of the cheese plate was that students were completely comfortable sharing food with others and using their hands to serve themselves. While we are often discouraged from touching and eating food that strangers have also been eating, these students did not seem to perceive any of this risk. Chloe told me that she felt this was a strength of her teaching style, as she encouraged students to feel relaxed

and to share food with one another (while still respecting personal space) and to essentially disregard the involuntary risks associated with communing with strangers. The dynamic of the cheese plate in Chloe's classroom demonstrates how food can change our risk perception and can further confuse the boundary between voluntary and involuntary risks.

While there are evidently questions to be raised around the boundary between voluntary and involuntary risks, for the professional cooks I spoke with there was no doubt about who was accountable for the risks a consumer faces while dining. Consumers generally engage with food acknowledging that there is some degree of risk and are able to have a choice in what they eat, suggesting that the consumer has control. However, these consumers are also said to be dining "in good faith," suggesting that the cooks are accountable. For the chefs I spoke with, the fact that others were depending on them for a safe food service meant that all the accountability was on them as the cook. Chef B expressed this obligation to the consumer as first and foremost an ethical and moral dilemma: "I'm not gonna cut corners, I mean, if you've ever experienced a foodborne illness, it's pretty unpleasant and I mean I wouldn't subject anybody to it, nor have I ever." For Chef B, before legal accountability came into play the biggest issue was the moral and ethical obligation he felt as a chef to limit the risks that his diners might experience. Chef B also demonstrated the very personal nature of risk perception as his ultimate test for serving food was the simple question "would I eat this?" This was also echoed by the students who volunteered at the food shelf. Although they did not have any professional training in cooking or in food safety, they were still able to rely on this simple question to check themselves and maintain that level of accountability to the consumers.

The Legal Kitchen

One of the very first episodes of the TV series "Friends" features the character Phoebe finding a thumb in a can of soda and promptly receiving a huge sum of money from the company. Although hilarity ensues as Phoebe rejects the company's efforts to compensate her, the episode highlights the beliefs of a society where "the customer is always right" and accidents can be corrected monetarily. Through speaking with cooks and cooks in training and through my own limited experiences working in food service, I have grown highly aware of the impacts of a Western litigious society on food service providers, particularly at the very intimate level of those responsible for cooking food. Our current ideas and standards of food safety are deeply tied to the effects of a litigious society, which ultimately shapes the relationship between consumer and provider.

A few important legal underpinnings:

Without delving too deeply into the origins and theories of Western law, I would like to offer a few key points that seem to be at the heart of legal issues in the foodservice industry today. The sacredness of the individual is the first major assumption that defines the system followed in the US today. This idea has its roots back in 17th century philosophy, notably in Thomas Hobbes' *Leviathan*, in which human nature is depicted as inherently individualistic. Hobbes argues that as all men are bestowed by nature with equal powers, they are thus in constant competition to achieve the same ends, leading to his famous depiction of human life as "nasty, brutish, and short." While Hobbes suggests that individualism in humans creates competition and conflict, John Locke later spins this individualism, or "consciousness," to a means by which society holds people accountable. For Locke, a key defining feature of this individual consciousness is its ability to reflect on the past and sustain aspirations for the future:

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"this personality extends itself beyond present existence to what is past, only by consciousness; whereby it becomes concerned and accountable, owns and imputes to itself past action, just upon the same ground and for the same reason that it does the present" (Locke, 1693). The key to maintaining a "personality" or an individual self-consciousness is in our ability to not only exist and act in the present, but also be morally and ethically accountable for our actions in the past. Through this, Locke effectively counters Hobbes' notion that the natural state of humanity is competitive and brutish, as society is now able to hold individuals directly accountable for what they have consciously done and punish them for it: "The sentence shall be justified by the consciousness all persons shall have that they themselves, in what bodies soever they appear, or what substances soever that consciousness adheres to, are the same that committed those actions, and deserve that punishment for them" (Locke, 1693). Connecting the individual with conscious action significantly creates a foundation for a system in which morals and ethics are borne out through the individual. Furthermore, this affords a certain primacy to the individual in the realm of Western jurisprudence, endowing the individual with rights and obligations. This sense of responsibility and obligation that is also deeply connected to the individual proved to be an extremely important factor in shaping the cook's relationship to their customer. Both amateur and professional cooks referred to the simple question "would I eat this?" to assess a basic level of safety. When I pressed them on how they could determine safety, both Chef B and the student volunteers told me that they would ask themselves "would I eat this?" when preparing and serving food. This question expresses perfectly the relationship of respect and obligation between cook and consumer: the cook follows a morality that extols their own power as an individual to guide their treatment of other individuals, it is their reverence for the power of the individual that creates a sense of moral obligation and respect. This respect might be seen to be

unidirectional, however, as consumers are expected to assert their own individual power, not necessarily affording respect for the cook.

While the individual can be considered to be the center of power within a society, this power is checked by the governance of agreed upon moral values. Another key underpinning of legal action in the food industry comes from these culturally determined moral values and their expression within a legal system. Anthropologist Paul Bohannan describes the relationship between social moral values and their legal implementation as double institutionalization: "customs are norms or rules...about the ways in which people must behave if social institutions are to perform their tasks and society is to endure...Some customs, in some societies, are *re*institutionalized at another level: they are restated for the more precise purposes of legal institutions. When this happens, therefore, law may be regarded as a custom that has been restated in order to make it amenable to the activities of the legal institutions" (Bohannan, 1965). This idea of double institutionalization ultimately describes how custom is narrowed into law and concurrently afforded a double authority. Naturally, the cooks I talked to did not want to violate their ethical and moral codes, especially as this would also mean violating the law. The underlying rules of food safety can thus be seen as norms and customs, but these societal rules are doubly institutionalized when they are validated in a legal system that attempts to settle disputes and abuses of the rules. When the implicit rule of respecting others and serving "wholesome" food is broken, disputes between cook and consumer can be settled through "official" rules, enforced by an institutionalized body of law. For example, this is what allows and encourages consumers to file lawsuits against restaurants or businesses if they can link a foodborne illness to food consumed at a specific establishment. In this way, food safety rules are

not only governed by moral and ethical codes of society but doubly enforced by the precision of law.

The relationship between cook and consumer is heavily influenced both by the reverence for the individual and the double institutionalization of food safety customs. But this relationship might be seen to be inherently out of balance as the cook has a much higher level of obligation to the individuality of the consumer. In a litigious society, this imbalanced power allows for a certain level of abuse of institutional laws as the consumer as an individual holds an enormous amount of sway over the cook or the company. Phoebe's predicament of an overcompensating company, while clearly exaggerated, does illustrate the intensity of this unidirectional respect in which food providers are so obligated to the consumer that a mistake requires a grand gesture of submission. This seemed to inspire a slight fear in the cooks I spoke with and the common refrain was "you can't afford it" when speaking about a slip up or mistake in the kitchen that could cause harm to a consumer. This relationship is so dependent on respecting the individual authority of the consumer that the cooks I spoke with were loathe to take chances in their kitchens when it came to both broad and precise rules governing food safety.

