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The Donation-based Approach to Solving Critical Social Issues: An Examination of the Food Waste Recovery Approach to Solving Hunger in the United States

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THE DONATION-BASED APPROACH TO
SOLVING CRITICAL SOCIAL ISSUES:
*AN EXAMINATION OF THE FOOD WASTE RECOVERY
APPROACH TO SOLVING HUNGER
IN THE UNITED STATES*

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PIM 74

A capstone paper submitted in partial fulfillment of the requirements for a
Master of Arts in Sustainable Development at SIT Graduate Institute
in Brattleboro, Vermont, USA.

May 25th, 2017

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List of Terminology and Acronyms

BEETS: Band of Environmentally Educated and Employable Teens – a youth program

Developed world: Countries have relatively higher levels of income, are generally not subject to displacement by war, generally have access to economic opportunities and access stable utilities such as electricity and water. Also referred to as the Western world

Developing world: Countries have relatively lower levels of income, are subject to displacement by war, citizens generally do not have much access to economic opportunities and there may be instability in utilities such as electricity and water. Also referred to as the Eastern world

Foreign Aid (Agenda): The money and resources that are typically sent from the developed countries to the developing countries. “Agenda” is sometimes attached at the end of “foreign aid” to critique the motivations of countries that provide aid.

Food Bank: A center that receives food in the form of donations and government grants of either food or cash. The center then distributes the food to people in need. Generally, people who require the food will need to go to the distribution center to pick it up themselves.

Free Market: Economic term for reducing barriers to trade among businesses and promoting global competition which determines prices.

Global economic system: Except for a few countries, everyone is participating in global free trade agreements. This connects national economic systems together into a global economic system.

Government Subsidies: Money that is allocated to support various sectors of society that is determined in the country’s federal budget.

Individualism: Personal rights and freedoms, but beyond that; having the belief that oneself has agency to do whatever they want in society in accordance to the law.

Inequality: The difference in economic means from one person to another generally in the form of money, which then garners vast differences of access to resources amongst citizens.

Lobbying: Trying to gain influence on politics/politicians

Means of production: Anything that is used as part of the production process such as machinery, tools, etc.

Non-Government Organizations: Also known as non-profits. They are separate entities from the government and are generally funded through donations or government grants

Off-grid: When someone lives without access to running water, electricity, or even a traditional septic system in some cases. Generally utilizing solar energy, water tanks and composting systems.

Privatization: Companies regulate pricing, production and distribution of goods and service rather than governments.

Supply Chain: A system that moves goods from production through to distribution.

Social Justice: Opposes inequality; work to ensure that wealth, resources, freedoms and opportunities are accessible to everyone

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Abstract

As the issue of hunger continues to plague the lives of nearly 1 billion people around the world, we need to find real, lasting and empowering solutions. This is an interdisciplinary research study into the donation-based approach to solving critical social issues in the United States by examining the food waste recovery and hunger debate. Social, public and private sectors advocate that hunger can be solved through food waste recovery and redistribution methods. From a systems perspective, such thinking is not only problematic for the people facing hunger, but raises concern of achieving overall social justice and change. Using qualitative methods, including interviews, a survey, focus groups, and literature review, this study attempted to understand the systematic nature of food waste, hunger, and the role of the donation system in the United States. Participants were primarily representative of the San Francisco Bay Area, with a small representation from the Eastern United States. An interdisciplinary approach, along with triangulation of primary data, was used to develop a greater understanding into the intricate nature of the issues. This study will show how the rise of capitalism has attributed to the need for food assistance programs in the United States, how donations and aid are treating the symptoms of hunger, and how in many cases the people working to address social issues are benefitting from their very existence; and are therefore less motivated to find long term solutions.

Introduction

Somewhere along the supply chain, the world wastes approximately 40% of food that is produced for human consumption according to recent studies by the Food and Agriculture Organization (FAO) and the National Resource Defense Council (NRDC) (FAO, 2013 and

Gunders, 2012). Meanwhile, 800 million people globally and 42 million people nationally are food insecure each year (USDA, 2017 and FAO, 2015). At varying times throughout the year, month, or day, 42 million Americans do not know where they will get their next meal.

In recent years, as the issue of food waste has become more prominently known to the public, activists have rallied towards the idea that hunger can be solved with food waste. The two issues have become intrinsically linked. We currently produce enough food to feed the entire world's population, yet nearly 1 billion people go hungry everyday (World Food Programme, 2016 and FAO, 2015). Activists therefore believe that if we can only redistribute the food that is currently going to waste, to feed the hungry, we can solve both food waste and hunger simultaneously (Ostroff, 2016). However, it is questionable if food waste recovery alone can solve the issue of hunger in the U.S. or abroad.

Today, the focus to alleviate hunger is primarily through federal food assistance programs, industry donations and non-government organizations (NGOs) in the United States (Feeding America, 2017). Although the vast majority of hungry people in the U.S. rely on such programs to feed themselves and their families, there is reason to doubt that they are actually ending hunger.

An example of this is the food bank system that was adopted in the 1960's, which was meant to be a short-term solution to aid U.S. hunger. If hunger were ending, the food bank system should have destroyed itself as it solved the problem. However, since then food banks have exponentially grown and now feed approximately 47 million Americans each year (Feeding America, 2017). According to McMillan, "In 1980 there were a few hundred emergency food program across the country; today there are 50,000" (McMillan, n.d., para. 7). The food bank system grows as the problem of hunger grows. Additionally, new assistance programs and

operations are being introduced in the country at an alarming rate with no end in sight.

Globally, we see this in the developing world where donations, or aid, are sent to a country with the intention of providing basic human needs. Although there are certainly people who benefit from the received aid, such methods have proved that they do not work to solve hunger within the current global economic system that calls for growth and development (Moyo, 2009).

This paper is a multidisciplinary research study into the donation-based approach to solving critical social issues in the United States by examining the food waste recovery and hunger debate. The research used various qualitative methods including literature review, interviews, a survey, and a focus group. There are many layers to these issues, and we can only truly begin to understand the systemic nature of hunger, food waste, and donations, when we include the voices of many people. The main research questions were:

- Can hunger be solved in the United States through food waste recovery?
- What are the root causes of hunger in the United States?
- Does the donation-based approach to solving critical social issues work, or is it perpetuating problems?

Author's Interest and Relationship to the Research

Like many food systems activists, I had been promoting the idea that food waste recovery can solve hunger in the U.S. and abroad. However, after researching public opinion, reading through literature, and spending some time working in the food waste field, I believe that I may have been contributing to a larger echo chamber. I now believe that linking the two issues—food waste and hunger—and focusing heavily on the donation-based system as a solution may partially be why inequality levels and poverty continue to rise globally as we focus on treating

the symptoms of the problem and not the root causes. My perception has changed through the process of this study and I have learned that although we may have noble intentions, our actions may cause more harm.

As I was researching, multiple instances occurred where I saw that although people may be hungry they may not want to eat what would be considered food waste. On one occasion, I cooked too much food for myself and decided to give the leftovers to one of the many homeless people living on the streets of San Francisco. When I gave a man in the train station food, he threw it at a wall. Perhaps those that we want to accept a handout don't want to be "helped."

On a second occasion, I had food in a bag that I could not eat but did not want to waste. I offered the food to a man who appeared to be homeless. The man quickly asked several questions related to the food. "What is it? What's inside of it?" He even took the time to look inside the bag before accepting it. From my perspective, I had assumed he would want to accept whatever was being given to him, because he may not have the same access to food as me. However, that did not seem to be the case.

Perhaps it is cultural and people who are 'hungry' have more food options in the United States than in the developing world. After conducting a mini focus group with my roommates that came from India, Vietnam and the Ukraine, they all said that culturally it would be inappropriate to offer someone your food waste in their home countries, at least according to mainstream norms.

A certain power dynamic occurs when someone gives and another receives. Additionally, I find it hard to believe that most people who are forced to ask for a handout feel good about it. I believe that, in most cases, people would prefer to be able to sustain themselves and their families.

I originally entered the Master of Arts in Sustainable Development program at SIT Graduate Institute in 2014 with an intention to help people in developing countries have better lives. I realize now that was a very narrow perspective that was potentially harmful to myself and the world around me. After my first year on-campus, I recognized that the best use of my time, for now, was to work on the issues stemming in North America, rather than potentially making problems worse in the developing world through my Western perspectives and ideologies.

Through the Reflective Practice phase of my degree, I have come to realize the importance of uncovering the root causes of issues, rather than simply echoing the sentiments of fellow activists. Although it is not easy, our perspectives and opinions can change if we are open enough to critically examine ourselves and those around us.

Framing the Issues

Systems Thinking

Systems Thinking is used in this research as the fundamental framework to examine the interconnectedness of food waste, hunger and the ways we try to solve these issues. According to Meadows (2008), “A system is an interconnected set of elements that is coherently organized in a way that achieves something” (pg.11). Stroh (2015) goes one step further by saying that, “Systems thinking is the ability to understand these interconnections in such a way as to achieve a *desired* purpose” (Kindle Location 453). An example of a system is food, which is why we call it a food system. Food is the element, the way the food is grown, transported and distributed is part of the interconnectedness and the purpose is to feed humans and animals who need to eat food as a source of sustenance and energy. A desired purpose would be to make certain that

everyone in the country has access to consume healthy, nutritious food on their own accord. Additionally, systems thinking introduces the idea of feedback loops. It recognizes that the decisions or choices we make today may affect the system today, tomorrow, next year, or even twenty years from now (Meadows, 2008).

Today, there is great emphasis on the individual in the developed world, and particularly the United States which was founded on individualism (Lukes, 2014). Individualism gives us agency to make daily personal decisions, ideally in accordance to state laws. However, although we are individuals, we also create and exist within systems. Individual decisions add up to collectively create systems and even cultures (Ratner, 2000). Individualism often encourages people to incorrectly imagine they are separated from the systems that shape their environment. For example, there is a cultural belief in the west that says, “I am just one person, what can I do?” - i.e. my decisions do not matter and I am not part of the problem of climate change, racism, hunger, etc. As Stroh (2015) noted,

People typically assume that they are doing the best they can and that someone else is to blame— instead of recognizing, in the words of leadership expert Bill Torbert, that “If you are not aware of how you are part of the problem, you can’t be part of the solution. (Kindle Location 272)

Although we believe we have freedom of choice, and we do to some extent, corporations pay millions of dollars to influence our choices through the form of marketing, chemical formulations (cigarettes, foods, etc.) that develop addictions, and government lobbying which affects the prices we see at the store and the regulation standards that go into our goods

(Drutman, 2015, Hollis, 2011, Kilbourne, 1999). Unless you plan on living off-grid, growing your own food, harvesting your own energy, and not earning and therefore forgoing taxes, we are part of the system.

Donations are part of the system in the United States and around the world. NGOs have marketed donations to us as a solution to social ills; and although their intentions may be noble, there are negative byproducts. Donations shift the focus from the root causes of an issue, in this case hunger, to a response of only temporary and immediate relief. Relief is necessary in the short-term. However, in the long term, it could cause more harm as donations create a false sense that the problem is being solved. People experience a “warm glow” that Andreoni (1989) described, and are no longer concerned about the injustice that is causing people to be hungry in the first place (Stroh, 2015).

If we think in systems, we are more likely to consider potential hazards that could arise. When we think in systems, we recognize that we are not isolated beings and what we choose to do can affect everything around us, including the biosphere. Additionally, we may be more likely to consider choosing to employ ideas such as the precautionary principle, which would ask us to conduct a substantial amount of research on any element prior to allowing it into the system (Pollan, 2001).

In this study, systems thinking is used as an analytical framework to understand why hunger exists, and the potential externalities (or unanticipated/undesired consequences) to the approaches we take to solve hunger.

Capitalism

We live in a time of great technological advances and productivity. At the same time, the

United States has reached an all-time high of inequality; becoming the most unequal of all the developed nations (Lepore, 2015). Today, capitalism has become the worldwide system for economic and social practices. It focuses on the privatization of capital goods to maximize profit in a free market economy (Jahan & Mahmud, 2015). According to Kotz (2015), post-1980 capitalism is in fact the new form of neoliberalism; which means that the government should not intervene and instead allow the markets to regulate themselves – i.e. corporations should regulate themselves (Heskett, 2009).

There have been many benefits that have come from the capitalist system, largely related to technological advancement and increased productivity. Capitalism follows a competitive ideal. The “free market” is the place where different corporations compete to best provide the goods and services people need; at least that is the ideal. Two main arguments that support capitalism include competition that leads to innovation and competition that maintains price stability (The Center on Capitalism and Society, n.d.). No doubt, technological advances have changed the way we see the world today, along with exponential advances in the medical system, for example.

Capitalism promises opportunity, which may be true for the few that can access the market, making them the capitalist class or bourgeoisie. But most of the population does not have access. They are the working class, having on average less than \$400 to spare in their bank accounts at any given time (Gabler, 2016).

According to the Collins English Dictionary, “...the bourgeoisie owns the most important of the means of production, through which it exploits the working class” (Bourgeoisie, 2014). According to Marx & Engels (1848), throughout history we have seen social rank; including under capitalism. In capitalism there is an, “oppressor and oppressed,” and capitalism requires someone to be at the top and someone to be at the bottom (Marx & Engels, 1848, p. 14).

Furthermore, inequality destroys the democratic process, which leads to the “power of the rich to influence political processes and policies that best suit their interests” (Fuentes-Nieva & Galasso, 2014, p. 4).

Through neoliberal capitalist theory, we objectify the world we live in, perceiving it to be external from us (N. Kote-Nikoi, personal communication, September, 2014). Objectification is the process through which we see ourselves as separate from our environment and the elements in our environment. We see ourselves as the “subjects,” the actors, whose goal is to use “objects” for our subjective purposes. Objects can be anything. Anything can be objectified—even other people (like slaves to the master or the notion of “human resources”). And we generally view our “using objects” as something that has no consequences. We use them to meet our needs. Nothing else matters. This can lead to negative or destructive outcomes. A primary example is the environment. It is much easier to destroy the environment if we objectify it and see it as an outside object to use without consequences (N. Kote-Nikoi, personal communication, September, 2014).

Objectification prevents us from seeing externalities (or unintended consequences). Externalities are the result of the feedback loops that we receive through the system. An example of this is the carbon emission from vehicles. Although initially the amount of carbon that was being emitted did not make a big difference, the collective emissions, over time, have significantly contributed to environmental degradation. This was an unintended externality of the automobile society. There are positive and negative externalities within neoliberal capitalism. Negative externalities are often referred to as ‘market failures’ (Davies, 2010). Although, according to Lioukakis (2010), “The market failure metaphor may also be misleading...” and suggests it is “...rather a more general failure of the whole system based on private property and

profit” (p. 2604).

