

# **A Cultural Survey and Epidemiological Study of Tuberculosis in Migrant Agricultural Workers**

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## *Abstract*

This thesis examines how power structures influence the bodies and health of those within them. I specifically look at sporadic cases of tuberculosis in migrant agricultural workers in the San Luis Valley, a rural community in southwestern Colorado. I spoke with five informants who worked either in a public health capacity regarding tuberculosis or in an outreach capacity with migrant agricultural workers, and in a few instances as both. From my study, I have two classes of findings: ones which relate to tuberculosis in migrant agricultural workers and ones which contribute to a broader ethnographic survey of the San Luis Valley. Regarding specific findings, I identify a case where multiple public health officials interpreted a patient's resistance differently, which warrants further investigation, but suggests a disconnect between public health officials and migrant agricultural workers as patients. A second specific finding identifies ways in which the H2-A visa program possibly extends beyond economic employment into exploitation and the possible medical implications of that case. Regarding broader findings, I identify ways in which rural communities can be misrepresented by data and this misrepresentation's potential implications. In another broad finding, I discuss conceptions of charity and community in the San Luis Valley. This thesis touches on many topics regarding rural life, medical interactions, and power systems which affect the lives of migrant agricultural workers and suggests many opportunities for future studies.

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### *Guiding Questions*

My main purpose is to develop a framework for understanding health in the context of less visible cultures and populations. I will bring together theory and perspectives from multiple disciplines to understand how power structures, histories, and cultures affect bodies of the ‘invisible.’ I am using tuberculosis as a starting point to understand migrant agricultural workers’ living conditions. I am focusing on the politics and power structures of invisibility, the experiences of those who must remain invisible, and how these subjectivities affect health and bodies. Although I am focusing on a rare and often stigmatized disease, this research is meant to serve as a tool for understanding an at-risk community’s health care challenges, rather than providing an exposé of the medical abnormalities of said community. Ideally, this paper will be able to inform public health institutions at county, state, and national levels on means to improve approaches to health in ‘invisible’ populations.

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### *Prologue*

On July 12, 2019, I found myself outside of the Aurora ICE Processing Center. Ahead of rumors that some 2,000 individuals who recently arrived in the United States were scheduled to be detained by Immigration Customs Enforcement over the weekend, a crowd came to stand vigil outside the detention center (Romo & Maitas 2019). The protestors were officially there to show disapproval for the conditions of detention centers, the nature of ICE raids, and the treatment of the undocumented; however, the crowd’s anger and dissent seemed larger. People seemed angry; people seemed scared; the air felt hot with tension and grief.

There were older individuals whose cars were covered in progressive bumper stickers that came from earlier decades; there were young mothers and fathers, some white, many Hispanic, with children and infants in tow; there was the far-left protest group known as Antifa, dressed head to toe in black, with bandanas over their faces or around their necks; the ‘anti-protest’ protestors who proudly wore American flags and patches declaring themselves members of Bikers Against Radical Islam, and there were undocumented individuals—present, but visibly no different from anyone else in the crowd.

There was unease amid the chants of “*Basta!*” and “Show me what democracy looks like!” Maybe it was the physical proximity to the center, maybe it was fear of attack by the ‘anti-protest protestors,’ as voiced by one member of the crowd, or maybe it was the reality of deportation expressed in the speeches of those affected by immigration detention. The reason for the unease was not the primary concern. The quiet uncertainty made the protest feel like a battle rather than a celebration. The event did not feel empowering.

One speaker, Hispanic and young, was not much older than I—around the age of twenty-one. From the bed of a truck, she said, “My family, my friends, and my neighbors are scared. I stand here, being undocumented, but I am unafraid. Everybody deserves to live unafraid. When I say undocumented, you say unafraid!”

The vigil ended early. A group of the protestors had crossed the *arroyo*, the cement drainage ditch typical in the American Southwest, separating the detention center from the street. They lowered the American flag, replaced it with a Mexican flag and an upside down American flag. They left the Prisoner of War flag. Later in the night, the protest organizers announced that they were preparing to burn the flag they had taken down and that the vigil needed to disperse.

Signs lowered as the crowd scattered.

Signs which read “DON’T LOOK AWAY!”

I left with a majority of the crowd, but for a few hours at least, the Mexican flag waved over the Aurora detention center.

During the time in which I was conducting fieldwork, the fear of deportation and the risk of being noticed among those with uncertain immigration status were significantly high. More specifically, I conducted fieldwork during the Trump administration, a time when Mexican immigration was portrayed as a threat to America’s economy, safety, and way of life. During the vigil on July 12<sup>th</sup>, human faces were put to national conversations about immigration and deportation. For those without papers, the motivations for staying in the United States, despite being ‘illegal,’ are far beyond economic, and the current consequences go far beyond simple deportation. Due to the heated national discussion about illegal immigration and the changes in deportation proceedings to include imprisonment for uncertain lengths of time and separating migrant children from their families, being an illegal immigrant was more dangerous than in previous years and previous federal administrations. Although power structures have always played a role in the lives of those without papers, the weight of those power structures was heavier during the time in which I conducted my research than it had been in prior decades.

## Chapter I – Introduction and Literature Review

Four hours south of the front range city of Denver lies the San Luis Valley. The Valley lies wide open in the cradle of three mountain ranges, which surround the Valley's interior: flat, unbarred, and beautiful. The Valley gives the impression that it does not belong to humans in the same ways cities or towns do. The open sky, the wide arms of the land, and the encompassing mountains overwhelm you as you drive over the mountain passes, the landscape occasionally hinting at reminders of human lives that inhabit this Valley as well. It seems that the Valley has always held a kind of mystical beauty. In his description of the Valley in 1807, Lieutenant Zebulon Montgomery Pike described the San Luis Valley as "a terrestrial paradise, shut out from the view of man" (McConnell Simmons 1979, 4). It is in this striking landscape, which can feel far beyond human control, that I attempt to characterize the people that live in the Valley. The forms of power exercised over the inhabitants, local and national agricultural histories, and the tenor of contemporary rural life all are essential pieces in understanding the lives of those who inhabit the Valley.

The land Pike described in the 1800s is home today to 46,780 people, distributed across the San Luis Valley's six counties. With a land mass of 8,192 square miles, the Valley is markedly rural with a population distribution of 5.6 people per square mile. The main source of income for the Valley is agriculture, which brought in \$165,569,000 in 2013, employing 5,119 individuals in the same year (2015 SLV Statistical Profile). The soil is made up of clay, sand, and silt, providing a loose, dusty loam suitable for growing potatoes, alfalfa, hay, barley, wheat, lettuce, spinach, and carrots. The harvest begins every September with 98% of the produce going into storage before it is sold and shipped (*Agricultural Splendor* 2018). For the inhabitants of the San Luis Valley, livelihood is woven together with the sprawling and open land.



The profile of those who work the land is relevant to this thesis, specifically farm workers at both the local level in the San Luis Valley and the national level. According to the US Department of Labor's National Agricultural Workers Survey (NAWS), in the fiscal year of 2013-2014, 68% of hired farmworkers in the US were born in Mexico, with only 27% of workers being born in the United States. Approximately 80% of all farmworkers nationally were Hispanic. Within the US agricultural workforce, 84% of the population were sedentary, and a small proportion—16% of the population of agricultural workers—is further classified as migrant workers. In the same year, 53% of the farm workers surveyed by NAWS had work authorization in the form of citizenship, permanent residency, or a worker visa authorization. A total of 47% of the national agricultural workforce does not have 'legal work authorization' (read in this case as defining an illegal immigrant). The agricultural industry and its products are dependent on the sensitive subject of 'illegal bodies' and 'illegal people' (Hernandez et. al. 2016).

#### *Who and What is Being Studied*

I am focusing on the 16% of the agricultural workforce defined as 'migrant' (Hernandez et. al. 2016, 5). 'Migrant farmworkers' are classified differently by different federal agencies. The NAWS defines migrant farmworkers as individuals who, within a 12-month period, travelled 75 miles or more for an agricultural job. The NAWS further divides migrant agricultural workers into 'shuttle migrants' and 'follow-the-crop-migrants.' Shuttle migrant workers are those who primarily live and work in one location, but have traveled 75 miles or more to work on a farm. Follow-the-crop migrant workers are those who travelled to multiple farms throughout the course of a year and did not work at their place of most permanent

residence. I am defining migrant agricultural workers more broadly as individuals who regularly travel extensive distances for temporary work.

In the San Luis Valley, migrant workers arrive for seasonal farm work in May, as planting season begins, and stay tending the crops until the September harvest, after which they will return to where they live most permanently. During the work season, it is common for groups of 12-20 individuals to rent a house together, work on the same farms, and commute to and from work together. According Paul Wertz, the regional tuberculosis specialist of the San Luis Valley, and Ginger Stringer, the Alamosa county epidemiologist from 2016-2018, most cases of tuberculosis seen in the Valley occur in this population. Wertz also notes that many migrant workers are undocumented as well. According to Wertz, “there is an absolute fear in coming forward with sickness,” as interaction with a government official is tied to perceived risk of deportation. Based upon this information, I wanted to better understand the connection between migrant agricultural workers and tuberculosis in the Valley, in addition to better understanding the ways in which uncertain immigration status affects the health of the individual.

This thesis studies the health of migrant agricultural workers with respect to tuberculosis as a way of studying this population’s overall health. Studying any aspect of this motile group’s lifestyle or health poses a substantial challenge to researchers and public health officials alike. Because of the inherent mobility in the lives and work of migrant agricultural workers, centralized workers’ unions are extremely rare, which is a large factor in the lack of public health follow-up to those exposed to potentially hazardous working environments and lifestyles (Abadie 2010, 8). In the context of public health, the mobile lifestyle makes long-term studies difficult, as many initial participants are ‘lost to follow up,’ a public health term used to mean

they are somehow lost to the scope of public health officials for both treatment and inclusion in data. Additionally, treatment courses that last for extended periods of time, such as that of tuberculosis, require larger consideration of treatment conditions and longer time commitments for both public health officials and patients. When patients cross state lines, treatment monitoring and completion is placed on the other state's public health department, and, to the original health department, the patient is 'lost to follow up.' Active tuberculosis, for example, requires a treatment lasting 6 to 9 months and can be accompanied by severe side effects (Treatment for TB Disease 2018). As described by one of my informants, these side effects, coupled with how long the antibiotics course takes, can make individuals with active tuberculosis suspicious of or hesitant to complete treatment, risking the possibility that a contagious and untreated case will inevitably be 'lost to follow up.' The relationship between public health officials and migrant agricultural workers is a central interest of mine. Specifically, I want to explore perceptions by both groups about each other, and understand why and how these perceptions are constructed.

There is a direct relationship between perception of health and perception of normalcy; those deemed 'other' are both "infected because exotic and exotic because infected" (Farmer 1992, 251). The embodiment of the unfamiliar, the otherworldly, the 'illegal alien,' makes for the understanding of a body as innately unhealthy and abnormal while at the same time framing the perceived or real illness as being a consequence of the individual's exotic positioning. For most 'illegal aliens,' exoticism is applied to perceived racial and cultural practices. The term 'illegal alien' brings up an image of an individual who is Mexican, speaks Spanish, and is a cultural outsider in the United States. In practice, this exoticism can increase stigma around those 'illegal' bodies especially when individuals might be 'sick bodies' as well. Exotic positioning and stigma also have the potential to create dangerous misunderstandings between the world of

medicine and those deemed exotic. One of my goals is to explore this stigma, ideally so that those ‘exotic bodies’ are not further subjected to stigma while receiving treatment.

