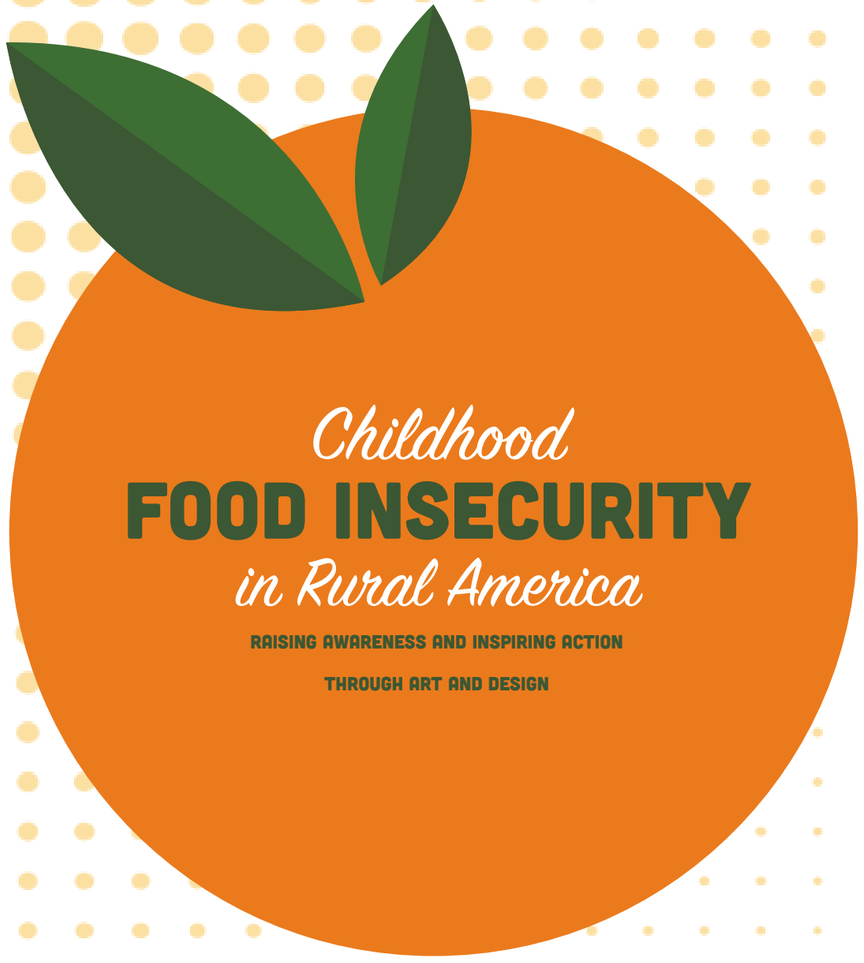
Childhood
FOOD INSECURITY
in Rural America

RAISING AWARENESS AND INSPIRING ACTION

THROUGH ART AND DESIGN

MFA Thesis
Julie Olson
2022



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Contents

ABSTRACT 1

CHAPTER 1:
INTRODUCTION 2

CHAPTER 2:
RESEARCH 6

CHAPTER 3:
PROCESS 38

CHAPTER 4:
VISUAL SOLUTION 68

CHAPTER 5:
CONCLUSION 94

BIBLIOGRAPHY 100

Photo by Donnie Ray Jones, *Reese Is Sad*

Abstract

Children go hungry in America every day, particularly in rural communities, where statistics show food insecurity to be as high as 17%. This means one in six children in rural communities lacks nutritionally adequate food or the ability to acquire it on a daily basis. In one of the wealthiest countries in the world, this appalling statistic is unacceptable. But how do we mitigate food insecurity for children and its resulting effects on a child's physical, mental, and social development?

This project proposes to educate, raise awareness, and inspire and/or enable action by all stakeholders to reduce food insecurity, specifically for the children of rural America, through research-based, charitable-event signage and a children's illustrated book. The expected result of these materials is that those who have resources to give will be inspired to do so, and those who suffer from food insecurity will better understand where and how to get assistance, no matter their age.

To effectively accomplish this goal, I conducted research into the following: the definition and factors of food insecurity, food insecurity in rural America, the effects of food insecurity on children, reducing food insecurity for children, psychological factors for charitable giving, and designing with the intent to influence an audience.

Unfortunately, the recent COVID-19 pandemic has only exacerbated the situation due to supply-chain issues, rising unemployment rates, and inflation. Therefore, we cannot delay in raising awareness and providing aid to the food insecure. This project aims to do just that through illustrated story and printed signage.

Chapter 1

INTRODUCTION

RESEARCH PROBLEM

Many households with children in rural communities of the United States lack the income, education, awareness, and transportation necessary to mitigate food insecurity, leading to children's malnutrition, mental deficits, and social impairment.

America is one of the richest countries in the world, where grocery store shelves are always stocked and the portion sizes at restaurants are abundant. However, in this land of plenty, an inexcusably high percentage of children in rural areas suffer from food insecurity. Regrettably, many food-secure Americans are either ignorant of or apathetic to the issue of food insecurity for the rural population. Perhaps this stems from a lack of proximity to those suffering from the issue since only 19% of the citizens of this country live in rural areas (Defining). No matter the reason, ignorance or apathy compounds the problem since those without means rely on help from those with means in the form of education, donations, or support.

Kofi Annan said, "Knowledge is power. Information is liberating. Education is the premise of progress, in every society" (GPE Secretariat). This statement reflects the projected outcome of the design solutions. When people who have monetary means become knowledgeable about food insecurity and those who are food insecure gain information about available resources, our society will become more educated and able to progress to a state where none need go hungry. Since we are not at the point in our society where no people go hungry, we still have work to do.

I first became aware of the severity of the childhood-food-insecurity problem when volunteering at a couple of local food assistance organizations. One helps anyone who is food insecure, and the other focuses specifically on helping children. As I sorted shelf-stable food at one organization, throwing out the expired products people had donated, I realized what few healthy options these people were provided and how unappetizing some of the food products appeared. I realized the need for more nutritious foods for the people relying on this organization's assistance. Then, while volunteering for the child-centered food charity, I learned of the shocking statistics surrounding childhood food insecurity in America. Both experiences left me wanting to do more for those in need of food assistance, especially for the children who have no means of acquiring food for themselves otherwise. But had I not been made aware of or educated about the existing problem, I would never have been inspired to take action and do more to help.

OBJECTIVE

This thesis aims to educate, inform, and support food insecure children, the communities in which they live, and the food-assistance programs they need through research-based illustrated story and fundraising-event signage. These works of art and design will bring awareness to the issue, encourage activism and volunteerism, and provide information to help those seeking relief. Ultimately, the vision for this project includes a festival-type event to raise funds for food-assistance programs, where proceeds from sales of the graphic novel would also be donated. Through a unification of efforts and projects such as these, I hope to reduce food insecurity for children in rural America.

KNOWLEDGE GAP

Unfortunately, no single solution exists for solving the problem of food insecurity. Since multiple influencing circumstances factor into a child's food security, and since I do not have firsthand experience with food insecurity, I needed to study qualitative

research from food-assistance organizations and from those who've directly dealt with food insecurity. In addition, not many children's books exist on this topic, so researching those that do exist and filling in the gaps they don't cover is important for my final deliverables.

SIGNIFICANCE

While the focus of this thesis specifically targets helping food-insecure children in rural areas, the final deliverables also inform, educate, and support any adult caring for or teaching these food-insecure children, such as educators or daycare providers. In addition, any food-assistance program, public or private, will benefit from the research included in this thesis, due to their need to garner financial support. This research provides methods of influence and design that would assist in fundraising and education efforts. Furthermore, this research will educate and inform societies, specifically the American public, because of the current and potentially increased state of food insecurity across most cultures and countries. This becomes especially important considering the effects of the COVID-19 pandemic on the worldwide economy. Ultimately, this project's in-depth study on the effects of food insecurity, especially among children, will educate, raise awareness, and hopefully inspire and/or enable action by all stakeholders to reduce food insecurity.

On a more individual level, through my illustrated story, I hope to reach those children who are suffering or who have a friend who is suffering from food insecurity. Many of the affected children do not have a proper adult advocate and may not even be aware of the resources available to them. However, by reading the book I create for them, these children may become their own advocates and could come to understand how to get help, where to get help, and when to get help. That knowledge will give them power, because no child should go hungry in this day and age.

Knowledge is power. Information is liberating. Education is the premise of progress, in every society.

–Kofi Annan

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Chapter 2

RESEARCH

The following pages examine existing research findings and explorations conducted by scholars in several fields relating to this thesis. Information from primary and secondary sources establishes the validity of the problem and supports a multifaceted approach to solving it. This review takes a critical look at the following research themes:

- Definition and overview of food insecurity
- Food insecurity in rural America: the additional factors that increase rates
- Food insecurity for children: the effects and signs
- Reducing food insecurity for children
- Psychological factors for charitable giving
- Designing to influence

Then research methods are discussed along with a summary of findings.

DEFINITION AND OVERVIEW OF FOOD INSECURITY

If a person enjoys food security, they have readily available, nutritionally adequate, safe-for-consumption food and the means to procure it without scavenging, using emergency-food storage, stealing, or employing other strategies. Those who are food insecure lack quality food and the strategy to obtain it. The United States Department of Agriculture (USDA) officially defined food insecurity in 2006 as "limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways" (Current 1–2). An expanded definition that explains, for food to be nutritionally adequate, it must provide the nutrients needed to sustain a healthy and active life (Bartfeld 691).

Many factors affect food security for a household, including social, economic, political, community partners, churches, food pantries, grocery stores, food networks, and the composition of the people

fig. 2.1 - *The Complex Tapestry of Food Security* (Current 1–3)

in the household (see figure 2.1). This composition factors in the number of people in the household as well as their income, education, ethnicity, and health (Current 1–3). While the majority of households with children in the U.S. are labeled as food-secure, food insecurity reached a twenty-year high in the years between 2008–2010, following the colossal stock market crash and economic windfall, including massive unemployment rates. Then, for the next nine years, the country slowly recovered, and the rates of food insecurity decreased to the twenty-year low reported in 2019. However, with the arrival of the COVID-19 pandemic, food insecurity rates in households with children took a sharp upturn.

Fig. 2.2 - *Trends in food insecurity in U.S. households with children, 2001-20.* Calculated by USDA, Economic Research Service, using Current Population Survey Food Security Supplement data. https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/ (U.S.)

The specific number of children in America reported to be suffering from food insecurity in 2020 was up to 6.1 million. Out of those, 584,000 children experienced the lowest level of food insecurity (Food). "Globally, the COVID-19 pandemic has already led to major increases in unemployment and is expected to lead to unprecedented increases in poverty" (Pérez-Escamila 1). In addition, the pandemic reduced the number of available farm workers in the food- producing regions of the U.S., led to reduced productivity in some food processing and packaging facilities due to added social distancing and sanitary measures, and caused meat processing plant labor shortages and inefficiencies (Food). Sadly, the increased unemployment rates and higher food prices caused by the COVID-19 pandemic do not bode well for the rates of food insecurity in America. With the arrival of the COVID-19 pandemic, food insecurity rates in households with children took a sharp upturn (see figure 2.2). Studies also continue to prove a direct relationship between unemployment rates and food insecurity or high food prices and food insecurity rates (Bartfeld 716).

FOOD INSECURITY IN RURAL AMERICA

Those living in rural locations in the U.S. statistically struggle more with food security than those living in urban areas. Studies report that "84% of counties in the country with the highest percentage of food insecure children are rural" (Child 2). When it comes to food, rural areas face the specific challenges of lack of opportunities, poverty, geographic isolation, limited resources, lack of education, and barriers to outside assistance (2). Laura Phillips, a manager of child hunger programs at Mountaineer Food Bank in Gassaway, West Virginia, discussed the lack of opportunities. She said, "Rural areas are losing population and losing jobs and losing the ability to find work. That causes a variety of problems that lead to child hunger. People want to do well for their families, but [job opportunities] are just not available in their local communities" (Child 3). For people in such areas of the country, gaining any or additional employment, increasing work hours, receiving wage increases, or finding a better-paying job may not even be an option (Loopstra 1321). The jobs and opportunities are few and far between.

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–Laura Phillips

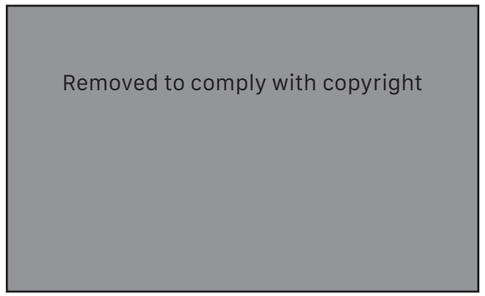
Because of the lack of jobs and opportunities, rural locations also suffer higher poverty levels, a major contributing factor to food insecurity. Counties with

rural populations make up 90% of all the counties in the country experiencing long-term poverty (Child 2), and more than 9.1 million people living in rural areas have incomes beneath the poverty line (Morris 52S). This number works out to be 13.3% of all people in rural areas living in poverty, while only 10% of people in urban areas live below the poverty line (Hunger). "In a No Kid Hungry survey [in 2017], almost 3 out of 5 low-income parents said it was difficult to afford food for their kids to eat after school" (No). The lack of monetary resources may become an even bigger issue, especially in these low-income areas, as food prices continue to rise due to the effects of the recent pandemic.

3 out of 5 low-income parents said it was difficult to afford food for their kids to eat after school.

Being isolated geographically is another challenge for rural communities. "Studies have been conducted that support the hypothesis that physical access to food is unequal" (Thomas 1546). When an area is spread out or has primarily dirt or gravel roads, just getting to a store to buy food can be a challenge. Likewise, the lack of transportation in rural areas also makes it difficult to even sign up for food assistance programs, let alone participate in or travel to them (Haynes-Maslow 5).

In addition to this situation, access to any food pantry, emergency food supplies, or food relief service is very limited in rural counties (Morris 52S). One survey participant from Montana said, "There's not very many community resources available. And then on top of it, all of our communities are rural, so you have to travel to get any kind of service. So, if I wanted help with anything, I'd have to leave the community I live in" (Haynes-Maslow 4).



There's not very many community resources available. . . . You have to travel to get any kind of service.

FOOD INSECURITY FOR CHILDREN

Food insecurity has been proven to impact a person's physical, developmental, emotional, and social health in a negative manner. Young children, in particular, suffer significant setbacks in these areas when their nutritional needs are not met (Loopstra 1316). Their growth and development are particularly vulnerable to improper nutrition, adversely affecting their physical and mental health and learning outcomes (Howard 157). These impairments can negatively impact classroom-based learning and continue into their adult years (158). In addition, "household food insecurity (HFI) has been shown to negatively affect caregiver mental health and that this in turn has a negative impact on early child development outcomes as young children cannot receive the nurturing care that they need" (Pérez-Escamilla 1). All in all, the challenges surrounding food insecurity can seriously hinder the growth and development of children (Current 3–4).

Jessica Schoen, a marketing manager for the Feeding America organization, suggests responsible adults watch for the following outward expressions of food insecurity, especially when in teaching or caregiving capacities.

- ***They ask about food every day, and they're not picky about what they eat.***
- ***They suddenly lose or gain weight but don't change their activity level.***
- ***They hoard snacks and food.***
- ***They bully others or behave badly.***
- ***They have a poor attention span, memory, or trouble concentrating.***
- ***They are hyperactive or impulsive.***
- ***They show aggressive or antisocial behavior.***

(Schoen)

If food insecurity is suspected, it is suggested the subject be approached privately with the parent of the child and a school counselor or a food assistance program coordinator (Schoen).

REDUCING FOOD INSECURITY FOR CHILDREN

Research findings support the need to help households with children, as they are at greater risk for food insecurity than households without children. Studies indicate that an increase in the availability of and participation in summer meal programs would reduce food insecurity in children. This increase can be done by "recruiting more community sponsors, increasing reimbursements for meals, reducing administrative barriers, addressing transportation challenges in rural areas, and improving program outreach" (Current 5–3). Along with these measures, for all the children in care centers after school or during the parents' workday, a reduction in their food insecurity could be achieved by expanding, simplifying, and enhancing CACFP (5–4). Finally, local charities and individuals can collaborate more to fill the needs of children in their own communities, especially in rural areas. For example, a smaller private organization that exists to specifically help fight child food insecurity is the Five12 Foundation. They pack and distribute sacks of food for food-insecure children to take home from school on the weekends.

Recruiting more community sponsors, increasing reimbursements for meals, reducing administrative barriers, addressing transportation challenges in rural areas, and improving program outreach.

PSYCHOLOGICAL FACTORS IN CHARITABLE GIVING

Several factors influence a person's likelihood to donate time, money, or services to charity. A study in 1972 by Isen and Levin demonstrated that happiness increases charitable behavior. In addition, other positive-mood states, such as feelings of competence or success on a task, have been shown to increase volunteerism and helpful actions (Olivola 6). Besides a person's happiness, "the affirmation of common humanity can bring out the best in others. . . . People's recognition of the social linkage of their lives and their vested interest in each other's welfare help to support actions that instill them with a sense of community" (Bandura 202). Tapping into the link between the welfare of the community and the welfare of each individual in it provides a great starting point to motivate charitable acts of time and money to support the food insecure. In addition, creating group bonds results in a greater sense of community and social ties, where citizens look after the welfare of one another. "Durkheim coined the term 'collective effervescence' to describe ecstatic group rituals and their effects. He considered the intense passion and joy generated by these periodic events to be essential to the long-term maintenance of a cohesive group" because "they bond and humanize all members of the group" (Haidt S140). Social scientists have also uncovered myriad benefits from charitable behavior, including tax breaks, a rise in personal social capital, or the psychological sense of well-being from helping someone else. Organizations can and have relied on all these motivators to inspire donations of time or money (Olivola 3). However, "research suggests that advertising the emotional benefits of pro-social behavior may leave these benefits intact and might even encourage individuals to give more" (11).