We see externalities and objectification all around us, including with the issues of food waste and hunger. At supermarkets across the United States, you will see fully stocked, pristine shelves of aesthetically perfect produce even though the aesthetics of produce do not strongly relate to their edibility. We objectify food by needing it to look a certain way, and discarding the perfectly good food that nonetheless does not meet our aesthetic standards. This contributes to a lot of food waste, and it has been established in the system. For decades’ supermarkets have demanded and maintained stringent cosmetic guidelines (Goldenberg, 2016). This practice is an externality because of the objectification of natural resources, etc. which leads to an insurmountable amount of wasted food at the farm level as there is no market for ugly produce (Royte, 2016). Supermarkets claim they enforce such practices so that consumers “don’t run to a competitor” and to adhere to consumer demand (Jacobs, 2014). Supermarkets have created perceptions in the minds of consumers what they should expect fruits and vegetables to look like through their own marketing efforts to entice consumers to buy more while adding to their company’s bottom line (Jacobs, 2014).

Using a systems lens, we see that through objectification of food, resources, and the environment, we are left with food waste as an externality. Hunger is the externality of poverty and inequality, while unemployment and poverty are the externalities of capitalism and its drive to maximize profits and minimize costs (Leslie, 2016; Patel & Saul, 2017).

Emergence of Power

VeneKlasen & Miller (2011) described a theory of power that includes four forms; power *over*, power *with*, power *to*, and power *within*. Power *over* exerts negative connotations for

people. It can take the form of repression, discrimination, coercion, and abuse (VeneKlasen & Miller, 2011). Such forms of power can be observed in the capitalist system through racial discrimination in employment and the grueling coercion that unskilled workers must face because capitalism treats them as easily replaceable (Warner, Forstater & Rosen, 2015; Swanson, 2013). I would go as far as to say that the low wages employers pay their workers is a form of abuse in the United States and around the world.

Power *with*, power *to*, and power *within* all exemplify positive and progressive forms of power. Power *with* offers solidarity through various forms of support (VeneKlasen & Miller, 2011). For example, power *with* is expressed through donations to feed the hungry by exemplifying care for the people facing the issue and solidarity. However, what is interesting to note about this form of power is that both the parties involved in the exchange may benefit from the process. The donor benefits from a “warm glow,” while the recipient benefits from accessing food (Andreoni, 1989). Although, the motives of the donor may be well intentioned, such practices may not offer long term solutions to the recipient facing the issue of hunger (Andreoni, 1989).

Power *to* and power *within* by far offer the most sustainable and potentially healthy outcomes as they both offer agency to a person in the form of knowledge, resources, and personal development (VeneKlasen & Miller, 2011). As VeneKlasen & Miller (2011) described, power *to* and power *within* are “based on the belief that each individual has the power to make a difference” (pg. 45). Power *within* goes one step further from power *to* and “has to do with a person’s sense of self-worth...the capacity to imagine and have hope” (VeneKlasen & Miller, 2011, pg. 45).

Both power *to* and power *within* offer great insight into lasting social change in the context of

solving the hunger issue in the United States and abroad. These expressions of power create a sense of empowerment that, according to the World Bank (2001) is one of the foundations of reducing global poverty. Furthermore, when we experience a heightened sense of self-worth as Baumeister, Campbell, Krueger & Vohs (2003) described, we are more likely to take initiative, stand up for ourselves and others, while improving our overall level of happiness.

Literature Review

Food Waste

Although the study and interest in food waste has become more recently known in the western world, public interest organizations like the United Nations (UN) have been aware of the issue for more than 30 years. In 1981, the Food and Agriculture Organization (FAO), an agency of the UN, defined food waste as, “Wholesome edible material intended for human consumption, arising at any point in the food supply chain that is instead discarded, lost, degraded or consumed by pests” (as cited in Parfitt, 2010, para. 4). Today, the FAO, the UN Environmental Protection Agency (UNEP) and additional stakeholders have defined food waste as, “the removal of food from the food supply chain which is fit for consumption, or which has spoiled or expired, mainly caused by economic behavior, poor stock management or neglect” (FAO & UNDP, n.d., p. 4). However, the United States Department of Agriculture (USDA) definition “includes all types of food loss and waste lost along any part of the supply chain” (ReFED, 2016, p. 12). For this study, we will use the USDA and ReFED (2016) report’s working definition on food waste. The term “food waste recovery” speaks to the recovery of food that would have otherwise gone to waste somewhere along the supply chain through government and non-government organizations

that provide charitable assistance programs; and social enterprises working on resolving while capitalizing on the issue.

At the global level, we see that the reasons for food waste vary according to income levels. For example, more affluent countries in the West, like the United States, mainly tend to waste food for the following reasons: (1) the consumers have greater purchasing power, greater abundance, and are culturally and financially less sensitive to waste; (2) the supermarkets and other food retailers have grown to be fully stocked at all times, meaning that whatever they cannot sell in the time prior to passing expiration dates gets thrown away and replaced; and (3) the farms do not have a market to sell imperfect produce that does not meet stringent retail guidelines of aesthetics (ReFED, 2016). However, in the developing world the main reasons for food waste are: (1) countries lack the infrastructure to keep the food from spoiling, such as refrigeration; and (2) insufficient resources to move the food from the farm to people's homes, such as trucking or the fuel for trucking (Hepker, 2014).

Over the last few years there have been several studies and pieces of legislation focused on addressing the world's food waste problem. Through my professional internship, I had the opportunity to speak directly with farmers who believe that the actual amount of food being wasted is much higher than estimated. Until this point there has been little incentive for any level of the supply chain to record all the waste that they are producing. As Woolley, Garcia-Garcia, Tseng & Rahimifard (2016) described, "Industry and retailers are not incentivized as the purchase of more products equates to larger profits" (pg. 372).

According to the FAO, the world wastes approximately one third of the food that is produced (2013). The same study by the FAO (2013) estimated that roughly 3.3 gigatons of carbon dioxide (CO₂) is produced annually, 250 km³ of water is wasted, and almost 1.4 billion

hectares of land is used to produce food that ends up in landfills. Additionally, food waste contributes to 23% of methane emissions, a greenhouse gas (GHG) that is 23 times more harmful than CO₂ (Gunders, 2012; Robinson & Allaby, 2004). In a time when the world is facing serious climate change issue and there are areas of land under severe drought, we simply cannot afford to be causing further emissions or wasting precious resources.

A recent study conducted by Rethink Food Waste through Economics and Data (ReFED, 2016), a committee of over 30 governments, nonprofits, and philanthropic organizations, found that the U.S. is wasting approximately \$218 billion in food production along the supply chain. This number is staggering and \$50 billion more than what the NRDC report initially proposed only four years prior (Gunders, 2012). Interestingly the ReFED report, like the NRDC, found that consumer-facing businesses and homes are the largest contributors to food waste accounting for 40% and 43% respectively (2016). Farms account for roughly 16% or \$15 billion of food waste in the United States.

In January of 2016, France became the first country in the world to pass legislation that would prohibit supermarkets 4,305 sq/ft or larger from disposing food nearing their best before date into dumpsters, and/or destroying it with bleach. Rather, they are legally required to donate the food to local food banks, giving more opportunities for hungry people to access these foods while reducing the amount of waste (Chrisafis, 2016).

There are many activists and agencies working towards ending food waste and hunger in America. One of the World's most well know is Tristram Stuart, an activist from the United Kingdom (UK) that has been fighting to end the global food waste issue for over a decade. During an interview, Stuart said, "All the world's nearly one billion hungry people could be lifted out of malnourishment on less than a quarter of the food that is wasted in the U.S., U.K. and

Europe” (Daugherty, 2014, paragraph 4). Feeding America, the longest running food relief program and advocacy agency in the United States, pointed out, “Last year, the Feeding America network and our partners rescued 2.8 billion pounds of food. That food went straight to feeding people facing hunger. But we can do more...to divert and gather food before it goes to waste” (Feeding America, 2017). Additionally, Gunters (2012) stated, “Investing in these food waste reduction strategies, together we can reap the tremendous social benefits of alleviating hunger, the environmental benefits of efficient resource use, and the financial benefits of significant cost savings” (pg. 5).

Stuart, Feeding America, and the NRDC seem to be working on rather large problems and using one issue, food waste, to amplify the other, hunger. However, there is scarce literature on perceptions of food waste by the hungry, and how much of it they are interested in eating. We see a huge influx of social enterprises that are working on creating seamless transactions of food waste at the consumer, supermarket, and restaurant level to be donated and redistributed to charitable assistance programs like food banks and food pantries across the country (Furbank, 2016). Food Tank, a global community of activists working towards an overall healthy food system, reported that there are 59 organizations fighting food waste and loss around the globe, many of which are new in the business (Furbank, 2016). Zero Percent, 412 Food Rescue, and Food for All have all created apps that are working on this process with further growth expected in this area as the country tries to find solutions to food waste. 412 Food Rescue goes as far as using the slogan, “End waste, end hunger” (412 Food Rescue, 2017).

Nick Saul, CEO and President of the Community Food Centres Canada, and one of the few advocates working on both food waste and hunger issues, pointed out explicitly, “Food waste will never be able to address hunger because hunger isn’t about a lack of food. It’s about a

lack of income. People are food insecure because they can't afford to eat" (Saul, 2016, para. 3). If that is true, as activists, it would be fair to say that our focus should be more on raising income levels to be more equal as a potential solution to these systemic problems rather than creating further dependency on donations, and perpetuating the problem.

This article by Nick Saul was an integral part of my own shift in perception as a food waste activist. It is perhaps an arrogant and privileged thing to say that food waste can be diverted to feed the hungry. As Saul points out, "Let's not conflate a food waste strategy with a poverty reduction strategy. It's destructive to do so. Are we saying that the poor amongst us are only worthy of the castoffs of the industrial food system—the majority of which is unhealthy food, laden with fat, sugar, and salt, which increases the risk of diet-related illnesses? There's no question we can and must do better than this as a society" (Saul, 2016, para. 8). Rather, Saul calls for, "supporting employees fighting for fair, livable wages" (Saul, 2016, para. 11). In Saul's most recent article on the subject, "Hunger is what happens as a result of privation and poverty. Treating hunger through society's waste compounds the indignity of hunger, and points us away from more permanent solutions" (Patel & Saul, 2017, para. 2).

Hunger

Under the recommendation of the Committee on National Statistics, the USDA has classified levels of food insecurity and hunger (USDA, 2017). The USDA defines food insecurity as, "a household-level economic and social condition of limited or uncertain access to adequate food" while the term hunger is defined as, "an individual-level physiological condition that may result from food insecurity" (USDA, 2017). Food insecurity is further divided into those who are considered as "low food security" and "very low food security" (USDA 2017). These terms express the average number of days or months per year that a person may not have

access to food. The USDA feels that it is important to classify and break down these terms for the use of policy analysis and development (USDA, 2017). Although I recognize how this system may be necessary in the political arena, for this research study the terms hunger and food insecurity will be used interchangeably.

According to Feeding America (2017), underemployment, stagnant wages and the rising cost of living are the root causes of hunger in the United States today. The World Hunger Programme (2013), a UN agency, states that the main causes of hunger at the global level are poverty, lack of investment into agriculture, climate and weather, war and displacement, unstable markets, and food waste.

Many food waste activists discuss the issues around distribution and logistics being central to solving hunger (Schiller, 2016). However, hunger exists primarily due to a lack of economic resources in the United States today. When we look a little deeper into the problem, we can see that the root cause of hunger is not an insufficient amount of food in North America, but rather inequality and poverty itself (Saul, 2016). People simply do not earn enough money to feed themselves and their families through the current global economic system. In 2015, 42.2 million Americans were considered hungry. As McMillan pointed out, “Today more working people and their families are hungry because wages have declined” (McMillan, n.d., para. 6). As Leo Chisholm, Founder of the Mitchell County Food Bank stated, “It’s amazing how much money it takes today. If they have a car payment, a house payment and then they’re making just over minimum wage and they’re driving over 30 miles to work. There’s just not enough money to go around. It’s just part of life” (McMillan, n.d., video file). It is interesting to note here that Mr. Chisholm accepts this system as “just part of life” and does not relate the issue to any economic or social systems.

Robert Egger (as cited in Jones, 2007, para. 5), a long-time and well known hunger activist, added,

The reality is, if you had to pick the face of hunger in America, it's a woman with two kids and a steady job, and she is doing everything right, but at \$8, \$9, \$10, even \$12 an hour, that's not enough to pay rent, put gas in the car, get shoes for the kids and pay for food. And we know -- we know -- at the end of the month, she's going to come up short. We have to step out of this charity model, and as nonprofits, we have to start being involved in the political discourse. Hunger's not about food. It's so much bigger.

Furthermore, one of the leading agencies working to end global hunger, Bread for the World said, "Ending hunger requires more than just giving people a meal today. Addressing the root causes of hunger — primarily poverty — is just as important" (Bread for the World, 2017, preamble, para. 3).

To supplement the need for food amongst U.S. households the government has adopted three main federal assistance programs, the Supplemental Nutrition Assistance Program (SNAP), Child Nutrition Programs, and WIC (USDA, 2017). SNAP, formerly known as "food stamps," is the largest federal food assistance program for low-income Americans. In 2016, just over 44 million Americans received SNAP benefits in the amount of \$66.6 billion (USDA, 2017). If we examine the trends, there appears to be a decline in the number of people receiving SNAP benefits. However, approximately one million Americans who fell into a category coined Able-Bodied Adults Without Dependents (ABAWDs) aged 18-49 years old were cut off from SNAP benefits in 22 participating states in 2016. This was because new regulations enforced by the

USDA are aiming to “test individuals’ willingness to work” by giving them stricter guidelines to receive benefits (Bolen, Rosenbaum, Dean & Keith-Jennings, 2016). These stricter guidelines do not question the actual number of jobs that are available to ABAWDs based on their level of experience, education and other demographics. Additionally, it is important to note that there have been numerous House Budget-Committee cuts to the SNAP program over the last few years as the, “Congressional Budget Office (CBO) expects SNAP spending to return to its 1995 level as a share of gross domestic product (GDP) by 2020 under current law” (Rosenbaum & Keith-Jennings, 2016, para 7).