The desire for and necessity of invisibility is a significant theme in my portrait of the lives of migrant farmworkers. I am working, as do public health officials, in the capacity of surveillance. I understand my position in relation to my subjects as representing a position of power. Surveilling, a ritual by which data about the lives of subjects is collected, reaffirms existing power structures. In this case, it comes in the form of an institution attempting to monitor the lives of individuals who are at risk of deportation, especially if they are recorded. The historian-philosopher Michel Foucault understands the practice of surveillance as the reaffirmation of “the power that is being exercised over” subjects (Foucault 1977, 187). Under his panopticon model—originally designed for prisons—subjects within a system of power regulate their own behavior under the threat of surveillance. With the potential to always be seen, subjects will regulate their own behavior to match standards set forth by a state (Foucault 1977, 187) However, I argue that invisibility from surveillance does not necessarily remove a subject from the power exercised over them. Specifically, when invisibility is an active form of life, the actions individuals take to avoid surveillance serve to reaffirm the dominant hegemony.

When one’s way of life hinges on remaining anonymous, any form of surveillance, such as a survey, a health clinic, or research by a young anthropologist is met with necessary suspicion, and is to be avoided. I am an outsider not only in my role as a researcher, but also from a racial and cultural perspective. I also acknowledge that in my capacity as a cultural and racial outsider, I am coming from a point of limited experience and knowledge. I would like to preface this piece by acknowledging these limitations while also asserting that it is still important

to acknowledge the invisible. 'Invisible people' still exist politically, culturally, biologically, and in any other capacity. As such, they deserve careful scholarly attention despite limitations.

### *Contemporary Immigration*

The term 'illegality,' as is it used now to refer to undocumented people, finds its roots in the Immigration Reform and Control Act (IRCA) of 1986. The IRCA, which was created in response to the displacement of nearly 4 million Central Americans following the US-sponsored 1979 Nicaraguan revolution, accepted 2.7 million immigrants on the grounds of temporary employment. It was the first act to make the hiring of undocumented workers illegal, and required employers to obtain employee social security numbers (Camyad-Frexis 2013, 91). Although this act brought in a large number of immigrants, it was also the first legislature that made a distinction between legal and illegal bodies. Since then, the term 'illegal' has taken on a meaning that extends far beyond employment eligibility. As it is used now, 'illegal' has connotations of race/ethnicity, morality, politics, and economics. How then, did lack of papers in the context of labor practices come to embody traits outside of employment? Placing modern immigration in an updated historical and cultural context can perhaps give context to how illegality has changed in substance and meaning.

It is widely accepted among scholars of migration studies that a modern framework for studying immigration is needed (Massey et al. 1998, 3). Theoretical frameworks formed in response to "the economic arrangements, social institutions, technology, demography, and politics" of Industrial Era immigration (late 19<sup>th</sup> century through the early 20<sup>th</sup> century) are largely irrelevant in a contemporary "post-industrial, post-Cold War world" (Castles 2010, 1566). Although specific classifications vary, most scholars of current and contemporary

migration emphasize contextualizing immigration as a normal practice resulting from global changes (Castles 2010, 1566). Despite this support for the creation of a modern framework for understanding immigration, related policies of the World Bank, and the International Organization for Migration are still primarily based around 'receiving country' perspectives. That is to say, it is a perspective that proposes a direct, positive relationship between international migration and the level of development of the countries of origin. This view, however, does not take into consideration the root causes of migration, including living and working conditions in receiving countries, human rights formation in both origin and recipient countries, and the consequences of international aid on development (Delgado-Wise et. al 2013, 433). To create effective and comprehensive immigration reform, immigration must be understood in a global and temporal chronological context, and immigrants must be separated from the popular image of public enemies (Delgado-Wise et. al 2013, 433).

To understand contemporary migration, it is necessary to consider immigration as a product of global conditions, rather than a problem grown exclusively within the country of origin. Within a globalist understanding there emerges a new profile of who immigrates, why, and where. The globalization of economies brought policies of structural adjustment to countries that send out immigrating populations, providing resources and labor to receiving countries. These policies resulted in an asymmetrical economic development along with increased social inequalities within the countries (Delgado-Wise et. al. 2013, 435). In countries with poor economic development and high degrees of social inequality, there emerges a new kind of 'refugee,' one who ends up leaving his or her country not by choice, but rather from pressure because of a persistent lack of social mobility and development in his or her home (Delgado-Wise et. al. 2013, 435). Arguably, those leaving their home countries for better opportunities are

doing so due to free will, disqualifying them as a ‘forced migrant’ or ‘asylum seeker.’ The American legal system shares this Industrialist Era perspective, understanding immigration as resulting from free will and the will for improvement. With this understanding, the 100 million worldwide forced immigrants instead fall into the category of ‘illegal’ or ‘criminal’ (Camayd-Freixas 2013, 90). However, from a globalist perspective that includes national and international structural inequalities, in addition to migrants’ perspectives on why they immigrated, this more comprehensive perspective contradicts the idea that immigrants leave their countries solely for better economic opportunities (Camayd-Freixas 2013, 90). ‘Illegal’ bodies as we understand them now are the products of global systems of power and legislature that created structural distinction between legal and illegal people. Furthermore, American definitions of ‘legal’ and ‘illegal’ are not biologically or culturally innate, but are instead the products of global policy and changing immigration labor laws.

### *The Anthropology of Visibility*

When discussing invisibility, perhaps the first questions to ask are simply, “Who counts? Who is recorded?” When considering rural health, “Where do they count?” is especially important. These questions are all relevant when discussing data, invisibility, and the limits of both epidemiological data and this study. The act of recording an individual’s health data is an exercise of power, but also an act that establishes individual rights and autonomy within the purview of the government. To be able to receive property rights, state services, state protections, legal identity, and citizenship—civil registration or ‘being recorded’ is necessary (Setel et. al. 2007). Thus there exists a paradoxical relationship between surveillance and the individual. Surveillance exercises both power over the individual while also being a mechanism through

which the individual gains autonomy. What is life like when living within this paradox of gaining power while also being a subject to power? How is life different for those who do not have the autonomy given by official documentation, but who simultaneously cannot be recorded in official documentation out of vulnerability and danger should they be noticed in an official capacity?

I am defining the *politics of invisibility* as the power structures, institutions and personal adaptations that serve either to obscure or erase individuals and groups, or cause individuals or groups to avoid recognition and acknowledgement. The politics of invisibility are two-fold in the San Luis Valley. The first form of invisibility is the extreme difficulty that comes with receiving statewide funding as a small, rural, and poor community. The second is a form of invisibility on the individual level that has become necessary due to precarious legal conditions. That is to say, that remaining unknown is required by individuals, families, and communities to maintain their way of life, the integrity of family, and their individual and collective well-being. It is in this rural and acutely dangerous landscape that these forms of invisibility take shape. I attempt to characterize the relationship between those who are the subjects of ‘necessary invisibility’ and those working in the field of public health. For those in public health, the invisible still exist as biological units who must be recorded and treated by a medical definition, and who have the potential to impact the health of others if they are not. I wish to explore the ethics and mechanisms of invisibility in relation to the institutions and the need for surveillance actions by those institutions.

In his exploration into communities of Senegalese immigrants living in Italy, Donald Martin Carter identified three forms in which the migrant community he studied became ‘invisible.’ Carter’s subjects experienced forms of erasure by exclusion from official statistics



such as census data, informal policing and exclusion from public spaces, and social exclusion from non-migrant communities outside of work (Carter 2010, 5). These mechanisms of “power, politics and social positioning” served to erase the Senegalese migrant community from collective memory and social imagination, situating the community and individuals at a cultural margin never fully acknowledged in official and social worlds. The politics of invisibility that resulted in exclusion were forms of power dependent on routine application of exclusion toward subjects as well as forms of power based on social and cultural practices and opinions (Carter 2010, 5). Similar politics of invisibility and exclusion were exercised over gay Cuban *Marielitos* following the 1980 Mariel boatlift to Miami. In the heat of the Cold War, media stories about the survivors of Communist Cuba were stories too topical to turn down, and consequently, the *Marielitos* had the added element of widespread media coverage. Despite some estimates that half of the immigrants from Mariel were openly gay, their sexual identity was actively excluded from media stories, and resolutely silenced when mentioned (Peña 2002, 43). Excluding sexuality employed the bodies of the invisible in the greater state, media, and social discourses during the Cold War (Carter 2010, 14; Peña 2002, 43). In this case, there exists a ‘visibility paradox’ of both invisibility in the form of exclusion and hypervisibility in the form of selective and loud media attention.

As in the case of the *Marielitos*, illegal immigrants in the U.S. are currently subjects of what has become known as the ‘visibility paradox.’ They belong to a population which is loudly and frequently talked about politically and in the media, while simultaneously being excluded because the risk of deportation limits their options to speak publicly about themselves. In the context of the lives of migrant workers, I understand invisibility as a state regularly placed upon subjects through an exclusion from official records and dialogues, reaffirmed by rhetoric that

serves to ‘other’ the subjects (migrant workers), and a self-exclusion from public spaces. Such systems that create invisibility are dynamic and ongoing practices that require regular supply rhetoric to ‘other’ subjects (Carter 2010, 6). The bodies that I am focusing on are, of course, biological bodies, but they have additionally become the subjects of heated political discussion. I theorize that the invisibility and silence of this population allows for the selective use of their bodies to fit specific political, media, and social narratives. I hope to speak to how political climates affect the lives of their subjects, specifically what the effects of necessary invisibility are upon bodies and upon interactions with public health officials. Given the political climate of the timeframe I am writing within, questions of power over those being studied are especially relevant.

The goal of this work is to paint a human portrait of my subjects in the context of the Valley, the political setting, and as subjects of medical and political power. I wish to acknowledge the effects that power produces in my subjects, while also speaking to public policy gaps caused by selective visibility.

### *Foucault on Power*

This ethnography assumes that all informants and groups of individuals reside under the power of the modern state. As I understand it, all individuals are subjects within governmental systems of power regardless of the extent to which they directly engage with it. To understand this power, and specifically its effects on all those discussed, I am working from Foucault’s description of the modern state and the ways in which it creates subjects. In his 1975 work, *Discipline and Punish*, Foucault outlines the history in which states have imposed power over their subjects, specifically focusing on the treatment of prisoners, criminals, and anyone else who

did not align with the state's image of a docile and contributing citizen. In 1837, Foucault highlights a distinct shift in prisons. Rather than strictly controlling the bodies of prisoners through rigorous and strict schedules, the creation of a new style of prison—the Panopticon—changed how the prisoner was controlled (Foucault 1977; West 2018). The Panopticon was the perfect prison as put forth by Jeremy Bentham. It consisted of prison cells with closed-off walls, excepting one wall, which opened onto the interior of the prison toward a guard tower. The prison would be arranged so that from this central guard tower, a guard might be able to look into all the cells encircling him, without the occupants of the cells knowing he was watching them. Why this architecture made such a perfect prison, Bentham argued, was that, at any moment, the guard might be monitoring the prisoner, but the prisoner could never be certain. This knowledge of surveillance ensured that the prisoners would monitor their own behavior at all times, policing themselves. It was in this way that docile subjects were created and maintained as the power over the body shifted to power over the mind (Foucault 1977; West 2018).

Taking a step back, Foucault used the metaphor of the Panopticon to explain the ways in which the modern state creates and maintains power over subjects. There are three elements of the Panopticon that are necessary for it to successfully exert power over its subjects—surveillance, normalization, and examination. Normalization, meaning a normalized standard of behavior of how a 'good citizen' or 'good prisoner' should act, would be enforced by surveillance and the constant possibility of being observed and surveilled. Examination is the act of comparing behavior surveilled with 'normal' behavior. With the possibility of surveillance, not only would a guard examine the prisoner to ensure they fit within normal behavior, the prisoner would examine themselves to ensure the same standards. This, Foucault argues, is how the modern state

is set up, with prisoners being citizens, and guards being state power (Foucault 1977; West 2018).