The affirmation of common humanity can bring out the best in others. . . . People's recognition of the social linkage of their lives and their vested interest in each other's welfare help to support actions that instill them with a sense of community.

—Bandura

DESIGNING TO INFLUENCE

The imagery and wording used in print, virtual, and motion media directly influence the viewer. Research studies reveal certain factors that hold particular sway. Humans are born with the instinct to imitate. It is how they learn speech and motor skills. Simply watching someone perform an

action, causes many of the same neurons to fire in the observer's brain, just as though he/she were making the same movement. These neurons are called mirror neurons. To influence someone's behavior, one need only show a person doing the desired action, and it will at least get the other to think about doing it themselves. Designers can use this knowledge to influence a target audience's behavior (Weinschenk 147).

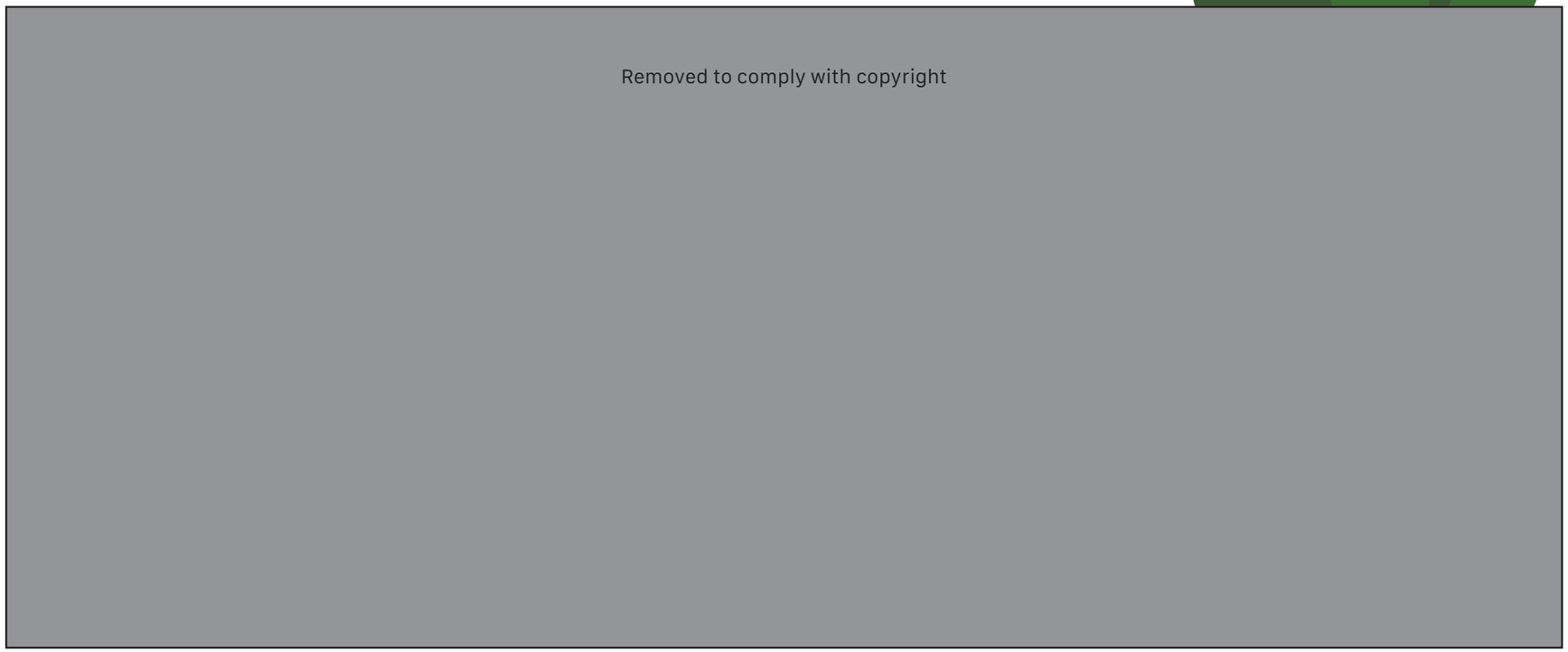
A remarkable power also lies in the humanization of the cause or victim: "Humanization can rouse empathic sentiments and a strong sense of social obligation linked to evaluative self-sanctions that motivate humane actions on others' behalf" (Bandura 203). So, including images, videos, or stories of the people affected by the issue garners sympathy.

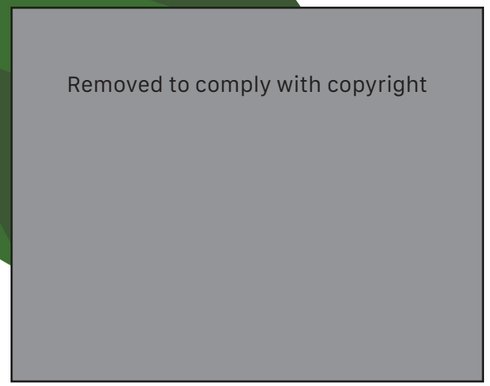
In addition, how something is labeled can influence a person because "language shapes thought patterns on which actions are based" (195). Therefore, specific care should be taken with written or spoken language when attempting to influence a person's actions.

Humanization can rouse empathic sentiments and a strong sense of social obligation linked to evaluative self-sanctions that motivate humane actions on others' behalf. —Bandura

Care should also be taken with where designs are placed. Studies find that people take observers into account when considering a donation, especially when future interaction with the observers is likely, since their choice could affect their personal reputation. More remarkable is the fact that research shows even the possibility of being observed influences altruistic behavior (Ekström 531). Therefore, if a choice of donation is to be made, the location of the donation site or box should be in an observable position.

However, even a simple image of human eyes observing can do the trick. According to research, imagery of human eyes should be used in designs aimed at inspiring altruistic actions. For example, one study showed a 30% increase in donations to a foreign-aid charity when a picture of watching eyes was present as opposed to a sign asking for donations next to a bottle recycling station (Ekström 533). The usage of human eye imagery can also add to the humanizing effect of the design.





RESEARCH METHODS

To better understand the effects of food insecurity on children and the struggles of the food insecure, this thesis studies surveys and interviews of those who have suffered from food insecurity, specifically in rural America, as well as surveys of those responsible for the education of food-insecure children. Furthermore, since part of the purpose of the thesis is to inspire charitable donations of time and money by people to help fight food insecurity, it also studies research concerning psychological factors surrounding charitable giving using a case study on cooperative behavior in relation to choices made for the public good.

In addition to this qualitative research, visual research of the signage from a No Kid Hungry charitable event called Chefs Cycle was conducted. Additional visual research on two children's books in the graphic novel genre was collected to also inform the final deliverables.

The following presents the case studies and visual artifacts researched along with a summary of findings for this thesis.

CASE STUDIES

The first study, *Synchrony and Cooperation,* came about when researchers Scott S. Wiltermuth and Chip Heath realized armies still train by marching in step even though they no longer fight that way, and across the globe, religions use synchronous singing or sound-making in their rituals. Then came their question, "Why do they do this?" Wiltermuth and Heath's hypothesis followed. They suggested that "acting in synchrony with others can foster cooperation within groups by strengthening group cohesion" (Wiltermuth). Ultimately, the study endeavored to determine whether synchronized movement would elevate cooperative behavior when that behavior conflicts with personal self-interest.

To test whether synchronous activities improve cooperation within groups, particularly when cooperating would be costly to the individual, Wiltermuth and Heath conducted three experiments. In addition, they tested whether collective joy was a necessary factor to improving cooperation.

In the first experiment, thirty participants in groups of three were led on walks around a campus. In the test group, participants had to walk in step with one another. In the control group, they could walk in whatever way felt normal to them. Afterward, all participants answered a questionnaire so they would believe they had completed the experiment. However, unbeknownst to the participants, another experimenter began a second study on them, asking each to choose a number from one to seven without communicating with each other, knowing it would be best for the group as a whole to choose seven but best for an individual to choose one if the others chose seven. This question was asked six times. The first round proved the hypothesis, that those who had walked in step chose higher numbers that would benefit the whole group. However, the following five rounds showed no significant difference in number choice between the test group and control group.

In the second experiment, ninety-six participants divided into groups of three wore headphones playing music while completing tasks with different degrees of synchrony. The conductors of the experiment told the participants they would be paid between $1 and $5 based on their group performance of the task and that everyone in their group would receive the same payment. Following the exercise, they were all paid $4 for their participation and then were asked to answer a series of questions about how they felt about their team, how much they trusted their teammates, how similar they were to their teammates, and how happy they were right then.

The third and final experiment studied whether synchronous movement could increase

cooperation if the outcome would conflict with personal self-interest. In particular, the study endeavored to determine whether people who've participated in a synchronized activity would contribute more to a public account than those who haven't participated in the synchronous action. Wiltermuth and Heath took 105 participants in groups of three and had them participate in the same synchronous activity, with music and movement used in the second experiment. But then, they also completed a public-goods game in which they each had ten tokens they could contribute or keep. If they contributed their token to the public account, it would earn $0.25 for every person in the group. However, if kept in their private account, the token would earn that person $0.50 but give nothing to the other two members of the group. Therefore, if everyone contributed to the public account, the group earnings would be maximized, while if they kept their token, the individual would obtain more direct value.

Each study faced the challenge of creating synchronized actions all members of the study could perform. In addition, they each faced the pull of the innate human mirror neurons that cause people to subconsciously mimic the action of others. Therefore, keeping the groups that were not supposed to act in synchrony from doing so posed a challenge.

Regardless of the challenges, the experiments were successful. The first round proved the hypothesis, that those who walked in step chose higher numbers that would benefit the entire group. However, the following five rounds showed no significant difference in number choice between the test group and control group. The second round better proved that synchronous activity could lead to an increase in future cooperation because those in the most synchronous groups cooperated more than those in the other groups. However, this round also proved that there was no measurable difference in cooperation between the kinds of synchronous activity, whether it was synchronous singing alone or synchronous singing-and-moving conditions. Finally, the third round of experiments showed those

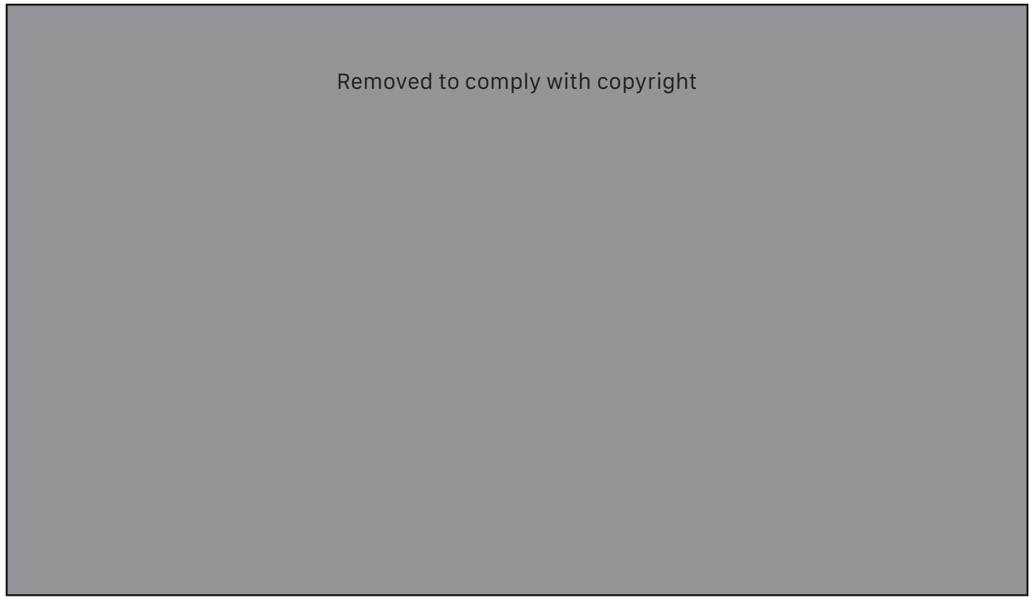


fig. 2.3 - **Contributions to the public account in Study 3, as a function of round, plotted separately for the four conditions: synchronous singing and moving; synchronous singing; asynchronous singing and moving; and no singing, no moving (control). Error bars indicate ± *SEM*.**

(Wiltermuth)

who participated in synchronous activities made persistently more contributions to the public account, reported increased feelings of team unity, and felt more similar to their teammates than those in groups of asynchronous activity (see figure 2.3). However, they did not report greater happiness. Altogether, the three experiments prove the hypothesis that acting in synchrony with a group of people leads to increased cooperation and may allow groups or organizations to overcome the free-rider problem, allowing for more successful social contributions.

Acting in synchrony with a group of people leads to increased cooperation and may allow groups or organizations to overcome the "free-rider" problem, allowing for more successful social contributions.

The second study, *Food Security in Rural America: A Study of the Availability and Costs of Food*, conducted by Patricia McGrath Morris, Linda Neuhauser, and Cathy Campbell, looked at three of

the major factors contributing to food insecurity in rural America, supermarket availability, food item availability, and costs of a USDA Thrifty Food Plan (TFP) market basket in relation to food stamp allotments. They conducted the research because they determined one could not assess food-security issues properly without measuring these factors.

To accomplish their goals, the researchers divided their methods into two parts, one that would analyze access to supermarkets in rural America and one that surveyed the availability of food and its costs in rural grocery stores. In the first method, comparing access to supermarkets between urban and rural areas, they used three databases: the Progressive Grocer's 1989 Marketing Guidebook, USDA's food stamp redemption data, and the U.S. Census Bureau's 1988 County and City Data Book. These provided data on the number of supermarkets, the amount of food stamps spent, and the size of the counties in relation to these numbers. For the second method, the researchers used a three-stage stratified random sampling design to capture the variations in the number of supermarkets versus small/medium stores in poor rural counties. All the stores selected received letters asking for their cooperation in the study. The final survey sample included eighty-two small/medium stores and fifty-one supermarkets, and each of the thirty-three poor rural counties in the study had at least one supermarket or small/medium store that participated in the survey.

The results of the two methods of study are as follows. In regards to access to supermarkets in rural America, at the time of this study, there were nearly eight times as many supermarkets per county and nearly ten times as many supermarkets per square mile in urban America than in rural America (see figure 2.4). The study showed that the rural poor households had to travel greater distances to supermarkets and possessed fewer store choices than those in poor urban households. The second study on cost and availability of food determined that the total food price cost more than food stamp

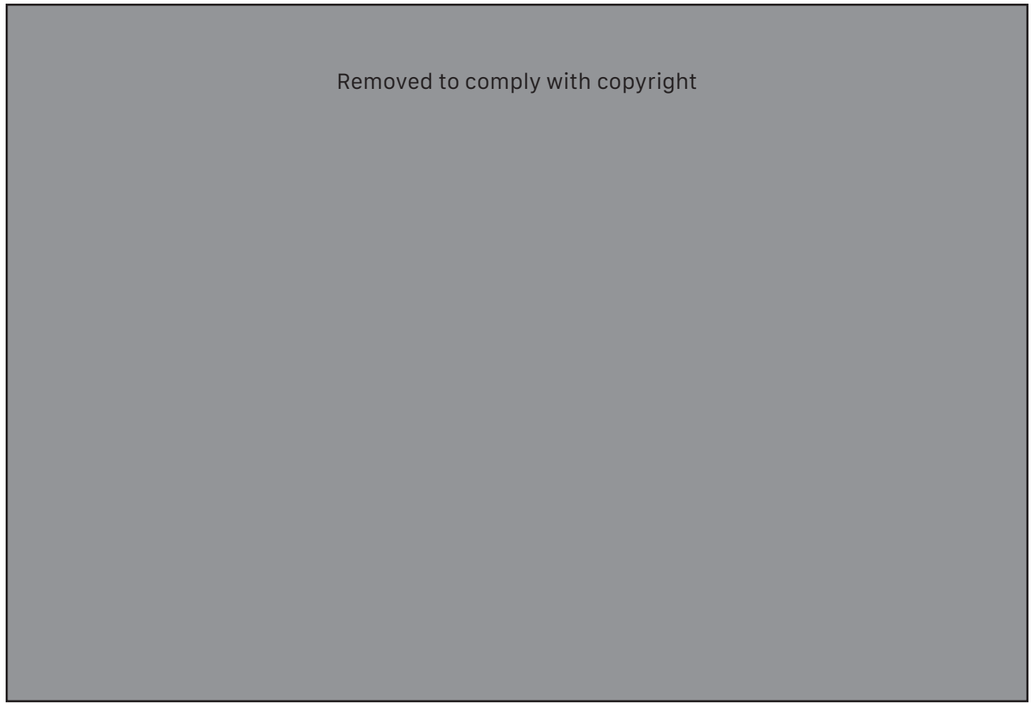
fig. 2.4 - Percent Lacking Convenient Access to a Supermarket or Supercenter in U.S. Counties, 2000 (Blanchard)

benefits provided, at an average of 8% more in supermarkets and 36% more in small/medium stores. Therefore, an overall average increase of 17% in food stamp benefits was necessary to solve this discrepancy in these areas of the country. In addition, the survey found that while supermarkets had a wide range of fresh foods available, the small/medium stores did not. Combining the results of the two methods of study reveals that those in poor rural America have limited access to the supermarkets that offer more competitively priced and fresher foods than the smaller food stores. When forced to rely on the smaller food stores, those in poor rural areas experience limited purchasing power and limited access to food high in nutrients.