There are currently six Child Nutrition Programs run by the USDA: the National School Lunch Program (NSLP), the School Breakfast Program, the Child and Adult Care Food Program, the Summer Food Service Program, the Fresh Fruit and Vegetable Program, and After-School Snack and Suppers (USDA, 2017). According to the USDA (2017), “The NSLP is the Nation’s second largest food and nutrition assistance program” serving over 30 million children at a cost of nearly \$12.6 billion in 2014 (USDA, 2017).

WIC is the Special Nutrition Program for Women, Infants and Children under the age of 5 years old (USDA, 2017). According to the USDA (2017), WIC is the Nation’s third largest nutritional assistance program. It includes over half of the infants born in fiscal year 2015, with an overall program cost of \$6.2 billion.

Led by the former U.S. First Lady, Michelle Obama, through her Let’s Move! campaign, President Barack Obama signed the Healthy Hunger Free Act of 2010 (The White House, 2010). The law stipulates new regulations to the nutritional content of the federally assisted childhood nutrition programs and WIC (USDA, 2017). Although criticized by some, including the children benefitting from the program, this was a major step in addressing both hunger and nutrition by

the federal government (Harrington, 2014; The White House, 2010).

Government subsidies that primarily go towards the production of corn, soy and wheat in the United States have garnered a fair amount of criticism (Fields, 2004). Billions of dollars go towards the production of these crops that some say have played a significant role in aiding poor nutrition for millions of Americans (Fields, 2004). A recent medical study found, “Among U.S. adults, higher consumption of calories from subsidized food commodities was associated with a greater probability of some cardiometabolic risks” (Siegel et al., 2016, para. 7). As Patel put it, “We are paying for our own demise” (Patel, 2016, para. 1). Foods made with corn, soy and wheat are relatively inexpensive to make and cheap to sell, making them the most accessible food group on the market (Fields, 2004).

Non-government organizations have played a large role in making certain that hungry Americans have access to food in recent decades. The largest, longest running, and perhaps most well know program is the national food bank system; run by Feeding America, a 501(c)(3) non-profit and the Nation’s largest domestic hunger-relief organization. Feeding America’s mission is to “feed America’s hungry through a nationwide network of member food banks and engage our country in the fight to end hunger” (Feeding America, 2017, preamble, para. 1). According to their website, “Feeding America is a nationwide network of 200 food banks and 60,000 food pantries and meal programs that provides food and services to people each year” (Feeding America, 2017).

Another large NGO working on addressing the hunger issue in the United States is Meals on Wheels America (MOWA). MOWA is the nation’s largest 501(C)(3) non-profit program that feeds approximately 2.4 million senior citizens (Meals on Wheels America, 2017). The program focuses on addressing an immediate need and encourages American citizens to advocate to their

legislators to keep the program funded.

While these organizations provide an immediate relief, none of them are working on addressing the root causes of hunger. Furthermore, we already see how hungry people are being affected as the new American administration recently proposed funding cuts by 16% to its Health and Human Services budget that partially funds MOWA programs (Korte, 2017). This will certainly affect the seniors who have come to rely on this program in the weeks to come if the budget goes through.

Hunger is racialized in the United States. According to Feeding America (2017) & the USDA (2017), African American households are twice as likely to experience hunger and face unemployment than white households, are three times more likely than whites to receive food from a charitable assistance program, and have a 24% rate of poverty compared to 9% of non-Hispanic whites. Additionally, we see that the Latino households are twice as likely to receive food assistance as white households (Feeding America, 2017; USDA, 2017).

Rural rates of hunger are significantly higher than for those living in urban areas. According to Feeding America (2017), 15% of rural households are faced with hunger; with higher levels of unemployment or underemployment, concentrations of lower wage jobs, and lower levels of education. In 2015, “17% of households with senior citizens faced the threat of hunger, and that number is rising. The number of food insecure seniors is projected to increase by 50% when the youngest of the Baby Boom Generation reaches age 60 in 2025” (Feeding America, 2017). Lastly, 13.1 million children faced hunger in the United States in 2015, with approximately 20% of them living in poverty (Feeding America, 2017).

There is an often-surprising relationship between hunger and health. Obesity is prominent among the 42 million hungry Americans (Feeding America, 2017). The hungry have access to far

less fresh, nutritious foods in the United States. Benefit programs like the food bank and food pantries are commonly stocked with processed, sugary, and fatty foods (McMillan, n.d.). Globally, we see a similar shift as the world has increasingly adopted a “neoliberal food regime...since the 1980s” according to Gupta from the Borgen Project, a U.S. nonprofit working to end world hunger (Gupta, 2015, para. 4). Gupta (2015) described the neoliberal food regime as,

Characterized by multinational and corporate power, this system has promoted a “global diet” that is high in sugars and fats at the expense of traditional or local diets. This trend in food is caused in part by globalization, and creates an intricate relationship between the individual and multinational corporations, local and distant farms, and the environment (para. 4).

This further adds to the American health crisis related to obesity, heart disease and type 2 diabetes (Centers for Disease Control and Prevention, 2016). It also contributes to high percentages of income going towards healthcare in the United States (Perry, 2016). It is a systemic issue and a revolving door. Those who cannot afford nutritious food rely on government and non-government assistance programs in the United States, only to find a multitude of health problems in the process. According to Melissa Boteach, vice president of the Poverty and Prosperity Program of the Center for American Progress, “People [make] trade-offs between food that’s filling but not nutritious and may actually contribute to obesity” (as cited in McMillan, n.d., para 9). McMillan refers to the extra weight that hungry Americans put on as “collateral damage—an unintended side effect of hunger itself” (MacMillan, n.d., para. 9).

Donation-based Approach

According to the Merriam-Webster's dictionary, donations can be defined as "the making of a gift especially to a charity or public institution, or as a free contribution" (Donation, 2017, para. 1). Depending on the type of entity the gift is directed to, the monetary amount may also be tax deductible (US Legal Inc., 2016). As the American GDP has risen, so has the amount of charitable contributions. According to Giving USA, a charitable data collection agency, "2015 was America's most generous year ever" estimated at \$373 billion (O'Brien, 2016, preamble, para. 1).

Korkki (2013) described internal and external motives for donors to give, including moral values or social recognition. Amodeo (2014) discussed how physiologically it is much more challenging for a person to receive than it is to give and offers reasons as to why, including but not limited to letting go of control, fear of strings attached, and a belief that it is selfish to receive.

Although technically not a donation, Kasperkevic (2014) described how there are millions of Americans who qualify for SNAP benefits but are not utilizing them. Some reasons for this are social stigma that people who use SNAP benefits are lazy, make poor lifestyle choices, and are working the system – i.e. manipulating the system but not actually in need (Fong, Bowles & Gintis, 2003). Garthwaite (2016) explained that similar stigmas lie within the food bank system that does rely on donations to keep their shelves stocked. Other reasons people in need might refrain from participating in assistance programs include a sense of pride, particularly amongst the senior citizen community (Kasperkevic, 2014).

Although the donation model has become mainstream today, there are several critiques to

the donation or philanthropic model. According to Levy (2002), “Essential services should be provided to the needy as a right, not as a favor, and these services are most appropriately delivered by government” (p. 1). Reich (2013) criticized the donation system by pointing out that the wealthiest Americans benefit the most in the system through tax deductions. According to Reich (2013), 85% of the total charitable deductions in 2012 went right back into the pockets of the nation’s richest 20 percent. Reich (2003) pointed out,

As with all tax deductions, the government has to match the charitable deduction with additional tax revenues or spending cuts; otherwise, the budget deficit widens. In economic terms, a tax deduction is exactly the same as government spending. Which means the government will, in effect, hand out \$40 billion this year for “charity” that’s going largely to wealthy people who use much of it to enhance their lifestyles (para. 11).

In large, the charitable donations that the wealthy make go to support museums, theatres and the ivy league schools in which they are alums and/or their children attend, or perhaps someday hope to (Reich, 2013).

Interestingly, according to Piff et al. (2010), people in the lower socio-economic classes are more generous, charitable, trusting and helpful than their upper class socio-economic counterparts (Piff, Kraus, Cote, Cheng & Dacher, 2010). In that case, perhaps the poor are in fact sustaining themselves through the collective survival of charitable donations, while the wealthy continue to do the same through their charitable tax deductions for their own self-interest.

Historically, we see this criticism of the donation model when Hobson (1921), in his book *Work and Wealth*, wrote,

It is more socially injurious for the millionaire to spend his surplus wealth in charity than in luxury. For by spending it on luxury, he chiefly injures himself and his immediate circle, but by spending it in charity he inflicts a grave injury upon society. For every act of charity, applied to heal suffering arising from defective arrangements of society, serves to weaken the personal springs of social reform, alike by the ‘miraculous’ relief it brings to the individual ‘case’ that is relieved, and by the softening influence it exercise on the hearts and heads of those who witness it. It substitutes the idea and desire of individual reform for those of social reform, and so weakens the capacity for collective self-help in society (p. 296).

What Hobson (1921) was referring to is the economic and social systems that a country has adopted as a failure to its citizens. Furthermore, he argues that there is ‘miraculous’ relief and softening influence that further supports the “warm glow” that Andreoni (1989) described seventy years later that ultimately deters people from economic and political social reform in the name of experiencing personal gratification through what may be perceived as altruism. Ivan Illich (1968) perhaps put it best when he said, “to hell with good intentions” while addressing U.S. students at the Conference on Inter-American Student Projects in Cuernavaca, Mexico. Illich (1968) famously pointed out the disillusion people experience while going abroad to volunteer in developing counties in the name of “help” and “development” that lead to destruction, while personally benefiting through the process.

Niebuhr (1932) discussed the distinction between social justice and charitable assistance when he said, “We have previously suggested that philanthropy combines genuine pity with the display of power and that the latter element explains why the powerful are more inclined to be generous than to grant social justice” (p. 77). The idea of social justice is intended to contrast

with donations, or charity. While charity intends to treat a symptom, social justice seeks to fundamentally solve social issues.

“Let us remember that the main purpose of American aid is not to help other nations but to help ourselves.”

U.S. President Richard Nixon, 1968 (Hancock, 1989, p. 71)

Foreign aid has not been a solution to the issue of poverty in the African Continent or in any other developing countries around the world (Williamson, 2009; Miller, 2014; Moyo, 2009). Miller (2014) and Moyo (2009) go on to discuss how, in fact, foreign aid had done nothing but increase hunger and poverty levels. Governments in the developing World are not held accountable to the citizens of their countries, because foreign aid will always come to their rescue. For that reason, governments are not incentivized to provide basic public services such as education, health care and infrastructure. These are all sectors that create jobs for people, which is, the only way that the developing world will be able to come out of poverty--through investments and the creation of jobs (Moyo, 2009).

Research Methodology

Data Collection Methods

This study is an Independent Practitioner Inquiry Capstone (IPIC) that used a combination of primary and secondary data. A triangular approach was used by including in-depth interviews, a survey, and a focus group. Numerous interdisciplinary methods such as peer reviewed articles, newspapers, blogs, videos, and personal discussions with people were included as secondary research. Primary research took place in the San Francisco Bay Area, California except for the survey which went out to other areas of the United States, primarily along the

Eastern coast.

Participants were selected through a combination of purposive and convenience sampling. The focus group and most in-depth interviews were selected because of their professional and volunteer roles related to hunger and food waste recovery. Survey participants were largely selected as a convenience sample due to data collection time constraints.

Six interviews were carried out with the following demographic: food systems activists, food system educators, one food bank volunteer, one grocery store worker, and a person who managed the food for a housing cooperative. The group was 50% male and 50% female. All interviewees had attained post-secondary education, ranging from undergraduate degrees all the way up to PhDs. Four of the interviews took place in person, while the other two were conducted over the phone.

A survey of 16 questions was comprised and sent out to a personal network of contacts based in the San Francisco Bay Area and greater United States to gain general perspectives and insights related to hunger, food waste, and the donation-based system. Twenty-six people participated in the survey. Seventeen of the people were from the San Francisco Bay Area, accounting for 65% of the population sample. The remaining nine or 35% of people lived in five other states in the United States; primarily located on the East coast of the country, with one mid-westerner from Missouri. Nearly half of respondents were between the ages of 18-29-years-old. Thirty-eight percent of the respondents were between the ages of 30-39. The remaining 15% were aged 40 or above. The group was highly educated, with 50% of the population having achieved a bachelor's degree, 27% with a Master's degree, and 15% with a PhD.

Focus groups were made up of three volunteers from the Marin Country Food Bank on two separate occasions. The focus groups were intended to be conducted through Google

Hangout. However, not everyone in the group was able to attend the meeting using this technology, and we had to transition to a focus group conference call at the last minute. The second interview also took place as a conference call, over the phone as well. The group was organized by a personal contact who also volunteered at the food bank and had a relationship with the participants. It was my first time interacting with the people in the group. I did not ask any questions related to demographics and therefore can offer little insight other than that two were male and one was female. The focus group was asked specific questions in relation to volunteering at the food bank that other populations were not asked.

During the coding process, I was noticing, considering, and taking note of the data. I created a document and added new ideas or thoughts in relation to recurring themes of the data whenever they arose throughout the process.

Data Analysis Methods

To begin, all six interviews and two focus groups were transcribed. Next, I went through the transcriptions, line-by-line and assigned codes that emerged from the text. Some codes represented paragraphs to summarize what the interviewee was describing. I then downloaded the survey results from survey monkey, the online survey operation that I used. I separated survey participants into two groups. One represented people from the state of California and the other represented the rest of the participating states in the United States. The purpose of this was to determine if there were any emerging patterns or themes that were different across geographical regions. However, I determined there were not, and grouped the respondents together for a larger population size when presenting their findings, while keeping them coded separately. Upon completion of this entire process, I recognized the four major emergent themes throughout the

research. I then decided to use an inductive approach to code the research. I assigned a letter code to each interview so I could keep track of who said what without using any of their names to reduce the chances of influence or judgement in my own perceptions, along with the security of keeping their identities confidential. I then coded the survey results by each response and added them to the master themes / sub-themes document. To keep track of which statement came from which question, I assigned a color code to each question (refer to Appendix E for examples). Statements were then assigned to one of the four themes within subthemes to keep the information together so it could be grouped within the findings and analyzed. This study used the content analysis method through descriptive and interpretive data to understand the research.