The Kitchen and the Courtroom

Whenever I tried to pin cooks down on why they did what they did when it came to food safety practices it inevitably came down to protecting the business. On multiple occasions Chef B explained to me that as a cook you simply "couldn't afford" to make people sick. For him, this not only meant morally and ethically, but also legally. Lawsuits over food poisoning or foodborne illness are considered reasonable and viable responses when a consumer can link their illness to a specific vendor. For example a mother and son who fell ill after eating at a restaurant

in Rochester, New York, in November 2016 filed a lawsuit against the restaurant later in January. The restaurant reportedly made 260 customers sick with the bacteria *Clostridium Perfringens* (Food Safety News, 2017). In some instances, the contamination might not have originated at the restaurant, but the cook inevitably feels the repercussions. The Vermont restaurant "The Worthy Burger" experienced an outbreak of *E. coli* in 2015, forcing them to close temporarily. While undercooked burgers were ultimately blamed for the outbreak, officials did find unopened packages of meat containing *E. coli* (Food Safety News, 2015). Legal consequences, and even the *potential* of these consequences, have meant that food businesses must be vigilant in ensuring the safety of their food, which ultimately translates into the food safety practices ingrained in their staff and cooks.

The influence of the law was not always immediately noticeable in the different classroom spaces, but could be seen behind some of the more mundane details. One of the more readily apparent manifestations of this litigious influence came when Chloe pleaded with a group of students: "please don't burn yourself in my class." Chloe's many obligations were all wrapped up in this one sentence. Not only does she have the moral obligation to keep people safe in her classroom, but in offering a service she also carries the pressure of ensuring people have an enjoyable experience and a safe experience. As an employee of a business, Chloe could never lose sight of liabilities. In her case, the students themselves proved to be the biggest risk: "[when] people are cooking with fire, people burning themselves is like a real risk and absolutely you could really like hurt yourself, when we're burning, when we're deep frying, like that, if you get severely burnt here like your waivers probably not gonna actually cover that you know? I mean it'll protect us so we don't get in trouble" but she added that the business and her own career as a cook could be ruined. Even without a lawsuit, one student's bad experience could

bring down the business simply because of the implications and the underlying notions of

liability. In Chef B's class, the influence of the law was perhaps more subtle and yet even more

present. Toward the end of their term in the class, I observed that the students were fastidious

about practices like wearing gloves when handling raw meat, washing and sanitizing their

workspace and checking temperatures of food, especially meats. Students were eager to talk to

me about the routine of preparing their work space. One student stressed to me the importance

of not only sanitizing before beginning cooking but also throughout the day, "especially with raw

meat." As the course is a vocational program, the students are expected to learn how to make

themselves competitive candidates for jobs in restaurants or other food service providers.

Because of this, it was especially important that the students learn good practices in food safety.

Chef B told me on several occasions that his students were more competitive simply because

they had gone through the standardized ServSafe training. The value placed in learning these

safety practices seems to acknowledge the ever-looming fear of legal consequences.

As trained cooks, both Chloe and Chef B were adamant about the necessity of following

the rules. My questions about food safety rules were always met with some frustration

presumably because for professional cooks, these practices become an unquestionable fact. For

B, there was simply "no wiggle room with standards" and food could not be anything less than

adhering to the standard requirements. Additionally the liability and responsibilities of the cook

meant that ignoring standards was truly not an option: "you can run fast and loose, but you know

it's like, number one it's an ethical problem if you're running loose if you're running some

restaurant cutting corners, I mean you gotta deal with your own ethics, not to mention the legal

liability... I mean I worked at a facility where we would do hundreds of thousands of meals a

month it's like I really couldn't afford to anyway." Chef B's own morals and ethics aside, the

biggest variable determining his conduct was the "cost" of neglect, especially for an employee of

a large business. A respect for the business also seemed to be a major driving factor in Chloe's

adherence to food safety rules. She noted that as an employee in a business there were simply

certain rules she needed to follow. There was really not questioning food safety rules for her: "I

mean, food safety is food safety and we're still delivering a service and if somebody gets sick

here um they're not, you know, it's not okay." Food safety also was simply just a part of her job,

with set systems already in place and "hard rules" that just were not negotiable: "I think when it

comes down to safety and food safety for us like we're a pretty big business and like all of those

things for me weren't options." Similarly to Chef B, Chloe seemed to suggest that neglect of the

rules was not only a moral issue that was simply "not okay," but also inherently tied into being a

part of a business and respecting the legal obligations of that business. For Chloe, neglecting

food safety rules essentially went against all common sense: "I'd be more likely to probably like

break a lot of laws than something like feeding someone old food. It's really questionable. And

its so stupid, it's like I would have no reason to ever do something like that, like it's not a good

idea." Being employees of businesses, food safety rules are simply basic instincts for these

cooks, seen as just another part of the job.

How can it affect both foodservice and food safety?

There are many consequences to the environment of obligation and liability found in the

current food system, both productive and limiting. In one sense, the obligation to the business

and to the bottom line creates the potential for disregard of food safety and for liability. One of

the largest issues for cooks is paid sick leave, or lack thereof. In one of my first observations of

Chloe's classroom, she recounted to the class her terrible experience of contracting pneumonia

over the summer, adding as an aside that "Chefs don't have health insurance." To make this

situation worse, most cooks also do not receive paid sick days, meaning that if they do fall ill, they are not covered medically and they still feel obligated to come into work. Chef B summarized this predicament for me:

> I can see why people do it; you got people out and you tell somebody to come in when they're sick because you're so short. That's a really good one. And I mean Vermont too doesn't help. I mean, employees don't have sick time, "I don't work I don't eat." So sometimes it's not the managers or the chefs, it's the employee who goes "I'm really not feeling well and I shouldn't be here but I don't, I'm not gonna get paid." So there's plenty to go around when it comes to responsibility here.

The underlying sense of obligation to the "bottom line" can essentially replace obligation to the individual. According to the Centers for Disease Control, norovirus, a common and highly contagious viral infection, is the leading cause of outbreaks from contaminated food the US and is spread through infected food workers. This suggests that perhaps one of the most significant interventions in food safety would be to institute labor laws that ensure paid sick time for cooks and food service employees. Organizations like Restaurant Opportunities Centers United are making strides towards this type of action through campaigns such as One Fair Wage, an organized national effort to eliminate the two-tiered wage system and subsequent inequalities in the restaurant industry. In her 2013 book, *Behind the Kitchen Door*, attorney and activist Saru Jayaraman demonstrates how issues of compensation and workers rights have long been ignored in the food service industry, even as US consumers turn toward food that has been locally, sustainably and/or ethically sourced. Jayaraman discusses the health effects this has not only on the cooks but also the consumers, as "the health and safety and overall working conditions of restaurant workers in the United States directly affect the health and safety of consumers" (Jayaraman, 2013). The lack of basic worker's rights, like paid sick days and health care, directly results in riskier food practices and food:

"In ROC's survey of more than 4,000 restaurarant workers, we found that 90 percent did not have access to paid sick days, and, with a median wage nationally of $9.02, most cannot afford to take a day off from work. The result? Two-thirds of all restaurant workers reported preparing, cooking, and serving our meals while sick" (Jayaraman, 2013).