The two most significant forms of Foucauldian power referred to in this thesis are pastoral power and the objectification of bodies. In the lives of my subjects, these powers are exercised over them by the state or the U.S. government, and by the medical and public health system. To understand the lives of my subjects as members of a marginalized group and members of a rural community, contextualizing their lives within power systems is necessary. As discussed previously, my subjects exist within power systems that render them invisible or hyper-visible, and remove individual autonomy over their own visibility. This section aims to explore these forms of power in depth and discuss how they might affect the subjects of this study.

The first relevant form of power is that of pastoral power. Finding its roots in the Catholic church, pastoral power is oriented toward saving the individual: it is non-optional, individualizing, constant throughout life, and helps to create individual truth and identity (Foucault 1982, 783). Pastoral power is now the foundation of the modern state as a structure where individuals are members of the state and have state guaranteed protections, under the condition that they fall within the criteria of ‘salvation’/normalcy as set forth by the state (Foucault 1982, 783). What emerges is an understanding that modern institutions of power such as public institutions (law enforcement), private ventures (benefactors, NGOs), and ancient institutions (the family) take on the form of pastoral power, which allows for “individualizing techniques,” ones which allow for variation between individuals, while also enforcing contradictory “totalization procedures” (Foucault 1982, 782), which require variation to fit within certain accepted scopes. In application, ‘salvation,’ protections and benefits ensured by

these institutions, is granted to individuals on the condition that the individual meets its requirements to fit within the system of power (Foucault 1982, 782). My subjects experience this form of power as members of a rural community and as members of a community that do not enjoy full governmental rights and protections, and find themselves excluded by other institutions.

The first form of power relevant to this investigation is the power of the state over rural communities. For this section, state is defined as a system of governing power rather than a regional location. The San Luis Valley's place as a rural, sparsely populated, impoverished region of Colorado makes representation and funding acquisition difficult. Since laws are passed in Denver from a primarily urban perspective, providing real input into the laws and policies that affect the people of the San Luis Valley is extremely difficult. Furthermore, when applying for Colorado and federal funding, the San Luis Valley does not fit many basic requirements needed for receiving grants; these requirements mean the region would have to change in order to meet proposals, or not receive adequate health funding because of their community's rural nature. As noted in my discussion of invisibility, migrant agricultural workers are often invisible or hyper-visible. Part of this is because of pastoral power's effects on the individual. Pastoral power grants rights to those individuals who meet certain criteria. For migrant agricultural workers, these full rights and protections are not granted because they do not fit into the view of an 'approved' individual through the lens of pastoral power. As mentioned previously, 47% of US agricultural workers do not have legal work authorization. In this case, 'legal authorization' is a characterization which gives the individual 'salvation' or protections. Not having legal authorization can take away union protections and protections from adverse working conditions. Furthermore, migrant agricultural workers, who do not work where they live for most of the

year, or who do not have a permanent address, can be excluded from government services which require a permanent address or an address in the state where services are being offered.

### *The White Plague*

The New World's first known case of *Mycobacterium tuberculosis*, the bacterial agent of tuberculosis, was found in the lungs and lymph nodes of a 10,000-year-old Peruvian mummy, indicating that the 'white plague' came to the Americas prior to the arrival of Europeans (Levy 2012, 626). In both ancient and modern times, tuberculosis has been most prevalent in concentrated areas where it could be transmitted through contact with individuals with active tuberculosis. *M. tuberculosis* has evolved in populated environments, being able to remain dormant in an individual for decades until the individual's immune system is weakened, and the bacteria can propagate inside the host's body (Levy 2012, 626). Chapter II focuses on the epidemiology of tuberculosis, with a focus on tuberculosis prevalence in the San Luis Valley, Colorado, and among migrant workers. This section outlines the value of studying tuberculosis and how the disease can reflect cultural conditions of those infected, as well as how tuberculosis can be used as a tool to understand overall population health.

Globally, 25% of the world's population has latent tuberculosis infection, which in 2017 led to the infection of 10 million people, and the subsequent deaths of 1.3 million people (TB Statistics United States n.d.). In the United States, as in many developed countries, tuberculosis is of miniscule concern, with very low incidence rates (2.8 out of 100,000 in 2017). However, to consider tuberculosis a disease contained by borders would be ill informed in a globalized world. As discussed in more depth in later chapters, the majority of tuberculosis cases in the United States are in foreign-born individuals (TB Statistics United States n.d.). Risk factors that affect

the transition from latent tuberculosis to active tuberculosis include co-infections of conditions (which weaken the immune system of hosts) and age-related weakening of immune systems. Various behaviors and statuses also increase the risk of tuberculosis infection such as excessive alcohol use, non-injectable drug use, homelessness, and incarceration (TB Statistics United States n.d.). Considering these factors can shed light on the lifestyles of populations within the United States with high rates of latent and active tuberculosis.

Canada, like the United States, has low rates of tuberculosis, consistent with a developed country. However, in Nunavut, Canada's northernmost territory inhabited largely by indigenous Inuit people, tuberculosis is still an active disease with a tuberculosis rate 62 times greater than the rest of Canada. The question then arises—why is tuberculosis so prevalent in this population? The answer lies in Nunavut's rural nature, the typical, daily living conditions, and the historical relationship between Nunavut and public health institutions. Nunavut, like the San Luis Valley, is extremely rural. These living conditions combined with a historical mistrust of public health officials make screening infrequent and public health policies difficult to implement. The mistrust of public health institutions finds its roots in the Nunavut tuberculosis outbreak of the 1950s and 1960s in which those infected were taken to sanatoriums and hospitals far from their homes, frequently without consent or notice (Stevenson 2014). This historical experience with tuberculosis and public health officials has created a generalized fear of public health institutions and their personnel (MacDonald et al. 2011). This distrust of public health is also evident in migrant communities in the United States. The living conditions and lifestyles for most residents of Nunavut compound risk of tuberculosis infection. High rates of poverty, unemployment, lack of quality housing, the prevalence of smoking and second-hand smoke exposure, poor nutrition, and excessive use of alcohol are all risk factors for transmission and infection specifically

common to Nunavut and migrant workers (MacDonald et al. 2011). Nunavut shows that there is a relationship between a culture's experience, its ways of life, and vulnerability to disease. In the case of tuberculosis management, "you can control the disease best by alleviating the miserable conditions people live in ... if we don't address the basics of poor nutrition and overcrowding, then we are going to keep on chasing our tails" (Levy 2012, 629).

Tuberculosis can thus be understood as a disease that is affected by many factors beyond simply *M. tuberculosis*; that is, tuberculosis has a deeply social component. An understanding of these factors, and why tuberculosis disproportionately affects certain populations, may be useful in assessing other health issues in marginalized populations and the relationship between affected individuals and public health institutions.



## Chapter II – Epidemiology of tuberculosis

In this section, I compartmentalize anthropology's intersection between the realm of 'hard science' and 'social science.' This section uses epidemiological data and methods to characterize the issues being investigated from a qualitative approach.

In 2017, a total of 9,105 cases of active tuberculosis were identified in the United States, with an incidence rate of 2.8 cases per 100,000, an extremely low incidence rate relative to most of the world. From a public health perspective, managing the spread of tuberculosis is dependent on maintaining a low incidence rate of active and latent tuberculosis, which reduces the likelihood of tuberculosis spreading to other potential hosts. In the past fifty years, incidence rate has reduced significantly; however, in more recent years, the rate has decreased only slightly and remained relatively stagnant. The United States' stated goal, more ideological than practical, is to eliminate tuberculosis in the United States. The question is, then, what populations are most at risk of tuberculosis and should be given special attention to reduce the stagnant incidence rate? (TB Statistics 2018).

### *Etiology and Risk Factors*

Tuberculosis is caused by the bacterial agent *Mycobacterium tuberculosis* (*M. tuberculosis*). It is spread through droplet nuclei which originate from a host's lungs and may be expelled through the process of coughing, sneezing, shouting, or singing. To contract *M. tuberculosis*, an individual must inhale the airborne nuclei, typically acquired by being near a host expelling droplet nuclei. Tuberculosis is often transmitted between individuals who spend extended periods of time in close quarters. Exposure to *M. tuberculosis* does not necessitate the

development of tuberculosis. Once in the lungs, *M. tuberculosis* must reach the alveoli of the lungs, where they will be met by alveolar macrophages and ingested. At this point, most bacilli are destroyed or inhibited; however, some reproduce within the macrophage, and are released upon the death of the macrophage. The bacteria either continue to reproduce in the lungs or travel through the bloodstream to other parts of the body, including the lymph nodes, kidney, brain, and bone (Pulmonary tuberculosis Etiology 2019).

Latent tuberculosis (LTBI) is the presence of *M. tuberculosis* in a host's lungs that is actively contained by the immune system. Macrophages surround the bacilli and form a barrier shell known as the granuloma to prevent the reproduction of the bacteria. Active tuberculosis infection occurs when the immune system cannot successfully maintain this granuloma, and the bacteria begin to multiply, rapidly affecting the body's tissue. The transition from LTBI to tuberculosis is heightened by compounding conditions which may affect an individual's immune system. These include hosts with co-infection of HIV/AIDS, hosts under the age of 5, hosts receiving immunosuppressant therapies or drugs, cigarette smokers, those who abuse alcohol or other drugs, and hosts with compounding medical conditions such as cancer, diabetes, renal failure, and silicosis. (Pulmonary tuberculosis Etiology 2019).

Clinical symptoms of pulmonary tuberculosis, the most common form of tuberculosis, include coughing which lasts at least three weeks, chest pain while coughing, blood while coughing, chest pain while breathing, loss of weight, fatigue, fever, and loss of appetite. An individual presenting clinical symptoms will likely receive a chest radiograph and test for *M. tuberculosis* before a clinical diagnosis of active tuberculosis ("Directly Observed Therapy (DOT) for the Treatment of Tuberculosis" n.d.).

### *Course and Outcome*

Subjective diagnosis of tuberculosis is based upon an individual's exposure history, symptoms, and tuberculosis risk factors ("Directly Observed Therapy (DOT) for the Treatment of Tuberculosis" n.d.). If a practitioner suspects tuberculosis based upon the subjective criteria, numerous tests can be conducted for a definitive diagnosis. An individual very likely has tuberculosis if they test positive with a Mantoux tuberculin skin test, have a positive stain of acid-fast bacillus from samples taken from lungs, have chest radiographs consistent with pulmonary tuberculosis, respond to tuberculosis antibiotic treatment, or have a positive culture of *M. tuberculosis* in a nucleic acid amplification test ("Directly Observed Therapy (DOT) for the Treatment of Tuberculosis" n.d.).

If an individual tests positive for tuberculosis, a six-month course of daily antibiotics is administered under directly observed therapy (DOTS) to ensure a patient completes the full course of antibiotics. Directly observed therapy requires a health worker to meet with a patient every day they are scheduled to take an antibiotic dosage. The patient takes the medication under the direct supervision of the health worker to ensure a patient adheres to the antibiotic course ("Directly Observed Therapy (DOT) for the Treatment of Tuberculosis" n.d.). DOTS ensures a successful treatment on the individual level and prevents the development of antibiotic resistant forms of tuberculosis, which have become a recent concern (Karumbi and Garner, 2015). Because of the medication's range of side effects, nurses treating patients also regularly take blood samples to monitor a patient's health and ask a variety of questions about any side effects being experienced ("Directly Observed Therapy (DOT) for the Treatment of Tuberculosis" n.d.).

A confirmed case of active tuberculosis also requires contact tracing to find all individuals with whom the patient came into contact while contagious. As with DOTS, health

professionals become intimately involved in the lives of individuals to find all possible cases of transmitted tuberculosis.