Limitations

Because this was an interdisciplinary study, there was not an opportunity to go into great depth in just one area. I therefore had limited space to discuss critical points within the context of each issue. That certainly left out significant information because there is a limited number of pages allowed for this capstone; although it did not hinder the process and learnings experienced. It would have been beneficial to get the perspective of a variety of demographics including income levels, races and geographical locations throughout the country. The group I interviewed was highly educated and therefore not representative of the people who are hungry in the United States. In fact, they are likely the greatest food wasters in the country. I did not define the terms food waste or hunger to the interviewees or survey respondents, which may have caused some confusion or misunderstanding that could have skewed the data. The survey, and to some extent the in-depth interviews, were a convenience sample, so it did not include the voices from numerous socio, cultural, or racial demographics and therefore, is not representative of a diverse

random sample. The focus group was conducted over the phone along with two of the interviews, which may have led to an informal setting that influenced the data.

Findings

During the data collection and coding stages, the following four themes emerged in the research: (1) U.S. Culture, (2) Economics and Capitalism, (3) National and Foreign Donations, and (4) Potential Solutions. Additionally, within each theme, sub-themes became apparent which will also be presented in the findings. These themes and sub-themes were observed in both the in-depth interviews and survey results of this research study. Although the focus group data did not support all the themes of the findings, the results will be discussed in this section as well.

U.S. Culture

U.S. culture was frequently named as a contributing factor to food waste. Interview and survey participants were asked what they thought about the 40% of food produced going to waste in the United States. Among survey respondents 23 or 88% agreed that it is “upsetting” and “fundamentally wrong.” Three of the interviewees were not surprised to hear the statistic, while one found it “pretty shocking.” One interviewee said, “I think a lot of people buy food and don’t cook with it and then throw it out.” A second interviewee said,

America has a reputation for being a glutinous country. It's sort of the stereotype that Americans eat terrible food and then they waste a lot of it and they drive these really big cars that destroy the environment. I think that it suggests that people across the stratosphere don't really worry about that kind of stuff. It doesn't strike them as a

problem, it seems like it's someone else's problem if you throw away food.

There was much discussion of people being disconnected from the environment. One interviewee said,

I think people are, maybe not as much in San Francisco, but very disconnected from their food and how much energy it takes to grow food. And so, I think, being able to just toss your half-eaten dinner doesn't affect people, because they don't realize how much effort was put into it, or how many human rights were violated for putting that meal together on that table. So, I think that it's just a disconnection that people have and not really thinking about it.

One respondent said, "People who do live in abundance are not conscious of all that they are wasting." A second respondent, reflecting on the 40% of food wasted, said, "I'm actually shocked that it's not more. I feel like America is an indulgent society, so we always take more or buy more or order more than we truly need, JUST to absolutely ensure that we won't have to go without. Plus, we don't have a culture that supports minimizing waste in general!" and a third mentioned that there is, "LUXURY of having endless access to food."

One participant spoke about how people don't necessarily want the donated food given to them, even if they are hungry,

I've volunteered at homeless shelters and plenty of people there throw away food too.

They don't like corn, or they don't like chicken or whatever it is, they'll throw away half

their plate. So, it's a problem that extends beyond just the people that have food to spare and waste. It also goes to people who don't necessarily have meals a day. So, for them it's like whatever if I don't like it, I'm just not going to eat it. So, it almost makes you wonder if it's some sort of weird cultural thing of wastefulness. I don't know, like speaking for the rest of the world, like it in Europe or Asia for example, what food waste looks like.

One of the leading causes of food waste in the U.S. is aesthetics of the produce. As one interviewee explained, "Anything that doesn't measure up gets thrown out and I know that for sure! That's what I've had to do in my experience of personally working in a grocery store." Additionally, six of the respondents and two more interviewees mentioned that a lot of waste happens due to the aesthetics of food, with the interviewee attributing supermarket waste to "the way it's been marketed" to consumers. One interviewee said,

I think it's ridiculous that grocery stores throw out perfect food because it doesn't look perfect, but inside it's fine. I think it creates this charade for the public to think that all apples need to look this perfect and when the BEETS come in, they're like what is this apple? And I'm like, you've never seen this apple? It's okay if it has this mark. I'm like, those are sugar marks, that's delicious. You know, trying to make them realize that in nature, perfection is a different definition. It doesn't have to look like this beautiful apple. Perfection is the fact that this apple has evolved and the fact that it's come onto your plate and survived all of these harsh challenges. I think that's part of the disconnection – oh yeah, it's not good enough because it has a brown mark, so we're going to toss it out. Like, are you crazy? Just cut that, or eat around it! It's ridiculous. I'm shocked!

Three survey respondents discussed the lack of awareness and education around the impacts of food waste. Other elements of food waste related to U.S. culture that were mentioned were, portion sizes, people taking more food on their plates than they can eat, less cooking at home, emotional eating, and a toxic culture.

Five survey respondents mentioned that sell by dates are one of the reason that there is so much food waste. Additionally, some of the respondents referred to laws and regulations when they stated, “We have strict laws that do not allow companies to sell the food after a certain date” and “have to throw away food from restaurants and grocery stores to prevent being sued...to prevent legal liability.”

Sustainability was discussed extensively. One interviewee said,

They take it for granted and just throw it out because they can just get more. But the earth can't do that, you know. The earth can only make so much and there's tons of people starving and so they're taking for granted something that is slowly killing us and that really upsets me...I see it as a byproduct of this culture, this disconnection with our food and it saddens me because to me it's such a fulfilling part of culture.

One of the interviewees pointed out that food waste is “a symptom of a larger view of a throw away culture we're in.” The respondent continued,

We went from the 50s and having a lot of consumption and having a lot more disposable income and this idea of convenience is the ultimate priority and then that sort of morphed

into microwaved food items that have trays that we throw away and we started amassing more trash in the name of convenience and then also I think food got pushed into that.

Today, the United States is a multi-cultural society. One interviewee described it as a “melting pot.” This has potentially caused further disconnection and confusion around food choice for Americans,

I studied anthropology and I think there’s just a huge connection between culture and our relationship with food. And when I look at the United States, it’s a melting pot which is amazing because you get all of these different perspectives and kinds of foods. But I think the downside to that is that there’s no one food identity. So, you look at other cultures and there’s this balanced diet and people kind of know when they’re satiated and what tastes good and what goes together because historically it’s rooted in the culture about what came from the land and there’s this connection between the land and what they’re consuming. And in America that doesn’t really exist anymore because we have this melting pot.

A second interviewee discussed this from another perspective,

I think it’s a lot different for my ancestors, we used every part of the animal that we ate. Really acknowledging that this animal gave its life up so that you have energy and nourishment and really respecting that. I think that that has been lost with the commercialization of food. Fast food, all that stuff.

Interviewees were asked what they are seeing in their communities regarding food waste.

One interviewee spoke about nutrition,

the organization that I work with now and the things we focus on are around nutrition education and cooking and some of those. It's skills, but it's also changing pallets. And what I'm seeing now with a lot of the kids and families that we work with is, after so long of having really processed, really high in saturated fat, things that taste good but are so bad for our bodies. Like we actually have to change taste buds, it's not something that you can say, here's a kale salad and they're like, awesome! I've been waiting for this kale salad, forget McDonalds!

Other interviewees discussed the abundance of food at restaurants, and school children not finishing all their lunch.

When asked to describe what they knew about hunger in the United States, thirteen people, or 50% of the survey respondents, expressed some level of knowledge, stating it is a "rampant issue", "it is a problem", and "I know that it affects more people than we think." Only three of the respondents felt that hunger was not as big of an issue in the United States as it is abroad. Ten survey respondents, or 38% expressed that they knew "very little" or "not much" about the issue.

Two of the interviewees that work with schoolchildren shared their experiences as educators in relation to childhood hunger with one stating,

kids are hungry when they come to school here and it is unfortunate that there are kids that are still going hungry here in the U.S. and it's unfortunate because I have to see what happens when a kid comes to school hungry throughout the whole day and they're not learning anything. And then I see them as BEETS and they're reading at a fifth grade level and they're not ready to go to college and they're just sucked into the cycle.

The second interviewee discussed that, "Part of our job is just feeding them and making sure that they have the fuel to concentrate and get through the day. And not at any fault necessarily to their families or to the schools, it's just part of this culture that's not prioritizing it." As the interviewees point out, if children do not have access to food and attend school hungry, there are serious consequences.

There is another form of hunger that is less talked about; nutrition. Two of the interviewees and two survey respondents discussed hunger as malnourishment. One interviewee said, "If you eat a honeybun, that's not giving you the nutrition and the energy that you really need." The second interviewee stated,

I think maybe you have enough money to go to the corner store to buy chips and whatever. But even when you eat that, your body is still going to be hungry. You may be satiated for a bit, but if we're talking about actual nourishment, then it's a whole other form of hunger, you know.

Additionally, one survey respondent pointed out, "Even those who may not deal with 'hunger' issues may still be malnourished or undernourished as they are not getting the vitamins,

minerals, and nutrients necessary for optimal physical and mental performance.” Hunger can therefore take multiple forms including physical access and nutrition.

Adding further dimensions to the issue of food waste one interviewee said,

There’s a couple of communities that we work with and they work with food banks and they will provide apples and greens and other nutritious vegetables and fruits and there are often tens of dozens of bags that are left over, that people aren’t taking. These are communities that are hungry, but it’s either produce that they don’t know how to work with or it’s things that they don’t have time to cook down like greens and make a squash casserole. So, it’s easier and cheaper to get other food. Because, if they know that it’s just going to go to waste anyway, why pick it up in the first place.

Survey respondents were asked why they thought that hunger exists in the United States.

Four respondents connected food waste as part of the cause of hunger in the United States.

Others attributed hunger to addiction, systemic issues, irresponsibility, and poorly spent subsidies. One survey respondent said,

I do understand there are a lot of cases of hungry people I do empathize for. But the root of the issue to me is something deeper, and I’m not always sure "handouts" are the way to solve things like hunger. Although it is a very cool thing to me to Salvage our food waste and give it people really in need. But how do you decide who really needs it?

When asked if they thought food waste recovery could solve hunger in the U.S., 38% of

survey respondents said yes. While 19% said no and the remaining 42% responded “I don’t know.” Majority of respondents expressed that food waste recovery could “help” reduce hunger, but that they were not sure if it was the solution to the issue. Four respondents specifically mentioned distribution issues as part of the connection between food waste and hunger. One person said, “If it hit a plate, I doubt people will want to eat it. If it was prepared but never served, it can absolutely be donated,” while another said, “Recovery seems like a treatment of the symptoms. What about food waste prevention and more efficient food distribution?” and a third stated,

I don’t think that this can solve hunger, only appease the symptoms of it. Hunger will continue to exist while the root causes of poverty still exist. It’s like filling a bucket with water that has a hole in the bottom. Yeah, you’re “filling” the bucket but it’s never “full.” So food waste recovery can feed people, but hunger will not be solved.

The interviewees expressed concerns about the logistical challenges of distributing and having a consistent supply of food waste for hungry people. Referring to the homeless population, one interviewee said, “...they don’t have a kitchen” and therefore cannot use raw food waste, or that which requires cooking. Further adding to the complexity, another interviewee said,

It’s not an equal problem. It’s not an equal solution to where you solve food waste and therefore no one is hungry. I think we have to solve food waste in terms of resources and it will help some people, definitely, but it’s not going to be the end all be all. I think there

are systemic issues around racism and oppression and accessibility that are part of our culture and until we deal with those things, all these other things are all still symptomatic.

Donations

Millions of Americans rely on food donations from industry and the public each year. Donations are also part of the global strategy to end hunger. Two interviewees and 18 survey respondents, or 69%, supported a donation-based solution to critical social issues like hunger. Eight survey respondents, or 31%, criticized the approach. One survey respondent said, “I think that it perpetuates need. Things that are human rights, like food, shouldn't have to come from non-profits giving out food. Our society should be structured in a way that every human has access to the things that they need to survive.” Another mentioned, “I think it is a solid approach in the short term because it creates a counter culture infrastructure; but in the long term just perpetuates the existing problems with wealth, food, and land distribution in our country.”

Four of the interviewees felt that donations played an important role in the immediate future, but that they were essentially a “band-aid” and not a “solution.” One of the interviewees said, “We also need to look down the road, sustainably how do we treat the true root of hunger.” Another said, “There's a lot of people going hungry; and there are a lot of social institutions and programs to deal with that. But is the problem really going away? Are there less people hungry now than there was before these food programs came into place? I think that's just a short-term fix right now.”

A second interviewee said:

While I applaud organizations that want to help people on a day-by-day basis. I think in many, not all, but many cases it actually does more harm than good. Take for example a foreign NGO in a developing nation. They're there giving handouts based on their money, Those people become dependent on it because they have no other resources and then never seek out how to fix the problem themselves because they **found** the solution. But then, say a war breaks out and that foreign NGO has to pull-out of the country. They're now left with no resources to handle that situation on their own. Whereas, had that NGO not been there, it would have been difficult for them but eventually they would have figured out some other kind of situation – or how to deal with the situation. So, for me, donations can do harm because it creates a dependency when pulled, because inevitably nothing can last forever. At least in my mind, at some point things have to shift and change. At which point you leave people hanging and that's even more cruel.

Two interviewees and four survey respondents discussed the need to specifically donate to “programs,” such as service-based organizations and government assistance programs. One survey respondent discussed the importance of, “programs that target youth populations.” On the other hand, one survey respondent was critical of service-based organizations and government assistance programs, saying “I think it's a good start, but charities will always be subject to the whims of people who donate, which threatens the stability of any charity-based program.”

Three of the interviewees discussed the food bank as necessary to the community. One interviewee was concerned about homogenous demographics among those who use the food bank, and questioned how much the community was utilizing the service. The same interviewee questioned the access that people have to “fresh food” at the San Francisco food bank.

Two interviewees and 13, or 50%, of survey respondents were proponents of U.S. foreign aid; while two interviewees and two survey respondents had mixed feelings about aid. One interviewee said, “I’m less of an advocate for foreign aid I think and more about – instead of giving a hand out, give a hand up – really developing the communities – let them develop themselves. You can support that and you can give them resources to do that, but let them do it on their own terms. I think that’s really important.” Another said,

So, I’m a big proponent – if you’re going to work in a community, you need to be invited or it needs to be working with the community. It’s kind of the same as my view around development vs. gentrification. Are you coming in and saying here’s what I think you need and just giving it to you and then half the time it’s not what they need, or it’s not going to the right people. It’s not understanding the dynamics and the power structure that are in those communities. And so then it sort of feels like putting a band aid on it, or as a photo op, or congratulations – good job! But isn’t really getting at the root of the problem. Every time you buy a pair of shoes, they give a pair of shoes in a foreign country. I complimented my friend on her shoes and my other friend said, “oh those are Tom’s shoe’s, they’re not good because they’re actually taking production and jobs away from some of these countries. And they’re like ‘here’s shoes!’ And they’re like, ‘we don’t need shoes, we need jobs and we need these other resources.’ And it’s like, ‘no! You need shoes.’” And on that; that’s not really helpful.