Without these basic rights to healthy and safe working conditions, many food service workers cannot help but put consumers at risk. Because the cook, as an employee, has a certain obligation to the business, their obligation to the consumer becomes lost. Additionally, the business seems to have been allowed to ignore the reciprocal obligations it has for its employees. The uni-directionality of obligations that is repeated throughout the food system results in a food chain that is riskier for all involved.

However, the looming consequences of obligation and liability did seem to serve as an important check on the cooks and I spoke with. As seen previously, both Chloe and Chef B stressed to me on multiple occasions the need to follow food safety guidelines in order to avoid legal issues, returning again and again to the idea that as cooks they simply "couldn't afford" to disregard these rules. Ethics and morals aside, this institutional threat ensured that these cooks were responsible and clean with the food they prepared. What remains to be discussed though are the tradeoffs of such a system: where is the line between safe and paranoid? In my own experience working for a large food service company, I have observed that responses to legal liability can sometimes result in issues in other aspects of the food system. For example, in observing their obligation to keep their customers and being conscious of the scope of their legal liability, one food service provider prohibits customers at catered events from taking any foods with protein out of the event. The reasoning being that these foods are at risk of being contaminated and should the customer fall ill from eating the food after the event the company is still liable. The consequence has been that these foods are disposed of (composted in my

experience), often in large quantities, ultimately contributing the huge amount of food waste in the US today. Consumers and cooks alike need to begin questioning how safety is addressed, considering specifically the relationship of obligation between cook and consumer and how safety can be addressed in a more sustainable way.

The Scientific Kitchen

For many cooks, food and the art of cooking becomes an obsession, something they "just can't shake" as Chloe put it. For Chloe, this obsession started after mastering basic techniques and moving onto more complex forms of cooking such as emulsification, which Chloe described as putting "tiny tiny particles of air in tiny tiny particles of water or oil." She told me this technique intrigued her particularly because it was not immediately evident how oil and air could be transformed into a smooth sauce. Chloe told me this prompted her to "figure out why it was happening." In many ways, cooking mirrors the methods and approaches of modern science, with cooks acting as scientists and meals and recipes serving as their experiments. The past few decades have seen an increase in the interest in the intersection of these two fields, with notable food writers like Harold McGee publishing books like *On Food and Cooking: The Science and Lore of the Kitchen*, providing cooks with a comprehensive background of biology and chemistry behind a litany of foods and ingredients. But what are the broader implications of characterizing the relationship between cooks and their food in this way and of equating cooking to a form of scientific experimentation?

The Western world today holds the study and practice of sciences in very high esteem, as opportunities in scientific fields continue to expand and work in engineering and environmental sciences change the world around us. So intense and complete is our society's attention to science that there is a field of anthropology dedicated to studying science as a culture in itself. Before delving into the intermingling of science and cooking, I would like to look briefly into where this culture of science came from in order to more completely understand its role in Western society today. Generally, we look toward the Enlightenment and the Scientific Revolution as the key cornerstones in advancing modern society and even as the basis for our

society today.   Scientists like Galileo, Isaac Newton and Charles Darwin, who either inspired or benefitted from this "revolution" feature prominently in our textbooks and everyday cultural references. Anthropologist Jonathan Marks notes however, as other anthropologists have, that within this perception of science, "we restrict *science* to mean specifically the kind of thinking that arose in Europe in the seventeenth and eighteenth centuries, when the respective domains of nature and supernature began to be circumscribed, in contrast to the more widespread view of seeing them as mutually interpenetrating and porous - indeed, as not really different from one another" (Marks, 2009). It is somewhat broadly accepted (at least in the anthropological world) today that Western science is significantly limited in its scope, excluding not only other forms of knowledge (such as religious) but also other forms of science, such as Traditional Ecological Knowledge, or ethnoscience. Anthropologist Laura Nader takes issue with science for this very reason, arguing that this definition of science potentially limits our ability to seek out the truth: "what is at issue is whether a narrowly demarcated science - one restricted to contemporary Western ways of knowing - provides us with the greatest source of truth" and further, "the idea that it might [be the greatest source of truth] is a recent cultural fact...It was not until the late 1700s that a distinction was made between theoretical and practical knowledge, and the notion that scientific knowledge means technological power over nature can 'scarcely be dated before about 1850' (White 1967)" (Nader, 1996). Both Marks and Nader make clear the constraints of the Western perception of science, in that this body of knowledge is severely limited to a specific place and time, which ultimately introduces inherent lines of demarcation and separation.

While Western science evidently has been, and still is, a body of knowledge of great import and impact, the same movement of knowledge has created distinct boundaries and hierarchies. As Nader notes, Western science is based heavily in delineation and contrasts, being

"not only a means of categorizing the world, but of categorizing science itself in relation to other knowledge systems that are excluded." She argues further that "a style favored by contrasts includes some things, excludes other, and creates hierarchies privileging one form of knowledge over another" (Nader, 1996). So not only is science concerned with "discovering" and defining the world, it also hopes to define itself within the greater sphere of knowledge and truth seeking. Nader acknowledges the role anthropologists have played in propagating this demarcation: "however, because nineteenth-century anthropologists (in the spirit of the Enlightenment) delineated science for the modern age by contrast, hierarchy became endemic in analyses; science was conceptualized as separate from pseudoscience and from religion, and other cultures were used to justify the position that science could best answer fundamental questions in life" (Nader, 1996). Anthropology, itself acting as a science and attempting to define the outside world, created an environment of separation and distinction. Anthropologist Jonathan Marks addresses some of the consequences of this propensity for contrast in his book, *Why I Am Not a Scientist: Anthropology and Modern Knowledge*, discussing the academic environment of the late 20th century and the so-called conflict between the sciences and the humanities as academic fields struggle for funding and resources, and even for the claim to Truth. Perhaps even more significantly, this aim to contrast also creates boundaries and hierarchies as noted by Nader, forming a system of power that often (in the West) places science favorably above other forms of knowledge, giving a high level of prestige to numbers and data. This is not to say that these types of understanding are unimportant or insignificant, but rather to suggest that having created a hierarchy of contrast, the power dynamics of our own relationship with the world around us and with each other is significantly changed by science.