Public health response and treatment of tuberculosis necessitate direct and intimate contact between patients and public health workers. The procedures related to tuberculosis treatment are intensive, for both public health workers and patients. I theorize that in populations where surveillance is met with suspicion, compliance with tuberculosis treatment is especially difficult to enforce because of distrust between patients and health workers as government representatives. Based on this, I chose to focus my research on populations and individuals who avoid medical surveillance and the effect this avoidance has on the individual, the population, and the culture.

### *Latent Tuberculosis in Migrant Workers*

When looking at specific populations where active tuberculosis is prevalent, predicted cases of tuberculosis can be based on prevalence of latent tuberculosis and conditions which can affect the immune system, including co-infection of disease, age, and extensive stress. An individual with latent tuberculosis has a 5-10% chance of developing active tuberculosis in their lifetime (Garfein et. al 2011). The probability of active development is affected by numerous behaviors and physical conditions.

In multiple studies conducted along the US-Mexico border, populations of migrant workers have been found to have extremely high rates of latent tuberculosis. In a cross sectional study conducted on 133 members of the migrant agricultural community of San-Quintin, Baja California, Mexico, 39.8% of individuals blood tested positive for latent tuberculosis (Garfein et. al 2011). Similar results were seen in a study conducted with farmworkers crossing the US-

Mexico border near the San Luis region of Arizona. Out of 109 farmworkers whose main source of employment was seasonal agricultural work and who had been employed within the past two years, 55% tested positive for latent tuberculosis (Oren et. al. 2016). Both studies suggest high rates of latent tuberculosis specifically in migrant agricultural workers. When considering these rates in addition to the likelihood of developing active tuberculosis at some point in an individual's life, it can be theorized that migrant agricultural workers have a 3.184% – 5.5% chance of developing tuberculosis if they have no compounding conditions which affect the immune system.

*Prevalence in Colorado*

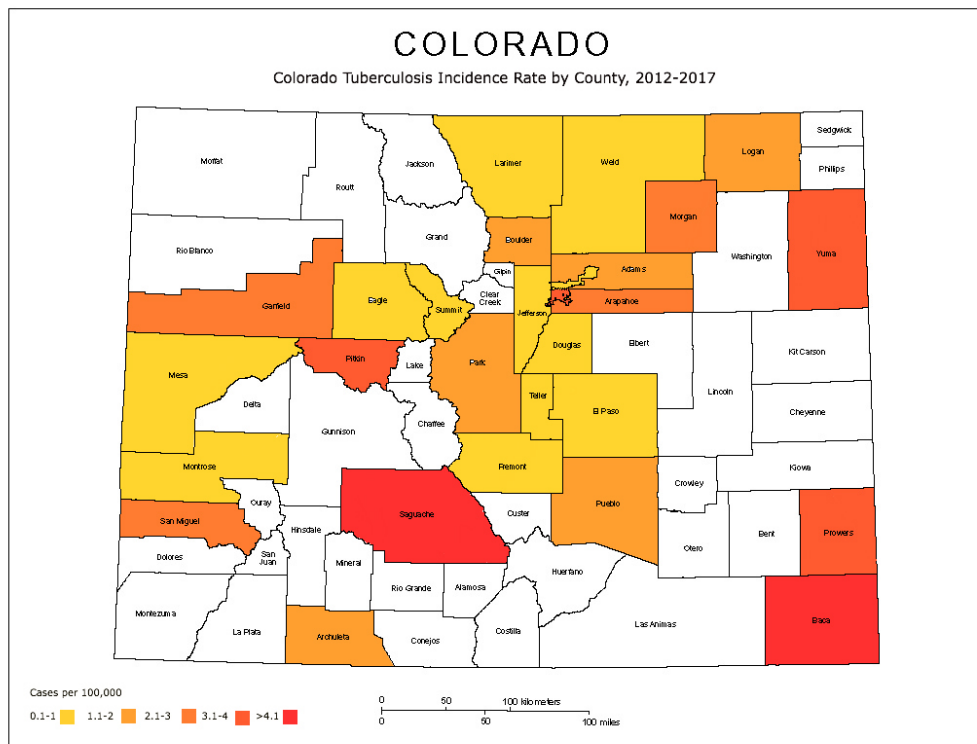


Figure 1: Tuberculosis incidence rate by Colorado county, 2012-2017. Incidence rates from Colorado Department of Public Health & Environment. (Tuberculosis in Colorado, 2017).

As mentioned previously, tuberculosis incidence rate in the United States is low compared to most other countries. Incidence rate in Colorado is lower than the national rate at 1.3 cases per 100,000 (compared to 2.8 cases per 100,000). Incidence rate is a relative measure based upon the total cases reported relative to the total population of the area. This means a relatively small number of individuals may get sick, but in comparison to the total population of an area, the rate of illness can be higher than other areas which experience more cases. Incidence is of note when considering prevalence of disease in small populations. Although the raw number of cases of disease may seem insignificant, relative to the population size the incidence rate of a given disease may be higher if a population is especially small.

In the Colorado county of Saguache, between 2013 and 2017, a total of 3 cases of tuberculosis were reported. The total population of Saguache is 6,208 individuals. Given the cases of tuberculosis between 2013 and 2017, the incidence rate for Saguache county is 9.4 cases per 100,000, a rate that is over three times the national rate, and over seven times the rate in Colorado. High incident rates of tuberculosis in Saguache are also unusual in that Saguache is sparsely populated, unlike urban centers where high incidence rates of tuberculosis are seen more often (“Tuberculosis in Colorado in 2017” 2017).

Consisting of a total of 3,168 square miles, Saguache has an average of 1.9 persons per square mile. Saguache County fits comfortably within the classification of a ‘frontier’ area defined by the Frontier Education Center as an area with less than seven people per square mile (“Frontier: A New Definition” 1998). When examining tuberculosis in the San Luis Valley, two factors are of interest: the relatively high incidence rate and the sparsely populated nature of the valley. The primary concern is not epidemic levels of tuberculosis, as is a concern in high density populations such as cities and prisons. Rather, the majority of cases in the San Luis Valley occur

in foreign-born individuals who most likely contracted tuberculosis in another country, but whose case became active while living in Colorado. The concern from a public health perspective is less on the spread of tuberculosis and instead on managing active cases and preventing conditions which make a latent infection active.

In the United States, most cases of tuberculosis are foreign-born. In 2016, 6,307 reported cases of tuberculosis out of the total 9,287 total cases (66.2%) occurred among foreign-born people. Out of these foreign-born cases, the top five countries of origin were Mexico, the Philippines, India, Vietnam, and China (TB Statistics in the United States 2018). In 2015, 79.5% of tuberculosis cases in Colorado occurred in foreign-born individuals (58 of the 73 cases) (TB Statistics in the United States 2018). In large populations of foreign-born individuals from countries with higher rates of latent tuberculosis, the risk of developing active tuberculosis is of significant concern.

### Chapter III – Research

In the Spring of 2018, I found myself in the San Luis Valley. My sophomore year of classes had just ended, and a group of friends and I stuffed ourselves into a car to go camping and rock climbing in the valley. At that point, regarding my undergraduate honors thesis, I knew I wanted to better understand rural communities, but beyond that I had not narrowed my focus any further. After conducting some research, I left a message for La Puente, an Alamosa<sup>1</sup> based nonprofit, asking if someone would be willing to speak with me regarding issues of poverty in the San Luis Valley. With my standing as an undergraduate student, I was not expecting a response and had left my message well after business hours, fearing that if I spoke with someone directly, I would surely be turned down.

To my excitement, I received a call back two days into our camping trip and coordinated a meeting. I put on my nicest looking camping clothes, braided my hair to hide how dirty it was, and promised the boys I was camping with to bring back lunch if I could take the car into town. I met with the La Puente representative at a coffee shop on Alamosa's main street and received my first introduction to the communal spirit of the Valley. She was encouraging and enthusiastic about my ideas and discussed aspects of life in the Valley and the pervasive poverty La Puente addresses. As people entered the coffee shop, she seemed to know everyone and introduced me around. People met my project with the same encouragement as she did. Although I witnessed just a taste of the community spirit there, I got my first glance into the lively spirit of the people working at La Puente and of the community in the valley they support.

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<sup>1</sup>La Puente is an Alamosa based non-profit that aims to address the symptoms of poverty.



In the same coffee shop, several months later, I met with Ginger Stringer who was, at the time, the Alamosa epidemiologist whose jurisdiction included all six counties in the Valley. Knowing I wanted to pursue an undergraduate honors thesis in medical anthropology, I met with Stringer to gain ideas in order to narrow down my thesis question. Our conversation brought up many potential avenues—drug use, diabetes and obesity, difficulty with outreach programs—but she paused notably during our conversation. She said she had some unusual cases every so often that might be of interest to me (and my medical anthropology focus). She said about once a year in the Valley, she received a report of tuberculosis, and in every case she had worked except one, the patient had been a migrant agricultural worker.

Tuberculosis was a disease I originally thought of in simple, black and white terms. In school, it was taught in the context of a time in Colorado's past when one out of every three Colorado residents had had tuberculosis, and people flocked to Colorado for its sunshine and dry air. When I was in high school in Lakewood, Colorado, every day on the way to school I drove past a dilapidated cemetery full of graves from the height of the tuberculosis surge in Colorado. I also knew of an old sanatorium made to look like a small town. It was designed to give patients 'a sense of humanity,' and is now the campus of the Rocky Mountain College of Art and Design. I knew what tuberculosis was in a very general sense, but this was the first time I had learned of a case in the 21<sup>st</sup> century.

What further intrigued me was that nearly all of the cases Stringer recalled had been among migrant farmworkers. The connotation of a migrant agricultural worker in the American West is that they are of Mexican descent, and the connotation of Mexican migrant workers in America is that they may be 'illegal.' At the time of writing this thesis, Mexican immigrants, both legal and illegal, were being talked about frequently in the context of national politics.

President Trump's notoriously proposed border wall and inflammatory comments about Mexican workers of all kinds put them at center stage in the national discussion of immigration. Missing from these national discourses were faces, names, and descriptions of lives, details that turn abstract discussions of humans into concrete discussions about fellow people. I grew up in North Denver during the 2000's. Prior to gentrification, the neighborhood was primarily made up of first and second generation Mexican families, and many of my neighbors and classmates had the distinctions of 'legal' and 'illegal' tied into their identities and families. For many Mexican Americans, regardless of legal status, the risk of deportation is real and is intertwined with their family, livelihood, and safety. Missing from national discussions were the factors that transform people from ideas and numbers to humans with whom we can empathize. The potential to help re-paint a portrait of the humans behind the negative rhetoric about them motivated me to pursue the cases Stringer described.

### *Methods*

Between January and August 2018, I interviewed five individuals who could offer information on the San Luis Valley, migrant workers, tuberculosis, or a combination of these subjects. Interviews with informed citizens lasted between 40 minutes and 80 minutes. The majority of my informants worked in the field of public health. Procedures for this study were compliant with the University of Colorado's Internal Review Board (IRB) and received data security approval from CU's Office of Information Technology. This study also received a Certificate of Confidentiality from the National Institute of Health. These precautions and protections were taken because of initial study plans that would have included speaking with migrant agricultural

workers. However, given the restraints of this study, I did not speak with migrant agricultural workers themselves, but did my best to understand their relationship with the public health system. The most difficult of these constraints was time—both the temporal and seasonal presence of migrant farmworkers in the Valley and the admittedly short timeframe available to gather information relevant to this thesis. The second constraint was the necessary caution I had to take as a researcher investigating potentially sensitive subjects and individuals who are also extremely vulnerable on a number of accounts. Interviewing migrant workers would require a relationship of trust between the potential subject (the migrant worker) and the researcher (me). Although the public health outreach organizations had a long-established relationship of trust with this population, given the nature of surveillance and the potential for mistrust, I wanted to establish a relationship separate from that of the organization so as not to risk the existing trust. In future studies, if given adequate time, migrant workers could be spoken to. This would be advantageous and offer important perspectives concerning their relationship with public health officials, among other things.