The researchers conducting this study faced the challenge of acquiring stores from poor rural counties to participate. Nearly half of the chosen small/medium stores had to be disqualified from the survey due to a lack of telephone numbers to communicate with them. This may have biased the final sample in favor of the small/medium stores with lower prices and larger selection. In addition, the costs of the selected foods were chosen from the least expensive in the USDA's food categories, pricing only the cheapest items, regardless of package size or brand. Therefore, the food-cost findings of the survey probably ended up lower than the actual cost to food-stamp recipients in these areas.

The third study, *Does Food Insecurity at Home Affect Non-Cognitive Performance at School? A Longitudinal Analysis of Elementary Student Classroom Behavior*, conducted by Larry H. Howard, used classroom-based measures of noncognitive skills to determine the effects of food insecurity on the development of children of elementary school age. In particular, he investigated whether the severity of food insecurity in a home and the rate of occurrence of food insecurity affect an elementary-school-aged child's development. The categories of development analyzed included interpersonal relations, self-control, approaches to learning, and externalizing problem behavior. Howard conducted the research to further knowledge of how food insecurity impacts a child's development since impairments can last into adulthood as well as lessen the effectiveness of the learning environment in a classroom.

To accomplish his goal, Howard used regression models of child-level fixed effects. These models scored the child based on when they first became food insecure (in first grade, third grade, or fifth grade), whether they faced food insecurity at all, or the trend of food insecurity in addition to the data from the public. These models formed the baseline for the research. In each survey round of the study, the skill questionnaires were slightly changed, while the teachers continued to report on the child's performance each time. To be able to compare the results with other studies, Howard used the USDA definition and classifications of food insecurity. The models for the study also measured each child's height and body weight during specific time points in the study to help determine control values for long-run and short-run health and nutrition measures. In addition, reports by parents of similar-aged children on activity levels were used to create the control numbers for low, normal, and high activity levels. Other control variables included the number of minutes watching television per day, the hours per week a child spent not in a parent's care, the amount a child cared for himself/herself when not in school, and how much a parent cared for a child when the child



was not in school. The number of siblings, overall household size, and household income were also taken into consideration.

To conduct the study, Howard observed 20,000 kindergarteners enrolled in over 1,200 elementary schools throughout the United States. By the end of their fifth grade year, only 11,000 participants remained in the study due to relocation to other areas and the inability to contact them thereafter. The final sample for analysis included full data for only 4,710 of the children originally enrolled. However, the demographic characteristics for this final group do mirror that of the full sampling of participants. Throughout the study, teachers of these children were asked to report on how often students exhibited four noncognitive skills, including interpersonal relations, self-control, approaches to learning, and externalizing problem behaviors. These are defined as follows. For the purposes of the study, "interpersonal relations" means how well a child could form

and maintain friendships, how they got along with people who were different from themselves, their ability to comfort or help another child, their ability to express their feelings, ideas, and opinions positively, and whether or not they showed sensitivity to others. "Self-control" means how a child respects the property and rights of others, controls their temper, goes along with their peer group's ideas for activities, and responds to peer pressure. "Approaches to learning" means how a child showed attentiveness, persistence in tasks, excitement to learn, independence in learning, adaptability, and organizational skills. Finally, "externalizing problem behaviors" means whether a child's behavior interfered with the learning process by their arguing, fighting, getting angry, acting in impulsive ways, or interfering with ongoing activities. The higher the value in any of these four areas, the worse rating developmentally the child received.

The results show significant developmental impairments in children who come from food-insecure homes. In particular, children's lack of self-control was found to be directly related to the intensity of food insecurity in their homes. The study also shows the developmental impairments from food insecurity are greatest in the earlier years of development. The research concludes food insecurity impairs a child's development in interpersonal relations, self-control, and approaches to learning. However, in the area of externalizing problem behaviors, the study determined there is no real increase for those who suffer from food insecurity.

Food insecurity impairs a child's development in interpersonal relations, self-control, and approaches to learning.

Beyond the case studies, further research into separate visual artifacts informs the final deliverables that address the problem of food insecurity was conducted. The first visual project studied, called "Chefs Cycle," is an organized, annual, multiday, charity, group-cycling event created to raise funds for the No Kid Hungry organization, which helps feed food-insecure children. Every year, hundreds of cyclists who have a professional connection to the food and beverage industry pay a fee to ride in the event and endeavor to acquire donations from additional sponsors. Anyone is also encouraged to donate or sponsor a rider via a link on their website, chefscycle.org. Their goal for 2022 was to raise $2 million or more to feed hungry children in America. This year, 250 cyclists rode together as a group, stopping at rest stops, eating at food tents, receiving aid at aid stations, and posing for pictures in front of event banners. In addition, food-insecure children from the Santa Rosa, Calif., community were invited to eat with the riders at the conclusion of the event (Come).

The kinds of signage used included the following. First, vertical event banner flags marked entries, exits, and key points along the road course. These flags measured about ten feet tall by two feet wide and were printed on a weatherproof fabric material. They were double-sided, with the same information on both sides (see figure 2.5).

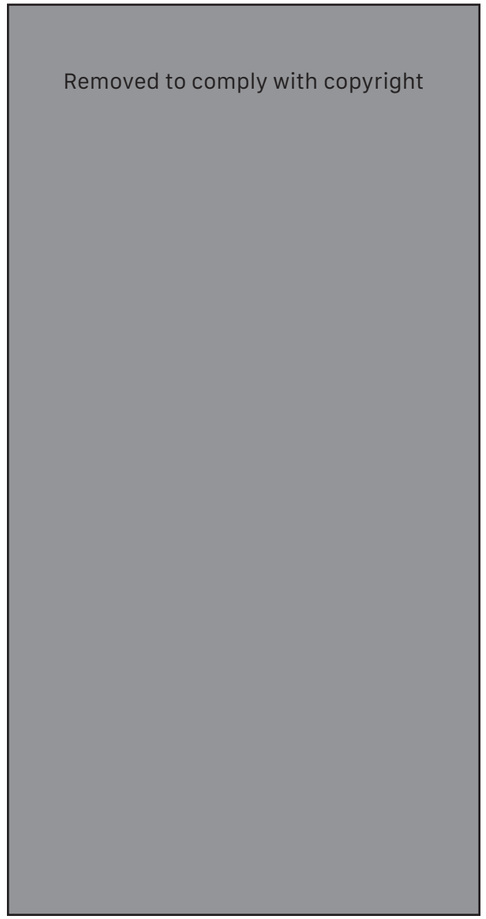


fig. 2.5 - Chef's Cycle Verticle Banner (Come)

Next, a variety of 2x3—foot vertical information signs, printed on sturdy, fade-resistant, corrugated plastic were used to encourage riders on the route and designate the event area. Wording on this signage included the following phrases: "Hydration Station," "The Pain You Feel Today Will Be the Strength You Feel Tomorrow,"

"We'll Buy You a Beer at the Finish," "Thank You Sponsors," and "How Are You Feeling?" In addition, smaller 18x24–inch or 24x24–inch signs were used to indicate directions or instructions. These signs used the following phrases: "Rest Stop Here," "Dismount Here," "Massage," and "Bike Wash" (see figure 2.6).

Way-finding signage for the event was also found on the cycling route and included vertical 2x3–foot, tent-style, double-sided mile markers. Caution signs in the same format as the mile-marker signs were also included in the signage for the event to warn pedestrians and automobiles of the cyclists on the road and in the area. Additional way-finding signage in the form of smaller directional arrows printed on rectangles or circles helped direct the cyclists through turns on the route. Finally, shade tents with event logos on them, along with an 8x10–foot photo backdrop banner completed the signage for the Chefs Cycle event (see figure 2.7).

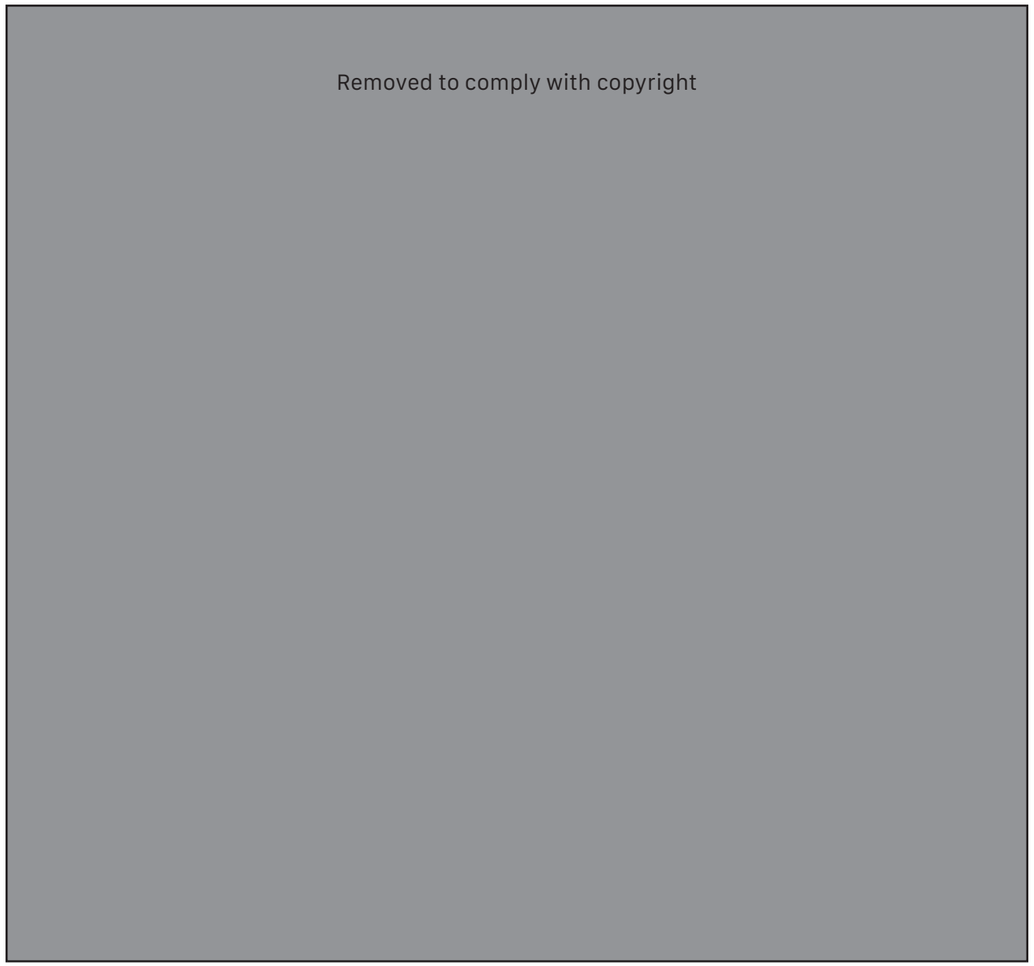


fig. 2.6 - Chef's Cycle Event Signage Varied (Come)

fig. 2.7 - Chef's Cycle Photo Backdrop (Come)

The colors for all signage, markers, tents, and flags coincided with the established colors of the No Kid Hungry and Chefs Cycle organization, which are orange, warm gray, and true white. Their coinciding CMYK values are (1, 73, 99, 0) for the orange and (38, 34, 40, 1) for the warm gray. Most of the typefaces used for the signage were Gotham; however, some included the Arial typeface. Regardless of typeface, all wording appeared in all caps, and most of it was in a bold version of the typeface used (see figure 2.8).

The audience for this signage at this event was primarily the participating cyclists but also the participants' guests, or support team, as well as the invited children with their families. These people viewed the signage as they walked or rode by. However, since cyclists travel at a faster speed than those walking, the signs on the route for cyclists had to be larger and highly readable from a farther distance. Meanwhile, at the crowded event sites at the end or beginning of each ride, the orange shade tents and large, vertical, orange banner flags helped people determine at a glance where to find event-related stations.

fig. 2.8 - Chef's Cycle Signage (Come)

Compositionally, the majority of the signs needed to remain uncluttered, with vast amounts of empty space around the wording to be readable from a distance. However, the signage in the walking areas of the event could have included more items, such as the logos of the sponsors of the events. Including all the logos from the sponsors took up a lot of space on some of the signage; however, enough white space was left around them to keep each logo readable from close proximity as a second-read element.

As far as the semiotics of the event went, many of the signs directed the traffic of the cyclists but not the attendees at the event. However, many logos of the sponsoring companies appeared on many of the signs, and nearly all the signs bore the logo of the event and the charity organization it benefited. A few icons were used in the signage to quickly convey meaning. These icons included directional arrows as well as slash marks repeated in a row to indicate caution. No other icons seemed necessary; however, signage and icons indicating restrooms could have been helpful at such an event.

Aesthetically, the signage was cohesive and coordinated in color scheme, typeface, and theme, including the event host's brand and the charitable beneficiary's brand. In addition, the color scheme was bright, eye-catching, and invigorating.

The next visual artifact studied for this thesis was a children's graphic novel titled *Owly, The Way Home*, from the Owly Series by award-winning author/illustrator Andy Runton (see figure 2.9). This series includes some of the first graphic novels created to be readable by

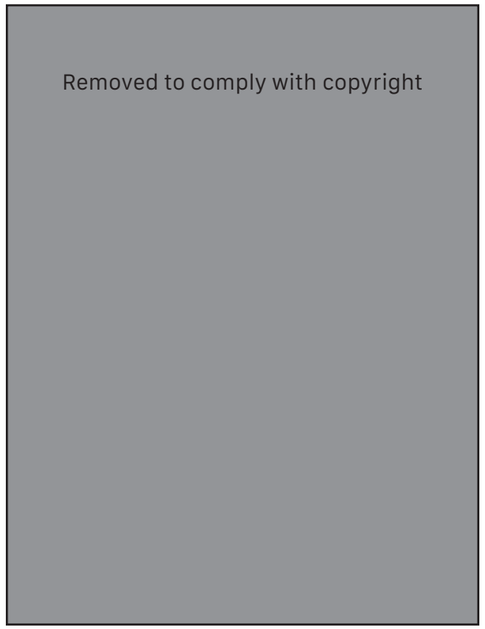


fig. 2.9 - *Owly, The Way Home* by Andy Runton (Runton)

all ages. It earned the award for "Best Publication for a Younger Audience," the Harvey Award, two Ignatz awards, and many others. Runton came up with the idea after years of drawing the Owly character on little Post-It note messages for his mom and others. Throughout the various note doodles, Owly appeared with little friends or did various activities and actions. One day, Runton realized he'd created a whole world for this character and that he needed to tell his stories, all based on kindness, nonviolent solutions, and an understanding heart (Runton, About).

This book, heavy on illustrations, combines two stories that share a similar theme of "home." The first story, *Finding Home*, centers on the main character named Owly, who fears being alone, desires a friend above all else, and fights the predator owl stereotype. In the beginning, Owly searches for a friend. Two potential pals run away from fear, but then, Owly finds a worm in dire straits. After rescuing the worm, which an owl would usually eat, Owly helps it find its parents, and the two become best friends (see figure 2.10).

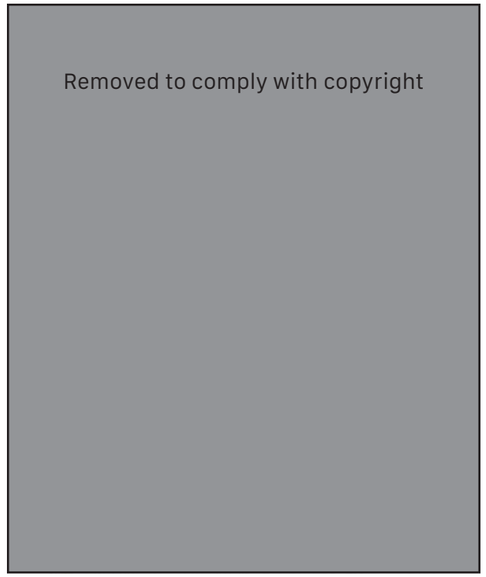


fig. 2.10 - *Owly, The Way Home* by Andy Runton (Runton 12)

But the story doesn't end there. It goes on to show how the worm decides to leave its home to go live with its new best friend, Owly. The second story seems to pick up where the first left off, with the two friends, Owly and Wormy, going about life together and planting a garden. While outside, they discover a new creature they've never encountered before, a hummingbird named Tiny. They try to feed Tiny some seeds, but it tells them it can't eat seeds. So, they do some research, buy some special seeds, and grow special flowers just for Tiny. The hummingbird appreciates Owly and Wormy's flowers so much that it brings a

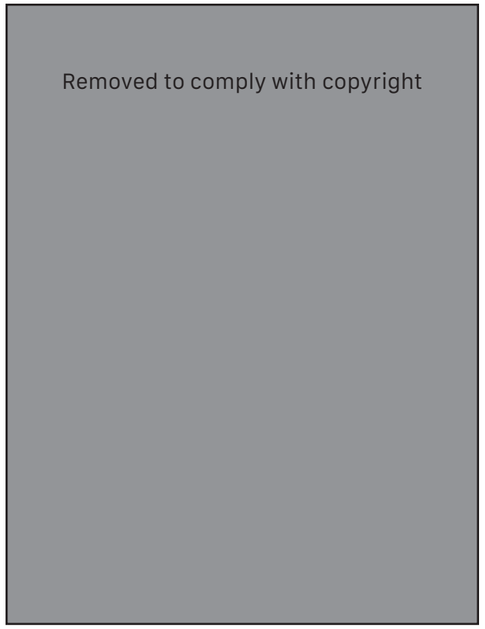


fig. 2.9 - *Owly, The Way Home* by Andy Runton (Runton 5)

friend along to enjoy them too. Then, one day, the friend gets trapped, and Tiny calls on Owly and Wormy to help. Of course, the two friends help their new pal Tiny and free the other hummingbird. Soon, all four animals are friends, creating memories together. The story could end there, but it continues with the need for the two hummingbirds to travel south for the winter. This proves to be a sad occasion for Owly and Wormy, but they weather the six months together, planting new seeds indoors and preparing new flowers for the birds' return in the spring. Finally, the day arrives when the two hummingbirds return, and the four friends have a joyous reunion.