Science in the kitchen

A theme that often came up in conversations with Chloe was her own thirst for knowledge and her own drive to "understand" her cooking. One afternoon while discussing her own background in cooking, she began talking about fermentation "projects," stressing to me the importance of making mistakes in these recipes and especially observing those mistakes and using that knowledge in later trials. To me, this sounded exactly like what the ideal science experiment was supposed to be: having an idea of how something should work, trying it out, and then analyzing those results for the next attempt. I asked Chloe if she found the science of fermentation to be important in these trials. "So funny thing is, I'm totally horrible at science, I'm really bad at like hard facts, I'm very like, my whole life exists in a grey area like black and white is non existent, um and it has really amazed me in cooking that I realized that like, I am actually a scientist without knowing it." Her response speaks to several different key manifestations of science in the kitchen. First, she makes an important characterization of scientific knowledge, describing it as something based in "hard facts" and "black and white," giving it a rigid and definite quality and perhaps more significantly, putting it in direct opposition to other forms of knowledge. While science for Chloe is something fixed and sure, she describes her own way of understanding the world as a "grey area," suggesting something more fluid and open to interpretation. This intentional dichotomy between scientific knowledge and other forms of knowledge sets up important boundaries and hierarchies. Additionally, in calling herself a scientist, Chloe seemed to be referring more so to the process and method of her work rather than specific content. While she may not know or understand fully all of the "hard facts" behind the fermentation process, she clearly practices the scientific method, which is based in hypothesis and experimentation. This method has arguably been the biggest contribution of science to human society, however it has unfortunately come to be asserted as the only true way of

knowing. As Marks writes: "Science is a method, a way to knowledge, a path to enlightenment. Facts are great, but they don't constitute science; they are merely its many endpoints. Science is how we get facts, not the facts themselves. You can know a lot of them yet still be ignorant or unscientific" (Marks, 2009). Lastly, identifying herself as a scientist gives Chloe a certain claim to power. Considering the hierarchies within forms of knowledge and "truth" finding, deeming oneself a scientist is the surest way to assert a high level of status, intelligence, and power. In Chloe's kitchen, this simply added another layer to the power divisions between herself and her students. Her ability to summon a chemical or biological explanation seemed to give weight to her advice during a class and students looked to Chloe as an expert who could satisfactorily explain *why* certain oils were better for browning meat than others and why later batches of meat might brown more quickly than the first.

The role of science in claiming power in the kitchen was also evident in the students at the food shelf. A key part of their training included the previously mentioned ServSafe certification. I asked Chef B to describe the weeklong training at the food shelf and he told me:

> It is like two hundred pages worth of [material], divided into various chapters of food handling operations, everything from microbiology to safety and sanitation, temperatures, preparing, you know, retail food, it's just a lot of material for them to go over and, you know the chapters, a lot of them get into some real scientific detail about microbiology especially related to foodborne illnesses so...a lot to remember for them too, I mean, it's got a lot. The test is eighty questions and it is multiple choice but it is college level. And it is, there is a lot of material so it's just not a great week, and it's not one of my favorites, not one of theirs either.

This grueling labor was important to the students however as it made them much more employable and even desirable as retail chefs. While the state of Vermont does not technically require food service employees to hold this certification, Chef B stressed that being ServSafe certified increased the students' credentials and possibly meant less expense on the part of the employer (who presumably would not have to pay for these students to be trained). As they

inched closer to graduating the program, the students grew more and more confident. One

student in particular, who had been very quiet at the start of the program and consistently looked

to Chef B and her classmates for guidance, was now at the point of deciding herself whether or

not to omit salt from a recipe and at what point to thicken a sauce. Chef B told me that by the

end of the program he has complete trust in their abilities to cook and to cook safely: "I'll say,

did you test that? And they'll say yes Chef I did and they would never lie to me, they won't lie,

you know they'd just say oh no I forgot or whatever but that happens very very rarely." Certainly

some of this was owing to their spending hours on end with Chef B and each other, developing

closer relationships with the group and with the kitchen itself. But as Chef B told me, the food

safety protocol and rules were almost like a religion for these students by the end of the program.

Gaining the factual knowledge about cooking and maintaining a clean kitchen empowered these

students.

Assessing and confronting risks through scientific knowledge

For groups of humans sharing land and space together, a source of food and a means by

which to ensure the safety and edibility of that food has always been a concern. This inherent

need has given rise to certain rules and practices governing how groups handle and consume

their food. Anthropologist including Mary Douglas and Marvin Harris have previously analyzed

and discussed food practice in Judaism, specifically the avoidance of pork. While Douglas

approaches the restrictions of Kosher eating as a cultural adherence to purity and wholeness,

Harris posits that there are other outside factors determining these food rules, including the

limitations of environment and economy. Harris argues that religion offered (and still does

offer) a means by which to address and mitigate the risks and limitations presented by certain

environments and costs by providing followers with a set of strict rules. In the US, this is

mirrored today in modern food safety rules provided by scientists and lawmakers. Chef B remarked to me on several occasions just how dedicated his students were to the food safety rules once they learned them. During one conversation he told me: "I don't have any concerns about their ability to handle food properly, you know they know everything from defrosting it correctly to how to store it, what they're looking for, clean and sanitary, you know so it's kind of like, no we don't have any problems with that. They're very in tuned with that. And it's like a religion for them after a while." Observing the students at work showed me this was true. Before any cooking began, the students were all busy clearing spaces for themselves, getting their equipment, and especially sanitizing their work space by first cleaning it with a detergent mix followed by a sanitizing agent. Students were always ready to tell me about these rules, making sure I understood that the detergent came before the sanitizer, different meats were to be cooked to precise temperatures, and uncooked eggs in a recipe needed to be pasteurized. Behind each of these rules is a microbiological explanation of what risks are present and how a cook can best address them, either through avoidance or some form of sanitation. In a sense, scientific fact has replaced religious rule and governance for these cooks and cooks in training as a means by which to confront the inherent risks in food, especially food exchanged between humans.

For both cooks and in both classes, cross contamination was one of the strictest protocols. Following the scientific penchant for contrast and separation, certain ingredients and types of foods *must* be kept apart from one another, the prefered method of achieving this being intensive physical separation. The classroom at the food shelf was set up with multiple washing stations at several different points in the kitchen. One was obviously the large dishwashing station, equipped with three sinks and an industrial dishwasher, but there were also two other sets of sinks including one set of two dedicated to washing produce and another dedicated to

handwashing. Each of these sinks was clearly labeled and a sign on the produce sink explicitly stated that it was not for handwashing. Other spaces of separation within the kitchen included the cups of plastic spoons placed throughout the room. When offered to taste someone's soup, a student instructed me to take a clean spoon from the cup, dip it into the dish just once, and then throw it away. I was encouraged to take multiple samples, but always with a new spoon. These spoons were not to be shared or dipped more than once into any dish. This intensive separation found throughout the kitchen goes back to the strict rules determined by scientific fact that the students learned through their ServSafe certification.

While Chloe's classes were very hands-on, I only observed one class in which students actually came into contact with a "riskier" ingredient. In a class covering popular Polish dishes, Chloe had students cooking with raw ground beef for a stuffed cabbage dish. Having noted that raw meat did not make regular appearances in Chloe's classes, I payed close attention to how both Chloe and her students interacted with this ingredient. In my field notes, I remarked how Chloe specifically reminded all the students to wash their hands before getting started, an instruction I had not heard from her in previous classes. The students of course obliged willingly and were soon on their way to cooking the beef. As they began cooking, I noted that the students all seemed to handle the meat and meat packages similarly, pinching the plastic with their fingers to pull it aside, and generally touching the meat and its package as little as possible. While Chloe did not tell students to do this, those who had handled the meat immediately gave their hands a second washing after throwing away the packaging. Clearly, there was something about this ingredient that made the students more cautious and even a little uncomfortable. Maintaining a level of distance from the meat and anything that touched it was the preferred method of addressing the risks they perceived in the raw meat and allowed the students to go on

with the recipe without too much extra labor. Chloe later described the importance of communicating with students when it came to riskier or "dirtier" ingredients, using raw meat as an example:

> While doing meat I like, you know, tell people like how to clean up, how to stay clean. I also will like make it clear like, I'm getting rid of this meaty cutting board, I'm bringing this meat over can you please choose one station for your meat so the rest of your station isn't dirty, you know, make sure you only use one knife for this so we can clean it after, it's okay if you need to use both knives but we need to clean both of 'em. Like with stuff like that I really try to talk to 'em.

