

Closing the Gap Between Food Waste and Food Insecurity

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Abstract

This project strives to discover the most efficient way in which we can connect the edible food that would be sent to rot in a landfill with the people who lack access to adequate and healthful food. Existing charitable food distribution programs will be assessed so as to determine how to create a food distribution event that is far-reaching, well attended and effective. This research will be translated into a comprehensive plan outlining best practices for carrying out a distribution event on a college campus.

Introduction

Food is what ties us as humans to our friends, our families, our upbringings, our heritages, all other living things, and most importantly the earth itself. Without food we cannot biologically survive, without specific foods we cannot emotionally survive, and without balanced food we cannot equally survive. One's access to healthy food is one of the biggest factors in development and health at every stage of life. However, much of the population of the United States, one of the wealthiest nations in the world, is unable to access and afford healthy food options, or enough food at all.

While the U.S. experiences high rates of hunger, it is, at the same time, wasting 40 percent of its food (NRDC, 2012). It is a society based around consumerism and excess, as well as a society that shuns those who are different. Each of these aspects comes into play in terms of food waste. First of all, we buy too much. In the U.S. people are over consuming and continually wanting more. We do not think about what we already have, only what we want. Thus, many people's kitchens are stuffed with too much food and the people are not capable of eating it fast enough before it goes bad, or when they think it goes bad. Second of all, even though we consume more than we need, we still desire to have what our neighbor has or better. Thus, the

value of any produce that looks differently than we imagine it should is greatly decreased.

However, biodiversity is what keeps every single living thing from going extinct. We need the produce to all look and be genetically different or it will cease to exist. This means that only produce that looks similar enough will be sold. Thus, produce companies discard harvested produce that they deem to be too “ugly” for the consumers to purchase, because it is cheaper to throw it in a landfill than it is to transport it to be sold.

All of these issues have a special magnitude in Arizona. Nogales, Arizona has been the top or one of the top southern border ports for fresh produce for many years: “Over half of the produce that's grown in Mexico and imported — \$4 billion worth — comes through this border crossing” (Morehouse, 2015). Here we see the issue with “ugly” produce first hand: Most gets distributed to all parts of the U.S. and Canada, but some fruits and vegetables get rejected before they leave the city of Nogales” (Morehouse, 2015). Furthermore, Arizona has a food insecurity rate of 17.1% while the national average is only 15.4% (Feeding America, 2014), and yet all of this valuable food is rotting and not making it to the people who need it. Luckily, programs such as food banks, discounted produce distribution, and SNAP are attempting to change this.

Literature Review

History of the Food System in America

In a logical world, if people were not getting the amount of food that they needed, we would think that there was not enough food to go around. However, the situation is quite the opposite. Around the world people are wasting the food that should be providing others with sustenance by purchasing food but letting it rot; throwing away extra food from meals made or bought instead of saving it to have another time; throwing away food that is claimed to be past its expiration date; and even throwing away food that is perfectly edible but looks differently from

our generalized understanding of what we think it should look like (Gunders, 2012). In order to gain understanding of how this could possibly be the case, we must look into the history of our food system.

In Soderberg (2016), she addresses the inefficiencies of the modern food system as a result of the three successive ‘food regimes’ summarized by Clendenning, Dressler, and Richards (2015). The first of the food regimes comes into play with industrialization. This caused a shift from an agrarian society to one based on the manufacturing of goods and services coupled with the adoption of reliance on machinery (Soderberg, 2016). These events drastically changed how our food was made and delivered. The second food regime is introduced with the increase of industrialization that occurred after WWII. American wheat surpluses caused an inversion of distribution of all agriculture from the global south to the north, to the post-colonial developing nations of the south producing specialized goods to export long distances (Clendenning et al., 2015). Northern and southern nations alike shifted their preference to produce high-yielding cash crops for export, rather than producing many crops for domestic distribution; this hailed tragedy for the rural, small scale farm, as well as for biodiversity and reasonable production alike (Soderberg, 2016). Farming had to adapt to the hottest idea in business: mass production, and “with increased scale came proportional increases in inputs, which during the post WWII era a catalyst for the rise of synthetic fertilizers, pesticides, and fossil fuels used to power massive machinery” (Soderberg, 2016). The third food regime is characterized by the food system that exists in our world today. Said to have “[come] along with the rise of neoliberalism in the 1980’s, and the institutionalization of free trade in the 1990’s” (Soderberg, 2016), this food regime is characterized by “the accumulation of large tracts of land and capital for intensive,

mechanized mass-produced food, fuel and feed for domestic and international production and consumption” (Clendenning et al., 2015). With that, food waste is incorporated into the system.