One interviewee and three survey respondents felt that it is most important to aid the United States first, prior to sending money and resources abroad. One of the interviewees said,

There's a lot of issues going on in the United States on an infrastructure level. And if we're talking about hunger level, there's a lot of things that need to be fixed. There are schools that are decaying, the roads, a lot of the bridges in this country are really messed up. Like something major could easily happen. Is there no money to fix that? I'd like to think it's a good thing and that people have an opportunity to eat, but I think that that's putting a utopian perspective on it. I mean you have to wonder how many of these countries actually have transparency in their governments.

Three interviewees and two survey respondents expressed concern about U.S. foreign aid. All the respondents discussed the importance of being self-sustaining. One survey respondent said,

I think that this has a lot of "grey areas." Yes, there are countries that are suffering and in need, and we should not ignore that. But also, a lot of aid perpetuates poverty, and allows foreign governments to not provide their citizens with basic needs. I guess it depends on the circumstance. But generally, a lot of countries need aid because we colonized them, and took their resources for our benefit, and that's still largely happening.

One of the interviewees said,

I think foreign NGOs bring in a lot of resources that often the local community doesn't have access to and that's invaluable. But I think the dangerous part of foreign NGOs is

treading that line of cultural solutions. What works for one culture won't necessarily work for another. What you see as a problem isn't necessarily a problem for them. And your ideal community isn't necessarily their ideal community.

Donations were named as a way to address excessive food waste. Three survey respondents discussed the need for consumers and restaurants to "donate unused food." A fourth mentioned that, in stores, "much of the produce and fruits get wasted because they can't be stored and given away to poor people."

When asked about ways to change the current food waste situation, two interviewees discussed "having better places where you can drop off food donations" or "[giving] to either social entrepreneurs or meals on wheels...things of that nature." One survey respondent said that donations are not enough and that we also need to change our habits at home. One interviewee said that donations can start at the farm-level.

Economics

When asked why they thought hunger exists in the U.S., seven survey respondents replied using the phrases "capitalism," "inflation," and "corporate greed." One respondent said, "Hunger exists because poverty exists, which is because of the neoliberal agenda that is keeping people poor while the rich profit." The overwhelming consensus is that neoliberal economics is keeping people in poverty and therefore in a state of hunger.

Six respondents described a lack of economic access to food as the main cause of hunger. One interviewee mentioned, "wealth disparity between classes. We're not on an equal playing field in terms of access to resources." One respondent said, "The government is keeping people poor, and food waste recovery provides food for people who shouldn't be hungry in the first

place.” One survey respondent described the effects that rising prices and stagnant pay is having on the U.S. population:

Inflation makes it difficult to keep up with living expenses and forces people to skip meals to try to keep a roof over their heads. There are so many people barely getting by, and many that are under the threshold of 'getting by,' and don't have enough money to afford food. Many who have children are not able to earn enough money to fully support the needs of their families, even while working multiple jobs. Systemic discrimination has crippled many communities of minorities who disproportionately deal with hunger issues. There are so many issues that contribute to the causes of hunger. Veterans in this country are often practically discarded after being taken advantage of by the government and left struggling with PTSD and issues that make resuming a normal life after service very difficult, leading to mass homelessness of veterans and the hunger that comes with it.

Three survey respondents were not optimistic about hunger ever being solved in the United States. One said, “I think we can do a much better job than we are doing right now. But there may always be a small number in a capitalistic society that do not have enough.” Another said, “As long as capitalism is held over public programs, and inequality is not addressed, I don't think that we can ‘solve’ hunger. It's not hopeless, but I'm not optimistic either.” Another said, “The deck seems stacked against leveling the playing field but I'm open to possibilities. More socialism will be necessary, which runs counter to many American values of individualism - for better or worse.”

Three interviewees described the limitations of individualism. One interviewee stated, “There is so much emphasis put on the individual in this country that it’s hard...or there is just so much apathy that people don’t feel like that they have any power to do anything about it.” A second interviewee said, “I think it just says something about this culture in general of capitalism, and so much emphasis on the individual, and we can see people who are clearly struggling.”

Two interviewees went into detail making the connection between hunger and capitalism when they said, “It’s just the natural law of economics that not everyone is going to be an equal member of society and have the same access.” A second interviewee went on to say,

It’s a capitalistic culture. We don’t live in a communist society where everything is made together and distributed evenly. So, if you can’t afford it, or you’re not born into it – sucks to suck. And everyone wants more, so the people who already have some can buy more and dispose of it as they please and the people on the bottom struggle to make it out of that position. So, they keep struggling. Granted it’s what causes growth, but for me I think there has to be a happy medium at some point. And I don’t think we’ve found it because we’ve become so consumed with more, more, more – me, me, me. And sometimes it’s easy to lose track of the larger picture and I think it’s also hard for organizations that try to more evenly distribute things, to survive. Because we are a capitalist society, so you have to produce some sort of income in order to provide and thrive and to do that you can’t just wholeheartedly give out or provide. You have to be part of the system.

Participants in the study discussed the relationship between capitalism and food waste. One survey respondent discussed, “Obviously the system of food production and distribution is inefficient somehow. More is produced than is needed at a specific time.” One interviewee mentioned “the idea of Costco, buying a ton of shit so you can save money. If you save money? ...I mean a lot of it is due, I think, to the corporations trying to make more money off of us.”

One of the survey respondents pointed out that “The commodification and sequestration of food under capitalism creates artificial barriers to access and drives stigma for tapping into the abundance of surplus food in pantries and soup kitchens.”

Poverty limits not only access to food but food choices. One interviewee said,

I think there’s a lot of challenges when you are living in poverty... I think that really puts you up against barriers to getting access to healthy foods. I think we’re blessed here in San Francisco and California to have access to food banks that have fresh foods. At a lot of other food banks, you don’t get fresh foods, you get the canned food, you get government cheese always. I mean, it’s not healthy either.

Health of residents should be a major concern of any state. As one interviewee described,

I think people that are really eating at the margins – they’re eating soda pop and chips and making themselves sick--well not making themselves. But yeah, they’re probably going to end up with a lot of diet related illness because of lack of access and lack of money.

In relation to government policies, one survey respondent discussed, “All the subsidies make it easy for people to forget how important and with care [food] was made.” Another mentioned that food is “cheap.” A third said, “I don’t know what our government is doing around food. I don’t think they’re doing enough.” Three survey respondents discussed policies that have affected hunger such as food stamps being reduced, poorly spent subsidies, and resources allocated to other causes. One survey respondent said the “U.S has too much money not to be able to ensure all citizens are taken care of” while another said, “Being the richest country in the world it's inconceivable that hunger can exist in USA.”

Potential Solutions

Interviewees and survey respondents offered many insights into how the U.S. can work towards reducing food waste and the number of hungry people. Two interviewees felt there needs to be a greater cultural awareness around the issue of food waste, stating, “I feel that we can change [food waste] by like being more conscious about how much we’re eating and how much we actually need” and “It's one of those things that you have to sort of raise awareness and hope that people try modifying their behavior.” Other ideas around cultural shifts included changing the relationship that Americans have with food, reducing fad diets, and a greater connection with the environment.

Three interviewees and 10 survey respondents raised the importance of greater education around food waste and hunger issues in the United States. One interviewee discussed education starting at an early age when they said, “In Japan the young children, part of their preschool almost education, is going out to the fields and growing rice and harvesting and making a meal themselves. So, I think, nurturing that connection between land, food and consumption in the

younger generations, so that it's something they grow up with [can help].”

Another interviewee described more urgent messaging, “Make it like a national health issue.” Another participant discussed a media campaign, “I think it could be explained across the board, you know like what is the effect of this food being wasted, how does it affect the environment, how does it affect the people that are going hungry.”

Six survey respondents discussed the importance of proper planning regarding food production, distribution, and efficiency. About the donation-based approach, one respondent suggested, “It is simpler to implement than we realize I bet. What if we just plug in some fridges around cities?” Four interviewees and seven survey respondents supported ideas regarding policy reform and government action regarding both food waste and hunger in the United States.

Other potential solutions that were recommended were: changing dietary guidelines for Americans, allowing people to grow their own food, a willingness to eat aesthetically imperfect produce, a move towards more socialist ideals and less emphasis on individuals, more service and donations, being open to food that has not expired but is beyond stamped dates, removal of social stigma with food stamps/asking/taking food from food banks, and consumer consciousness around marketing.

Focus Group

Three long-time volunteers of the Marin County Food Bank were interviewed as part of a focus group. The group was asked a series of questions; mostly different from the interviews and survey. I wanted to get the perspective of people who were working on the ground, in the field, to get an idea of what is happening at the food bank specifically, as it is the longest running non-government assistance program in the United States. The group was in unanimous agreement

with all the responses listed below.

The group was asked what made them get involved, what makes them stay, and what keeps them excited to keep coming back to volunteer. The group felt they were making a difference in the community, but more than that, it gave them the opportunity to socialize and meet new people.

The group was asked what they thought some of the causes of poverty are in the U.S. today. They all agreed contributing causes included the high cost of living, that certain people are born into it, that certain people fall victim to drug abuse or just violence in general, and that some are psychologically unstable. One person said, “There are also just a certain amount of resources in general and not everyone has access to those resources. It's not quite a level playing field so I think that's a part of it as well.”

The group saw a lot of food waste coming in as donations to the food bank, but also acknowledged that there was a lot more in restaurants and shelters that was not being used. All three focus group participants discussed the high cost of living in the San Francisco Bay Area as the largest reason for hunger in the community. One participant said, “The pay doesn't really match up to how much we should be paying out of each paycheck to go to housing, and so it cuts into the budget.”

The group expressed that they do believe the food bank is locally making a difference, but that the government and corporations need to also aid. Generally, I was surprised at how the food bank volunteers, who were doing the on the ground work, did not say as much as I expected about the broader issues of hunger, donations, and food waste.

Analysis

This research project set out to explore the following questions;

1. Can hunger be solved in the United States through food waste recovery?
2. What are the root causes of hunger in the United States?
3. Does the donation-based approach to solving critical social issues work, or is it perpetuating problems?

This study began from an investigation into the sources of food waste, and the potential for food waste recovery to end hunger. Many participants named U.S. culture as a prime contributor to food waste. As one interviewee said, “Food waste is a symptom of a throw away culture.” There is a direct correlation between having an abundance of resources and being disconnected from the impact of wasting them.

An interesting and perhaps telling note; on numerous occasions participants referred to the people causing the problem to be ‘they,’ meaning they may not consider themselves to be included as contributors to the problem; even though the clear majority of respondents have completed higher education, making them part of the so-called elite that are generally more inclined to waste. This further supports the idea that neoliberalism tends to make people objectify their surroundings, as people see issues outside of themselves.

Also, interestingly, cultural abundance may lead to a culture of waste at multiple sections of society in the United States. As one survey respondent mentioned, “having endless access to food” may have negative implications in terms of waste regardless of one’s level of personal hunger. From a systems perspective, abundance could be linked to the capitalist culture which produces more than enough, as recent generations have not had to experience a lack of resources; at least not in the Middle and Upper classes.

Capitalist abundance culture may also be exemplified in the way that supermarkets function in the United States. As previously discussed, stringent guidelines at supermarkets have promoted the cosmetic perfection of food in the minds of consumers. This is clearly an issue across the data that people are concerned about, and see as an opportunity for change in the system. This practice is an externality of capitalism and has contributed to unsustainable consumer behaviors. The most patronizing aspect of this practice being when consumers ask supermarkets why they impose such wasteful practices, they simply reply ‘consumer demand’ – which is basically saying that “it is your own fault and not ours,” even though supermarkets did make consumers want it through marketing efforts and creating the expectations for how foods should look.

Another contributing factor to food waste is the widely-held belief among consumers that food can only be used by the best before date, even though these dates are arbitrarily decided by the producer or food company and not formally regulated by any government agency. Numerous survey respondents cited strict laws that supermarkets need to abide by in relation to donations. However, as one of the interviewees discussed, there is a law called the Bill Emerson Good Samaritan Food Donation Act. The law states that individuals, corporations, wholesalers, caterers, farmers, restaurateurs, and others are not held liable for donated food. This law was passed in 1996 during the Clinton Administration to encourage food donations (Jacobs, 2014). However, very few people know about it, or those that do are not speaking about it because there is a widespread belief among Americans around legal liability that in fact does not exist and further infers a culture that is disconnected or misinformed from what is happening around them.

Disconnection was another major theme that emerged from the research. Historically, the United States was an agrarian state, with the majority of its population producing and harvesting

their own food. Today, through urbanization, we see agrarianism greatly lost. Urban Americans have become incredibly reliant on the industrialized food system, with little to no knowledge about the amount of resources that go into growing food, how and where it is being produced, who is harvesting it, and eventually how it is transported and ends up on their table.

We see that food waste is making a huge impact on environmental degradation. The data shows that many people are aware about this, as they expressed their concerns around resources, the environment, and the earth in general.

Prior to modern-day agriculture, there was a much greater connection to food and the environment. In homogenous cultures, there was a general diet that the people of the culture would follow. The diet would have been developed over time as the culture evolved, and in relation to the landscape and beliefs of that group of people. Multicultural food choices may contribute to additional disconnection from food in the United States. Also, because each culture may hold their own belief system as to nutrition, digestion, and flavors, there is a myriad of information that may cause further confusion in the minds of U.S. consumers.

Beyond the contributing factors to food waste, there is the question of whether food waste recovery can solve hunger. Food waste recovery makes an impact on addressing an immediate need to feed the hungry through various assistance programs. However, there is a difference between feeding the hungry now and ending hunger as a systemic problem. There are a wide range of perspectives on food waste recovery's potential. Most believe similarly to the literature; that there are distribution issues around solving hunger. However, most of the data shows that people do not believe food waste recovery can end hunger by itself. Furthermore, several people supported perspectives in the literature and what became my own opinion through the research that, in fact, food waste is not a solution to systemic hunger in the United States, or

around the world.

Food waste recovery itself is part of a broader donation system, consisting of both nonprofit and government assistance programs. Despite the economic and material abundance in the United States, a country considered to be one of the most developed in the world, it is shocking that children are going to school hungry. This is a problem not only in terms of children's physical well-being. Hunger prevents children from learning to their maximum potential, as one of the interviewees discussed. Being below reading level means that if you are an 18-year-old and it is time to go to college, you may not be ready because you have not learned what you need to learn to thrive at that academic level. Essentially, the system is setting these children up for failure by not providing what they need. If the system is not supporting people during their formative years, they may have greater obstacles to excel in their lives as they grow older.