### *Subjects and Interviews*

The interviews were conducted primarily over the phone; one was conducted in person at the informant's private office, and one was conducted in the informant's car while visiting the Valley. All but one of the informants were public health officials, so the list of questions and themes for the interviews was similar for nearly all the people I interviewed. For the informant who was not in the public health sphere, I asked similar questions to those asked of public health officials, but tailored those inquiries to be more specific to his outreach programs. All informants for this study received an informed consent document detailing my purpose, procedures,

certifications, and potential risks associated with participating. The informed consent included an option to not be identified in this study, requiring the removal of identifying information for the informant. This includes name, age, place of residence, specific position, or any other details specific enough to potentially disclose the subject's identity. Only one subject chose to remain anonymous in this study. All potentially identifying information has been removed and the individual is referred to by a randomly chosen number.

Paul Wertz: Paul Wertz is a registered nurse in the San Luis Valley and the regional tuberculosis specialist. He received his bachelor's degree from Adams State University and his master's degree in nursing education. He has lived in the Valley most of his life, from elementary school through college. His position as the regional tuberculosis specialist was created in the past two years after a number of tuberculosis cases emerged in the Valley.

Ginger Stringer: Ginger Stringer worked as the San Luis Valley's epidemiologist office until the Fall of 2019. I spoke with her in preliminary interviews that were useful to me in terms of narrowing down a research question regarding rural health. As the regional epidemiologist, Stringer helped to collect and report tuberculosis counts to the Centers for Disease Control (CDC), and was also responsible for conducting disease investigations at a local level.

Informant 8: Informant 8 is an outreach worker specializing in migrant agricultural workers who has worked in her position for an extensive amount of time. Her outreach team provides a wide variety of services to migrant agricultural workers.

Lance Cheslock: Lance Cheslock is the founder of La Puente, a San Luis Valley based nonprofit organization that relieves the symptoms of poverty. La Puente offers a variety of services, including homeless shelters that house migrant agricultural workers. Cheslock has also worked closely with many subcultures in the Valley and offers insight into farming trends and labor patterns over the years.

Carol Bergman: Carol Bergman is a public health nurse who specializes in tuberculosis management in the Denver metro area, including Boulder, CO. Bergman confirms or rejects suspected cases of tuberculosis, conducts contact investigations of active cases, and works with patients to ensure they receive treatment. This can include costs beyond medical care, such as transportation, housing issues, or other associated costs of living with illness. Bergman has worked on many different cases across a variety of populations.

### *Analysis of Data*

In compliance with IRB and Office of Information Technology (OIT) data security procedures, interviews were uploaded to my personal computer and a university affiliated Google Drive after their completion. I transcribed each interview by hand and removed identifying information from the informant who chose to remain anonymous. I looked at the interviews to find common themes mentioned about the Valley, tuberculosis, and the relationship between public health officials and migrant workers. I present my data in the form of an ethnographic narrative based around myself, or as a descriptive narrative of an event compiled from descriptions given by multiple informants. In cases when I was told about a theme by only

one or two informants, I do my best to supplement the collected data with literature about the same themes.

My ethnographic findings are broken down into two categories of sub-findings, those that attempt to answer my narrower questions, and those that do not (but which I still thought to be important research findings). One part which does not answer my specific research questions, but I encountered in my research, is categorized into a general ethnographic survey of the Valley. The second part includes findings which can give specific insight into the interactions of migrant agricultural workers and health care systems within the broader culture of the San Luis Valley.

## Part I: Ethnographic Survey Findings

### *I. Representation of Rural Communities*

Many of the informants I contacted worked either for the state or for non-profit organizations that receive or have received state funding in the past. All informants discussed the difficulty in applying for and receiving government funding because of what they felt was a ‘mis-representation of the Valley.’ Based on my interviews, I have found two specific ways that rural communities have struggled to receive funding. The first way in which rural communities are left out of federal funding is because the federal agencies do not consider the size or geography of the area when determining the funding levels. Additionally, there are many populations in the area that follow ways of life that fall outside the norms recognized by the federal government. The second way in which rural communities are misrepresented is through data collection procedures that privilege densely populated urban areas and disadvantage rural areas. The data collection, the geography, and a host of issues have all made it difficult to apply for and receive funding, and have, in some instances, contributed to outsiders’ misunderstandings about the Valley. Outsiders, those who try to understand but are not from the Valley, can make the Valley appear either backwards and without adequate resources or generate data that paints an incorrect or misleading picture of the Valley.

### *Tuberculosis*

Because this thesis focuses on the burden of tuberculosis, many of the subjects I spoke with brought up the problems of representation and funding streams within the context of tuberculosis. Tuberculosis is a resource intensive disease: public health officials and nurses perform directly observed therapy (DOTS), arrange transportation and housing to prevent

transmission, and perform contact tracing to assess if others could be at risk for infection. In the San Luis Valley, where it is not uncommon for someone to live in one county, work in a second, and shop in a third, public health officials cross county lines and vast distances to do their jobs, so the burden of tuberculosis can be even greater. Paul Wertz, the Valley's tuberculosis specialist, was hired for just this reason. His job is to manage cases that are often multi-jurisdictional. His position would likely not be needed in urban areas where crossing counties and jurisdictions involves fewer resources or may not be as common.

Tuberculosis case counts determine funding; however, in rural settings, case counts do not necessarily reflect a disease's burden. Ginger Stringer, the previous epidemiologist of the Valley, noted how CDC standards for counting cases of tuberculosis can drastically impact case count, thereby impacting funding. In her time as the Valley's epidemiologist, Stringer recalled the last two cases she worked on, both of which did not count toward the official case count. In rural areas, stray cases that are not included in the official count have a much smaller effect on the data that describes a disease's burden.

In one case, the Valley's health department received a call from an Arizona health department. A homeless patient died in Arizona. Upon autopsy, it was discovered that he had an active case of tuberculosis. In the contact tracing investigation, the Arizona health department realized that the patient had spent extensive time in the Valley six months prior, while he was contagious. The San Luis Valley department of public health had to conduct their own contact tracing on a highly mobile population based on information six months old. The investigation was expensive and resource intensive. Although this case of tuberculosis placed a heavy burden on the public health department, it was not included in the case counts, and therefore was not considered when receiving funding.



The second case Stringer mentioned is discussed in more detail in a different section. This is the August 2018 case of a migrant worker with tuberculosis. To make sure the patient was not infecting others, the Valley's public health department needed to keep him in the Valley until he was no longer contagious. The health department financially covered living costs, including food and shelter for this patient while he began his course of antibiotics. They were also responsible for conducting contact tracing and covering the medical costs of the patient. When the patient was no longer contagious, and the Texas health department was contacted, the patient boarded a bus to go back home. Despite the Colorado public health department's agreement to financially cover the many associated costs to ensure the patient received treatment and would not place others at risk, the case did not count for the San Luis Valley.

In populated areas, cases like the aforementioned do not make a significant impact on net case counts. While some cases leave and are counted elsewhere, a relatively equal number comes in from other places and are counted. In rural areas, where there are few total cases, a patient being counted elsewhere impacts data significantly. Although I describe only two cases I came across in this manner, when there are only three records of tuberculosis in the San Luis Valley between 2013 and 2017, these two cases—counted as belonging elsewhere—have a large impact on the descriptive data of disease burden.

### *Homelessness*

Poorly adapted data procedures have also affected funding meant to address homelessness in the San Luis Valley. Lance Cheslock, the director of the Alamosa based organization La Puente, explained the struggles of creating a statistically accurate data set given current data collection procedures. La Puente is a Valley-created and Valley-supported nonprofit

with the goal of relieving the community symptoms of poverty. La Puente provides food, shelter, clothing, and many other services to those in need in the San Luis Valley. To receive funding to address homelessness, La Puente works with the United States Department of Housing and Urban Development (HUD). As Cheslock points out, the ‘U’ in HUD “stands for urban.”

Methods for quantifying homelessness across the United States are dictated by HUD. These include methods such as ‘point in time studies,’ wherein the homeless population is counted on a set date, and that day’s sample is used as an annual indicator of homelessness. Further, HUD’s definition of ‘homeless’ has changed between years, ranging from new definitions, broadening or narrowing the scope of the definition, or returning to previous definitions. This fundamentally changes who is counted, therefore affecting the broader narrative about a given area through data.

For La Puente, this has generated inaccurate data sets. Using a singular date in the year can over or underestimate homelessness in the Valley because of the seasonal migrant population. Further, when definitions of ‘homeless’ change between years, it is difficult to create an accurate timeline of how homeless populations have changed over time. Cheslock recalls that, during one year, HUD changed the homeless count from including those living in substandard housing to those living with no housing. There was a migrant camp with 120 individuals in a warehouse with one bathroom and one hot plate. However, since the warehouse did indeed have a roof, none of those individuals counted.

Cheslock recalls going to Denver, and being complimented about the apparent drop in homelessness in the Valley when, in fact, the only thing that had significantly changed was the definition of who needed HUD’s help. As summed up by Cheslock, “the census of the homeless

begets funding... and so you change the metrics of the data to suit your own population needs ... that's the rural story for you.”

*Case Study: Tierra Nueva*

I will use the housing project Tierra Nueva as a case study to understand the complexities of applying rural data to receive funding. Tierra Nueva is an apartment and dormitory housing development in Center, Colorado. Tierra Nueva was built to address the living conditions of the Jimenez<sup>2</sup> Camp, which at the time placed many in substandard living conditions. As Lance Cheslock recalled, “there was one toilet for everyone” and “the women’s bathroom door was torn off, and the toilet was busted in half, water would be flowing out the door.” The founders of Tierra Nueva used the Jimenez Camp as a reason to do better.

Tierra Nueva was designed with compassion. As one of the board members pointed out to me, it was built to encourage community in the project. At the center of the chain of buildings is a Head Start program for migrant workers’ children. Also, in the middle is a restaurant, meant to provide a gathering place for residents. Tierra Nueva was created by a group of people who worked closely with migrant workers and had the compassion to want to give them a better housing option. Despite their best intentions, Tierra Nueva fell victim to grant requirements that did not ‘correlate’ with the migrant population of rural Colorado.

The first issue Tierra Nueva faced upon opening its doors was calculating rent for residents. As a federally funded housing project, rent is subsidized by asking residents to pay 30% of their income as monthly rent, which is then calculated using tax returns. None of the migrants had brought their tax returns with them, so rent was calculated with recent pay stubs. In

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<sup>2</sup> The name of the housing camp has been changed.

the case of someone who is seasonally employed, however, their income during the period of employment does not accurately reflect how much money they make. Cheslock recalls that for its first year, Tierra Nueva was virtually empty, and had not addressed the issue of substandard housing.

The second issue Tierra Nueva encountered was related to the project's mortgage. Tierra Nueva needed 12 months of income in order to pay its mortgage, but migrant workers were only living there during the planting, weeding, and harvest seasons. Conservatively, this is from May through September. For the rest of the year, Tierra Nueva was almost entirely vacant. Lance Cheslock helped to arrange homeless populations to live there while it was vacant, but since it was built for migrant workers, the homeless residents were evicted from the space once the farm workers came back to the region for work. The displacement of large populations once a year was not a permanent solution. Tierra Nueva is now simply low income housing rather than migrant agricultural worker housing. More recently, the Jimenez camp was fixed up to address the substandard living conditions it previously held, and is once again occupied.

I highlight this case to show the complexities of receiving consistent federal aid and to highlight the difficulties of meeting grant requirements in rural communities whose populations are unlike those of many other places.