Today we see government organization and regulation perpetuating this approach to agriculture as best it can. By providing uneven subsidies and trade policies to encourage massive cereal and grain production for export, northern governments, corporations, and institutions have disabled local market structures and undermined the livelihood of many people involved in small farming (Clendenning et al., 2015). While the North is also forcing Southern countries to restructure their agriculture sectors for export to supply the amount of fruit, vegetables and meat that it desires (Clendenning et al., 2015). Governments such as the U.S. and Britain have gained political and economic power through these food regimes which allow them to “[...] determine not only what will be produced and where it will go, but also who will profit from agriculture and who will be vulnerable to food crises” (Winders, 2009). Food insecurity is the major result of these policies.

Food Insecurity

Food insecurity in the U.S. was first measured by nationally representative data in 1995 through the Food Security Supplement to the Current Population Survey (CPS). The CPS was devised by the United States Department of Agriculture (USDA) to determine the prevalence of food insecurity among U.S. households. It is a selection of eighteen questions, referred to as the Food Security Core Module, that are meant to assess the degree of food security experienced by households, and “according to the USDA, households must give affirmative responses to three questions indicating conditions of food insecurity to be considered food insecure” (Coleman-Jensen, Rabbit, Gregory, & Singh, 2015). Problematically, this measurement grouped together households that are marginally food secure and those that are entirely food secure, which means that food insecurity in our country was likely underestimated and likewise, “the need for

government food assistance and emergency assistance [was] likely underestimated as well” (Coleman-Jensen, 2009). In 2006, USDA revised these criteria to identify a difference between those with high food security and those with marginal food security. Studies have shown that households indicating any degree of food insecurity in the Food Security Core Module should be considered food insecure. “Food insecurity exists whenever the availability of nutritionally adequate and safe foods or the ability to acquire acceptable foods in socially acceptable ways is limited or uncertain” (Anderson 1990, p.1560). The first indicator of this insecurity tends to be food anxiety, or “when an individual or household is concerned about adequate food supply” (Coleman-Jensen, 2009). As soon as food anxiety is experienced, women’s food consumption, as well as quality of diet, declines. According to USDA, a food anxious household would have still been food secure, even though nutrition for one or more members was being compromised. USDA now recognizes marginal food security as “one or two reported indications-typically of anxiety over food sufficiency or shortage of food in the house...[and] little or no indication of changes in diets or food intake” (USDA, 2016).

There are numerous factors that influence how an individual or household becomes food insecure. The massive urbanization movement of the world largely influences the growing epidemic of food insecurity: “Cities currently hold more than half of the world’s population and in the next decade an estimated 3.5 billion people will seek wage labor and income in sprawling cities” (Clendenning, Dressler, and Richards, 2015). The situation is less so an issue of producing enough food for the world’s growing population, and more so an issue of “producing and distributing food in ways accessible and affordable for the growing urban poor... [who] remain hungry due to their inability to pay for and/or access food through other means due to constraints in society and the modern food system” (Clendenning et al., 2015). Furthermore, the

cost of living in a city is high, but the potential for higher income often outweighs this concern. Corbridge and Jones (2005) note that it is characteristic of developing civilizations “to seek the rapid transference of men and women from low-paying, often unproductive jobs in the countryside to more productive and better paying jobs in towns and cities”. Specifically, lack of affordable housing and high food prices can cause many of the urban poor to have to choose between eating and paying rent (Jacob, 2003).

Although Tucson, Arizona is a smaller city with a lower cost of living than many other cities in the United States, the demographics of the area tend to lend themselves toward poverty and ultimately toward food insecurity. Located just over an hour north from the U.S.-Mexico border, Tucson is home to many Mexican immigrants. The population of Tucson is 41.6% Hispanic or Latino as of April, 2010 (U.S. Census, 2010). Furthermore, “Arizona [as a whole] accepts more refugees per capita than almost any other state” (DeParle, 2010). These populations often include many low-income individuals and families and thus an increased risk of food insecurity. The median household income for the city of Tucson is \$37,149 and the poverty rate is 25.3% (U.S. Census, 2015). Feeding America has found that 26% of food insecure households live above 185% of the poverty line. For a family of three, 185% of the poverty level is \$37,296. This is slightly above the median household income for persons in this city, furthermore according to the U.S. Census, there are 2.45 people per household in Tucson. Among food insecure people in Pima County, 28% of them are above this threshold of 185% poverty. Poverty does not always give us an accurate representation of experienced need in our community. The food insecurity rate in Pima County is 15.4% and the insecurity rate for the state of Arizona is 17.1%.