In her re-telling of using raw meat in the classroom, Chloe highlighted the same sense of distance and separation that I observed in the Polish cooking class: any equipment that touched meat needed to be cleaned (including hands) and more importantly the meat should be contained to one specific space and should only come in contact with a limited number of kitchen utensils. Chloe later linked this method back to the science of food safety, commenting that food safety knowledge was sometimes surprising but revealed a more factual side to the risks of food. Microbiology tells cooks that bacteria invisible to the naked eye can travel from one object or surface to another through physical contact, resulting in strict rules of distance, separation and containment of riskier ingredients.

Additionally, cooking is regarded as an appropriate means of making something safe or sanitary. During a class featuring recipes to make your own dim sum, Chloe taught students to form and fry scallion pancakes. To help them understand the qualities of the dough, Chloe passed around a formed pancake for students to touch. Several students made a point of apologizing for touching the raw dough with unwashed hands, implying that they had soiled it in someway. Chloe responded simply that they shouldn't worry because the pancake would be "fried like crazy." This was accepted as a reasonable response and the students chuckled appreciatively and went on sharing in feeling the uncooked dough. Implicit in this interaction

was the idea that cooking has the ability to purify and sanitize even something that has been passed around between the potentially dirty hands of strangers. The same rule was observed by the students at the food shelf, as they learned to avoid touching any food they would be serving if it would not be cooked or heated through again. I know I ascribe to this assumption as well, justifying saving food that has fallen on the floor or sat out on the counter too long with the promise that it will be cooked and therefore made safe. But where exactly does this assumption come from and why should we believe it? To return to the case of the food blogger, Michael Ruhlman, and his chicken stock that excited so much conversation, the response from food scientist, Dr. Peter Snyder, was that boiling the old stock before serving it was key, as "any active bacteria are killed by holding the stock for a minute at 150 degrees or above, and botulism toxin is inactivated by 10 minutes at the boil" (McGee, 2011). While Dr. Snyder wrote unequivocally that this stock was risky, the science of heating food in order to kill living bacteria served somewhat as a saving grace for Ruhlman's reputation. Food left on the counter or dropped on the floor could potentially still be considered impure because it was not treated respectfully or was touched before it was ready but because we follow and accept scientific fact, we feel comfortable assuming that our food will be made pure again by the simple act of cooking.

Culinary and Kitchen Capital

Food anthropologists are perpetually grappling with the question of how people assign value to food, why some foods are defined as good and others bad. One answer to this question is the idea of culinary capital, a social hierarchy that correlates certain food habits with certain moral characteristics and, as scholars Peter Naccarato and Kathleen Lebesco argue, ideas of citizenship. This social hierarchy can be expanded out to our food safety practices as well, as these practices signify a moral and ethical standing. However, here I will also explore the ways in which culinary capital acts beyond the power of the state, considering the relationship between status in the kitchen and adherence or subversion of accepted food rules.

What is culinary capital?

Culinary capital has been discussed in many different settings, from the status awarded to organic foods to the power dynamics at work at the dinner table and across genders. For the purposes of this research, I will first offer a general understanding of what culinary capital is and how it is used in order to then apply these ideas to the specifics of culinary training and food safety. In his study of 1960s counter cuisine, Warren Belasco offers this understanding of culinary capital: "By categorizing foods into what's good to eat and what is not, a cuisine helps a society's members define themselves: To eat appropriate foods is to participate in a particular group; eat inappropriate foods and you're an outsider. Like language, a cuisine is a medium by which a society establishes its special identity" (Belasco, 1989). According to Belasco, culinary capital is a means by which people define and organize themselves into a social hierarchy. However Belasco goes on to demonstrate the fluidity of this hierarchy in which different foods and ways of eating can gain or lose social status, as shown by the rise in marginal or "deviant" culinary practices like "organic" and "natural foods" in 1960s US culture. This fluidity allows

for social norms to be challenged and even reversed as different moral arguments award and withhold different amounts of culinary capital. We might also look to Pierre Bourdieu's discussion of distinction to find a sense of culinary capital. Bourdieu considers the differences in the judgement of taste between the working class and the bourgeoisie. Importantly, Bourdieu notes that one cannot exist without the other, and can only be defined within a sort of Hegelian dialectic in which one must negate the other to assert its own existence. As such, an appreciation of distinction, or culinary capital, can be asserted both by the culturally defined elites and so-called "deviants" mentioned by Belasco

The power dynamics embedded within culinary capital follow the ideas of biopolitical power suggested by Michel Foucault. Foucault asserts that modern powers are focused on "generating forces, making them grow, and ordering them" (Foucault/Hurley, 1980). In asserting power over life, states thus became more concerned with organizing life rather than destroying it. "But a power whose task it is to take charge of life needs continuous regulatory and corrective mechanisms. It is no longer a matter of bringing death into play in the field of sovereignty, but of distributing the living in the domain of value and utility. Such a power has to qualify, measure, appraise, and hierarchize…it effects distributions around the norm" (Foucault/Hurley, 1980). In order to maintain the dominance it has asserted over life, the state power must rely on normalizing functions of culture to order its subjects and enforce rules and hierarchies that allow the state a certain level of control. Food, as something every living being needs to survive, is a particularly productive cultural arena in which biopolitics can be asserted. If, as Foucault suggests, the state governs citizens not through threats or obligations but instead through normalized social values, it follows that our patterns of consumption are a form of state ideology in which we are incentivized to adhere to culturally accepted ideas of good and bad food in order

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to claim a certain moral and ethical standing as a citizen. How then, does this state ideology act upon food safety practices? This section will demonstrate that these normalized rules and practices are an extension of the social hierarchy of culinary capital, allowing cooks to affirm their moral and ethical standing as a citizen.

Who has culinary capital and where?

Culinary capital seems to have a very specific flavor in Vermont, particularly in the city of Burlington. Markers of high status generally include labels like "local," "sustainable," "fair," and "organic." Status markers that I observed in culinary classes included food like eggs purchased from a neighbor or coworker who raises their own chickens, Vermont-made cheese, or even just less common weekly dishes like homemade pesto. Although the two classes catered to different students and eaters, certain modes of claiming culinary capital were consistent. This was apparent in different identities, such as the expert, and in certain styles and types of cooking, such as making a hollandaise sauce. Analyzing who possesses culinary capital, where, and how reveals more deep-rooted values surrounding food and cooking.

Due to the social centrality to culinary capital, these status symbols are inherently performative. For my own research, this lead to more evidence at one field site than the other, namely the more casual courses offered at the local health food store. The classroom itself suggested a certain status, being furnished with expensive appliances and tools, the room was lit by track lighting running above the main kitchen island, calling to mind a stage or the set of a cooking show. In observing classes taught by Chloe at the health food store I noticed that assertions of culinary capital were frequent and even encouraged. The elusive idea of "quality" loomed over the kitchen space during every class, as instructors and students attempted to claim status. This setting suggested the democratization of taste and capital, as each person, as an

individual citizen, had the chance to define their position in the social hierarchy. However, it

was also clear that some groups were able to make more definitive claims to capital than others,

namely those who could be identified as "experts."