This book spans all cultures due to its usage of animal characters instead of specific ethnic groups or genders of humans (see figure 2.10). In addition, the overarching problem of overcoming loneliness and stereotypes speaks to all humans in any circumstance, and its message of kindness above all else possesses no cultural barriers. The book even handles the limitations language may impose by using sparse text and many visual icons and symbols in place of or next to written text. This allows those who may not yet read or those who do not understand the language to still draw meaning from the story and understand the overall message and storyline. This ability for everyone to understand the story is important because "storytelling is at the core of culture" (Mizrahi).

The audience for this specific graphic novel is primarily children from ages seven to ten years old, in grades two through five. However, readers of all ages also consume the text and illustrations in this book. *Owly, The Way Home* measures 5.3 inches high by 7.5 inches tall, small enough for children's hands to hold. The small size and flexible paperback cover also make the book easy to carry in a purse, satchel, or backpack and allow the reader to hold the book open with one hand without difficulty. The 160-page length makes it a bit thicker physically than other graphic novels for this age group, but this book actually contains two stories printed one after another. If one breaks the two stories apart, the page count comes to fifty-three and eighty-seven pages respectively, fitting them closer to the category's average length of sixty-four pages. Looking further into the physical aspects of the artistic medium, the first story in the book uses 191 illustrated panels and 399 words. Meanwhile, the second uses 317 illustrated panels, about 30% more, but only 437 words, only 9% more. Therefore, the illustrations tell more of the story in the second tale in *Owly, The Way Home*.

In regards to the book's artistic merit, the artist composed varied panel layouts on each spread of the book to direct the viewer through the story. Smaller panels, with several on a page, speed up the pace of the story, while larger, single panels on a page slow the pace and make the viewer take notice of the scene and its elements. In addition, single panels with large amounts of white space around them draw even more attention than full-page single panels. Aesthetically speaking, Runton used an eye-catching but appropriate color palette of orange-browns, vibrant greens, bright yellows, and sky blues on the cover and throughout the book (see figure 2.11). The stylization of characters, with

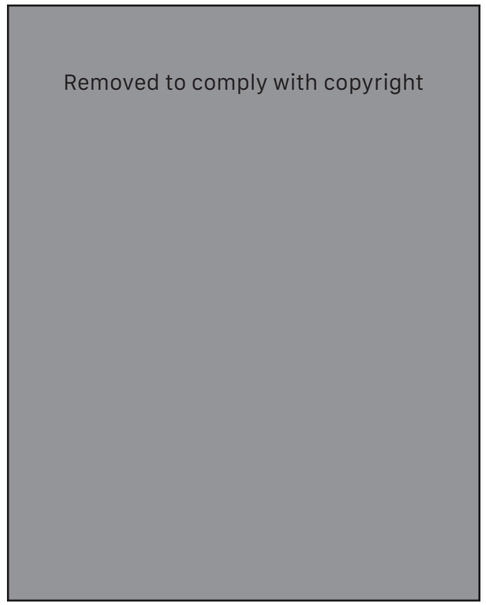


fig. 2.11 - *Owly, The Way Home* by Andy Runton (Runton)

friendly silhouettes and large eyes, also adds to the book's appeal. All of these elements combine with the story's wide appeal to make it a success, as the aforementioned awards attest.

Finally, the last visual artifact for the study consisted of a children's graphic novel titled *The Great Pet Escape* from Newbery Honor Award–winning, *New York Times* best-selling author and illustrator Victoria Jamieson (see figure 2.12).

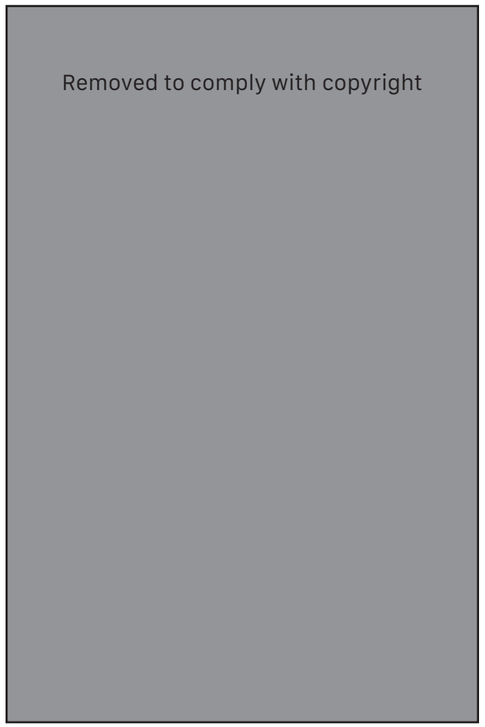


fig. 2.12 - *The Great Pet Escape* by Victoria Jamieson (Jamieson)

Jamieson bases this book on her older brother's two pet hamsters from childhood and puts them into a story about two classroom pets who must escape at night to protect the school from a little mouse named Harriet and her evil mouse minions. In addition, Jamieson's childhood visits to her teacher mom's elementary school classroom during the summer and on weekends inspired the setting for the book. Created for younger graphic-novel readers, aged siz to ten, this book is shorter than those for older audiences and includes only sixty-four pages total.

This illustration-heavy, paperback book follows the traditional story arc of characters with a problem, who try to solve it in several ways, eventually solve it, and end up learning something in the end. In the story, the main characters, two hamsters, and a rabbit, all with childlike qualities, are tired of being incarcerated like prisoners in their elementary classroom cages. The primary main character hamster, named George Washington (G.W.), plots and plans and eventually breaks out one evening (see figure 2.13). Then he ventures out to set

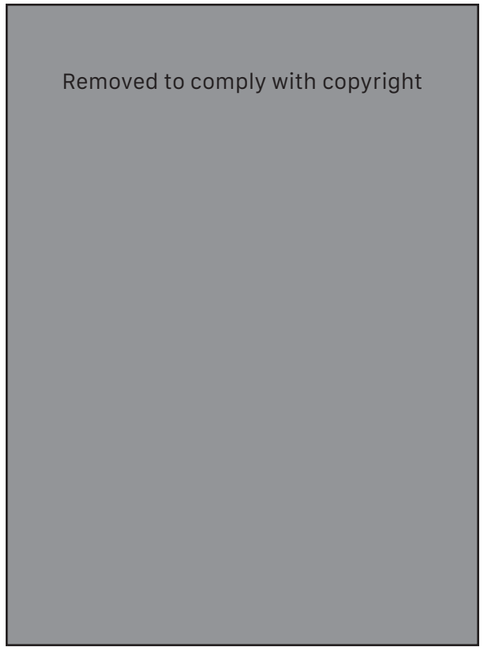


fig. 2.13 - *The Great Pet Escape* by Victoria Jamieson (Jamieson 5)

his pals free in their respective classroom cages. The rabbit is happy to leave, but the other hamster invites G.W. and the rabbit in for tea, yoga, and a sort of therapy session. But then they realize they all want out of the school and make a plan. Unfortunately, they meet the evil mouse Harriet, who has tasked herself and her mouse minions with preventing any pet escapes, like a prison warden. Harriet locks the three main characters up and then reveals her plan to alter the students' lunch in the cafeteria the next day, in an effort to make them all sick to their stomachs. G.W. and his friends vow to stop them and save the students. A mess and mayhem ensue, but they achieve their goal in the end and return to their respective cages in their respective classrooms, because they realize they had a pretty good life as class pets. Like many other traditional stories, this book has a main action plot as well as an overarching theme. While this book tackles the idea of freedom and adventure, its overarching theme is one of loyalty and friendship.

This book also spans all cultures due to its usage of animal characters instead of specific ethnic groups or genders of humans for the main characters. However, when humans do appear in the illustrations, the artist includes a wide representation of genders and ethnicities (see figure 2.14). In addition, the overarching problem of loyalty and friendship speaks to all humans in any circumstance.

The audience for this specific graphic novel is primarily children from ages six to ten years old, in grades one to five. However, readers of all ages also consume the text and illustrations in this book.

fig. 2.14 - *The Great Pet Escape* by Victoria Jamieson (Jamieson 7)

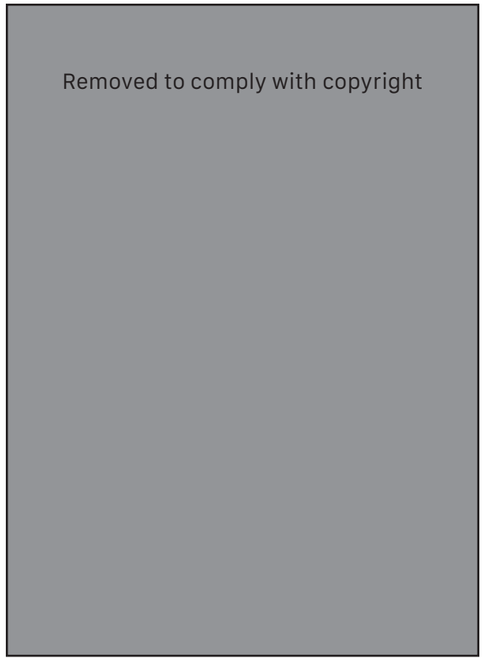


fig. 2.15 - *The Great Pet Escape* by Victoria Jamieson (Jamieson 6)

The Great Pet Escape measures 5.7 inches wide by 8.8 inches tall, small enough for children's hands to hold. The small size and flexible paperback cover also make the book easy to carry in a purse, satchel, or backpack and allow the reader to hold the book open with one hand without difficulty. The sixty-four-page length fits the category's average length. Looking further into the physical aspects of the artistic medium, the story in the book uses 248 illustrated panels and has about fifty-two words per page, pushing it up into the higher word counts for books in this category (see figure 2.15).

Regarding the book's artistic merit, the artist composed varied panel layouts on each spread of the book to direct the viewer through the story. Smaller panels, with several on a page, speed up the pace of the story, while larger, single panels on a page, slow the pace down and make the viewer take notice of the scene and its elements. In addition, illustrations without a paneled border edge, with large amounts of white space around them, occur now and then to provide variation and emphasis. Aesthetically speaking, Jamieson used an eye-catching but age-appropriate color palette of bright, saturated colors throughout the book (see figure 2.15). The stylization of characters, with friendly silhouettes and expressive faces, also adds to the book's appeal.

SUMMARY & APPLICATION

Each of these case studies and visual artifacts combines to inform the final thesis deliverables, which focus on helping food-insecure children in rural communities.

The first case study discussed demonstrated that acting in synchrony with a group of people could later lead to successful social contributions. This finding would apply directly to a charitable event, such as Chefs Cycle, where a group of people ride together to gather donations for children suffering from food insecurity. The signage at such an event also reflects group cohesiveness and positivity through its limited but bright color palette. The analysis of this study and the signage from the Chefs Cycle event provide research-based validation and inspiration for creating poster and signage designs for a group-synchronized-movement, charitable event.

The second case study concluded that those in poor rural America have limited access to larger supermarkets that offer more competitively priced and fresher foods than the smaller food stores. Therefore, those in poor rural areas have limited purchasing power and limited access to nutritious food. This study provides information on the geographic availability of food to those in rural America and the costs associated with the available food. These elements inform the plot and scene elements for the final thesis project's graphic novel deliverable.

The third case study also informs the final graphic novel by providing information on particular

noncognitive character traits of food- insecure children. The study concluded that food insecurity impairs a child's development in peer-to-peer relationships, in their ability to control themselves, and in how they approach learning. Thus, these traits will be reflected in the child character suffering from food insecurity in the book.

Finally, the two graphic novel visual artifacts provide examples and reference points of books in a similar genre as the final thesis deliverable. In particular, information about the word count, panel count, page count, panel composition, character stylizations, and book format all exemplify successful solutions to creating a visual project in the same genre. In addition, the books' themes of overcoming loneliness, friendship, and loyalty all possess a universal nature applicable to all humans. A theme of a similar nature will be applied to the final thesis project.

Once created and completed, the final thesis deliverables will combat rural America's childhood food insecurity problem in two ways, which coincide with each another.

First, the event signage digital files will be available for download for any charitable organization wishing to host an event to raise funds and awareness for the food insecure. Since these signs are research-based to induce charitable giving, they should be more effective. In addition, having the signs provided without cost or additional labor will save the event organizers time and money, which can then be put toward the cause instead.

Second, the children's graphic novel will also be available as a print-on-demand book or published through an organization such as *Feeding America* and made available for purchase and distribution by charities, schools, religious organizations, or individuals. Through illustrated story, the graphic novel will educate, raise awareness, and provide resources of support. It will help food insecure children learn where to seek help, children with suffering friends learn to spot the signs and help, and caregivers of suffering children understand, advocate, and acquire assistance for the child.

Ultimately, the charitable event would serve as a distribution site for the book, and additional funds could be raised from the graphic novel's proceeds. All these efforts combine to raise awareness, educate, and instigate change so America can begin the needed progress toward a country with little to no children suffering from hunger.

Photo by Merlijn Hoek, *JimmyEating*

Chapter 3

PROCESS

I chose to focus on two separate design projects—charitable-event signage and an illustrated story—that work symbiotically to bring about the most significant contributions and selfless human action in fighting food insecurity for children in rural America. While these two projects ultimately work in tandem, each one feeding support to the other, their creation required individual attention to project-specific issues.

The following pages review the process behind the creation of both final visual solutions.

PLANNING THE PROJECTS

EVENT SIGNAGE

The main challenge with designing event signage was its need to be editable, customizable, and downloadable. The charities or organizations utilizing these designs for their events may have a specific color palette, particular verbiage, and various format requirements. After researching the most common sizes and types of signage, I used the industry-standard program, Adobe InDesign, to create the artwork. Then, I also exported the files into EPS and PDF formats, which are more easily editable and openable by other programs. Ultimately, the entire set of digital files was packaged and made available for download from my website,

www.jujubeeillustrations.com/uploads/FinalSinage.zip.

GRAPHIC NOVEL

Unfortunately, many children suffering from food insecurity do not have a proper adult advocate and may not even be aware of the available resources. Therefore, my challenge in creating a graphic novel on this subject was to write and illustrate a story and provide information that would resonate with a child, provide hope, and help them understand how to get help, where to get help, and when to get help. Because of these goals, the book follows a young, mixed-race Hispanic boy living in a rural area of the southwest who suffers from food insecurity. The story follows him from early morning on a Friday, throughout his day at school, into his experiences over the weekend at home with his single, working mother, and ending after the school day on Monday. Over that period, the reader experiences the effects of food insecurity through the eyes of a child who wants to do well at the school's kickball tournament.

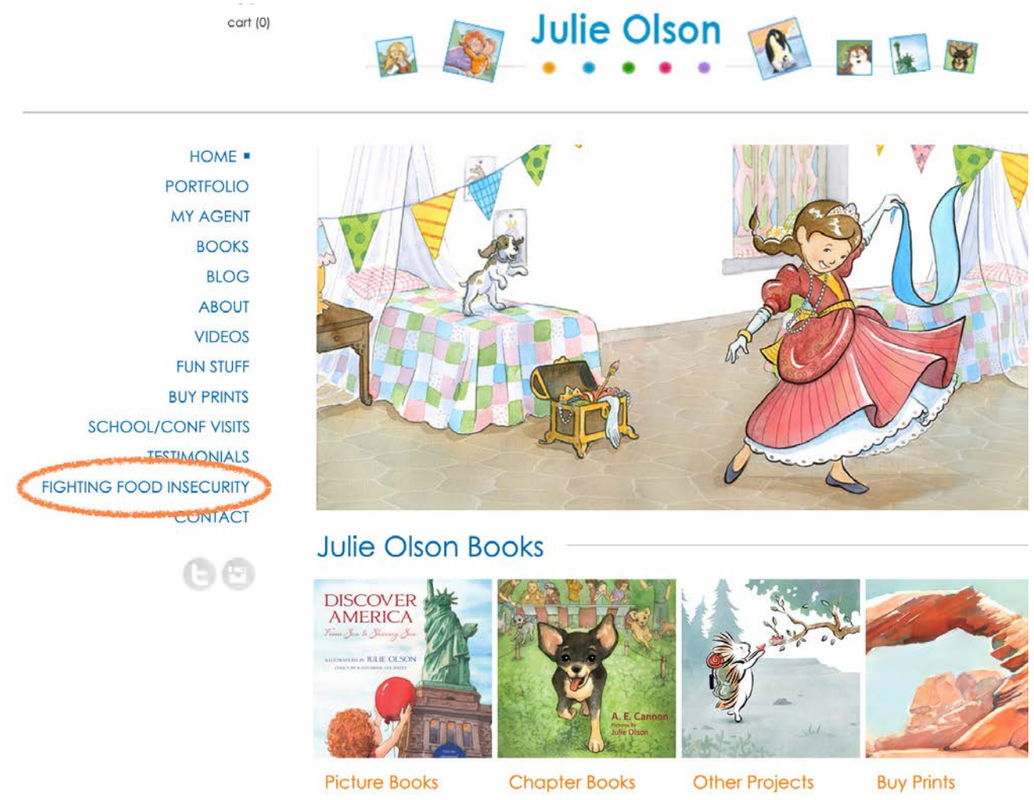


fig. 3.0 - Screenshot of Julie Olson's Website by Julie Olson

To pay for the publication of this book and get it into the hands of readers, I hope to partner with a national organization, such as Feeding America, or search for a government grant. If neither of those routes proves successful, I plan to submit it to editors for traditional publication or upload the book to Kindle Direct Publishing as a print-on-demand offering through Amazon.