Food Waste

The shift of the food system from localized to global had massive effects on the amount of waste that occurs. Each step of the supply chain provides another opportunity for potential sustenance to meet its end. The Natural Resources Defense Council (NRDC) reported in 2012 the percentage of food loss within each food group and at every stage of the supply chain. It was found that the most significant were consumer losses. The next highest losses were in the production stage, however these were not even equivalent to half of the losses that occurred in the consumer stage.

For each stage in the supply chain, there are some primary reasons that waste occurs. For the production stage, fresh produce suffers the highest losses and occurs either because the food is never harvested or the food is lost between harvest and sale. Typically, “approximately 7 percent of planted fields in the United States are...not harvested each year...[although] this is not a complete loss, as nutrients are returned to the soil... it still represents a lost opportunity to provide nutrition and not the highest use of the water, energy, and chemicals used to grow those crops” (Gunders, 2012). Losses that occur between harvest and sale are due to the fact that “workers are trained to selectively harvest, leaving any produce that will not pass minimum quality standards in terms of shape, size, color, and time to ripeness” (Gunders, 2012). This leads into the next stage: post-harvest and packing. The major losses of fresh produce in this stage are due to culling, or “the removal of products based on quality or appearance criteria, including specifications for size, color, weight, blemish level, and Brix (a measure of sugar content)” (Gunders, 2012). Essentially making a beauty pageant of Earth’s bounty that is judged by the greedy and ill-informed eye of our consumerist society. Gunders reports that “a packer of citrus, stone fruit, and grapes estimated that 20 to 50 percent of the produce he handles is unmarketable but perfectly edible” (Gunders, 2012). This phenomenon can be particularly influential for small

and medium farmers because they are more limited when it comes to excess revenue. Thus, even if the culled products were accepted by a certain processing facility, the farm must be able to cover the added costs of transporting more food and have that made up by additional sales, which makes apparent how waste can be seen as the economical option. In the processing stage, losses occur primarily due to trimming, or “when both edible portions (skin, fat, peels, end pieces) and inedible portions (bones, pits) are removed from food” (Gunders, 2012). However, trimming during this processing stage rather than by the consumer has potential to be more efficient, as quantity lost may be less and there are more opportunities for use of scrap by-products. During the distribution stage, problems with proper transport and handling can be issues, but the more prevalent issue is that of rejected shipments. These shipments will either be dumped, bought by someone else, or given to a food bank. However, if bought they will have a much-decreased shelf life, and many food banks cannot use produce in such large quantities (Gunders, 2012). While losses in the retail stage have been found to equal 10 percent of the total food supply (Gunders, 2012), the effect that retailers have on all stages of the supply chain indicate that they are responsible for a much larger percentage of the waste. For instance, while consumers create the demand for perfect produce by selecting stores based on the quality of their perishables, “retailers feel compelled to have only produce of perfect shape, size, and color-leading to much of the culling discussed [previously]” (Gunders, 2012). Furthermore, the culture of ‘abundance as success’ that we experience affects how grocery stores stock their shelves: “Industry executives and managers view appropriate waste as a sign that a store is meeting quality control and full-shelf standards, meaning that blemished items are removed and shelves are fully stocked” (Gunders, 2012). Regarding losses at the consumer level, the USDA found that “households and food service operations (restaurants, cafeterias, fast food, and caterers)

together lost...19 percent of the total U.S. retail-level food supply” (Gunders, 2012). Moreover, it has been found that “American families throw out approximately 25 percent of the food and beverages they buy” (Gunders, 2012).