## *II. Community Cohesion*

### *The Longest Lawsuit in Colorado*

In 1844, the Beaubiens, a noble family in the Mexican owned territory New Mexico, received the Sangre de Cristo land from the Mexican government. As an Atrisco Merced land grant, a condition of the grant was that the land would be used to found a settlement, and the

grant included a variety of perks to encourage economic growth in the area by supporting any new settlers. Communal land use would support citizens economically, ultimately growing the community rather than individuals. *La Sierra*, a 77,000-acre tract of land at the base of Culebra Mountain, in the southeast corner of the Valley, was put aside for communal land use (Peña 1993). Any citizen of the Valley had rights to grazing, hunting, fishing, and gathering firewood on *La Sierra* or any other strip of land that was not on a *vara* strip, meaning a piece of land allocated for private use. In 1864, following the death of Carlos Beaubien, the United States took ownership of the Sangre de Cristo land grant, but expressly affirmed that the communal land use under Mexican property law would remain.

In 1960, *La Sierra* was purchased by Jack Taylor, a North Carolina lumberman. Despite the legal requirement to uphold the community's land use rights, shortly after the purchase, Taylor fenced in the land and forcibly denied the community's entry and use. The firewood that heated generations of homes could no longer be collected. The timber used to frame their adobe homes would no longer be harvested. The grass on which their livestock fed was on the other side of a wire fence. The land that fed, sheltered, and warmed generations of settlers was cut off from their children by a man with no connection to the Valley. The bond between the community and the Valley that had persevered for over 100 years was discarded without consideration.

In 1981, the longest lawsuit in Colorado history began as a result of the fencing in of *La Sierra* and the subsequent alienation of the community. In *Lobato v. Taylor*, the battle to incorporate American land rights with Mexican land rights raged on for 21 years. The stakes for the community were far more than economic. For those who lived in the Valley, the shared identity tied to the land was also threatened. In 2002, the Colorado Supreme Court concluded that the communal land uses were an easement of the property that legally continued for those

who originally had access to them. A caveat of this decision was that, although the Taylor family no longer held complete and private control of *La Sierra*, those who could use the land must be able to prove they were a descendant of the settlers of the Valley. While externally a victory for land rights, this legal decision failed to uphold one of the main goals of the land grant—to grow the community by supporting individuals within it.

When I was told about this case, it was in the context of how rural ways of life and understandings are often misunderstood or written over. The decision of *Lobato v. Taylor* ignored the Valley's rich history of communal support and commitment. As described by Devon Peña, professor of Anthropology and Environmental Studies, "local people believe that, ultimately, no one owns La Sierra—the mountain owns us by claiming our spirits and giving us the opportunity to develop a sense of place." A previous judge in the Valley told me that the ruling missed the fact that rights were not only for the original settlers; rather, they were for anyone within the community for generations to come, and that the grant represented a spirit that still persists to this day. I include this case to contextualize the Valley's current culture of support within a historical understanding of how communal support is conceptualized in the Valley. Communal support is not an act of charity or kindness. Support of the individual is needed to support the community.

### *Helping Rather Than Serving*

From reading literature about the San Luis Valley, speaking with my informants, and speaking informally with others who have lived in the Valley, it is a place where the concept of charity is often rejected. Nevertheless, deeply rooted ideas of communal cohesion and support take on similar forms but are expressed from different planes of understanding. Many people in

the Valley hold a spirit of self-reliance, while also remaining committed to helping others in the community because it is ‘the right thing to do.’ From my interviews, forms of community cohesion took on understandings of ‘helping’ rather than ‘serving.’ In a rural and poor community with limited funding, support rarely comes from nonprofit organizations and charities alone. Rather, support comes from communal understandings of need and the viewpoint of ‘helping out neighbors.’

Ted Conover, an immersive journalist currently conducting research on ‘off the griders’ living in the San Luis Valley, describes how one of the outreach members for La Puente conceived of the nonprofit’s work with those in need (Conover 2019). One of the outreach workers Conover worked with in depth was a man named Matt. Matt became an outreach worker after coming to the Valley in 2016. Establishing himself and his adult son was difficult to do while living out of his truck and camping in the Valley’s unforgiving climate. Matt understood from his personal experience the conditions that ‘off the griders’ needed to overcome to survive, so he agreed with the goals of La Puente to relieve symptoms of poverty within the Valley; however, Matt differed in how he perceived those being helped. Matt rejected La Puente’s common refrain that they were ‘serving clients.’ To him, they were not clients but neighbors, and he was not serving them, but helping them out. To Matt, self-reliance and the willingness of people to help themselves—values he cherishes—conflicted with how nonprofit organizations address the communities they serve.

### *Feeding the Multitude*

Although the spirit of community in the Valley is uplifting, underlying these stories are, arguably, structurally constituted conditions that cause social and economic paralysis. The

important message behind all of these stories is that the desperate living conditions should not be overshadowed by how members of the Valley reacted.

“It was like the loaves and the fishes from the Bible,” Informant 8 told me. Except for this: far from being a miracle, the story she told me was an earthly one that came from the support of many different community members rather than from the Bible. We had been talking about funding and how the limited funds often meant that nonprofit organizations and outreach programs were forced to be resourceful about providing desperately needed services. She told me of several occasions when the nonprofits simply could not help people due to a lack of resources or funding. However, these cases were not solved through organized donations. Instead, they were solved through many acts of kindness from within the community that did not receive any kind of recognition other than doing the ‘neighborly’ thing. I do not wish to over-romanticize these stories.

Informant 8 had received a call from a contractor with whom she had previously done outreach work. The contractor told Informant 8 that the workers at their farms had not been able to work due to hail and rain for the past 2-3 weeks, and therefore, had also not been paid for 2-3 weeks. Although she did not recall exactly how many were affected, she recalled that ‘lots’ of families and workers were without food and were hungry. The farm manager asked Informant 8 if she could do anything to help. She reached out to her supervisor asking for money to provide food for the camp. She was awarded \$200. Initially, she was angry; how was she possibly expected to feed that many people with so little money? But in regards to funding, they were doing the best they could given the conditions.

She went to the local grocery market in her hometown which was owned by an acquaintance. She explained her situation, and he responded by saying, “You know what, I’ll



give you a discount.” The ‘discount’ ended up being a car full of groceries, including ground beef, hotdogs, vegetables, and 100 pounds of beans. With a renewed sense of excitement and awe, she told me, “Clara, I had money left.” They made a batch of chili with the groceries, and when they brought the food to the camp, people were so excited and hungry that they were scooping the chili into plastic bags with their bare hands instead of the scoops. She said that after the food had been distributed, and she and her outreach worker were packing up their car to leave, one man stood up and yelled out, “*La gente de Colorado son lo mejor*” (“the people of Colorado are the best”). As they drove out through the fields, everybody working stood up and joined in the same chant. As Informant 8 put it, “If you talk about the community getting behind people in need, that’s what happened.”

To feed the workers, there was not only one act of kindness; rather, multiple people within the community rallied to provide for those in need. Informant 8 contacted her supervisor, her supervisor freed up some money, and the owner of the grocery market gave a ‘discount,’ which others might have called a donation. In the face of scarcity, there was communal cohesion.

This spirit of ‘helping’ rather than serving and the rejection of ‘handouts’ seems to exist paradoxically within this story. Although the spirit of communal cohesion by doing the ‘neighborly’ thing can be seen with multiple actors, questions remain as to the farm’s role as dependent upon a form of charity to feed their employees. In a community where self-reliance, helping those who help themselves, and rejection of charitable handouts are valued, an outsider may expect negative reactions to the farmer’s inability to feed their employees. My ethnographic investigation looked at the surface of this story. The questions outlined above could be investigated further in depth, which would require more interviews targeted at community

perceptions of farmers' reliance on forms of charity and a better developed understanding of how charity in the San Luis Valley is perceived.

## Part II: Migrant Agricultural Workers and Broader Systems of Power

### *I. Tuberculosis Case Study*

I was told about the following patient by three different subjects who all managed different aspects of his case. I have tried to put together the story of this patient and his interaction with the public health system. They all told me parts of his story that seemed to correspond with their views and what aspects of the case they were brought in to manage.

The ‘drama’ of this tuberculosis case was the patient’s reaction to his diagnosis. I talked with the informants primarily about this; we speculated about the man himself, discussing how the patient reacted and what they thought of it. This vignette is missing a key voice of course – that of the patient himself. Due to confidentiality and the time frame in which I am writing, tracking down this patient or interviewing him are not options. I will try to do justice to his case by sticking to the facts I was given about him and noting when I am speaking outside of those facts.

In August 2018, a migrant Mexican farm worker in the San Luis Valley was diagnosed with tuberculosis. He was diagnosed at the end of the season and was waiting for his last paycheck to arrive before he departed with a group of other farmworkers to his home in San Antonio, Texas. He had come to Colorado and lived during the working season with the same group of men, approximately 10-12 individuals. He was waiting for his last paycheck, just killing time before he and his friends could go back home. He was sick when he sought medical attention, but not as sick as what he was being told. It couldn’t be tuberculosis; he was vaccinated against it when he was a baby in Mexico, and tuberculosis was when you coughed to

death, and he wasn't coughing. But the public health nurses were sticking with it: he had tuberculosis.

A patient diagnosed with active tuberculosis has two options: they can receive treatment until it is non-contagious and will not return, or they can refuse treatment and stay in isolation until it is non-contagious—typically when the patient dies. The second option is only chosen by the terminally ill who do not wish to undergo the lengthy course of antibiotics. He didn't like either of those options. He was determined to leave the hospital where he was held after receiving his diagnosis. The public health outreach nurse and the other hospital staff did not speak Spanish, so they did not understand him. He was sure he did not have what they said he had. He knew what tuberculosis looked like, and he firmly believed that if he did have it, American medicine was only going to kill him. But he could not tell them that; they would not listen.

Years ago, he had a girlfriend in El Paso, Texas. She was also from Mexico. It is hard to characterize their relationship without speaking with him, but they were close enough that he very possibly contracted tuberculosis from her. She had an active case of it, presumably pulmonary with a prolific cough, since that is how he described tuberculosis when he insisted his symptoms did not line up with it. In the hospital, she was treated for it, but the medicine they gave her did not work. She died despite being hospitalized and treated. He had watched her die of a curable disease in a country that was not her home—that was not what was going to happen to him. He did not trust US medicine or the hospital, and he resisted the diagnosis they gave him for this reason and because he was nearly ready to depart for Texas.

Although all three of the people I spoke with mentioned his resistance to treatment, only one of them told me about his girlfriend. After he chose to comply with treatment, arrangements

were made so he could stay in a hotel in town while he took antibiotics until he was no longer contagious. After this period, he was given a bus ticket and ‘handed off’ to the Texas health department. Presumably, he finished treatment there.

As an anthropologist, it can be difficult to try to extract cultural understandings with a limited perspective. Specifically regarding this case, I do not assume that I fully understand the issues above and am not comfortable making any sweeping characterizations of the relationships between migrant agricultural workers and public health systems. The above case, however, raises questions which could be investigated deeper. The main place of concern is the health officials’ understanding about why he resisted treatment. If two of the public health officials I spoke with knew about his girlfriend’s death, they did not find it important to bring up when we discussed the reasons behind his resistance to treatment. Rather, to understand his resistance, they pointed to his specific misunderstandings about tuberculosis, such his belief that the disease always meant a prolific cough and that the vaccination he had as a child meant he could not have tuberculosis now, even though the vaccine works for short periods of time and is typically given to infants who are at risk for developing and suffering severe outcomes from active tuberculosis should they contract it. That he had experienced the death of a loved one in the United States from tuberculosis, gives depth and dimension to the patient’s understanding of the disease. He may have misunderstood medical details about tuberculosis, but having watched the disease progress closely, he certainly understood the impact of tuberculosis on the body better than most, perhaps resulting in an emotional connection between the loss he experienced and the American medical system.