Either way, there will eventually be a link to the book from my website, www.JulieOlsonBooks.com (see figure 3.0).

IDEATION & CREATION: EVENT SIGNAGE

VISUAL RESEARCH

I began by researching a color scheme for my signage. It needed to be eye-catching, inspiring, and energetic to reflect the purpose of its use. I settled on the primary color of bright orange (see figure 3.1) with variations toward golden-yellow for reasons that chapter four explains. Then, along with my previous signage visual research discussed in chapter 2 of this thesis, I collected several images of other signage and created an inspiration board on Pinterest (see figure 3.2). I included images of various formats, styles, verbiage, and colors.

fig 3.1 (Suleman)

fig. 3.0 - Screenshot of Julie Olson's Signage Designs Pinterest Board by Julie Olson

In addition, I researched signage typefaces that satisfied the required criteria of readability from a distance and commercial usability licenses. Because of license usage limitations, I stuck to researching typefaces available through the Adobe Creative Suite (see figure 3.3).

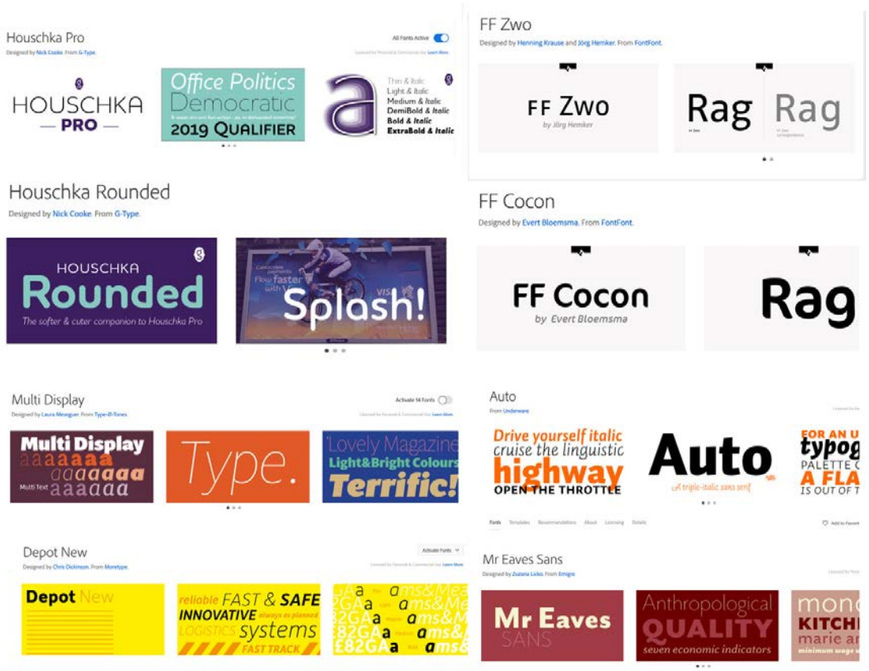


fig. 3.3 - Screenshots of Typeface Options

THUMBNAIL SKETCHES

At this stage, I sketched out several design ideas for the event signage deliverables. I decided many of the signs may share the same wording but will be offered in two different shapes and display applications depending on the user's needs. For example, a sign displaying the words "Thank You" will exist in a 12" x 18" lawn sign or a 24" x 26" sidewalk sandwich-board sign (see figures 3.4-3.6). Besides ground-level signage, I created thumbnail designs for an 8 'x 10' photo/stage backdrop for the event (see figure 3.7). Each sign design has basic wording along with event-title placeholder wording and an area for logo placement so the end user will have the ability to input event-specific information.

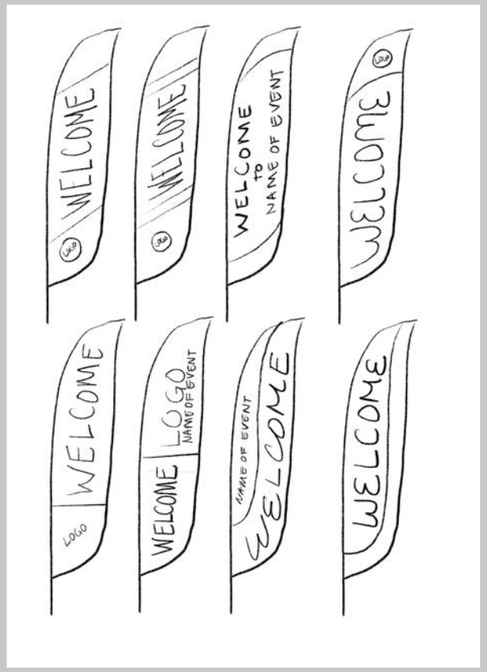


fig. 3.4 - Initial Signage Thumbnail Sketches for Feather Flag Banner

fig. 3.5 - Initial Signage Thumbnail Sketches for Lawn Signs

fig. 3.6 - Initial Signage Thumbnail Sketches for Sidewalk Sandwich Boards

fig. 3.7 - Initial Signage Thumbnail Sketches for Photo/Stage Backdrop

Then I took each thumbnail design and created full-color mockups using Adobe InDesign. At this point, I reviewed the typefaces I gathered during the earlier stage of visual research and activated a narrowed-down selection through Adobe Fonts. In the end, I settled on FF Zwo, designed by Henning Krause and Jörg Hemker; Houschka Pro, designed by Nick Cooke; and FF Cocon, designed by Evert Bloemsma. The strong, sharp-cornered, contemporary FF Zwo typeface reads very well from a distance and includes several weights for varied applications.

Meanwhile, the rounded, mono-weight thickness of Houschka Pro lends a comfortable softness that invites the viewer while maintaining its distance readability. Finally, while also easily legible, the brush-swooped endcaps of FF Cocon create a friendly, welcoming vibe. In the final versions of the event signage, I narrowed down my choice of typeface even further, but for this stage, I tried out all three. In these initial designs, I used limited wording examples but planned to include expanded wording choices in the final signage designs.

The following images display the initial color mockups of the feather-flag event signage (see figures 3.9–3.15) created in Adobe InDesign using the feather-flag-template outline downloaded from Vistaprint.com (see figure 3.8).

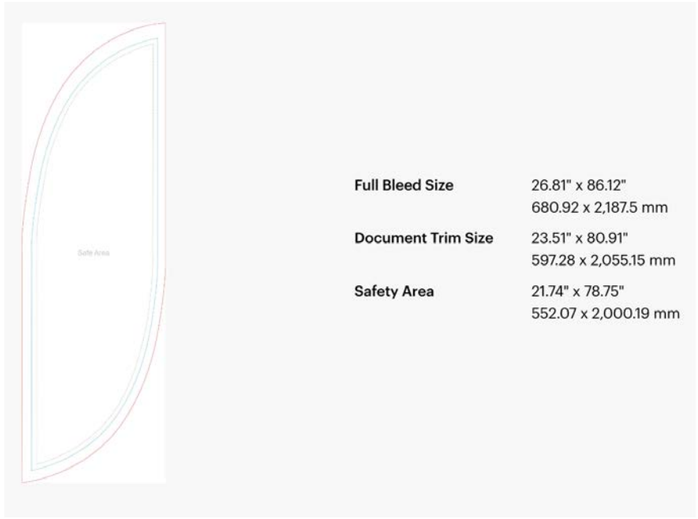


fig. 3.8 - Feather Flag Template (Flags).

fig. 3.9

fig. 3.10

fig. 3.11

fig. 3.12

fig. 3.13

fig. 3.14

fig. 3.15

These images show the initial color mockups of the sidewalk sandwich boards (see figure 3.16), the lawn signs (see figures 3.17), and the photo/stage backrop event signage (see figures 3.18) also created in Adobe InDesign.

fig. 3.16 - Sidewalk Sandwich-Board Mockups

fig. 3.17 - Lawn Sign Mockups

fig. 3.18 - Photo/Stage-Backdrop Mockups

With the event signage designs conceptualized and mocked up, I chose the feather flag's most readable and visually inspiring design (see figure 3.19). For the final designs, I combined the feather flag's gradient color curve element and typeface choice with some design elements from the chosen sidewalk board (see figure 3.20), lawn sign (see figure 3.21), and photo/stage backdrop (see figure 3.22) to create cohesiveness and a unified design for the event signage.

fig. 3.19

fig. 3.20

fig. 3.21

fig. 3.22

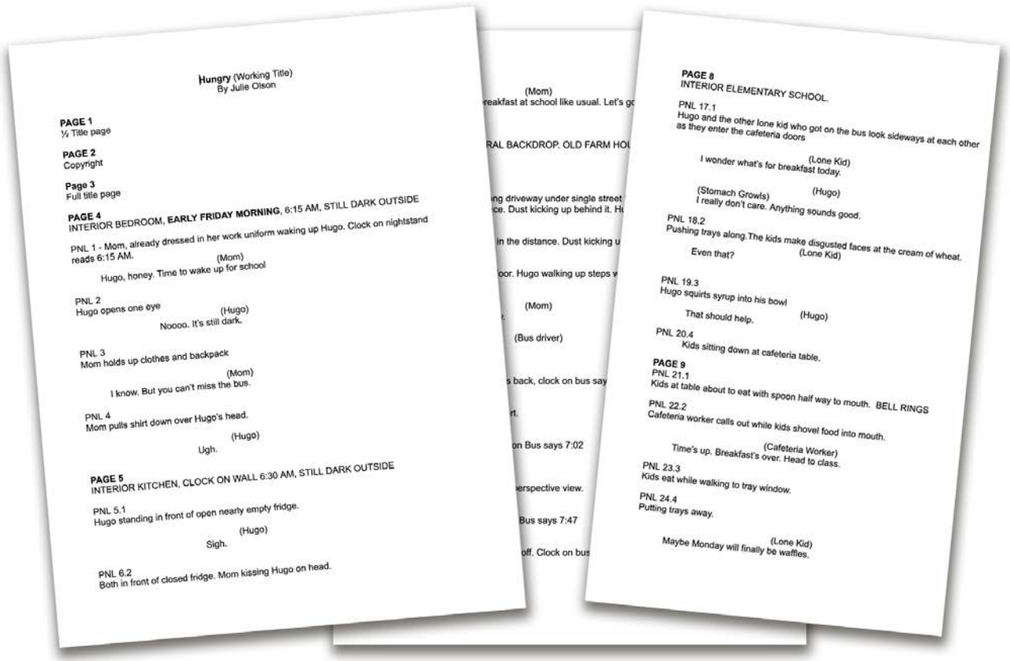
FINAL FILE CREATION

Packaging and exporting the files into various formats was the second-to-last step in making these designs available to event organizers. From the file menu in InDesign, I chose the "package" option. This action created a folder with the InDesign file, document fonts, image links, and an exported high-resolution PDF. Then I exported the InDesign file to an EPS format as well. Compressing all these files together made them a smaller package to upload to my website server and allowed quicker downloads.

IDEATION & CREATION: GRAPHIC NOVEL

CREATION OF STORY

Before I began any visual research for this graphic novel's art and design elements, I had to create a manuscript complete with a character with a problem to solve. Like all good stories, the character needed to go through an external story arc and an internal, emotional one, learning and growing along the way through overcoming obstacles in both plots. Because children aged six through ten make up the audience for this book, I chose to make the main character nine years old. Then I placed him in a familiar setting, an elementary school, and gave him a relatable goal for the external arc, winning the school kickball tournament. These elements provided lighthearted, relatable aspects to the storyline, drawing in readers. However, his internal, or emotional, story arc relates directly to this thesis's subject. The main character is a child in rural America, suffering from food insecurity. That story arc weaves throughout the book, displaying a few of the common signs of food insecurity through the character's feelings, physical health, and emotional struggles. In the end, the character finds temporary relief from his hunger but not a permanent solution, as in many real-life food-insecure situations. However, the overall message remains positive and hopeful. After several revisions, I came up with the final storyline and formatted it specifically as a graphic-novel manuscript before beginning the illustration process (see figure 3.23). The eighteen-page manuscript includes illustration notes and dialogue for thirty-five pages of story, 124 illustrated panels, about 1,015 words of narrative and dialogue, and about 500 words on five informational, descriptive pages at the end.



Hungry (Working Title)
By Julie Olson

PAGE 1
½ Title page

PAGE 2
Copyright

Page 3
Full title page

PAGE 4
INTERIOR BEDROOM, **EARLY FRIDAY MORNING**, 6:15 AM, STILL DARK OUTSIDE

PNL 1 - Mom, already dressed in her work uniform waking up Hugo. Clock on nightstand reads 6:15 AM.
(Mom)
Hugo, honey. Time to wake up for school

PNL 2
Hugo opens one eye
(Hugo)
Noooo. It's still dark.

PNL 3
Mom holds up clothes and backpack
(Mom)
I know. But you can't miss the bus.

PNL 4
Mom pulls shirt down over Hugo's head.
(Hugo)
Ugh.

PAGE 5
INTERIOR KITCHEN, CLOCK ON WALL 6:30 AM, STILL DARK OUTSIDE

PNL 5.1
Hugo standing in front of open nearly empty fridge.
(Hugo)
Sigh.

PNL 6.2
Both in front of closed fridge. Mom kissing Hugo on head.

(Mom)
reakfast at school like usual. Let's go

RAL BACKDROP. OLD FARM HOU

ng driveway under single street.
ce. Dust kicking up behind it. Hi

in the distance. Dust kicking u

oor. Hugo walking up steps w

(Mom)

(Bus driver)

s back, clock on bus say

rt.

on Bus says 7:02

erspective view.

Bus says 7:47

off. Clock on bus

PAGE 8
INTERIOR ELEMENTARY SCHOOL.

PNL 17.1
Hugo and the other lone kid who got on the bus look sideways at each other as they enter the cafeteria doors
(Lone Kid)
I wonder what's for breakfast today.
(Stomach Growls) (Hugo)
I really don't care. Anything sounds good.

PNL 18.2
Pushing trays along. The kids make disgusted faces at the cream of wheat.
Even that? (Lone Kid)

PNL 19.3
Hugo squirts syrup into his bowl
That should help. (Hugo)

PNL 20.4
Kids sitting down at cafeteria table.

PAGE 9
PNL 21.1
Kids at table about to eat with spoon half way to mouth. BELL RINGS

PNL 22.2
Cafeteria worker calls out while kids shovel food into mouth.
(Cafeteria Worker)
Time's up. Breakfast's over. Head to class.

PNL 23.3
Kids eat while walking to tray window.