To address this problem, the USDA offers several breakfast, lunch, and snack programs for children under the age of 18 years. But getting enough calories is not the only issue. The quality of the food has been highly controversial for several decades. It is questionable whether these "nutritional" assistance programs offer the actual nutrition that children really need. Meanwhile corporations are making huge profits through in-school cafeteria programs (Zieperstein, 2012). The Healthy Hunger Free Kids Act that Michelle Obama supported, and subsequently passed in 2010, did attempt to address nutritional needs. However, as Klein (2017) recently reported, the Act is under jeopardy with the new administration. Nutritional standards may be less restrictive once more, which would benefit corporations who simply want to provide cheap food and maximize their bottom-line.

In general, as both the primary and secondary research has shown, the food that the

American people are receiving through both government and NGOs is not providing the essential nutrients that their bodies and minds need to thrive. Instead, in many cases, people eat diets consisting of processed foods that are high in saturated fats, sugar and unknown chemicals that are making them sick. There is an epidemic of obesity, heart disease, cancer and mental health issues in the United States today. Poor nutrition is a key driver in these diseases. The culture is malnourished on top of being hungry, with a drive from food waste activists to further divert unhealthy food to people.

In addition to the problem of corporations profiting from nonnutritive processed food, when nutritious food is donated it can still go to waste. As one of the interviewees described, many people do not know what to do with kale or other vegetables. If they do not know how to cook it, or how to store it, they will not buy it. In fact, as several interviewees discussed, people who are physically going to the food banks are not even taking vegetables home for free. As one interviewee said, “We actually have to change taste buds” because people are so used to eating processed food. Additionally, the data showed that a lack of time to prepare food and simply not wanting to waste food are other factors in poor eating habits.

The donation system also operates internationally; and respondents were more in favor of foreign aid than domestic donations. However, there were opponents as well. Proponents felt that the world is a global community and should be supported as such. While opponents criticized the aid agenda of interfering with foreign cultures and perpetuating poverty around the world through perpetuating dependency on the “developed.” Many people discussed the importance of including the voices of the people whose community is being aided, and not just relying on American perceptions of need. However, interestingly, the same was not said about the hungry in America. The voices of the hungry were not included as part of the discussion, which leads me to

believe that perceptions of hunger at home and hunger abroad are somehow different in the minds of people.

As we figure out ways to feed the hungry, and analyze assistance programs, we often may wonder why do we have such a donation system in the first place. Hunger is an externality of capitalism. The same is true of food waste. Currently, the U.S. and global economic systems are capitalist; meaning there is a drive to maximize profits. There is a push from industry for Americans to consume, because that is how they are going to maximize profits. The research shows that people are discussing the capitalist agenda to maximize profit and that a lack of wealth causes a lack of access to food, which leads to hunger. Furthermore, stagnant wages, inflation, and systemic discrimination add to the root causes.

There is a stigma in the minds of consumers that they should have to buy their food and not accept it in the form of donations. As one respondent said, “The commodification and sequestration of food under capitalism creates artificial barriers to access and drives stigma for tapping into the abundance of surplus food in pantries and soup kitchens.” What they mean is that food has literally become a product, a good that is sold in the market for a profit, as opposed to a necessity that we all have a right to access. Furthermore, the system creates social stigmas around accepting food or anything else for that matter from an assistance program, or “charity”. Those who accept donations are seen as unable to pull themselves up by their “bootstraps,” or to meaningfully contribute to society. But, in a capitalist economy, even people working full time are not necessarily able to afford the cost of food. Thus, donations are a byproduct, or externality, of a capitalist system that cannot offer access to all people to all the goods and services that are abundantly produced.

How donations reinforce capitalism is rarely discussed. The data shows that the American

people, or perhaps culture, is highly supportive of donations. Over the past several decades, donations have played a critical role in providing access to resources to groups of people who would not have access otherwise in this economic system. Donations offer immediate relief and assistance. However, the donation or charity system is not only a byproduct of the capitalist system, it is only a short-term approach that does not provide an overall solution. Some of the data further went on to support critics and my own conclusion in this research that, in fact, donations only perpetuate the problem in the long-run as they create a dependency that did not exist before. As countries continue to pass food waste laws around the world, like the one in France, we will continue to see the numbers of recipients rise. This may not be viewed negatively in the intermediate. However, as one interviewee points out, what will happen to the people receiving the food if one day it simply is not there.

By encouraging donations, we are not empowering people as VaanKlassen and Miller (2011) discussed. Furthermore, I cannot imagine people in general would want to get their groceries from the food bank or enjoy paying for food using SNAP benefits, especially if they are underemployed or work for minimum wage, which are the predominant demographic of hungry Americans today.

Focusing on donations and aid is taking the focus away from the real problem. And when you take away the focus from the real problem, from a systems perspective, you are essentially making things worse in the long run through postponing solutions. If we continue to put a heavy focus on the donation-based system, I believe that in less than ten years from now, hunger will be greater than before because more people will become dependent on these donations. Not only that, but, as Patel & Saul say, “Treating hunger through society’s waste compounds the indignity of hunger, and points us away from more permanent solutions” (Patel & Saul, 2017, para. 2).

Finally, interviews and surveys raised several suggestions for ways to reduce food waste and better address hunger. Suggestions included,

- Greater cultural awareness through public education
- Proper planning at the federal level in terms of food production, distribution and efficiency
- Policy reform and government action in relation to the issues
- Changing dietary guidelines for Americans
- A move towards consumption of aesthetically imperfect produce
- Changing perceptions about best before dates
- Changing cultural stigmas with receiving assistance
- Consumer consciousness around marketing

It is interesting that no one said anything in terms of creating restrictions on the amount of food that is being produced. Rather, the overwhelming response is towards donating more food, rather than producing less or controlling the amount that is produced and working on decreasing inequality or increasing real wages. I believe that the American people and western societies in general have been socially conditioned to just “donate” without thinking about alternatives or long-term solutions.

In the short term, we can focus more on things like a push for living wages, increasing investment, creating more jobs, and holding the government accountable. Otherwise, the inverse needs to happen where the government starts to restrict food subsidies and the amount of food being produced to minimize the waste issue. Additionally, organizations will need to shift from power *with* to power *to* and power *within*. Education and re-evaluations of the neoliberal economic system will also play integral roles in moving forward towards change and eradicating the issues of food waste and hunger in the long-term.

Conclusions

This research process has significantly changed me and potentially the people I interviewed. Through questioning we can unfold and really begin to understand complex social issues. I wanted to know if food waste recovery could solve hunger; what the root causes of hunger were in the U.S.; and if the donation-based approach to solving critical social issues worked or if it perpetuated the problem.

The in-depth interviews had the greatest impact. All six interviews, at the end, asked for my perspectives on the issues. This became an exchange which encouraged everyone to think deeply about the issues. I believe that the power of those exchanges was perhaps the most transformative part of this process.

The interdisciplinary approach of my research led me to understand that there are deep structural issues within the economic, political and social environment of the United States that has led to a service, or donation-based approach to addressing the issues that people living in poverty face. The need for aid, or donations, is symptomatic of a culture that has lost touch with the environment around it, both socially and perhaps spiritually, with such emphasis on individualism and consumerism. Psychologically, people continue to seek out the “warm glow” that we receive while giving to, or ‘helping’ others. We may not receive this from other aspects of our lives, or we simply cannot get enough of it. Undeniably, there is an immediate need to address the issue of hunger. However, “helping” as a motivation of personal psychological benefit, whether knowingly or unknowingly, is delaying the process to collectively address the underlying causes of hunger in the first place. As Niebuhr suggested, the focus is diverted to giving charity, rather than social justice.

There are certainly organizations in the United States who are working on addressing the causes of hunger. However, there needs to be a greater sense of cultural awareness and urgency amongst the masses to the implications and potential downturn of a donation-based system in the United States and abroad. This can be brought forth through education, not only in the formal sense, but through the conversations we choose to have with our neighbors, friends and family.

Internationally we see this issue already unfolding with the current ‘nightmare’ that Somalia and neighboring countries are facing with famine (Sieff, 2017). If aid was a solution to the problem, countries like Somalia would not be facing this crisis today. That is why it is imperative that we educate ourselves and all those around us to shift the expression of power from power *with* to power *to* and power *within*.

Recommendations for Future Research

- Impacts of donations and aid on hunger / food insecurity
- Perceptions of food waste consumption from the people facing hunger / food insecurity
- The nutritional content of food waste recovery
- Ways to mitigate the amount of food being produced

Bibliography

- 412 Food Rescue. (2017). *Programs*. Retrieved from <https://412foodrescue.org/programs/>
- Amodeo, J. (2014, January 10). 5 Reasons why receiving is harder than giving. [Web Log] Retrieved from <https://psychcentral.com/blog/archives/2014/01/07/5-reasons-why-receiving-is-harder-than-giving/>
- Andreoni, J. (1989). Giving with impure altruism: Applications to charity and Ricardian equivalence. *The Journal of Political Economy*, 97(6), 1447-1458. Retrieved from <http://econweb.ucsd.edu/~jandreoni/Econ264/papers/Andreoni%20JPE%201989.pdf>
- Baumeister, R. F., Campbell, J. D., Krueger, J. I., & Vohs, K. D. (2003, May). Does high self-esteem cause better performance, interpersonal success, happiness, or healthier lifestyles? *Psychological Science in the Public Interest*. 4(1), 1-44. Retrieved from <http://assets.csom.umn.edu/assets/71496.pdf>
- Bread for the World. (2017). Hunger Programs. Retrieved from <http://www.bread.org/hunger-programs>
- Bolen, E., Rosenbaum, D., Dean, S., & Keith-Jennings, B. (2016, May 05). More than 500,000 adults will lose SNAP benefits in 2016 as waivers expire. Retrieved April 22, 2017, from <http://www.cbpp.org/research/food-assistance/more-than-500000-adults-will-lose-snap-benefits-in-2016-as-waivers-expire>
- Bourgeoisie. (2014). In *Collins English Dictionary – Complete and Unabridged, 12th Edition*. Retrieved April 22 2017 from <http://www.thefreedictionary.com/Capitalist+Class>
- Centers for Disease Control and Prevention. (2016, September 01). Adult Obesity Facts. Retrieved from <https://www.cdc.gov/obesity/data/adult.html>
- Chrisafis, A. (2016, February 04). French law forbids food waste by supermarkets. *The Guardian*. Retrieved from <https://www.theguardian.com/world/2016/feb/04/french-law-forbids-food-waste-by-supermarkets>
- The Center on Capitalism and Society. (n.d.). Theory of Capitalism. Retrieved from <http://capitalism.columbia.edu/theory-capitalism>
- Daugherty, S. (2014, October 16). Tristram Stuart: Waging war against global food waste. *National Geographic*. Retrieved from <http://news.nationalgeographic.com/news/2014/10/141016-food-waste-tristram-stuart-emerging-explorer-hunger-charity-ngfood/>
- Davies, W. (2010). The politics of externalities: Neo-liberalism, rising powers and property rights. Retrieved from http://www.compas.ox.ac.uk/media/WP-2010-OS-Davies_Social_Externalities_Neo-Liberalism.pdf

- Donation. (2017). In Merriam-Webster's Dictionary. Retrieved from <https://www.merriam-webster.com/dictionary/donation>
- Drutman, L. (2015, April 20). How corporate lobbyists conquered American democracy. *The Atlantic*. Retrieved from <https://www.theatlantic.com/business/archive/2015/04/how-corporate-lobbyists-conquered-american-democracy/390822/>
- Food and Agriculture Organization. (2013). Food wastage footprint: Impacts on natural resources: Summary report. Retrieved from <http://www.fao.org/docrep/018/i3347e/i3347e.pdf>
- Food and Agriculture Organization. (2015). The State of Food Insecurity in the World: Meeting the 2015 international hunger targets: Taking stock of uneven progress. Retrieved from <http://www.fao.org/3/a4ef2d16-70a7-460a-a9ac-2a65a533269a/i4646e.pdf>
- Food and Agriculture Organization & United Nations Development Programme. (n.d.). Definitional framework of food loss. Retrieved from <http://www.thinkeatsave.org/docs/FLW-Definition-and-Scope-version-2015.pdf>
- Feeding America. (2017). *Home page*. Retrieved from <http://www.feedingamerica.org/>
- Fields, S. (2004, October). The fat of the land: Do agricultural subsidies foster poor health? *Environmental Health Perspectives*. 112(14) A820-A823. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1247588/>
- Fong, C. M., Bowles, S., & Gintis, H. (2003, July 27). Reciprocity, self-interest, and the welfare State. Retrieved from <http://www.umass.edu/preferen/gintis/Reciprocity%20and%20the%20Welfare%20State.pdf>
- Food for All. (2017). *Donations*. Retrieved from <https://foodforall.us/donations>
- Fuentes-Nieva, R., & Galasso, N. (2014). Working for the few: Political capture and economic inequality. Retrieved from https://www.oxfam.org/sites/www.oxfam.org/files/file_attachments/bp-working-for-few-political-capture-economic-inequality-200114-en_3.pdf
- Furber, L. (2016). 59 organizations fighting food loss and waste. Retrieved from <https://foodtank.com/news/2016/07/fighting-food-loss-and-waste/>
- Gabler, N. (2016, April 26). The secret shame of middle-class Americans. *The Atlantic*. Retrieved from <https://www.theatlantic.com/magazine/archive/2016/05/my-secret-shame/476415/>