At both field sites I discovered that the identity of "expert," or possessing the quality of

expertise, consistently afforded cooks a high level of culinary capital. In both settings, the power

dynamics of culinary capital seemed to follow the same hierarchy as the relationships between

teacher and pupil, as the instructors of both classes served the dual role of teacher and food

expert. As teachers, they held a certain power over their students as the leaders of the class, and

as experts, they held a culinary power over their students in that their expertise granted them

authority in claiming and denying culinary capital. Naccarato and Lebesco argue that the

circulation of culinary capital "relies upon specific social hierarchies that grant authority to those

deemed experts who are authorized to use their specialized knowledge and experience to

determine when, why, and how culinary capital is to be given and taken away" (Naccarato,

Lebesco, 2012). If culinary capital works to produce and reflect social hierarchy, then experts

are placed very high up in this hierarchy, granting them a large degree of power and authority in

determining the eating habits and preferences of others. This dynamic of the expert was

particularly present in Chloe's classroom in the health food store. While Chloe never graduated

culinary school, she did tell me that she had taken many culinary courses and studied nutrition at

university. The first evening I sat in on Chloe's class she was cooking Cuban-inspired beef stew

with plantains and beans. The class was advertised as a sort of date night and the promise of

warm spicy food brought three couples out on a cool fall evening. Chloe's role as the expert was

immediately evident as she began discussing beef with the students. She began her stew by

searing chunks of beef in a hot pan before incorporating other vegetables and broth. Chloe often

took the quiet minutes of waiting for something to heat up or cook as an opportunity to either share a story or talk more about the recipe or ingredients. While searing the beef (which was a reasonably large amount as the stew would feed at least eight adults), Chloe started talking about the meat she was using and the significance of the different types of beef available to consumers. Chloe surprised many of her students by telling them that buying grass fed beef was not actually the best culinary choice, as cows raised on a grass-only diet in fact made more less fatty meat, which meant less flavor and tenderness. She advised them to instead look for beef that had been grass-fed but grain finished, meaning the cows were fed grains before slaughter. I have to admit that while sitting in on a class priced at around fifty dollars per person I was eagerly soaking up every bit of knowledge I could. In the margins of my notes I scribbled down the two vendors Chloe recommended for meat. I was not alone in this: during the classes some participants would take pens out of their bags to note down recipe pointers or general food tips that Chloe doled out throughout the class.

As the expert, Chloe enjoyed the greatest claim to culinary capital within the classroom setting. She had the power to define good and bad, and award and withhold culinary capital. Interestingly, this role as expert seemed to rub up against the power of the state and normalized culinary capital, particularly where food safety rules were concerned. Chloe's expertise allowed her to reject certain rules in certain settings, asserting her own power over the state and cultural norms.

Kitchen capital: how cooks negotiate status and power

The idea of culinary capital should be extended from the foods we consume to the way we cook. In observing and speaking with cooks and cooks in training, I realized that multiple negotiations of power occur in the kitchen even before any food makes it to a consumer. Any

given dish is wrapped up in power dynamics between cook and consumer, and even in conflicting social identities of the cook. How do a cook's practices in the kitchen afford or remove culinary capital? Additionally, how does this social capital elevate or diminish the food produced by a cook? Considering safe food practices, what is it that determines a cook's culinary capital: does status come through accepting or rejecting rules and if so, which rules? With the cooks I observed, I found that their identity as a cook could never be fully separated from their own personal life and values. This created friction between the actions and values of some cooks, especially Chloe.

Throughout my time in Chloe's classroom, it became increasingly apparent that there was a divide between Chloe's actions and her beliefs and between her various identities from professional instructor and chef to young woman and mother. Chloe expressed values from all facets of her identity during the classes even when they were fundamentally at odds with each other. Chloe's identity as young woman and mother came out during her entertaining stories or in the extra bits of knowledge she shared. She often shared her own cooking preferences, such as not using any plastic or silicone utensils in the kitchen, especially with high heats, but qualified this statement, telling her students: "that's not a real thing it's just my opinion." This qualifier immediately ceded power to the "official" rules, limiting Chloe's own authority as an expert. Chloe acknowledged that there were inconsistencies between her words and her actions: "I think the information I deliver is definitely different than the ingredients I'm delivering." This contradiction was apparent in foods like eggs, which, when used in class, were always the freshest, even as Chloe advised her students that eggs, by nature of being a closed vessel, do not usually make people sick and are safe to keep for weeks. Similarly, Chloe said she would condone drinking raw milk but would only ever serve students pasteurized milk in a class.

Chloe's different identities afforded her different levels or types of culinary capital. As a professional, she is expected to hold up certain standards and follow specific guidelines but as an individual and an expert, she finds herself at odds with some of those rules. She voiced this struggle to me saying: "I mean I'm just, I'm a pretty factual person, I'm always completely comfortable telling people this is the fact and this is my opinion and like I'm damn sure my opinion is right but like I have to tell you this and please know that this is the rule and this is what I've learned in my experience." Acting as a chef, an instructor and an individual all at once forced Chloe to negotiate different levels of culinary capital. While this meant she sometimes contradicted herself, it also created an atmosphere in her classroom where rules and norms could be questioned and discussed without hesitation, encouraging students to claim new knowledge and with it, new culinary capital.

Chapter V: Following and Breaking the Rules

During a class, Chloe once confidently told her students "I'm a big believer in your food looking like somebody actually cooked it." Having gone through some traditional French culinary training, Chloe was usually incredibly pristine and precise in her cooking, not wanting to use the less-than-perfect pieces of a bell pepper and forever reinforcing the importance of good knife skills. In class though, it seemed as though her style became more relaxed and focused on the experience rather than the finished product. After hearing her praises for precise cutting and immaculate plating, it was somewhat surprising to hear Chloe support and even encourage imperfection. But maybe this should not have come as a surprise at all: the class was geared toward the home cook, and stressed home-style, family-oriented recipes. But this comment potentially does more than simply state culinary preferences: in expressing and encouraging this appreciation for the informal, Chloe also went against the values of perfection that she had been taught. Going a step further, Chloe subverted the accepted norms of professional cooking. However, from speaking with Chloe it was clear that she would never go against the rules she had been taught, she often spoke of the divide she felt between her own "food nerd" cooking and the cooking done in her class. Even if she did have certain aesthetic preferences she would never discredit the norms and style of traditional professional cooking. This suggests that as a cook, one has the ability to simultaneously respect *and* subvert the rules.