PNL 24.4
Putting trays away.
(Lone Kid)
Maybe Monday will finally be waffles.

fig. 3.23

VISUAL RESEARCH

With the story complete, I began designing the graphic novel's characters, setting, and panels. First, I compiled a list of elements pertinent to the storyline, including school buses, elementary schools, kickball, baseball fields, southwest landscapes, rural desert roads, empty refrigerators, hungry children, and children of various ethnicities. Then I compiled a board of related images, color palette ideas, and illustrations from other graphic novels using Pinterest (see figures 3.24–3.26). In addition, I began gathering ideas for the typeface I would use in the book design. I considered Captain Comic, Classic Comic, Lint McCree, and CC Meanwhile suitable typeface choices because of their readability and common use in other graphic novels (see figure 3.27).

https://www.pinterest.com/rjolsonfamily/thesis-graphic-novel/

fig. 3.24 - Screenshot of Julie Olson's Thesis Graphic Novel Pinterest Board by Julie Olson

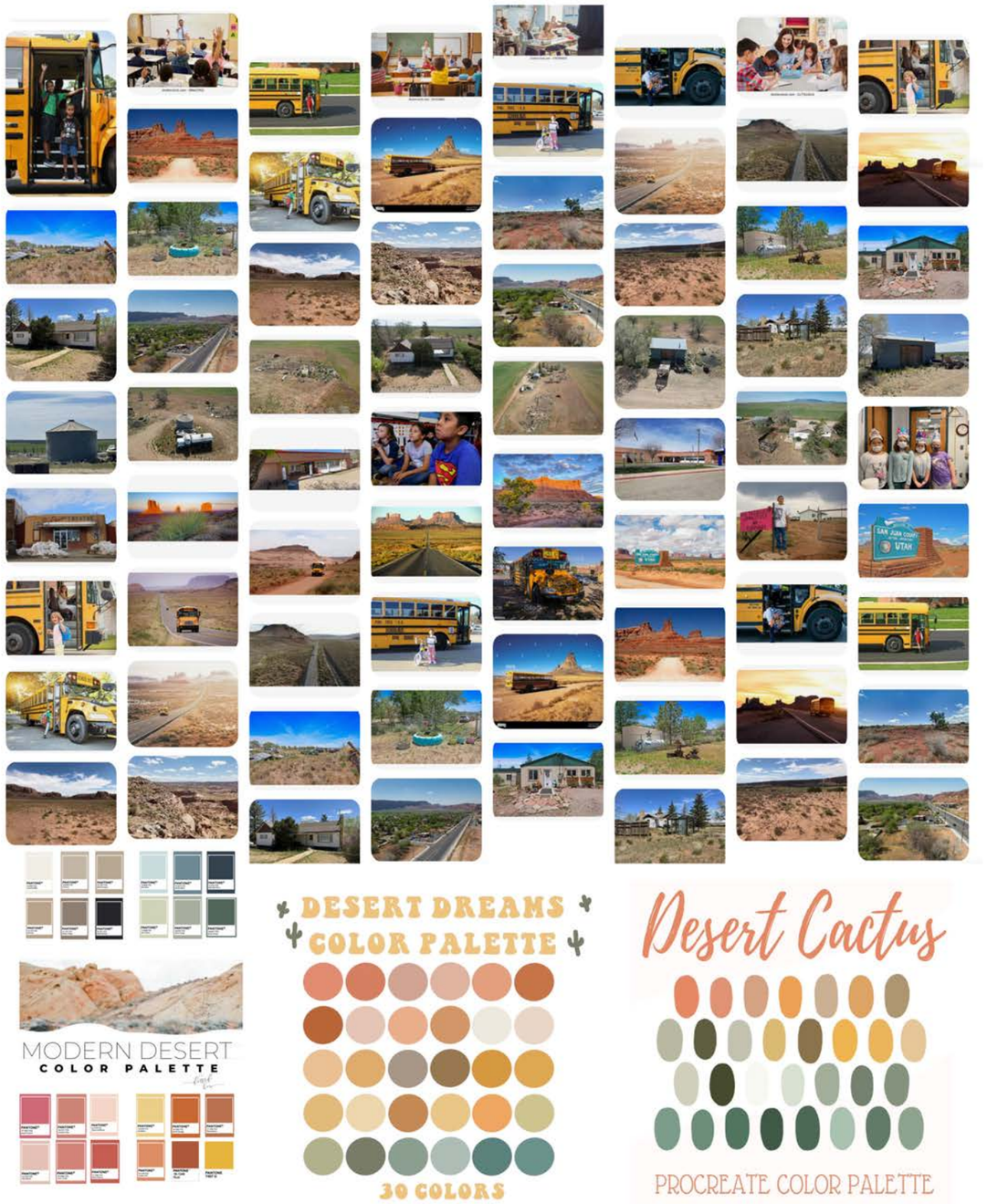


fig. 3.25 - Screenshot of Julie Olson's Thesis Graphic Novel Pinterest Board by Julie Olson

Removed to comply with copyright

fig. 3.26 - Screenshot of Julie Olson's Thesis Graphic Novel Pinterest Board by Julie Olson

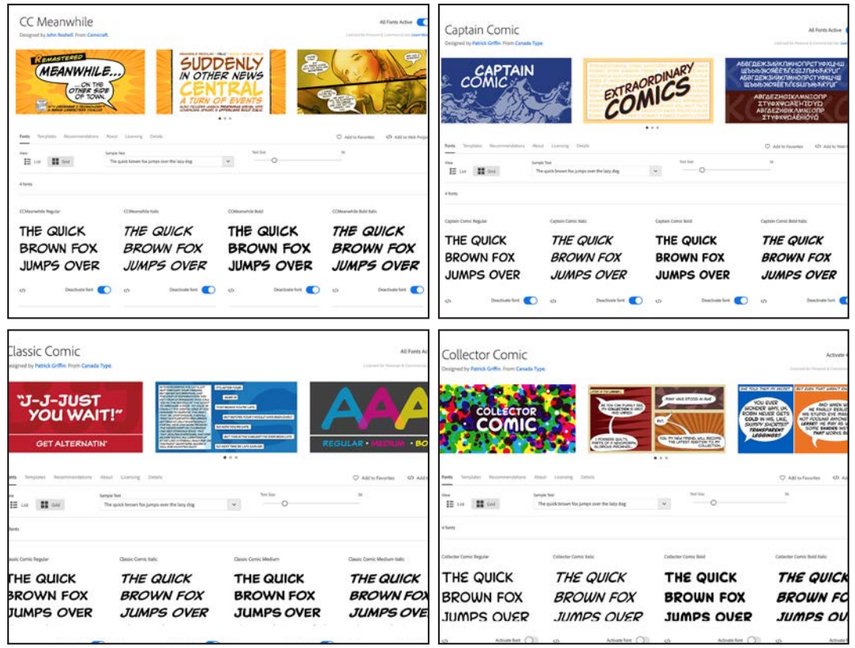


fig. 3.27 - Screenshot of Graphic Novel Typeface Options

For the book cover title typeface, I chose Pinecone MVB Rough2, designed by Mark van Bronkhorst, in the Adobe Creative Suite, to give it more presence and fill the space appropriately. This magnification of size also makes the type more readable from a distance.

I chose this novelty typeface for its rounded ends and textured interior. The curved, bubble-like letterform makes it approachable and inviting. Meanwhile, the gritty texture filling each shape hints at the raw, complicated nature of the story's subject matter (see figure 3.27a).

fig. 3.27a - Screenshot of Graphic Novel Typeface Pinecone

CHARACTER & SCENE DESIGN

With this visual research and my manuscript complete, I began the illustration process by designing the main character, one of the supporting characters, the main character's mother, and the teacher in the story. In addition, I drew some ideas on southwest scenery and story location. All these drawings were created digitally on an iPad Pro using an Apple Pencil and an art program called Procreate. I used digital brushes included in the software. For sketching, I used the 6B pencil brush in the "sketching" brush pack, and for inking the final ink lines, I used the Dry Marker brush in the "inking" brush pack. Finally, the brush I used to color these initial character designs was the Dry Brush in the "inking" brush pack (see figures 3.28–3.32).

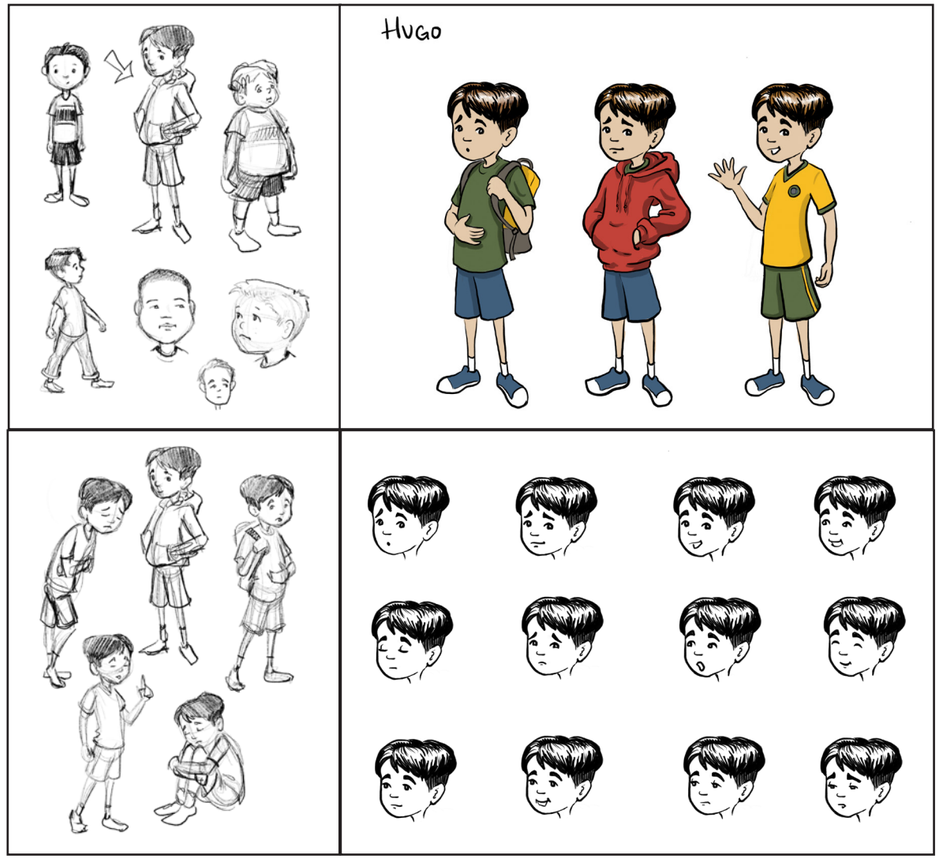


fig. 3.28 - Character designs for Hugo

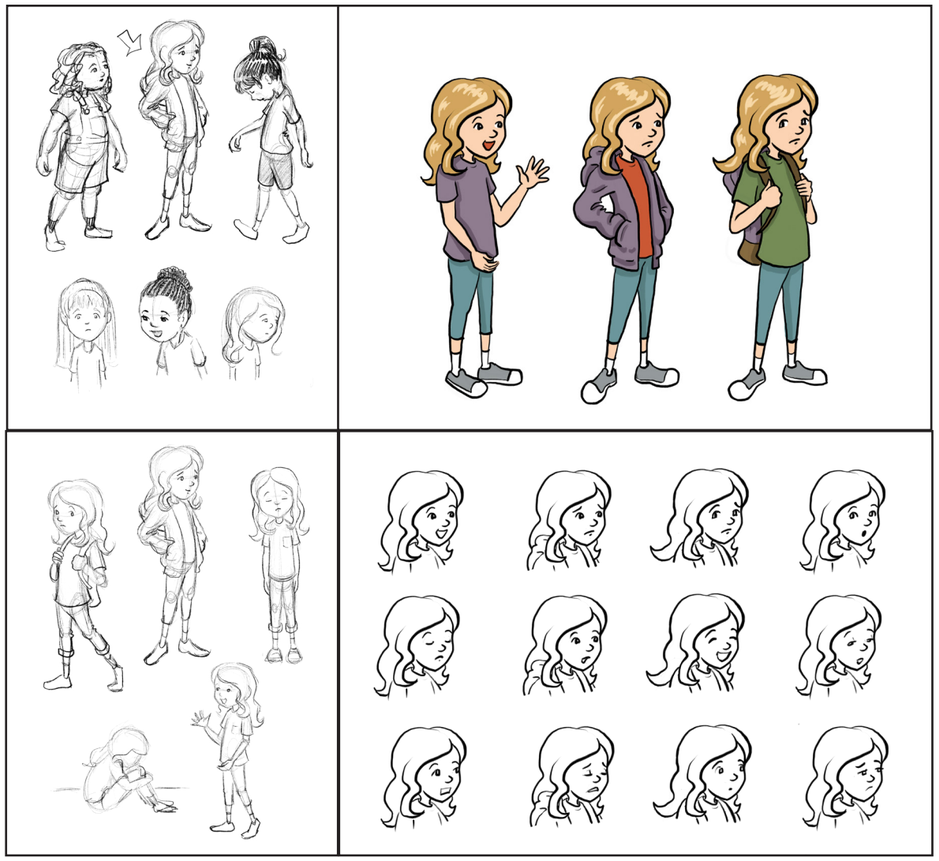


fig. 3.29 - Character Designs for Other Food-Insecure Child

fig. 3.30 - Character Designs for Hugo's Mom and Teacher

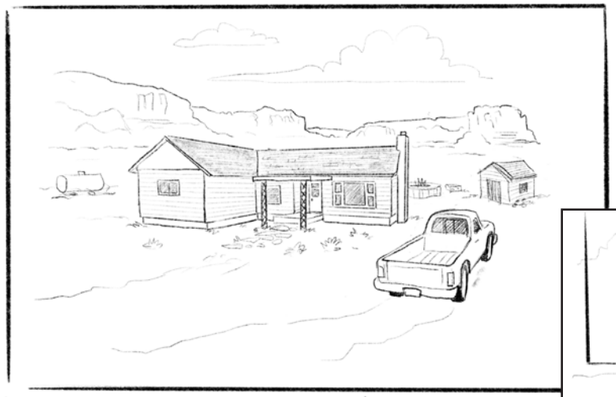


fig. 3.31 - Hugo's Home—Scenery Idea Sketch

fig. 3.32 - School Bus and School Idea Sketch

THUMBNAIL SKETCHES

As I completed the rough sketches for the book, I endeavored to vary the viewpoint, subject size in each frame, frame size, frame shape, and the number of frames on each page. This variation adds interest and variety to each page design and encourages the reader's eye to flow from frame to frame and on to the next page. In addition, as I drew, I sometimes edited the manuscript text due to overlaps in the words and images. When illustrating a book, the words never need to describe what is happening in the pictures. Instead, the pictures should illuminate the text, adding deeper meaning or further information to the text. Initially, I intended the manuscript to fill only thirty-two pages. However, while editing the story, I realized I needed a few more pages to complete the character and story arc. These changes extended the illustrated story to thirty-five pages. In addition, I needed to add some informational pages at the end of the book to achieve my goal of influencing social good and charitable action through this medium. Since books that print on a press require a page count divisible by eight, I increased the page count to forty by adding five informational pages to the end of the book. Then I created two to three rough-sketch designs for each full page of the graphic novel, totaling over seventy-five pages of sketches. (see figures 3.33–3.34).

fig. 3.33 - Thumbnail Sketches Sample 1

fig. 3.34 - Thumbnail Sketches Sample 2

At this point in the design process, I also created a couple of cover design options. I prefer to wait until I've completed all the interior sketch ideas before I design the cover to gain a deeper understanding of the story and character. Then, I attempt to embody that understanding as well as the main idea of the story in the final cover design. Instead of focusing on the serious issue the book addresses, I chose to draw readers in by representing a picture of the end goal, a happy child with food. I kept the background simple and the title short and prominent in the tradition of many graphic novels for this age group (see figure 3.35–3.36).

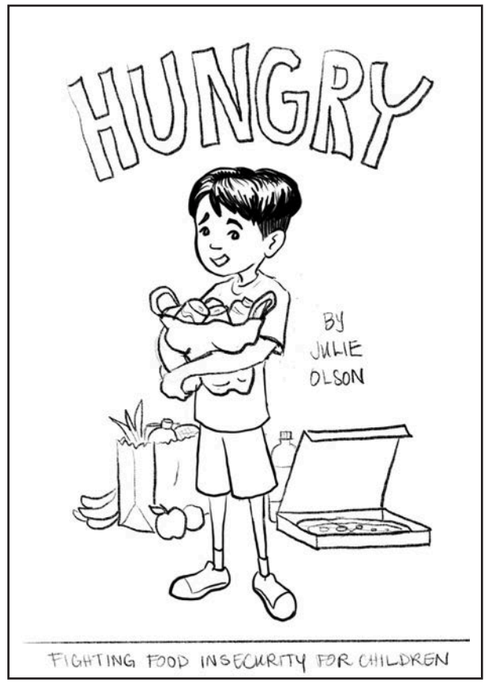


fig. 3.35 - Thumbnail Sketch of Cover 1

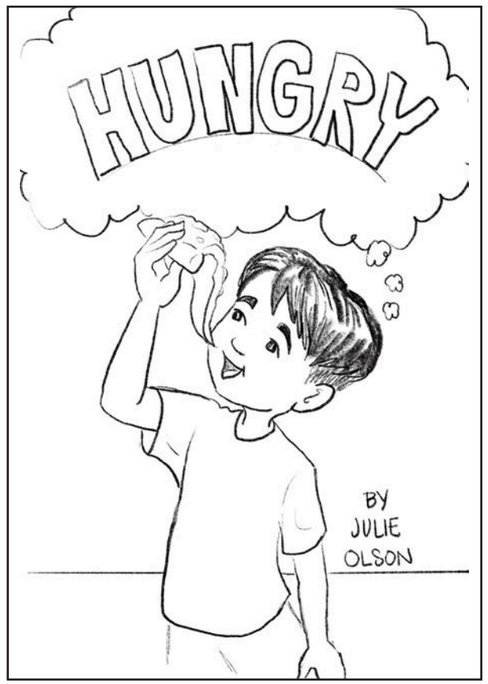


fig. 3.36 - Thumbnail Sketch of Cover 2

INKING THE GRAPHIC NOVEL

With the sketches complete, I sifted through the panels on each page, sorting and choosing the best ones to compile into the ideal page layout. Using the application on my iPad, I cut and pasted the selected panels together and brought them into a new file for final inking. These sketches served as a base layer to trace over, set at 20% opacity. Then, after adding another layer, I completed the inked line art panel by panel, page by page, using the Dry Marker brush in Procreate. Images from my Pinterest board often served as a reference when drawing complicated objects such as fridges, school buses, and landscapes. After many weeks, days, and hours, I finished the final ink lines for the cover and the 125 interior book panels.

WORD BUBBLES & TEXT BOXES

Traditionally, the job of an illustrator excludes typesetting. That responsibility often falls to an in-house graphic designer at the publishing company. If the illustrator also serves as the graphic designer, such as I am, or if the illustrator chooses to hand-letter the type, they must create the word bubbles and text boxes and insert the type themselves. It works best to make these bubbles and boxes and set the type at this inking stage instead of waiting for the final color art in case the layout of illustrations needed to be adjusted. To complete this task, I transferred my digital files from my iPad to my desktop computer and set up an InDesign document with 6″ x 9″ dimensions and forty pages. Then I placed each image file on the appropriate page and began the work of a graphic designer.