Charitable Food Distribution

Throughout history, charitable food distribution has taken many forms. From soup kitchens, to food banks, to the goodness of a person’s heart, to apps on one’s phone, there has been a need and a desire to help other people acquire the food they need. Even in Tucson alone, there are numerous organizations all striving to offer a solution to the food insecurity and food desert issues that are so prevalent. These programs include Produce on Wheels With-Out Waste, Market on the Move, the Community Food Bank of Southern Arizona, Casa Maria Soup Kitchen and multiple community gardens, each of which functions in a unique way and targets particular issues within food insecurity. This section will describe the similarities and differences between these programs in more depth.

The organizations Produce on Wheels With-Out Waste (P.O.W.W.O.W.) and Market on the Move (MOM) are what this particular project has been most closely based upon. Both of these organizations function on the premise of being a solution to food insecurity, as well as a fighter of food waste. P.O.W.W.O.W. is run by Borderland’s Food Bank out of Nogales, Arizona. This food bank was started in 1993 by the Community Food Bank of Tucson in order to better serve Santa Cruz County, Arizona. Now, the food bank is its own entity and has received its own 501 c(3) designation. Although the main purpose of the food bank is still to benefit the people of Santa Cruz County, Arizona, Borderlands also works to provide fresh produce to neighboring cities and states from Sonora, Mexico in the south to 23 surrounding states in the United States (Produce on Wheels). MOM is run by an organization called the 3000 Club. The 3000 club was started in 2008 by Lon Taylor as an initiative to try to save the local food bank in

Nogales, Arizona when its major donor gave notice that they would not be able to continue their support. His idea was to find 3,000 supporters who could pledge \$100 a year to cover the food bank operating costs of \$300,000. Taylor approached numerous people with this idea and finally, an entrepreneur and well-known community leader, Ethel Luzario became involved. Ethel was able to expand the membership of the 3000 Club by networking among small business owners who would be intrigued by the concept of supporting a non-profit organization. Thus, “networking chapters were born in the cities of Phoenix, Glendale, Peoria, Chandler, Prescott, Surprise and Scottsdale” and members would volunteer their services by driving to Nogales once a month and returning with plenty of produce to share. In October of 2010, MOM was started and functioned as we know it to today; “semi-truck loads of produce [are] brought into the valley where a supporter can donate \$10 and receive up to 60lbs. of produce that they can share with anyone they know who [is] in need” (Market on the Move). In May 2014, MOM was distributing at over 50 different sites in metro Phoenix and in Tucson. Interestingly, MOM was originally run in collaboration with Borderland’s Food Bank but in October of 2014 they broke their ties.

Casa Maria’s approach to combating food insecurity focuses on prepared meals. They receive their produce and other supplies from donations by individuals as well as overflow from programs that rescue produce, like MOM. Volunteers come to Casa Maria to prepare sandwiches and other simple foods that are then distributed, at no cost, to those in need. This model provides relief to those in the direst situations of need. It is based primarily on providing any sort of sustenance, rather than creating better access to produce and healthful food. This program is based in the Catholic faith and incorporates goals of “practice[ing] daily Works of Mercy and Works of Justice” (About Casa Maria). The Community Food Bank and Casa Maria Soup Kitchen operate under different models from these. The Community Food Bank establishes

farmer's markets in areas that are known to be food deserts (Farmers Markets). These markets do not source their produce from rescued produce, but provide produce that is locally grown. Thus, the produce at these markets is not discounted, but the markets do accept food stamps and other discount options. This model allows for a connection between the consumers and their farmers directly, which creates a better understanding of the food system and where ones produce comes from. The Community Food Bank runs numerous other programs that address food insecurity, including an example of a community garden in this realm, Las Milpitas de Cottonwood.

Las Milpitas de Cottonwood, like most of the Community Food Bank programs, approaches food insecurity with a goal to empower those affected by it and allow them to remedy their own situation. Thus, Las Milpitas “provides materials and support for local residents to grow food for themselves” (Las Milpitas). They offer garden plots, supplies, and educational workshops at no cost to residents so that low-income families are given an equal opportunity to grow healthy, local food. The farm also fosters community connection and involvement by hosting events and providing a space for gathering. Their main goal is to bring residents from all over Tucson together to create access to and advocates for a sustainable, local food system (Las Milpitas).