Ultimately, this case warrants further investigation. As stated above, as an outsider who conducted a surface level investigation, I may very well be missing parts of this story which

would change the interpretation. Possibly due to language barriers or other reasons, this case might simply be one of miscommunication that did not allow for the patient's experience with tuberculosis to be factored into the patient's treatment. Further investigation into other cases of a patient's resistance to treatment would provide a better understanding of interactions between medical systems and migrant agricultural workers.

## *II. The Interlocking Relationship of Law, Labor, and Machines*

This thesis has concentrated on the migrant agricultural workers who have come to the Valley for the planting, weeding, and harvesting seasons since the beginning of the 20<sup>th</sup> century. Upon the expansion of the Valley's agriculture industry, the small community has depended primarily on the seasonal work force to man the agricultural fields every spring through fall. In recent years, however, there has been a noticeable shrinking in the number of men, women, and families who come through the Valley in search of work for the summer. I was told about this by multiple informants who work closely with agricultural workers, and their statements were corroborated by a geographic profile of the Valley constructed between 1958 and 1973.

These changes in migration patterns are related to an interlocking relationship between farmers, changes in immigration policies, and the migrant agricultural workers. In the San Luis Valley, these changes, which cause an increase in mechanization and a decrease in labor availability, have occurred since initial federal regulations on agricultural working conditions in the 1960's, but have persisted since then, seeing a surge recently in the mid 2010's. The impact of immigration policies on farming, and the working conditions of especially vulnerable agricultural workers, has not been discussed on a national platform.

Based on the explanations given by my informants, national immigration policies have shifted some of the financial uncertainty associated with temporary labor from the laborers to their employers. In the 1960's, when federal regulations imposed housing requirements for laborers, a similar trend in labor availability and mechanization occurred (Carlson 1973). The H2-A program, the primary policy through which migrant laborers are working in the San Luis Valley, has aimed to crack down on illegal immigration within some employment sectors. For farmers who were dependent on migrant forms of labor, some of the insecurity of migrant work has also been placed on them, which has changed the ways in which their laborers have been treated.

Mechanization in the Valley has been present since the early 20<sup>th</sup> century; however, the extent of its involvement in agriculture has increased since then, especially in response to certain forms of immigration policy. Machines were used less in the early days of agricultural in the Valley. However, some agricultural tasks were completed by machines in the production of potatoes and fresh vegetables such as lettuce and spinach, crops which are still produced largely in the Valley today. Machines were used to keep costs down by reducing the number of laborers needed for certain agricultural tasks such as preparing fields for planting and planting seeds. In a 1927 article in the *Monte Vista Journal* describing potato fields in the Valley, the author noted that "production costs are held to a minimum by the widespread use of labor-saving devices for seeding and digging." The author notes that Mexican laborers were used for bagging the potatoes; however, there was an overall reduction in labor availability that year due to unmet demands for higher wages (Carlson 1973, 102).

Although mechanization always played a role in some parts of farming, the extent of that role has only increased, and has specifically intensified in response to legislation that regulates

migrant labor. In the 1960's, a series of regulations of migrant agricultural work led to an increase in mechanized crops and a decrease in the use of manual labor. After the 1960 documentary "Harvest of Shame," which documented the working and living conditions of impoverished migrant agricultural workers, aired the day after Thanksgiving, bringing the uncomfortable reality of mistreatment to American homes, there was a push to regulate migrant agricultural work conditions. In 1962, the Secretary of Labor enforced an adverse-effect wage rate on a state by state basis rather than the previous minimum wage rate set at the prevailing wage rate of their area (Scott Kosegi 2001). In 1967, further regulations required housing and camps provided by farmers to meet minimum living condition standards. Those whose housing did not meet those conditions were not eligible for referral of laborers through employment offices; however, many workers got around these regulations by seeking employment directly from farmers (Carlson 1973, 107-108).

In the 1960's, following legislation which required proof of adequate housing for laborers and regulation regarding the safety of migrant farm worker transportation, the Valley experienced a decrease in labor intensive specialty crops and an increase in mechanized crops which reduced manual labor needs. With fewer opportunities for employment and an increased risk of being denied work if they did not have adequate housing, the number of migrant agricultural workers arriving in the Valley seeking work also decreased. Between 1957 and 1970, the number of workers who contacted the employment offices of Monte Vista and Alamosa seeking work went from 4,365 individuals in 1957 to only 396 individuals in 1970 (Carlson 1973, 106). Although many laborers sought work directly from farmers rather than through employment offices, this data nevertheless shows a decrease in the number of



individuals seeking employment. The relationship between labor law, mechanization, and the volume of migrant agricultural workers has existed in the Valley for many years.

The relationship between labor law, increased mechanization, and decreased labor availability has remained since the 1960s. One of the main crops farmed in the Valley today is potatoes, producing, on average, 2.1 billion pounds a year. Other crops which I was told about in the context of mechanization include spinach and lettuce (San Luis Development Resource Group 2013). As agricultural mechanization technologies have improved at doing tasks that only manual laborers could complete at one time, increased numbers of farms in the San Luis Valley have reduced or altogether eliminated the need for human labor.

Over the past forty years, the agricultural industry of the San Luis Valley has changed significantly, affecting agricultural workers. Lance Cheslock noted that in 1982, the time of opening the Valley's first homeless shelter, approximately 40% of the homeless intakes were migrant agricultural workers. At the time, most came for the potato harvest, but also for harvesting other crops like lettuce and spinach. Today, about two-thirds of the lettuce harvest is mechanized, with workers picking the lettuce and machines packaging, washing, and further processing the crop. Potatoes are no longer picked in the field by hand and sorted in trucks. Rather, potatoes are picked mechanically and then sorted by workers in warehouses. Spinach is entirely mechanized. This mechanization has led to a reduction of laborers. Cheslock estimates that the number of migrant workers who come to the Valley has gone from approximately 6,000 in the 1980s to approximately 1,800-2,000 currently.

Many farmers have shifted to crops that can be farmed mechanically or have incorporated mechanization into the farming process. In turn, the increase in mechanization for many of the crops in the Valley and subsequent decrease in agricultural employment have prompted fewer

migrant workers to come through the Valley in search of employment. Thus, the result is a complex interrelationship between mechanization, policy, workers, and farms.

The type of migrant agricultural workers who come to the Valley has also changed dramatically. In the past, the Valley's migrant agriculture population consisted of traditional green card workers and immigrants coming without formal papers for seasonal work—essentially groups who travelled to the Valley together in addition to a handful of local workers. However, the reduction of jobs related to mechanization and changes in immigration and employment legislation have meant many of the seasonal laborers are H2-A contracted.

'Rolling migrants,' as one of my informants named them, are migrant workers who cyclically travel to locations for temporary employment, often returning to the very same places the next year. An example of rolling migrants is described by an immersive journalist, Ted Conover, who in 1987 travelled with migrant workers who began in Arizona picking lemons, moved to Los Angeles to work odd jobs between harvesting seasons, and then moved to Florida to pick oranges (Conover 1987). The National Agricultural Workers Survey call this group 'follow-the-crop' migrants, and distinguishes them from migrant workers who have a home and return to one place following a seasonal job (Hernández, Gabbard & Carrol 2016). As I understand them, 'rolling migrants' come to a location in search of employment, often without guaranteed lodging, transportation, or jobs. At the beginning of this study, I thought this would be the majority of my subjects. However, due to legislation, mechanization, and job shortages, the 'rolling migrants,' have all but disappeared, replaced mainly by H2-A visa migrants and machines.

The H2-A visa program was part of the Immigration Reform and Control Act (IRCA) of 1986 and allowed for temporary and legal work authorization of foreign nationals in agricultural

work. As mentioned previously, the IRCA was the first legislation to ban the hiring of workers who did not have citizenship or legal authorization for work. Under the H2-A visa, employers must anticipate the number of employees they will need for a given season and then sign contracts with the laborers prior to the work season. In recent years, the H2-A has seen a resurgence in popularity in response to pressures to reduce illegal immigration (Martin 2017). Many agricultural employees in the Valley today are employed under H2-A contracts.

Rolling migrants often experience extreme financial uncertainty, some of which has been shared with farm owners in recent years. As described by Conover's 1980s work and the informants I spoke with recently, migrant life has always been (and remains) risky and difficult to plan for. Some years they may not be re-hired at a farm where they worked the year before. Their transportation may be unpredictable and they may be stranded in an unknown place without the financial means to continue to their destination or return to where they departed from. Bad weather conditions might also prevent them from working for several weeks, costing them weeks of potential pay. However, the financial and legal risks that come with recent immigration legislation have meant that many smaller farms can no longer depend on the seasonal laborers who have come through the Valley for years. H2-A legislation regarding immigration has reassigned a portion of these uncertainties from migrant workers to farm owners.

For many smaller farmers, the H-2A requirement of providing food, housing, transportation and wages for employees is too costly given the poor pricing of agricultural products. Furthermore, because farmers must 'pre-order' laborers, a large amount of risk comes with either ordering too many or too few employees. If a farmer orders too many laborers, they are still financially liable for wages and living expenses, even if they do not need that number of

employees to complete the season's work. If a farmer orders too few laborers, he or she must find enough employees locally or risk having a poor harvest. Further, if conditions make it so that the fields cannot be worked, employers must still cover living expenses and wages for contracted employees. For smaller and typically more financially vulnerable farms, these expenses and risks are too much to keep using human labor. Labor and immigration legislation have contributed to increases in agricultural mechanization in the Valley since the 1980s.

One of the ideas behind the resurgence of the H2-A program was that it would address common cases of worker exploitation. Many without legal work authorization are extremely vulnerable to exploitation in working conditions and wages. Ideally, by opening opportunities for legal employment, the H2-A intended to reduce these vulnerabilities and give workers the opportunity to report abuse without risk of deportation. Although the H2-A program claims to take labor exploitation seriously, there are numerous examples of employers who are still eligible to receive H2-A contracts, and in some cases are even subsidized for these contracts, despite track records of exploiting H2-A laborers (Dutton 2017). Although there is a lack of enforcement of penalties when cases of abuse occur, there seem to be cases of exploitation that are allowed and perhaps derive from the structure of the H2-A program.

The implications of the H2-A program appear to be larger than financial changes. H2-A employees are more than contracted laborers. Their bodies are 'rented out' and controlled beyond agricultural fields. Although this legislation may seem like a solution that addresses potential risks of exploitation while also reducing illegal laborers, in application, the H2-A program has simply changed risks of already known cases of exploitation common in migrant agricultural work and has led to an increase in agricultural mechanization.

While conducting fieldwork, I visited an H2-A housing complex with a migrant agricultural outreach program. I believe labor insecurities experienced by the farmers, in addition to the knowledge that regulations related to exploitation are not enforced, may have contributed to a case of exploitation I was told about and saw.

### *III. In the H2A Camp*

As you drive north through Center, Colorado, you can see glimpses of the town. To the east are colorful homes, some with yard ornaments, some in states of disrepair, some whose lawns reach proudly out in front of them. The western side is understood to be the outskirts of the town, with potato cellars, scattered homes, gas stations, and warehouses. I drove this road numerous times doing fieldwork for this thesis, but also during other times in my life when I have been camping with friends and driving from one side of the Valley to the next. Except for a few scattered houses, the residential side of the town exists on the eastern side of the highway.

On the outskirts, however, if you continue driving past a petroleum station, there is a complex of long, low buildings enclosed by a fence. I had seen this building before, but had always assumed it was one of the industrial buildings that made up most of this side of Center. The complex is an H2-A contracted labor housing development, one of the handful of concentrated farmworker housing developments in Center. Getting closer, the development's purpose becomes clear; there are a few too many doors and windows for it to be a warehouse, and in the windows you can see what might be clothes pressed up against the glass. In front of one of the buildings is a basketball court and behind the buildings a soccer court is visible with green grass contrasting with the dust and gravel of the rest of the complex.