Instead of hand-lettering the type, I settled on using the Captain Comic typeface designed by Patrick Griffin of Canada Type Studio from the Adobe Creative Suite. Commonly used in graphic novels, it's known for its readability and more open form. On each page, I copied a section of text from my graphic-novel manuscript, used the InDesign type tool to drag a text box into the corresponding panel on the page, pasted the copied type, and converted it to the correct typeface. Then I created an ellipse, or rounded rectangle, around the

placed type using the shape tool. Each time, the implementation of the Direct Selection tool was necessary to drag the edges, angles, and corners of the shape to encompass the text. Once satisfied with the shape, I used the Pen tool to draw the speech-bubble tail toward the speaker. Then, to combine the bubble and tail into one object, I used the Selection tool, shift-selected them both, and joined them with the Pathfinder "Add" tool. Then I repeated this process many times until I finished the typesetting for the entire book (see figures 3.37–3.39).

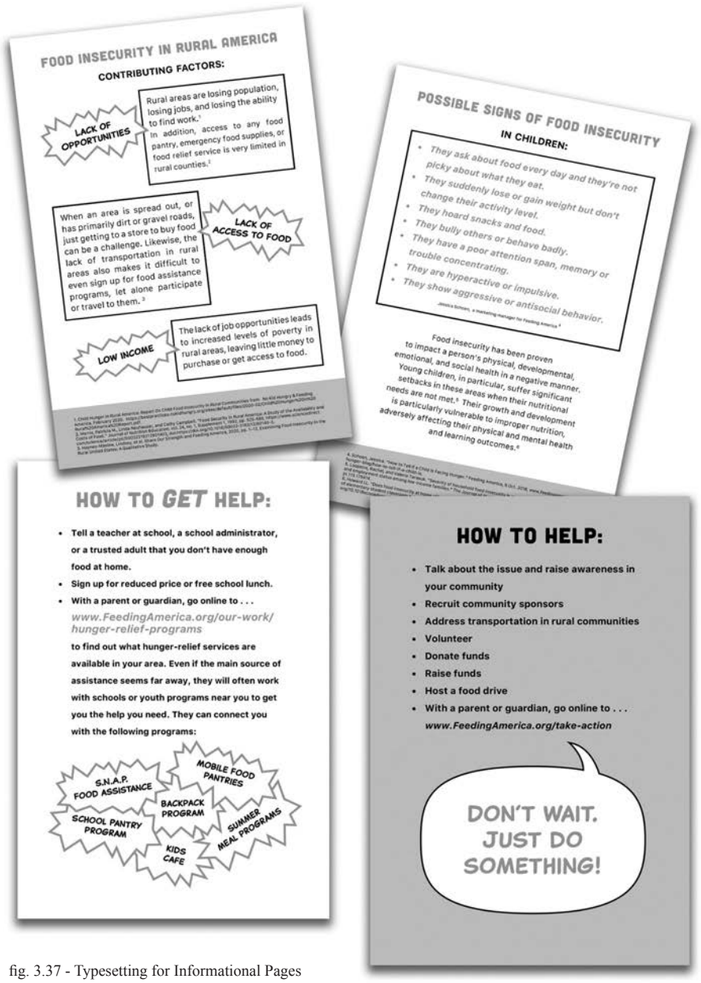


fig. 3.37 - Typesetting for Informational Pages

fig. 3.38 - Set 1: Examples of Final Inked Lines and Type Setting

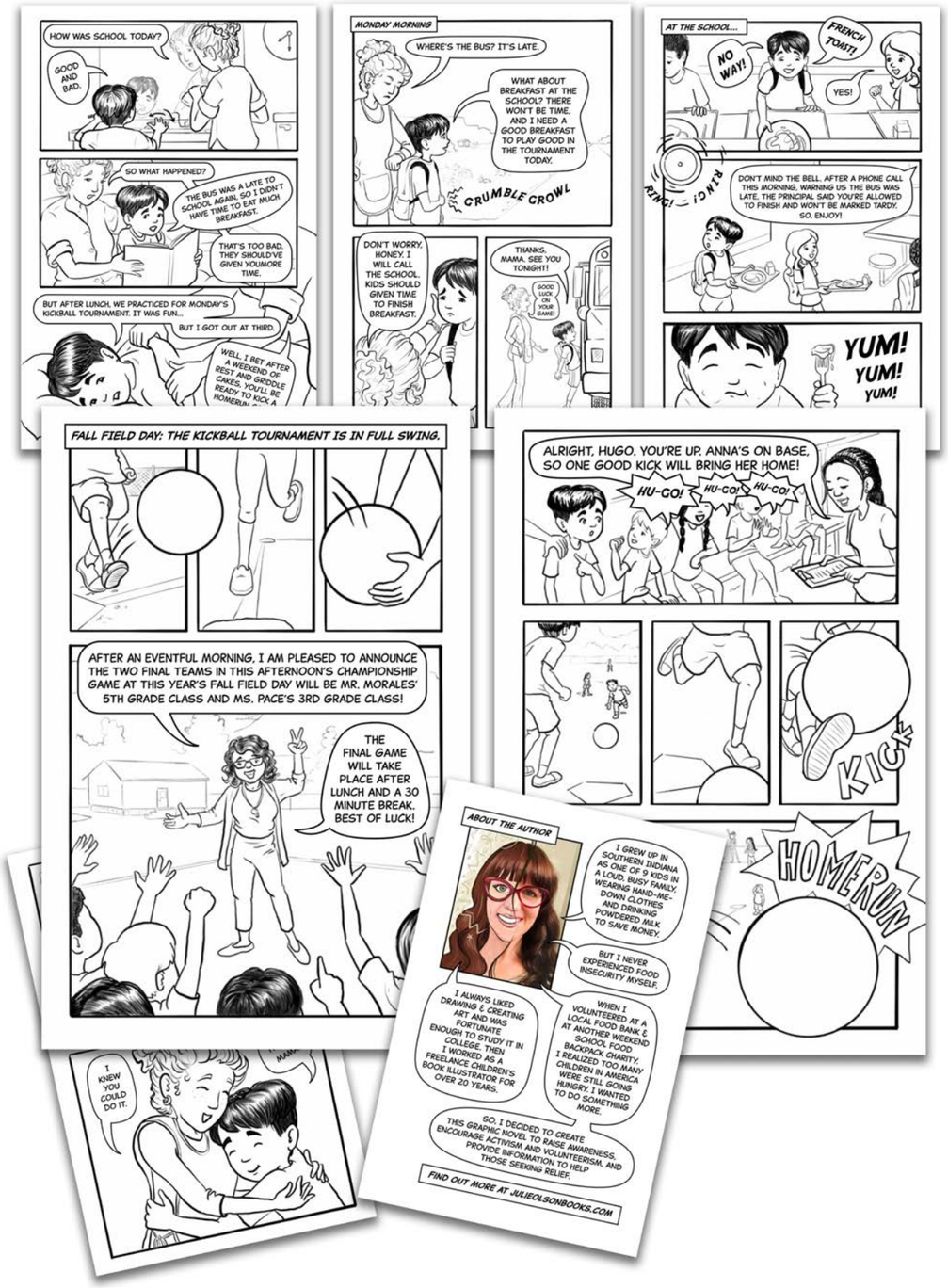


fig. 3.39 - Set 2: Examples of Final Inked Lines and Type Setting

FINAL COLOR AND DESIGN

Adding color, the last step before publication of this graphic novel, completes the illustrations and brings the graphic novel to life. To do this, I again implemented the brushes and tools in the Procreate application on my iPad. Page by page, panel by panel, I added color using a limited color palette, generally based on some of the desert colors saved on my Pinterest board and saved in the Procreate program for use throughout the book. These color choices brought continuity to the pages and the look of the whole book (see figure 3.41).

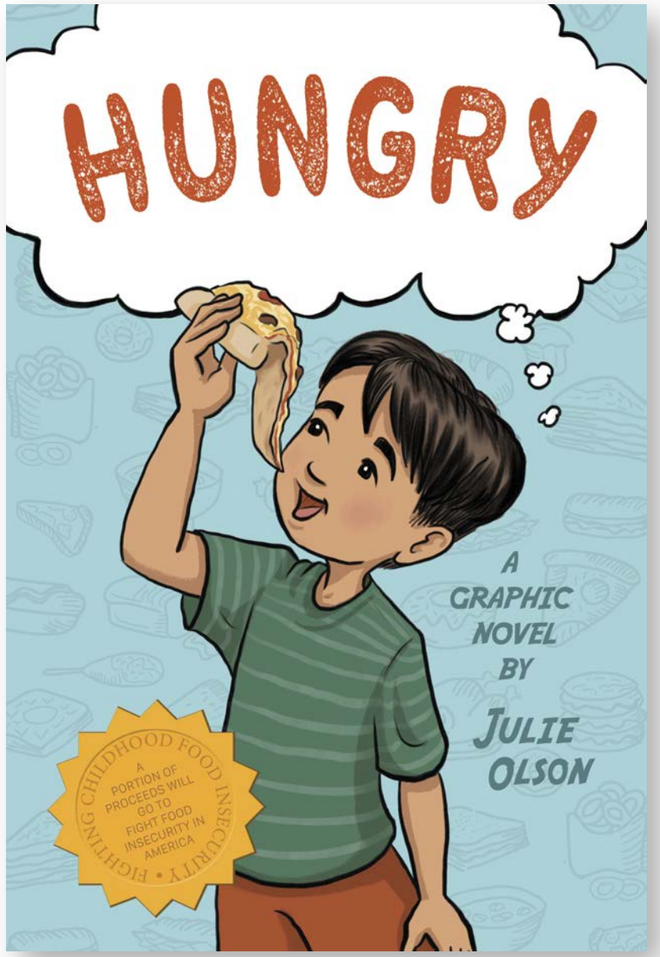


fig. 3.42 - Final Cover Art

fig. 3.40 - Working in Procreate on iPad

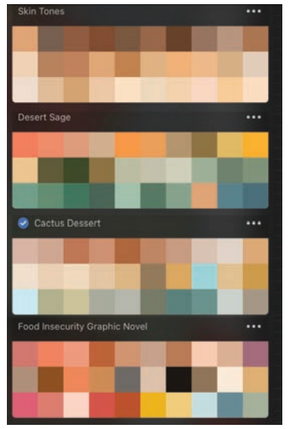


fig. 3.41 - Color Palette

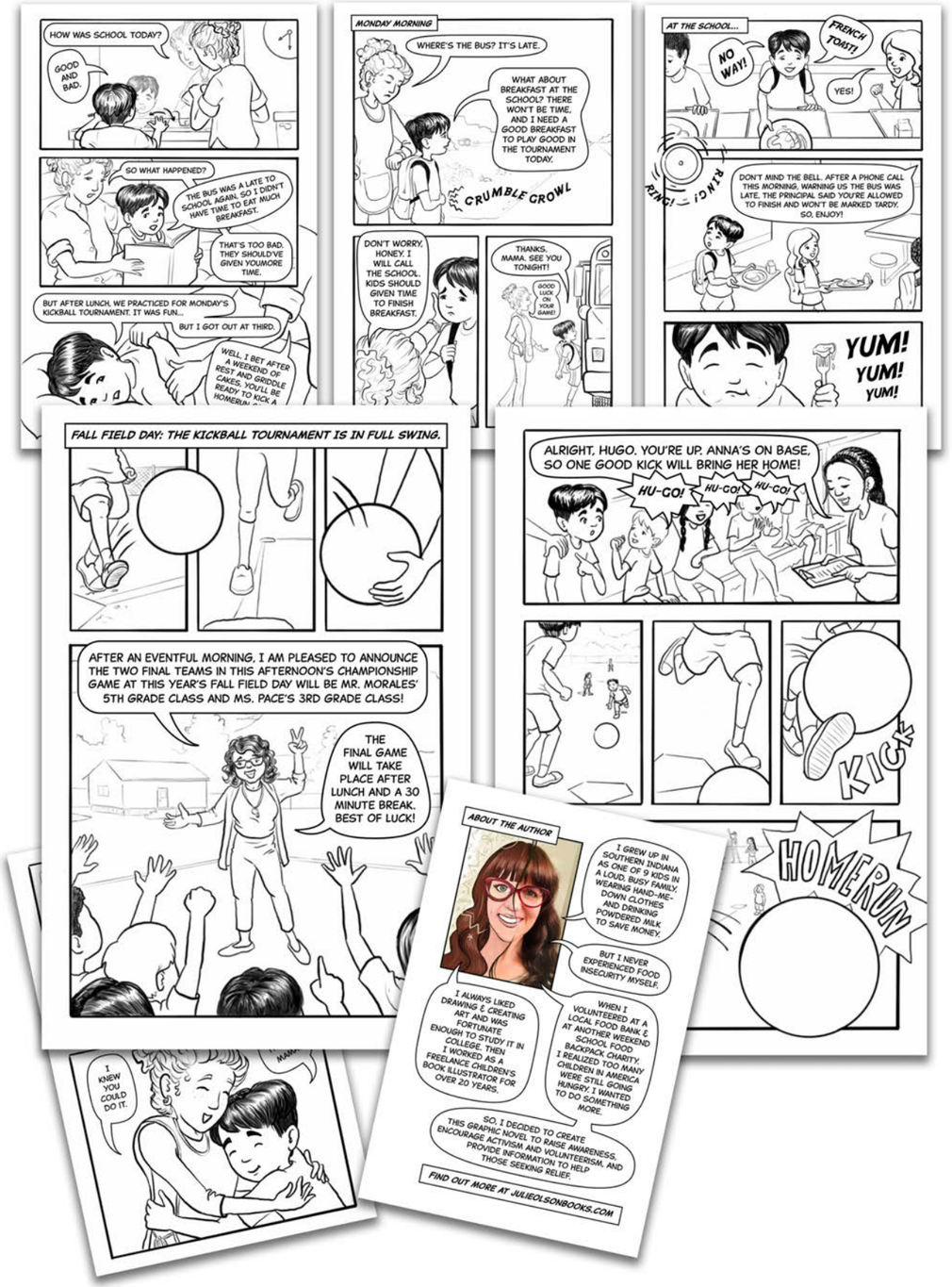


fig. 3.43 - Set 1: Sampling of Final Color Illustrations

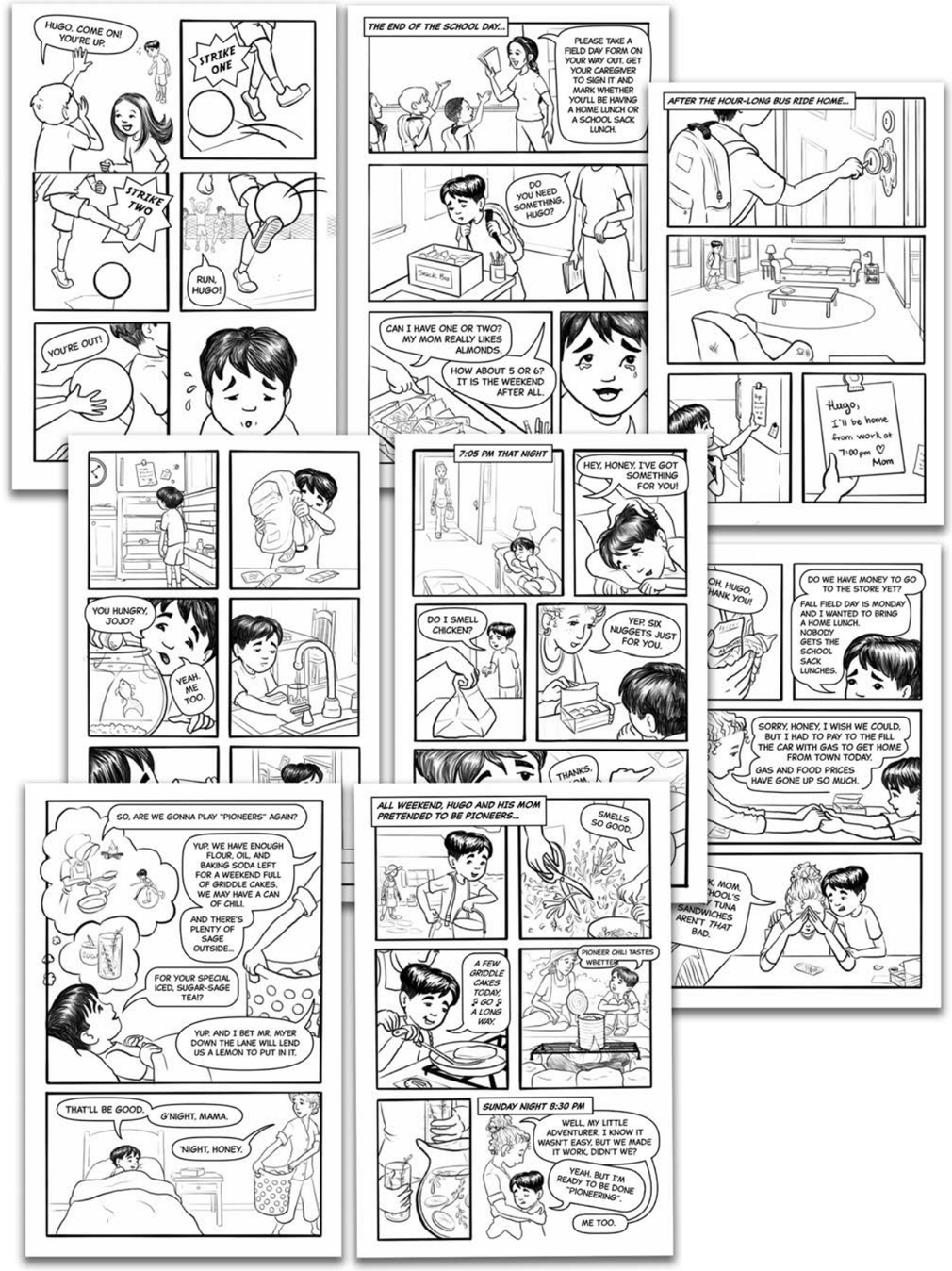


fig. 3.44 - Set 2: Sampling of Final Color Illustrations

Chapter 4

FINAL VISUAL SOLUTION

After becoming aware of the increasing problem of childhood food insecurity in rural America, any artistic solution seemed ineffectual. However, the research revealed that art and design's actual influence in inspiring charitable giving and raising awareness to effect social good lay in well-designed signage and humanization of victims through story. The research shows that increased contributions from society result from acting in synchrony with one another in movement, voice, or music. In addition, research supports the claim that humanizing a cause or victim holds remarkable power. It "can rouse empathic sentiments and a strong sense of social obligation linked to evaluative self-sanctions that motivate humane actions on others' behalf" (Bandura 203). Therefore, the final visual solutions, two separate but symbiotic design projects, include a set of charitable-event-signage designs and an original graphic novel. Event organizers could then distribute the book at the fundraiser to raise awareness, educate, and inspire action in the fight against food insecurity.