- Garthwaite, K. (2016, June 14). Starving and depending on foodbanks: Why we need to rethink choice, deservingness, and stigma. [Web Log] Retrieved from <http://blogs.lse.ac.uk/politicsandpolicy/life-inside-a-foodbank/>
- Goldenberg, S. (2016, July 13). Half of all US food produce is thrown away, new research suggests. Retrieved from <https://www.theguardian.com/environment/2016/jul/13/us-food-waste-ugly-fruit-vegetables-perfect>
- Gunders, D. (2012). Wasted: How America is losing up to 40 percent of its food from farm to fork to landfill. Retrieved from <https://www.nrdc.org/sites/default/files/wasted-food-IP.pdf>
- Gupta, N. (2016, April 13). History of world hunger. [Web Log] Retrieved from <https://borgenproject.org/history-world-hunger/>
- Hancock, R. (1989). *Lords of poverty: The power, prestige, and corruption of the inter-national aid business*. New York, NY: The Atlantic Monthly Press. Retrieved from <https://books.google.co.uk/books?id=5bHvTtNmsikC&printsec=frontcover&hl=en#v=onepage&q&f=false>
- Harrington, E. (2014, March 06). 1M kids stop school lunch due to Michelle Obama's standards. *The Washington Times*. Retrieved from <http://www.washingtontimes.com/news/2014/mar/6/1m-kids-stop-school-lunch-due-michelle-obamas-stan/>
- Hepker, C. (2014, July 3). Food waste reduction could help feed world's starving. *BBC News*. Retrieved from <http://www.bbc.com/news/business-28092034>
- Heskett, J. (2009, November 04). What is the role of government vis-à-vis capitalism? Retrieved from <http://hbswk.hbs.edu/item/what-is-the-role-of-government-vis-vis-capitalism>
- Hobson, J. A. (1921). *Work and wealth: A human valuation*. New York, NY: The Macmillan Company. Retrieved from <http://bit.ly/2oQFGTI>
- Hollis, N. (2011, August 31). Why good advertising works (even when you think it doesn't). *The Atlantic*. Retrieved from <https://www.theatlantic.com/business/archive/2011/08/why-good-advertising-works-even-when-you-think-it-doesnt/244252/>
- Illich, I. (1968). To hell with good intentions. Retrieved from <http://www.globemedcu.org/wp-content/uploads/2014/10/to-hell-with-good-intentions-ivan-illich.pdf>
- Jacobs, H. (2014, October 15). Why grocery stores like Trader Joe's throw out so much perfectly good food. *Business Insider*. Retrieved from <http://www.businessinsider.com/why-grocery-stores-throw-out-so-much-food-2014-10>

- Jahan, S., & Mahmud, A. S. (2015, June). What is capitalism. Retrieved from <http://www.imf.org/external/pubs/ft/fandd/2015/06/basics.htm>
- Jones, T. (2007, July 01). In the war on hunger, his plate is full. *Washingtonpost.com*. Retrieved from <http://www.washingtonpost.com/wp-dyn/content/article/2007/06/30/AR2007063001030.html>
- Kasperkevic, J. (2014, April 17). Food stamps: Why recipients are haunted by stigmas and misconceptions. *The Guardian*. Retrieved from <https://www.theguardian.com/money/2014/apr/17/food-stamps-snap-coordinators-challenges>.
- Kilbourne, J. (1999, November 15). *Deadly persuasion: Why women and girls must fight the addictive power of advertising*. New York, NY: Free Press. Retrieved from <http://www.cnn.com/books/beginnings/9911/deadly.persuasion>
- Klein, B. (2017, March 15). Michelle Obama's healthy school lunch program in jeopardy? *CNN*. Retrieved April 22, 2017, from <http://www.cnn.com/2017/03/14/politics/michelle-obama-healthy-hunger-free-kids-act/>
- Korkki, P. (2013, December 22). Nonprofits seek to understand why people give to charity. *The Boston Globe*. Retrieved from <https://www.bostonglobe.com/business/2013/12/22/nonprofits-seek-understand-why-people-give-charity/72b4B2kbKiXqNzxnQbKAtO/story.html>
- Korte, G. (2017, March 19). Here's the truth about Meals on Wheels in Trump's budget. *USA Today*. Retrieved from <https://www.usatoday.com/story/news/politics/2017/03/18/meals-on-wheels-trump-budget-proposal-cuts/99308928/>
- Kotz, D. M. (2015). Neoliberalism, globalization, financialization: Understanding post-1980 capitalism. *The Restructuring of Capitalism in Our Time*. doi:10.7312/tabb15842-008
- Lepore, J. (2015, March 16). Richer and poorer: Accounting for inequality. *The New Yorker*. Retrieved from <http://www.newyorker.com/magazine/2015/03/16/richer-and-poorer>
- Leslie, J. (2016, July 7). Unemployment and poverty, inherent features of capitalism. *Left Voice*. Retrieved from <http://www.leftvoice.org/Unemployment-and-Poverty-Inherent-Features-of-Capitalism>
- Levy, N. (2002). Against philanthropy. Retrieved from <https://pacscenter.stanford.edu/sites/all/files/Against%20Philanthropy.pdf>
- Liodakis, G. (2010, August 18). Political economy, capitalism and sustainable development. *Sustainability*. 2(8), 2601-2616. doi:10.3390/su2082601

- Lukes, S. M. (2014, December 03). Individualism. In *Encyclopedia Britannica*. Retrieved from <https://www.britannica.com/topic/individualism>
- Marx, K., & Engels, F. (1848). Manifesto of the Communist Party. Retrieved from <https://www.marxists.org/archive/marx/works/download/pdf/Manifesto.pdf>
- McMillan, T. (n.d.). The new face of hunger. *National Geographic*. Retrieved from <http://www.nationalgeographic.com/foodfeatures/hunger/>
- Meadows, D. H. (2008). *Thinking in systems: A primer*. White River Junction, VT: Chelsea Green Publishing.
- Meals on Wheels America. (2017). The problem & our solution. Retrieved from <http://www.mealsonwheelsamerica.org/theissue/problemandsolution>
- Miller, M. M. (Director). (2014). *Poverty, Inc.* [Motion Picture]. United States. Retrieved from <http://www.povertyinc.org/>
- Moyo, D. (2009). *Dead aid: Why aid is not working and how there is a better way for Africa*. New York, NY: Farrar, Straus and Giroux.
- Niebuhr, R. (1932). Moral man and immoral society: A study in ethics and politics. *Foreign Affairs*, 76(5), 215. doi:10.2307/20048213
- O'Brien, J. (2016, June 13). Giving USA: 2015 was America's most-generous year ever. Retrieved from <https://givingusa.org/giving-usa-2016/>
- Ostroff, J. (2016, September 23). Second Harvest turns waste into 22,000 free meals a day. *Huffington Post*. Retrieved from http://www.huffingtonpost.ca/2016/09/23/second-harvest-food-rescue_n_11727040.html
- Parfitt, J., Barthel, M., & Macnaughton, S. (2010, August). Food waste within food supply chains: Quantification and potential for change to 2050. *The Royal Society Publishing*. DOI: 10.1098/rstb.2010.0126
- Patel, R. (2016, August 01). How society subsidizes big food and poor health. *JAMA Internal Medicine*, 176(8), 1132-1133. doi:10.1001/jamainternmed.2016.3068.
- Patel, R., & Saul, N. (2017, January 27). Table scraps for the poor won't end poverty. *The Globe and Mail*. Retrieved from <http://www.theglobeandmail.com/opinion/table-scraps-for-the-poor-wont-end-poverty/article33784638/>
- Piff, Paul K.; Kraus, Michael W.; Côté, Stéphane; Cheng, Bonnie Hayden; Keltner, Dacher, (2010, Nov). Having less, giving more: The influence of social class on prosocial behavior. *Journal of Personality and Social Psychology*, 99(5), 771-784. Retrieved from <http://psycnet.apa.org/?&fa=main.doiLanding&doi=10.1037/a0020092>

- Perry, S. (2016, November 22). U.S. adults spend more on health care but are sicker than adults in 10 other wealthy countries, study finds. *MinnPost*. Retrieved from <https://www.minnpost.com/second-opinion/2016/11/us-adults-spend-more-health-care-are-sicker-adults-10-other-wealthy-countries>
- Pollan, M. (2001, December 9). Precautionary principle. Retrieved from <http://www.sehn.org/pollan.html>
- Ratner, C. (2000). Agency and culture. *Journal for The Theory of Social Behavior*, 30, 413-434
Retrieved from http://lchc.ucsd.edu/mca/Paper/00_01/agency.htm
- Reich, R. (2003, December 12). When Charity Begins at Home (Particularly the Homes of the Wealthy) [Blog]. Retrieved from <http://robertreich.org/post/69833627613>
- Rethink Food Waste through Economics and Data (2016). A roadmap to reduce U.S. food waste by 20 percent. Retrieved from http://www.refed.com/downloads/ReFED_Report_2016.pdf
- Robinson, M. S., & Allaby, M. (2004, January 1). Methane (CH₄). In *Encyclopedia.com*. Retrieved from <http://www.encyclopedia.com/topic/methane.aspx>
- Royte, E. (2016, March). How 'ugly' fruits and vegetables can help solve world hunger. *National Geographic Magazine*. Retrieved from <http://www.nationalgeographic.com/magazine/2016/03/global-food-waste-statistics/>
- Rosenbaum, D., & Keith-Jennings, B. (2016, March 21). House 2017 budget plan would slash SNAP by more than \$150 billion over ten years. Retrieved from <http://www.cbpp.org/research/food-assistance/house-2017-budget-plan-would-slash-snap-by-more-than-150-billion-over-ten>
- Saul, N. (2016, May 12). Trash talking: The problem with trying to solve hunger with corporate food waste. Retrieved from <https://cfccanada.ca/news/trash-talking-problem-trying-solve-hunger-corporate-food-waste>
- Schiller, B. (2016, August 16). The real reason there's world hunger: food waste, not food shortages. Retrieved from <https://www.fastcompany.com/3062692/the-real-reason-theres-world-hunger-food-waste-not-food-shortages>
- Sieff, K. (2017, March 07). New U.N. chief confronts the 'nightmare' of Somalia's food crisis. *The Washington Post*. Retrieved from https://www.washingtonpost.com/world/africa/new-un-chief-confronts-the-nightmare-of-somalias-food-crisis/2017/03/07/4081bc9a-0044-11e7-9b78-824ccab94435_story.html?utm_term=.c1baaed20ea2

- Siegel, K. R., Bullard, K. M., B. K., Imperatore, G., Kahn, H. S., Stein, A. D., Ali, M. K., & Narayan, K. M. (2016, August 01). Association of higher consumption of foods derived from subsidized commodities with adverse cardiometabolic risk among US adults. *JAMA Internal Medicine*, *176*(8), 1124-1132. doi:10.1001/jamainternmed.2016.2410
- Slackjaw Film (Producer), & Heap, R. (Director). (2011). *Consumed: Inside the belly of the beast* [Motion picture]. United Kingdom: Journeyman TV.
- Stroh, David Peter (2015, September 24). Systems thinking for social change: A practical guide to solving complex problems, avoiding unintended consequences, and achieving lasting results (Kindle version). Retrieved from Amazon.com
- Stuart, T. (2015). Foodwaste Facts. Retrieved from <http://www.tristramstuart.co.uk/foodwastefacts/>
- Swanson, P. (2013). *An introduction to capitalism*. New York, NY: Routledge. Retrieved from <http://bit.ly/2p8djmh>
- The White House. (2010, December 13). President Obama signs healthy, hunger-free kids act of 2010 into law. Retrieved from <https://obamawhitehouse.archives.gov/the-press-office/2010/12/13/president-obama-signs-healthy-hunger-free-kids-act-2010-law>
- United States Department of Agriculture. (2017, May 16). *Economic research service home page*. Retrieved from <https://www.ers.usda.gov/>
- US Legal. (2016). Donations. Retrieved from <https://definitions.uslegal.com/d/donations/?puslf=g1%2Bdefi%2BDonations%2BLaw&gclid=CIOfzcHpn6oCFSIRNAodYiod5A>
- VeneKlasen, L., & Miller, V. (2008). *A new weave of power, people, and politics: The action guide for advocacy and citizen participation* (D. Budlender & C. Clark, Eds.). Warwickshire, U.K: Practical Action Pub.
- Warner, A. W., Forstater, M., & Rosen, S. M. (Eds.). (2000). *Commitment to full employment: Macroeconomics and social policy in memory of William S. Vickery*. New York, NY: Routledge. Retrieved from <http://bit.ly/2pQYdiQ>
- Williamson, C. R. (2009). Exploring the failure of foreign aid: The role of incentives and information. *The Review of Austrian Economics*, *23*(1), 17-33. doi:10.1007/s11138-009-0091-7
- Woolley, E., Garcia-Garcia, G., Tseng, R., & Rahimifard, S. (2016). Manufacturing resilience via inventory management for domestic food waste. *Procedia CIRP*, *40*, 372-377. doi:10.1016/j.procir.2016.01.070

World Bank. (2001). World development report 2000/2001: Attacking poverty. Retrieved from <http://www.ssc.wisc.edu/~walker/wp/wp-content/uploads/2012/10/wdr2001.pdf>

World Food Programme. (2013, November 05). What Causes Hunger? Retrieved from <https://www.wfp.org/stories/what-causes-hunger>

Zero Percent. (2017). Our solution. Retrieved from <http://www.zeropercent.us/#solution>

Ziperstein, R. (2012, March 15). School food, Inc.: The contracting of America's national school lunch program and its nutritional consequences. Retrieved from <https://blogs.cornell.edu/policyreview/2012/03/15/school-food-inc-the-contracting-of-america%E2%80%99s-national-school-lunch-program-and-its-nutritional-consequences/>

Appendices

Appendix A: In-depth Interview Questions

1. Approximately 40% of food produced in the US goes to waste. What do you think about this? What do you think some of the causes are? What do you know about that?
2. What do you think that are some of the ways that we can change this?
3. How does it make you personally feel? The fact that there's all this food going to waste?
4. What do you see in regards to food waste in regards to your own community?
5. What do you know about hunger in the US?
6. Do you think food waste recovery can solve hunger in the US and why or why not?
7. What do you think about the donation- based solution to these issues?
8. What do you think about foreign aid in general?

Appendix B: Survey Questions

1. Please select your current age range:
2. Please select your highest level of education:
3. What state do you reside in?
4. Approximately 40% of food produced in the US goes to waste. What do you think about that?
5. Why do you think that 40% of food is being wasted in the United States each year?
6. *What are the issues that food waste recovery is solving?*
7. *How likely are you to do any of the following: Refer to Appendix F*
8. *To what extent do you agree/disagree with the following statements: Refer to Appendix F*
9. What do you know about hunger in the United States?
10. *Why do you believe that hunger exists in the United States?*
11. Do you believe that food waste recovery can solve hunger in the United States?
12. Why or why not?
13. *Can hunger be solved in the United States?*
14. *Why or why not?*
15. What do you think about the donation- based approach to solving issues like hunger in the United States?
16. What are your general thoughts on foreign aid?
17. Comments or any further information you would like to provide:

Appendix C: Focus Group Questions

Session #1

1. What made you get involved, what makes you stay, what keeps you excited to keep coming back?
2. Let's talk about poverty in general in the US and what you think some of the cause of poverty are in the US today. Even just a personal perspective of things you've seen in your communities. May or may not be related to the food bank.
3. Approximately 40% of food goes to waste in the US. I wanted to know what you guys know about food waste, what do you think about it, what have you seen at the food bank or in your personal lives related to food waste?
4. Why do you guys think that hunger exists, to begin with? What are some of the social issues that lead people to be in need?
5. do you believe that the food bank is a solution to solving hunger in the United States? and why or why not?