Methodology

A literary and observational analysis will be conducted to analyze the viability of current food distribution programs in Tucson and determine their successes and downfalls. Market on the Move distributions, a put on at the University of Arizona Campus by Students for Sustainability Food For All committee, will be the primary program studied and their event will be the primary source of observations. Other smaller and more exclusively local programs, such

as Casa Maria Free Kitchen, will be researched through Internet resources. The goal is to assess the food distribution systems specific to the Tucson area, specifically on or near the U of A campus, due to the fact that the University of Arizona campus is recognized as a food desert; there is no grocery store within a 1 mile radius of the campus. This is a specifically interesting case because large amounts of produce cross the border in Nogales but are unable to be sold for aesthetic reasons. The blemished produce is disposed of, sometimes in the compost, but more often than not in the landfill. Additionally, Arizona has one of the highest rates of food insecurity in the nation. It seems obvious that we should connect these two issues and make sure that food does not go to waste and it reaches people who do not have enough.

Qualitative data will be assessed in order to understand how to get more food to more people and close the gap between food waste and food insecurity. This should result in an effective plan of food distribution for the U of A campus that can be repeated to decrease the amount of food wasted and to increase the amount of food distributed to those who need it. Observations will include assessing how many people attend the campus distribution, what the demographics are of the people attending the distribution, the efficiency and organization of the distribution itself, and the viability of location (in reference to proximity and accessibility, as well as aesthetics). A survey will be conducted to gather more information on the perceptions of the users. As with any good study, diversity of the participants will be ensured as much as possible so as to best represent the population as a whole.

All of this observational, and possibly survey-based, data will be recorded and used to plan a distribution event that includes the successful practices from the programs observed, and incorporates the survey feedback from participants on how to improve. The most effective

location for the event will be determined from the data collected. A large amount of awareness will be attempted for the event.

Data Collection

Data collection for this project was accomplished through both literary and observational research. The literary research, featured in the literature review, explores the history of food insecurity and the factors that contribute to the occurrence of food insecurity. The current situation of food distribution in the Tucson area was assessed by analyzing the major local organizations that focus on charitable food distribution. Observational and experiential research took place during the planning stages of the project. Data was collected through meetings, emails, presentations, surveys and various iterations of distribution events. Most of this research was based around the preexisting, on-campus Market on the Move distributions that were organized by the Students for Sustainability Food For All Committee and occurred during the Food in Root farmer's markets on the UA Mall. These events were used as a model and case study to determine what should be changed to create an event that would attract and benefit the most people. Surveys were distributed to customers during these events in order to collect information from the consumers on how the events could be improved and about what was currently being done well (Figure 1).

Market on the Move Survey

Age? _____ Occupation? _____

How did you hear about this?

Why did you come?

Would you return? Why or Why not?

Figure 1

Discussion

Results

Two iterations of the Market on the Move (MOM) distribution at the UA Mall farmer's market were observed and produced varying results. At both distributions, 60 pounds of produce for \$10 was available for purchase and was defined by whatever would fit into a large produce box. This was found to be an unpopular option while on campus for multiple reasons. For one, access to the UA Mall farmer's markets is pedestrian and bike only, thus it is difficult for one to transport 60 pounds of produce from the market to their destination. This option was only purchased by people who were to transport the produce to a nearby dorm or office, and even then it required that person to make multiple trips.

The most commonly stated reason for why a person did not want to purchase the full 60 pounds was, “I couldn’t possibly eat all that”. The idea of sharing and distributing the produce to others was not a common thought, and thus they immediately wrote off purchasing 60 pounds. This is interesting due to the fact that MOM and the 3000 Club were based on the premise of sharing with those less fortunate. In it’s early stages, individuals would volunteer with the 3000 Club and receive produce to share in return for their time. The conversion of this idea into a marketplace is where this concept gets lost.

The alternative to purchasing 60 pounds of produce varied from one distribution to the next. At the first distribution the only alternative purchasing option offered was to buy 30 pounds of produce for \$5, which was defined by whatever would fit into a standard paper grocery bag. This option was much preferred to the 60 pounds, however many people were still deterred by the large quantity. After being presented with the two options, the majority of people who visited the stand would ask, “I can’t just get one?” and then walk away when we confirmed that this was the case. The second distribution had a much more appreciated alternative to 60 pounds. At this distribution one could purchase either 30 pounds, defined as two small paper lunch bags, for \$5 or 15 pounds, defined as one small paper lunch bag, for \$2.50. This is mostly due to perception; the smaller bags are far more manageable than a full box or even a full grocery bag. This smaller size makes more sense for the targeted consumer, people living and working on campus, as many of these people walk or bike everywhere and this size can easily fit in a backpack. Furthermore, this size is not a burden to carry around for the rest of the day, as many people who come to this stand are not coming for the sole purpose of buying produce and are often on their way to class or work directly after.