Anthropologist Carole Counihan argues that "food rules are a part of usually unscrutinized cultural ideology that continuously leads to the reinforcement of life as it is" and suggests that when the rules are broken, there are certain "rules to break rules" (Counihan, 19-). While Chloe might not explicitly scrutinize the rules of professional cooking, she is able to break

some of those rules in the environment of an informal cooking class, whose stated goal is to

"have fun." But when we take into account the ideas of culinary capital discussed previously,

Chloe's comment and actions become a bit more complex. Does perfect or informal cooking

afford a higher level of culinary capital? Does projecting a preference for the informal

necessarily subvert the more perfect style of cooking, and thus the tradition of professional

cooking? Naccarato and LeBesco argue that while culinary capital is often acquired by

following food rules, it is equally as accessible through intentionally disregarding and subverting

those same rules:

> "While one means of acquiring capital is to approach one's food practices in ways that conform to prevailing attitudes and assumptions about food and foodways-thus contributing to one's identification as a 'good citizen'-an alternative is to endorse or engage in eating practices that appear to contradict or challenge such norms" (Naccarato, LeBesco, 2012).

While Chloe's comment about "food looking like somebody actually cooked it" may have been

minor in the moment, it suggests a different way of claiming culinary capital other than, and in

direct opposition to, her adherence to the traditional rules of cooking. Naccarato and LeBesco

state that "even sites of resistance to privileged food discourses engage with culinary capital, but

award it based on different, arguably subversive food practices and knowledges" (Naccarato,

LeBesco, 2012). By arguing in favor of informal food practices, Chloe is in a way resisting the

traditional professional food practices, but is still engaging with culinary capital, crucially she is

claiming new culinary capital *through* resisting the accepted practices. This idea is summarized

by Naccarato and LeBesco:

> "While the power and status that come with culinary capital have been appropriated most commonly by those in the mainstream who adhere to and endorse privileged foodways, in subcultural spaces, culinary capital is a reward for those who most daringly subvert those

privileged foodways and animate their own set of alternative beliefs and practices." (Naccarato, LeBesco, 2012).

While culinary capital might be achieved through adherence to high status foods and practices, it can also be acquired through rejection of those same foods and practices. This comment from Chloe, rejecting traditional cooking rules in favor of informal cooking, will probably not make any major changes to existing food rules but it is still effective in asserting a more nuanced image of culinary capital. Outside of the somewhat trivial conflict between formal and informal cooking, there are many other places in food and in cooking where rejection of existing rules affords the cook a different and potentially higher level of culinary capital. These sites can also interact in interesting ways with existing food safety rules, both respecting and subverting them.

Keeping in mind the biopolitics (and microbiopolitics) of food safety, we might now look into what happens to a cook's culinary capital when they subvert established food safety rules. As discussed earlier, many of today's food movements challenge the accepted rules of the current food system, often disrupting food safety rules at the same time. While the goal of the movement might not be to reject food safety practices or even the existing ontology of food safety, because these rules are so inextricably linked to the large industrial food system found in the US, it is impossible to challenge one without also questioning the other. The Food Salvage movement in particular disrupts some of our ideas about what is clean or unclean when it comes to cooking and eating.

The vocational program at the food shelf offers a perfectly nuanced example of the friction between food safety standards and food movements. While students were learning how to cook and work in commercial kitchens, they were also making use of some less desirable ingredients that had been salvaged and donated. On the subject of these unconventionally sourced ingredients, Chef B told me: "I have no problem reusing, and the thing is for us, you

know, you can give somebody a steak, a turkey, great, but if they got somewhere to cook it, but in our case here like the students take the same turkey and you know I'll teach them how to use, how to debone a turkey so they learn that, you know we're gonna take the bones, we're gonna turn that into stock so we can make a stew or some of the meat we're gonna roast off for stuffed turkey breast, we're gonna make pot pies, tetrazzinis...so that one turkey when we're done with it will feed five families." For Chef B, the value in "reusing" food came in their ability to spread that food across the community. It was not uncommon for students to spend extra time processing and preparing ingredients from the food shelf for that day's recipes. One afternoon I entered the busy kitchen and found a student cutting mold off of an enormous block of cheese. The cheese had come from Shelburne Farms, he told me, and originally weighed about forty pounds but he guessed it would be closer to thirty once all the mold was removed. The cheese had been donated *because* it was moldy and unfit for sale, but, being cooks, these students were able to convert the previously considered "bad" cheese not only into something edible but multiple dishes that would feed the community. When I spoke with Chef B about this aspect of the program, he revealed that he actually disliked the term "food salvage," worrying that this implied they were taking food from dumpsters. However this willingness to go against the norms of the food system, and consequently ideals of food safety, afforded the food shelf program a different type of culinary capital, giving it not only the label of a charitable organization, but also an organization that upheld the ethics of sustainability: the simple act of subverting the existing rules seemed to merit a higher level of capital.

However, one of the major successes of the program was its reputation for molding employable cooks in the current food system, especially with training such as ServSafe certification where the central focus is food safety. As such, the food shelf's vocational program

was at once following and subverting food safety rules. What are the "rules to break rules" when

it comes to food safety? Taking the food shelf as an example of the food salvage movement, the

balance between clean/unclean and acceptable or not seems to come through the act of cooking.

While food such as a moldy block of cheese cannot be sold and consumed as an item by

themselves, they can still be cooked and then consumed. The stereotype of "dumpster diving"

might not be a socially acceptable means of acquiring food, but those same rejected foods are

easily accepted once they have been prepared and cooked. Furthermore, the cook then has an

unmistakable authority in determining the safety and wholesomeness of food. The experience

and knowledge that comes through cooking is irreplaceable; microbiology and laws cannot

achieve the same level of intimacy and truth about what it means to be safe with food. Chef B

was certainly not a microbiologist or a food scientist, but his years (decades even) of cooking

and having a close relationship with food gave him the confidence to take on the rejected

ingredients that might not be considered viable in other kitchens. The same can be seen in the

artisanal cheese community. Anthropologist Heather Paxson details the struggle between cheese

makers and FDA officials to find common ground on raw milk cheese safety. The response of

the FDA to the apparently unsafe product of raw milk cheese has been to fall back on the 1949

guideline of the "sixty-day rule." This rule, introduced after a shipment of Cheddar

contaminated with *Salmonella typhimurium* caused an outbreak of typhoid amongst servicemen

during World War II, establishes a mandatory sixty-day aging period for raw milk cheeses

(Paxson, 2013). However, "from a microbiological perspective, the trouble with the universal

sixty-day rule for raw-milk cheeses is that not all cheeses are constituted like Cheddar and not all

pathogens behave like *Salmonella*" (Paxson, 2013). The attempt at standardization, enforced by

law and legitimized through science, clearly falls short, demonstrating that a disconnect from the

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product itself only leads to a disconnect in maintaining its safety. Paxson goes on to show that the community of artisanal cheesemakers has in fact made great attempts towards ensuring the safety of their products through other non-mandatory regulations such as Hazard Analysis and Critical Control Point (HACCP) plans and through establishing a Certified Cheese Professional Exam for cheese retailers (Paxson, 2013). While FDA officials have been insufficient and even counterproductive in promoting safety in raw-milk cheeses, those with close connections and relationships to the cheese, the cheese makers themselves, have developed some semblance of standardized regulations in a very complex and diverse culinary field.