Session #2

1. I'm wondering what some of the challenges are that you guys see with the food bank in general in terms of the services that they provide, the people that are receiving the food and anything else that you can think of.
2. Do you feel encouraged to volunteer all of the time. Like when you are going for a shift, do you feel encouraged, are you excited about it and why or why not?
3. What is the meaning of donation to you? What does donation mean, or what do you think about the donation-based solution to issues such as hunger?
4. Wondering what your thoughts are around some of the challenges with the political economy in terms of any sort of public services related to solving any issues, whether it be food, education, hunger, etc.
5. I just wanted to get your thoughts on what you think about, this is totally unrelated to the food bank, just your general thoughts about foreign aid. Whether it be monetary aid, or food, or supplies, etc.

*Appendix D: Letter of Informed Consent***School for International Training**

@ World Learning

**PARTICIPANT INFORMED CONSENT****Title of the Study:** Can Food Waste Recovery Solve Hunger in the United States?**Researcher Name:** Desa Radic

My name is Desa Radic and I am a student with the SIT Graduate Institute Master of Art in Sustainable Development program.

I would like to invite you to participate in a study I am conducting for partial fulfillment of my MA in Sustainable Development. Your participation is voluntary. Please read the information below, and ask questions about anything you do not understand, before deciding whether to participate. If you decide to participate, you will be asked to sign this form and you will be given a copy of this form.

PURPOSE OF THE STUDY

The purpose of this study is to examine the donation-based approach to solving critical issues such as hunger, through such means as food waste recovery. Today, there are many activists in the United States and abroad advocating that if we solve the food waste problem, we can solve hunger. However, I believe that that both issues are much more complex. Therefore, this study will dive into the root causes of both food waste and hunger, along with the long-term effects of a donation-based approach to solving such issues.

STUDY PROCEDURES

Your participation will consist of answering a number of predetermined questions and will require approximately one hour of your time on one occasion for in-depth interviews and approximately one hour of your time on two occasions for focus group interviews. You will only be asked to participate in one form of study (i.e. In-depth interview or focus group).

POTENTIAL RISKS AND DISCOMFORTS

There are no foreseeable risks to participating in this study and no penalties should you choose not to participate; participation is voluntary. During the interview or focus, group or survey, you have the right not to answer any questions or to discontinue participation at any time.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY

The anticipated benefits to the study mainly focus on society and how we can develop greater understanding of solving issues such as food waste and hunger in the long term.

CONFIDENTIALITY

Any identifiable information obtained in connection with this study will remain confidential. I will be the only person with access to the data, which I will keep password protected on my laptop. Recordings will be immediately transferred to my laptop and backed up on one USB device. The USB will be kept in my bedroom desk, which only I have access to. Upon transcribing the recordings, they will be erased immediately. Names of participants will not be used in the transcription of the study. Rather, code names: Participant #1, Participant #2, etc. will be used instead. When the results are published or discussed in conferences, your identity will be protected by never using identifiable information unless stated otherwise below. The study group will be referred to as: professionals, experts and activists working or volunteering in the areas of food waste, food justice and hunger.

PARTICIPATION AND WITHDRAWAL

Your participation is voluntary. Your refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study.

“I have read the above and I understand its contents and I agree to participate in the study. I acknowledge that I am 18 years of age or older.”

Participant's signature _____ *Date* _____

Researcher's signature _____ *Date* _____

Initial one of the following to indicate your choice:

_____ (initial) I agree to audiotaping

_____ (initial) I agree to videotaping

_____ (initial) I agree to being quoted from the interview in the body of this work

_____ (initial) I agree to the use of my actual name and professional status in research publications

_____ (initial) I do not agree to audiotaping

_____ (initial) I do not agree to videotaping

_____ (initial) I do not agree to be quoted from the interview in the body of this work

_____ (initial) I do not agree to the use of my actual name and professional status in research publications

RESEARCHER'S CONTACT INFORMATION

If you have any questions or want to get more information about this study, please contact me at desa.radic@mail.sit.edu or my advisor at mokhtar.bouba@sit.edu

RIGHTS OF RESEARCH PARTICIPANT – IRB CONTACT INFORMATION

In an endeavor to uphold the ethical standards of all SIT proposals, this study has been reviewed and approved by an SIT Study Abroad Local Review Board or SIT Institutional Review Board. If you have questions, concerns, or complaints about your rights as a research participant or the research in general and are unable to contact the researcher please contact the Institutional Review Board at:

School for International Training
Institutional Review Board
1 Kipling Road, PO Box 676
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802-258-3132

Appendix E: In-Depth Interview & Survey Transcription and Coding Examples

Legend:

Abc text = In-depth interviews

Abc text = Survey – California participants

Abc text = Survey – USA participants (excluding California)

Theme = American Culture

Sub-theme = Consumer waste / cultural abundance

<p>Approximately 40% of food produced in the US goes to waste. What do you think about this? What do you think some of the causes are? What do you know about that?</p>
<ul style="list-style-type: none"> - I think a lot of people buy food and don't cook with it and then throw it out. (A4 Consumer Waste)
<ul style="list-style-type: none"> - I thought that statistic was pretty shocking to know that that much actually gets wasted. (C4 Shocking) - And it made me think about examining what I do in my own personal life and seeing how much food I waste at home and what I can do in helping others to do that. (C5 Personal waste) - I think it's just the American culture of having really large portions, serving more than what you can eat, getting more than what you can eat. (C14 Cultural waste) - The idea of Costco, buying a tone of shit so you can save money. If you save money? - And just the way we package things, I mean a lot of it is due, I think, to the corporations trying to make more money off of us. So I think that a lot has to do with a culture of over indulgence. (C15 Capitalism) - And just having the option of being able to buy whatever you want. You know, I have the liberty of buying this and it's okay (C18 Capitalism)
<ul style="list-style-type: none"> - I think it's a big problem. I think that more and more people are realizing that it's a problem at every level. It's a problem at production, it's a problem at consumption and restaurants and our homes. But it's a multi-level problem. (D4 Feelings)
<ul style="list-style-type: none"> - I mean it doesn't surprise me just because statistically speaking, America has a reputation for being a glutinous country. It's sort of the stereotype that Americans eat terrible food and then they waste a lot of it and they drive these really big cars that destroy the environment. I think that it suggests that people across the stratosphere don't really worry about that kind of stuff. It doesn't strike them as a problem. It seems like it's some else's problem if you throw away food. I understand it, but I think it's a bad thing. (E2 American culture of waste) - The environment that people grow up in, they don't think it's a big deal to throw away food. People grow up not needing stuff. To them it's whatever, who cares if I don't finish my plate. You know, I also think that it's interesting, I've volunteered at homeless shelters and plenty of people there throw away food too. They don't like corn, or they don't like chicken or whatever it is, they'll throw away half their plate. So it's a problem that extends beyond just the people that have food to spare and waste. It also goes to people who don't necessarily have meals a day. So for them it's like whatever if I don't like it, I'm just not going to eat it. So it almost makes you wonder if it's some sort of weird cultural thing of wastefulness. I don't know like speaking for the rest of the world, like it in Europe or Asia for example, what food waste looks like (E9 Cultural waste)
<ul style="list-style-type: none"> - <i>It's sad! We can do better. Come up with some cultural changes to not waste food (5 – C)</i>

- <i>People can't afford to buy food and those who can buy too much (1 – C)</i>
- <i>People buy things that they end up not being able to use before it expires, large events that produce more food than is actually needed, and imperfect produce that no one wants to buy before it goes bad. I'm sure there are more reasons (7 – C)</i>
- <i>Unsustainable living and eating practices (9 – C)</i>
- <i>On a small scale, people take more than they can eat in a meal (for instance, me tonight and scraping my plate into the compost). Or on a bigger scale, restaurants and others have lots of leftovers every day. Food expiration dates at groceries (11 – C)</i>
- <i>culture of waste, people throw away food b/c they are scared it has gone bad, depend too much on sell by dates, don't like to eat leftovers (12 – C)</i>
- <i>People who do live in abundance are not conscious of all that they are wasting. #13 – C)</i>
- <i>People over buy and waste. Also much of the produce and fruits get wasted because they can't be stored and given away to poor people. (15 – C)</i>
- I'm actually shocked that it's not more. I feel like America is an indulgent society, so we always take more or buy more or order more than we truly need, JUST to absolutely ensure that we won't have to go without. Plus, we don't have a culture that supports minimizing waste in general! (2 – US)
- Lack of education. Not knowing the impact of food waste. LUXURY of having endless access to food. (2 – US)
- People are not educated in the big picture. they just see what is in front of them and don't think that they are part of of large and complex food system. (7 – US)
What do you think that are some of the ways that we can change this?
- I can only say from a consumer standpoint. I feel that we can change that by like being more conscious about how much we're eating and how much we actually need and how we can be more conscious about that. There's just so much overconsumption and the overconsumption leads to stuff being thrown away by default. (B21 Consumer consciousness)
- You know I think it's one of those things that people are going to choose to do it or not and I think it depends on the circumstances and the environment that you grew up in. (E20 Public education)
- But I also think that it's not something that you can, you know you can't really force people. What are you going to do, penalize people for wasting food? You can't really quantify it or quantify it in a typical mass market way. (E23 Economic circumstances and awareness)
- So it's one of those things that you have to sort of raise awareness and hope that people try modifying their behavior. (E25 Can't force people)
- So I guess one example, I don't know how good of an example it is, but one example is smoking. It used to be that everyone smoked 30-40 years ago and then you know over time in the 70s/80s/90s/2000s it became very well documented that smoking is bad for you and smoking rates have gone down considerably since then. You know, so it's about raising awareness that this is bad for you. Now obviously it's not a one for one, because throwing away food doesn't affect you really the same - you're not going to get cancer from throwing away food. But it's the principle of like this is what you're doing and this is the results of your actions so it's something to be aware of. (E27 Raise awareness)
- And you know, maybe some people just don't think nationally. Maybe it's not a problem. People worry about these big national issues, oh man, people are going hungry someone needs to step up and do something about it, right.
How does it make you personally feel? The fact that there's all this food going to waste?
- I think it's a tragedy, you know. (A25 Feelings)
- It makes me feel like, I guess wanting to be a more responsible and conscious consumer. (B31 Upsetting issue)
- Having a young child, trying to give him the right nutrition. (D48 Nutrition)

<ul style="list-style-type: none"> - I feel like these are really important things and yeah food waste makes me feel incredibly guilty when I do it, but also just as a whole, what are we telling people. (D49 Feelings) - We're already telling some people that you're not worth having a home, you're not worth having a job, you're not worth having resources and also this food over here, we're going to trash that as well. (D50 Capitalism)
<p>What do you see in regards to food waste in regards to your own community?</p>
<ul style="list-style-type: none"> - But on that note, having been food lead for a 38 person co-op, I buy food in portions to provide what people need to thrive not to overeat and I provide quality things that I expect to be stored with care, made in care and made accordingly over the time I bought it to last. And what I see is people take more than they can eat and then they store it and then they forget about it and they throw it out, or it goes bad. They make everything at once and then it's all gone at once. And then everyone complains that's there's not enough. Or you buy more because everyone complained about it and then it goes bad because nobody ate it. Nobody wanted to bother to wash it and cut it up. Nobody wanted to bother to take it out of the plastic bag which I don't think food should even be packaged in and so it rotted. It's this disregard because people just say, why can't you buy more? There's no consideration for the land, the water, the labor that went into making that food. And even just the money upfront. (F57 Example of consumer waste and culture) - And they take it for granted and just throw it out because they can just get more. But the earth can't do that, you know. The earth can only make so much and there's tons of people starving and so they're taking for granted something that is slowly killing us and that really upsets me. It's not that I see every bit of waste and think, that evil human criminal! But like I said before, I see it as a bi-product of this culture, this disconnection with our food and it saddens me because to me it's such a fulfilling part of culture. (72 Culture of waste)
<p>Do you think food waste recovery can solve hunger in the US and why or why not?</p>
<ul style="list-style-type: none"> - I feel like there is a lot of access to food here in San Francisco for people who don't have enough income and I still feel like there's gaps in that really being utilized by the communities it's in in some ways. (A61 Food Access) - If you don't have access to food, there is food available and pretty high quality food, I mean SF food bank is giving out amazing stuff all the time. (A66 Food Access)
<ul style="list-style-type: none"> - When you talk about people's consumption levels and food waste in your own home, I don't know if it could solve anything. Because you'd have to coordinate a lot of people and motivate a lot of people and culture shifts are hard. (F111 Consumer waste hard to change) - And on the micro, home-by-home scale, to be seen. It would be nice, but... (F117 Consumer waste)

Appendix F: Additional Survey Results

7. How likely are you to do any of the following:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total	Weighted Average
I do my best not to waste any food:	0.00% 0	0.00% 0	7.69% 2	50.00% 13	42.31% 11	26	4.35
Food waste is a product of capitalism in the United States:	0.00% 0	0.00% 0	42.31% 11	34.62% 9	23.08% 6	26	3.81
People in need would want to eat my food waste:	0.00% 0	15.38% 4	34.62% 9	42.31% 11	7.69% 2	26	3.42
Organizations and businesses should donate more food to people in need:	0.00% 0	0.00% 0	30.77% 8	26.92% 7	42.31% 11	26	4.12
If we solve the food waste issue, we can solve hunger:	3.85% 1	7.69% 2	26.92% 7	46.15% 12	15.38% 4	26	3.62

8. To what extent do you agree/disagree with the following statements:

	Very Unlikely	Unlikely	Neutral	Likely	Very Likely	Total	Weighted Average
Throw out my leftover food:	23.08% 6	38.46% 10	11.54% 3	19.23% 5	7.69% 2	26	2.50
Compost my leftover food:	7.69% 2	15.38% 4	26.92% 7	34.62% 9	15.38% 4	26	3.35
Package my leftover food and eat later:	3.85% 1	0.00% 0	11.54% 3	38.46% 10	46.15% 12	26	4.23
Package my leftover food and give to an organization or person in need:	23.08% 6	26.92% 7	23.08% 6	19.23% 5	7.69% 2	26	2.62