Another difference between the two distributions was in aesthetic. At the first distribution, produce was primarily presented on a table in plastic flats. A shopping cart was utilized to present watermelon and was placed in the center of the display between two tables. A Students for Sustainability banner across the front of one of the tables was the only signage at the stand. At the second distribution, some produce was presented in the plastic flats, however MOM also provided wooden crates and one was used to display a food item for distribution. Furthermore, burlap was used as a tablecloth and a small chalkboard indicated this was a MOM distribution. The Students for Sustainability banner was still present. At this second distribution, it was observed that more people came to the stand. It was also observed that a significantly larger number of people inquired as to whether the produce had been grown by those working the distribution. This gave us an easy way to start a conversation about rescued produce, food waste, and food insecurity. Clearly this artisan aesthetic attracted people to the stand and felt more cohesive with the greater farmer's market. Catering to this attraction would be greatly beneficial in a future event.

The final difference between the two events is due to advertising. At the first event, little notification was given out to the greater university community that the event was occurring. This resulted in most people coming to the stand just by chance and inquiring as to what it was about. However, prior to the second event, members of Food for All gave announcements in classes of majors such as nutrition to explain when the distribution would occur, what MOM is and why they were having the distribution. Multiple students who were present in one of these classes attended the distribution. Advertising is a critical component of creating successful food distribution events that benefit the most people and are able to regularly occur. The MOM events were not advertised even remotely as well as they should have been. However, from these one

can learn the importance of advertising and how to accomplish it successfully on a college campus.

Basic Plan

Food distribution programs, grocery stores, and Compost Cats will be contacted in an effort to establish collaboration in this project. In this way, the event could provide more options for grocery stores and Compost Cats to distribute food waste in the future, if successful.

Conclusion

Table 1

The disturbing reality is that many families suffer from hunger while their neighbors are consistently throwing their excess food into the trash to rot in a landfill. In order to upend this pattern, the way that we perceive food and the food system will need to change entirely.



However, for now, we can create small steps in the right direction that will open more and more people's eyes to the injustice and inefficiency of the current system. By creating food distribution events that utilize rescued produce to provide affordable, healthy food to all people, especially those who are in great need, we provide services and educational opportunities that inform people of the injustices and help to fight them. The critical elements to the success of these programs all stem from immersion into the community in which the program is acting. This may be a specific neighborhood, an entire city, or a college campus. In all situations it is important to advertise and create awareness of the event, choose a location that provides the most access and convenient transportation for the desired consumer and to create an aesthetic that is intriguing and welcoming to the desired consumer.

Limitations

One of the major limitations for this project was the lack of commitment from attempted collaborations. When working in a non-profit atmosphere, it can be difficult to require individuals to be accountable for certain amounts of work. However, the commitment of collaborators is critical to create an event that is far-reaching, well attended and effective. In moving forward with this project, much collaboration will be sought so that the loss of any particular collaborator does not entirely stall the project. Another limitation to this project was a lack of iterations of the farmer's market distributions. Unfortunately, only two MOM distributions occurred at these farmer's markets in Fall 2017 so not as much observational data could be collected as would have been ideal.

In the Future

An interesting future experiment, presented by my thesis advisor, would be to take into account the inherent human aversion to waste and see how this affects people's willingness to take the food in larger quantities. In this experiment, one would have a control group that would

exist under the same conditions as was already the norm at the MOM distributions on campus. A short description of MOM and how and why it functions would be given when people come to the stand, then any questions asked would be answered, but otherwise the sellers would not try to convince the customers to buy the produce. In the experimental group, the same short description would be given, however when the customer declines to buy food or tries to leave with less than the full allotment of food, the sellers would make sure the customer knew that if they did not take the food now, anything leftover would be thrown away after this distribution. It would then be noted whether people felt that they should take more or actually buy food even if they are to throw it away themselves down the road. This experiment would show the true power of the guilt of food waste. When someone believes that food will be thrown away if they do not take it, they often feel obliged to at least try to use it. Furthermore, this takes away their potential guilt at wasting the food because if they have to throw it away eventually, they know that it would have been thrown away anyways.

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