Accompanying Informant 8 and her outreach team, I had come to the Valley to possibly speak with migrant agricultural workers about their experiences with public health in the United States. I followed Informant 8 to the H2-A camp where she and her team would be working for the afternoon. The outreach program provides many services including basic necessities to workers, some health services, and referrals to other nonprofit provided services if needed.

After pulling into the complex and setting up the outreach station, we waited for the busses of workers ending their shifts to arrive. The wind is strong on the flat land, and dark clouds in the distance threaten to blow in our direction. While we wait, Informant 8 said she would like to show me some of the other migrant housing complexes in Center. South of the complex are a series of townhome style apartments called Tierra Nueva. Some of the units are exclusively for single men, some for families. There is a Migrant Head Start in the middle of the apartments, and a restaurant. Down the road—inside the main part of Center—is a two story, long, skinny building painted pale green. Nearly out of sight, behind the building, are a collection of unmatched chairs, some lawn, some fold up, some dining. A few beer bottles sit out in front of seats. This is another complex, not affiliated with any non-profit organization nor with the H2-A program. These are the ‘true migrant farmworkers,’ I am told by Informant 8. An older Hispanic woman with short dark hair is visible from the road. She wears an apron and is folding a towel. She cooks for the men and maintains the property.

On our way back to the complex, Informant 8 points out the barbed wire circling the top of the fences. It wasn’t always there, I am told. One day the outreach workers came through, and the gate was locked and the barbed wire had been put up. That day, I am told—while taking vital health measurements, one of the services provided by the outreach program—the outreach team had found that a couple of the men had extremely high blood pressure. The next time the team

came to provide services, they were turned away. The men who had high blood pressure told their employers that they needed to go home to get better, or in other words, they needed to break their H2-A contract for medical reasons. Informant 8's supervisor had to appeal to the Farm Workers Coalition in California before she and her team were allowed entry again. I asked Informant 8, "Is the barbed wire for keeping people in, or keeping people out?" "Both," she replied. "Out for when the camp is unoccupied; in for when it is."

The changes that came about in this complex perhaps originate from the shortcomings of the H2-A program and the insecurities placed upon the farmers. But these changes also paint a grim picture of the conditions in which the H2-A workers live. Access in and out of the camp is controlled, symbolized by the barbed wire fence and locked gate. Access to vital services can be cut off by the employers at any time and for any reason. For the farmers, these changes might seem justified to keep their workers 'in line;' however, for those who are on the other side of H2-A contracts, the sense of absolute power over workers is not missed.

The contract of the H2-A program reaches far beyond labor. As described by Informant 8, when receiving outreach services in H2-A camps, the laborers will often say that they do not participate in activities such as drinking alcohol or smoking cigarettes, even if they, in fact, do one or both behaviors. As she explained it, the men often hide those behaviors from their employers since they are looked down upon for potentially affecting their working performance. This seems unusual under a strict interpretation of H2-A contracts—that they are employment contracts and that the provision of housing, meals, and transportation are conditions of the contract separate from an employee's job performance. Under this strict interpretation, activities outside of an individual's role as a laborer are part of their personal lives and should not matter to employers. Based on my own observations, employers have a larger scope of control of their

employees under the H2-A program, extending from control of individuals as workers to control of other aspects of their lives. In practice, the H2-A program seems to contract out bodies rather than employment, and employers seem to control far more than the workers' job performances.

From a medical perspective, the impact of the H2-A program on bodies may be important when looking at the health of H2-A employees. Not only do self-reported behaviors appear to be impacted by the span of H2-A contracts, the restriction of movement and access to care may also have broader implications for health. Like other subjects mentioned, this potential relationship warrants further investigation and may also factor into other studies of migrant agricultural workers' health.



## Conclusion:

This thesis is an exploration into the ways in which forms of power may impact the outcomes and treatment of disease in marginalized populations. Some of my ethnographic investigation touches on those themes, but I additionally discuss the ways in which rural communities are represented and understood from an outsider perspective. I believe this thesis gives a surface level understanding of a broad range of themes, but that a further, in-depth investigation into these themes is would give deeper insights. When first introduced to instances of tuberculosis in the San Luis Valley which predominantly occurred in migrant agricultural workers, I sought to understand why tuberculosis was observed at such high rates in a relatively small population. My first research question wanted to know why there are high rates of tuberculosis in migrant agricultural workers in the San Luis Valley? The second question I asked, to delve deeper, was how do public health workers interact with migrant agricultural workers? Preliminary research into this relationship between agricultural workers and public health consistently brought up themes of resistance and suspicion on behalf of farm laborers towards public health official. From these preliminary findings, I sought to better understand why there were forms and what power structures underlie resistance to medical treatment. These questions addressed broader themes of how power structures affect health and the patterns of disease.

The first research question--why are there high rates of tuberculosis in migrant agricultural workers in the San Luis Valley--was answered through interviews with tuberculosis specialists and further corroborated by epidemiological data. The clear majority of migrant agricultural workers in the Valley are of Mexican or Central American descent. Although the

United States has very low active and latent rates of tuberculosis, other countries have much higher rates. In the United States, nearly half of all active cases occur in patients who contracted latent tuberculosis in a foreign country. In similar fashion, most cases of tuberculosis in the San Luis Valley were likely contracted in a foreign country and became active in the United States, as I was told by one of my informants. The patterns of tuberculosis patients in the San Luis Valley are primarily due to migrant agricultural workers carrying higher rates of latent tuberculosis due to prior exposure to active tuberculosis in a foreign country. However, other factors such as living conditions, working conditions, treatment in the United States, and interactions with public health systems, complicates understandings of health in migrant agricultural workers in the San Luis Valley.

My second research question looked to understand the relationship between migrant agricultural workers and public health systems. The context of my research (America in 2019, during the Trump administration) played a key role in understanding these interactions. For many undocumented living in the United States, there exists a paradoxical and sensitive relationship between remaining invisible from forms of surveillance which could out someone as ‘illegal,’ and receiving legal protections and social recognition from these same forms of surveillance. This paradoxical relationship was evident in the relationship between public health workers and migrant agricultural workers. Providing health services is the core mission of public health workers regardless of an individual’s legal status, however, the need to remain invisible from official forms of surveillance (even if they do not ‘out’ someone as illegal) resulted in initial suspicion of public health workers. Regarding tuberculosis, this was a large factor for initial resistance to treatment and the frequent hesitancy to provide names of those with whom a patient was in close contact with, information necessary for a contact investigation.

A second key factor to understanding the relationships between public health workers and migrant agricultural workers might be communication gaps. In the case study discussed, a patient with active tuberculosis was resistant to treatment because he experienced the loss of a girlfriend in the United States from active tuberculosis. However, he perceived American healthcare as the ultimate cause of her death. Only one public health outreach worker accredited this experience, and his subsequent suspicion of public health, to be the reason for his resistance to treatment. This is a single case, so I do not make any assumptions that the experienced information gap between the patient and most public health officials is common, nor do I attempt to understand why some public health officials were misinformed about the patient's experiences. In this case study, the communication gap between the patient and those who coordinated his care seems to be a key factor in both his resistance to treatment and frustration towards American public health officials. If there are many interactions demonstrating communication gaps like the interactions in this case, this pattern of miscommunication would be a place for further research.

A finding which I did not anticipate, but that is an important consideration for this study and future studies, is the ways in which the employer-employee power dynamics impacts the lives of migrant agricultural workers. Based off my observations of an H2-A camp, farmers appear to exercise control over the movement, personal lives, and access to vital services of their employees. Theoretically, employees strictly have an employment contract with their employers, meaning the scope of an employer's control over employees should only extend while an employee is working. The provision of transportation, housing, and food (as required under H2-A) is a condition of the employment contract and is separated from their performance as a laborer. In practice, however, employers hold power over H2-A contracted employees through housing camps. As I observed, employers can restrict access to outreach services which provide

basic needs. Further, employers appear to be able to restrict the movement of their employees separate from when they are ‘on the job.’ The sense of control at the will of employers is clear in the living conditions of the H2-A camp I observed. In further researching this subject, the H2-A program does significantly little to enforce penalties when employers are found to breach the rights of their employees, resulting in H2-A contracts being re-awarded to farmers who have previously exploited H2-A laborers. Although migrant agricultural workers have always been subject to labor exploitation, the case I observed shows that under the H2-A program they are subject to forms of exploitation separate from labor as well.

The effects of employer-employee power dynamics are important considerations in future studies and have specific health implications which should be considered if looking at the health of migrant workers. The first health implication is the impact these power dynamics can have on individual accessibility to health services. This could be by both the potential restriction of leaving a camp to seek out health services and in the potential (and observed) restriction of outreach worker access which provides medical services or other basic needs. The second health consideration is the ways in which these power dynamics physically affect the body. In the Whitehall Study, the impact of power hierarchy on health showed that individuals at low levels of employment status (messengers, doorkeepers, etc.), had significantly higher mortality than their cohorts at higher levels of employment (Marmot et. al. 1991). Based on the understanding that status structures can impact health, the power dynamics observed in H2-A camps may have health implications beyond accessibility since this study and other studies have found significantly unequal power dynamics at play in H2-A camps. Any further studies into the health of migrant agricultural workers should account for the types of power dynamics experienced in the daily lives of workers as a variable which could impact health.

Unrelated to my original research questions, I was introduced to many themes related to the San Luis Valley and rural life. One theme was the importance of community support within the Valley and the spirit of ‘helping’ which often rejects traditional notions of charity. I included a surface level observation and interpretation of this theme, but a deeper investigation is ultimately warranted about the forms of communal cohesion which occur in the Valley. A second theme which can relate to epidemiological data, but also extends to topics beyond my research, is how data collection procedures can misrepresent rural communities. Most standardized data collection procedures are designed for urban and densely populated areas. When applied to rural areas, variables which are rarely applicable in urban settings (ex. seasonal agricultural population, many migratory patients) can influence how an area is portrayed through data. For rural communities, which ‘slip through the cracks’ of descriptive data, there are serious implications for receiving funding and having the burden of specific issues accurately represented. Although both themes came up, I did not set out to investigate either one but still found them relevant and interesting to my research.

I feel I scratched the surface of many potentially interesting and important subjects. Further research could look to see if some of the cases that I observed are a widespread phenomenon. More specifically, further research might look at other cases of resistance to tuberculosis treatment and investigate if there are widespread patterns of miscommunication between patients and public health officials. Other forms of research could research H2-A camps, seeing if other camps exercise power over the living conditions of H2-A contracted employees, and if so, if there are health implications directly tied to these forms of power. Regarding forms of charity in the Valley, further studies could look at how the community

defines who deserves and does not deserve help, and what other forms the spirit of 'helping rather than serving' takes on in the Valley.

This is a surface level study of rural areas, migrant agricultural workers, and the forms of power which impact both. It provides an analysis of how political power structures impact day to day lives of those living as 'illegal' in the United States. It further applies this theory to interactions between migrant agricultural workers and public health officials. It also looks critically at economic interpretations of the H2-A program, proposing that the program exercises control over contracted employees in their personal lives in addition to their lives as employees. Finally, it looks critically at data collection procedures when applied to rural communities, and provides examples of how rural communities can be misrepresented by some standardized procedures. Given the sensitive topic of illegal people and illegal bodies, the ethical considerations that needed to be accounted for while conducting this research meant I did not speak directly with migrant agricultural workers. One of my original goals in my research was to paint a human portrait of migrant agricultural workers. Although this research fell short of that, by examining the forms of power which influence their day to day lives, I believe it is a step in the direction of that envisioned human portrait.

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