Another key feature in safely bending or subverting food safety rules comes in actively submitting to those rules. Both Chloe and Chef B found capital and power in a certain mastery of the rules, whether through safety certification or through professional training, both had achieved a level of expertise in the existing rules. However it was precisely this expertise that allowed Chloe to extol foods like raw milk and allowed Chef B to successfully incorporate salvaged foods into his kitchen. Following the rules and regulations enforced by the state of Vermont (that in turn have been influenced by science), cooks making use of local or salvaged foods are able to process these foods for safety. Again, Michel Foucault offers an understanding of the societal power dynamics that lead to such a phenomenon. Foucault argues that we express our freedom through an ethos that we have cultivated and perform throughout our lifetimes, but that in order to cultivate that ethos we must all first submit to the logos, or the Truth, that has been determined by society. Submitting to this truth enables us toward phronesis, or the wisdom to act ethically, in which we are able to question the logos of society. Foucault notes that knowing the logos or truth of society is imperative to calling it into question:

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> Thus, one escaped from a domination of truth not by playing a game that was totally different from the game of truth but by playing the same game differently, or playing another game, another hand, with other trump cards. I believe that the same holds true in the of politics; here one can criticize one the basis, for example, of the consequences of the state of domination caused by an unjustified political situation, but one can only do so by playing a certain game of truth, but showing its consequences, but pointing out that there are other reasonable options, by teaching people what they don't know about their own situation… (Foucault, 1994)

Through first knowing the rules and working inside the rules, we are able to bend or challenge them, acting in our own ethos. So, while they might first depend on the rules of food and food safety to claim culinary capital, this knowledge also enables these professional cooks to then subvert those same rules by working within them. In making use of donated moldy cheese, the cooks at the food shelf are rejecting rules about what is considered pure and acceptable, but to do so they are working within the rules they know about food, such as removing the offending mold and heating the cheese to temperatures that will kill off any bacteria.

Subverting the rules of food safety, either through salvaging rejected food or producing raw-milk cheeses, can often lead to a higher level of culinary capital for the cook. However, through their subversion, these cooks and artisans might be seen to be even more concerned with the safety of their products than many others who do not challenge the norms. In a way, cooks like Chef B or raw-milk cheese artisans are at once fiercely loyal and opposed to food safety rules. In food safety, the "rules to break rules" are in the simple fact of cooking. Through a deep understanding of their ingredients and a preliminary submission to the rules, these cooks who subvert food rules are able to create products that are once safe and enjoyable, ethical, and sustainable.

Chapter VI: Conclusions

In the end, perhaps what was most surprising about this project was just how unsurprising it was. Within the two classrooms I found cooks and students who were appropriately concerned with the safety of their food, especially when serving that food to others, whether close family and friends or strangers. I also found food safety practices that were not so different from my own; while I had been expecting an observance of food safety so strict that it actually hindered culinary creativity and taste, I instead discovered kitchens where experimentation and expression flourished. The cooks of these two kitchens adhered respectfully to the food safety rules they had been taught, but also managed to negotiate a successful balance between the accepted rules and their own values. Chloe, through her creative classes and expansive ramblings, shared her own convictions and excitement about homemade and locally-sourced food with her students while still respecting her ethical obligation to not put others at risk. She raved about the fresh eggs she bought from her neighbor but would not even think of breaking rules and feeding them to students. Similarly, Chef B and his students learned and followed food safety rules "religiously" as he put it, and yet were still able to make use of salvaged and donated ingredients that may have otherwise ended up in the dumpster.

The goal of this project was to engage more deeply with food safety on a cultural level, and to understand the role of cooks and cooking within the culture of food safety in the US. I had originally proposed to achieve this through focusing on how food safety was learned and taught, but through the course of the project the focus shifted to analyzing how these cooks in fact followed and negotiated food safety rules on a daily basis. This research represents the first broad efforts at characterizing and analyzing the relationship between cooks and food safety. Future studies might include a greater depth and specificity of the food safety rules that are

taught. For the purposes of this study, I was only able to glean a peripheral comprehension of

the types of rules the cooks and students were taught. But, perhaps because of this, my attention

and energy were redirected towards the effects of those rules in the kitchen, pushing me to think

about how these cooks were engaging with the rules each day. While my small sample size

originally seemed to me a detriment, I found that narrowing my sample to two small groups and

the two leaders of those groups was ultimately beneficial. I was able to not only spend more

time with each, but also engage with them more thoughtfully, putting both groups into

meaningful conversation with existing literature and anthropological tradition.

In focusing in on a specific and small group, this project also suggests broader

implications for the larger industrial food system. I set out asking the question: "are the cooks

preparing our food a hazardous link in the industrial food chain?" hoping to engage some of the

fears surrounding the separation between people and food in today's food system. What I

observed were cooks who were deeply conscious of the moral and ethical obligation they had to

providing wholesome and safe food to those they were serving. Returning to the statistics from

the Centers for Disease Control that one in six Americans gets sick from a foodborne illness each

year forces the question of the source of such widespread illness. While the Centers for Disease

Control also reports that Norovirus spread by infected cooks accounts for a large number of the

cases of foodborne illness in the US, this research also shows the potential for cooks to be a part

of the solution to widespread foodborne illness. Certainly these cooks have a role to play in

ensuring the wholesomeness of food as it travels between producers and distributors to

consumers. One potential suggestion is that large scale contaminations might be traced back to

higher levels of the US industrial food system, looking toward industrial food production plants,

and beyond that, agencies such as the Department of Health and the US Food and Drug Administration.

This project has shown the biopolitical implications of regulatory agencies like state Departments of Health, demonstrating how the often oversimplified rules of risk and safety effectively determine how we feed ourselves. The regulations that come out of these agencies often do not account for the complexities of foods, and instead offer "one size fits all" solutions to extremely nuanced issues, potentially causing more harm than good. Furthermore, these regulations push the consumer toward a certain conception of food, defining for us what is safe and unsafe and what is wholesome and not. It is pertinent, then, to question the efficacy and intent of these rules and regulations, and to ask why certain foods and foodways are supported over others. Moving forward with these questions, anthropology will be an indispensable resource.

If nothing else, this research should serve as another example of the role of anthropological inquiry in contemporary society. When I began this project, many of the friends and family I spoke to about it seemed confused not only about why I wanted to research food safety, but *how*. The rules of being safe with food, following the scientific dogma of microbiology and the numerous laws on serving food, were simply unquestionable truths for most of the people with whom I spoke. It was perhaps this unquestionable nature of food safety that enticed me and pushed me to ask why we followed certain rules and not others and how these food safety rules were borne out in the kitchen. These questions were only resolvable through the observant lens of anthropology. As noted by many before me, anthropology has the unique capability of turning its gaze in on itself, applying this reflexive nature to its own culture. Anthropology in the US has inherited a tradition of self-reflection from thinkers like Margaret

Mead, who used the study of outside cultures to understand and question their own. Looking at one's own culture anthropologically requires a willful neglect of learned cultural facts, demanding the anthropologist to view each minute act and utterance with a new sense of critical wonder. In this careful observation, the anthropologist is inherently called upon to ask *why*, peeling back the layers of cultural projections and assumptions in hopes of eventually revealing some kernel of truth. While not necessarily an easy task, it is certainly an important one. It is through questioning ourselves that we are able to better understand, and even potentially change, ourselves.

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