In completing these projects, several considerations required attention and research-based support. For both visual solutions, these areas of concern included the choice of color palette and readability of typefaces. Meanwhile, for the graphic novel, the humanization of victims of food insecurity through the book's main character and the written story took the highest priority. Finally, both solutions needed to be readily available for little or no cost as freely accessible digital downloads or, in the case of the graphic novel, as a cosponsored, published, and distributed resource.

PROJECT 1: EVENT SIGNAGE

The main reason for including event signage in the final deliverables was to provide resources for organizations to make their charitable events more effective. The research proves that acting in synchronous movement, action, or song with a group inspires group action and influences charitable giving. Therefore, I created designs in four different formats to cover various charity event signage needs. These include a large welcome sign, feather-flag banner, sidewalk sandwich-board designs, lawn signs, and a photo/stage backdrop.

The wording on the signs varies, but users can edit the verbiage of the bold and readable typeface to suit their needs. However, I made sure to include a sign to indicate donations because according to the research, if a person feels observed by others, they are more likely to donate, serve, or act charitably (Ekström 531). Therefore, the event organizers should also place this signage in an observable position at the event.

The bright orange color palette also reflects the nature of the project.

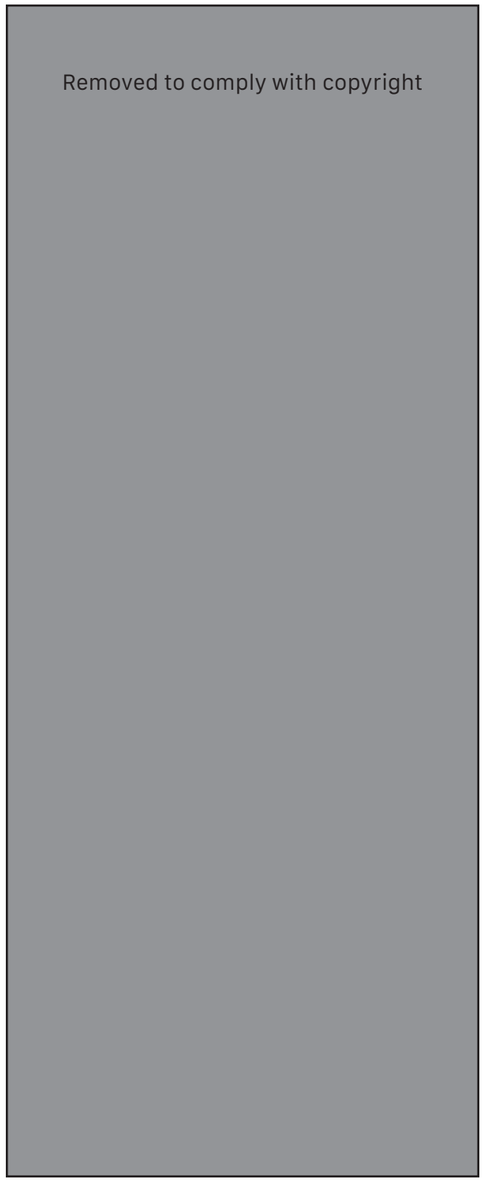


fig 4.1 (Suleman)

According to color psychology, vibrant shades of orange trigger creativity, radiate a sense of warmth and comfort, invoke interest, and encourage cheerfulness. Most notably, regarding its effect on these designs and this campaign, orange also suggests connectivity and stimulates appetite. It connects people to a cause, inspires them to collaborate with a brand, and encourages them to open lines of communication. Finally, the color orange's additional ability to evoke a sensation of thirst and hunger is particularly effective in this application. If people at the event notice a feeling of hunger or thirst in themselves, they are more likely to connect that feeling with a need to help others feed their hunger and thirst.

FINAL SIGNAGE DESIGNS

The following images display the final designs for this deliverable and mockups of their usage.

EVENT SIGNAGE AVAILABILITY

The high-resolution, editable files are available for download onlnine at www.jujubeeillustrations.com/uploads/FinalSignage.zip.

FINAL FEATHER FLAG DESIGN

FINAL PHOTO/STAGE-BACKDROP DESIGN

FINAL SIDEWALK-BOARD & LAWN-SIGN DESIGNS

ADDITIONAL SIDEWALK-BOARD VERBIAGE OPTIONS

ADDITIONAL LAWN-SIGN VERBIAGE OPTIONS

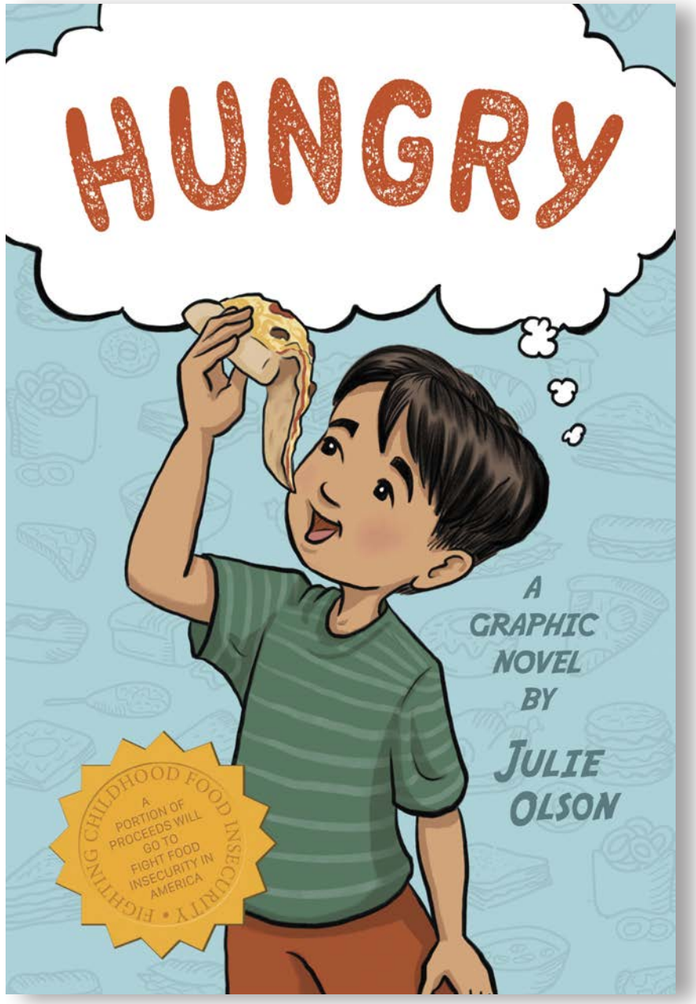
PROJECT 2: GRAPHIC NOVEL

As I began the process of writing and illustrating this graphic novel, I looked at some story examples centered on the same subject matter. These included a middle-grade novel, *The Great Food Bank Heist* by Onhali Q. Raúf, and two picture books, *Maddi's Fridge* by Lois Brandt and Vin Vogel and *Saturday at the Food Pantry* by Diane O'Neill and Brizida Magro. Very few children's books deal with food insecurity, but I wanted to be sure to approach the topic from a different angle in my writing. So, with these stories and my research on food insecurity for children in rural America, I wrote an original manuscript explicitly formatted for use in a graphic novel.

I chose to set the story in the rural southwest of the United States, based on the Utah county of San Juan, where the food insecurity rate for children is 25%, about 10% higher than the national average. The student population of schools in this county includes Caucasian, Hispanic, American Indian, and multiracial children. For this reason, I chose to depict all these races in the graphic novel. In addition, the character's situation in the story reflects most food insecure children, with one or more employed caregivers, a home to live in, but not enough funds to pay all the bills and keep adequate food on the table. During the story, the main character exhibits several research-based warning signs of childhood food insecurity, including asking about food daily, hoarding snacks and food, and having trouble focusing. In addition, the story's setting and timeline reflect the research through the character's lack of access to grocery stores and the effect of high gas and food prices on the food insecure. The main character's situation also reflects the research-based challenges of lack of job opportunities, lack of food-assistance resources, and the low-income status many rural American households face.

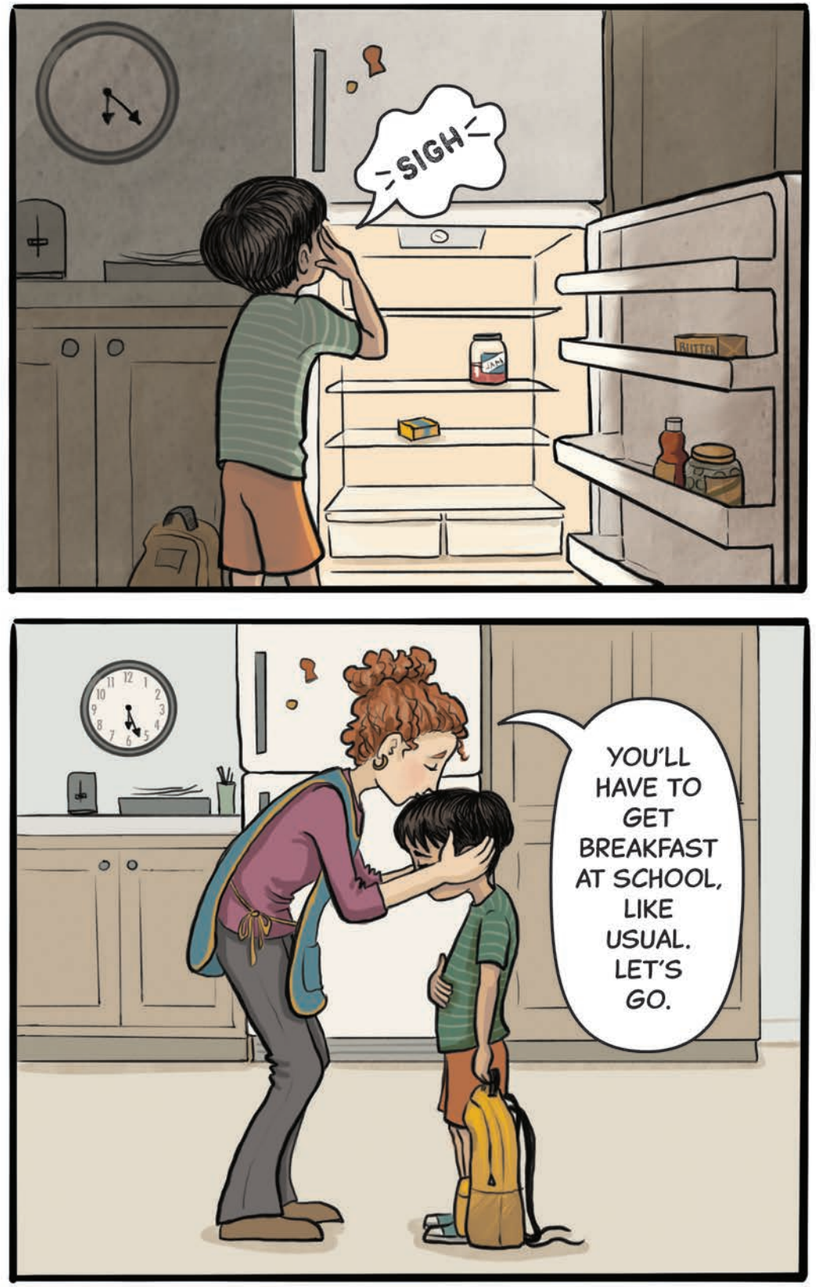
The story's page count, word count, and panel count per page remain consistent with the researched visual artifacts in the same genre. Like the book *The Great Pet Escape*, this graphic novel utilizes one to six panels per page, and at about twenty-eight words per page, it falls right in between the higher and lower word counts of the two researched artifacts.

SAMPLING OF FINAL ART & LAYOUT



EARLY FRIDAY MORNING
HUGO, HONEY. TIME TO WAKE UP FOR SCHOOL.
06:15
NO-OO! IT'S STILL DARK.
I KNOW. BUT YOU CAN'T MISS THE BUS.
UGH!

4

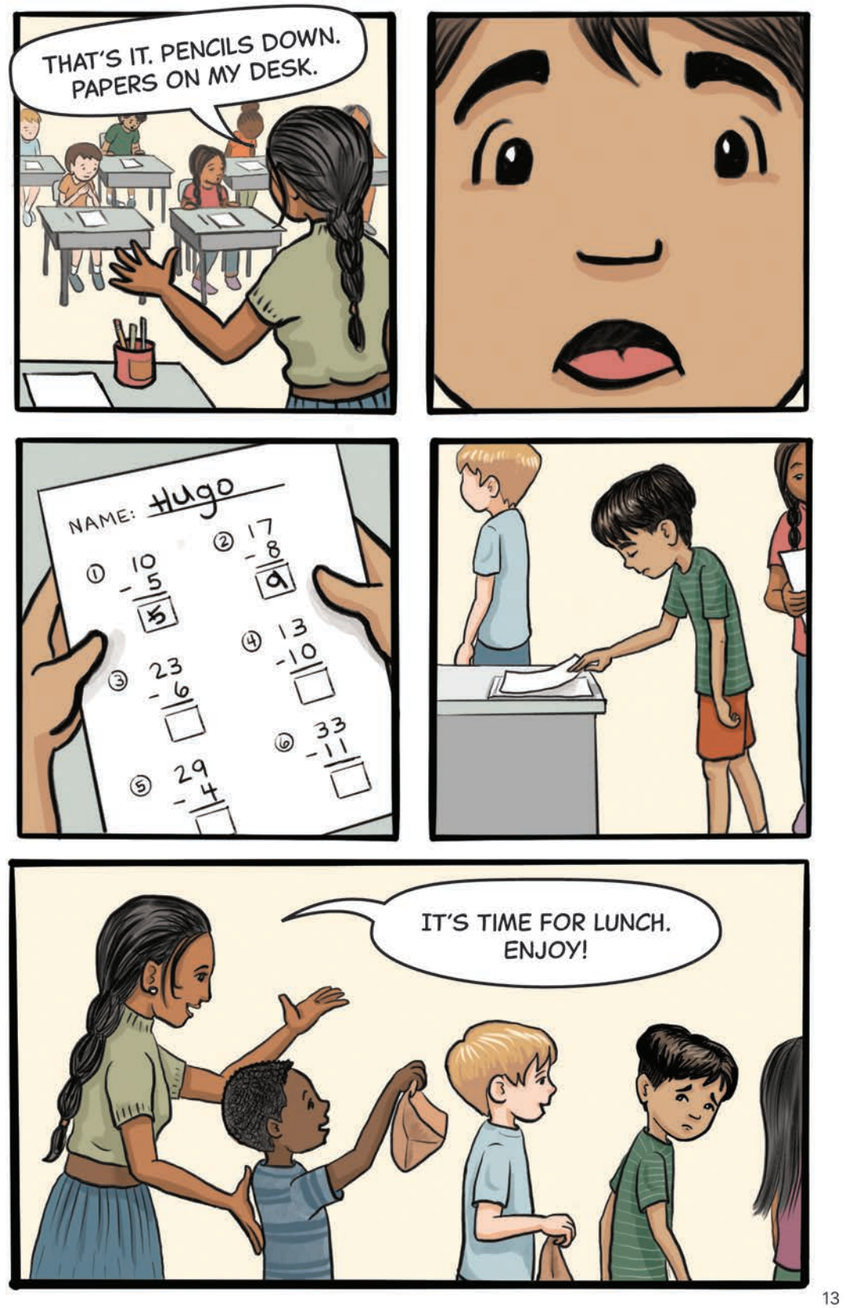

SIGH
BUTTER
YOU'LL HAVE TO GET BREAKFAST AT SCHOOL, LIKE USUAL. LET'S GO.

5

RING
RING
RING
RING
SORRY. BREAKFAST IS OVER. TIME TO HEAD TO CLASS.
MAYBE MONDAY WILL FINALLY BE WAFFLES!
OR FRENCH TOAST!
I JUST HOPE WE HAVE TIME TO EAT IT.
9

HUGO'S THIRD-GRADE CLASSROOM
AS YOU KNOW, MONDAY IS OUR FALL FIELD DAY,... WHICH INCLUDES THE
SCHOOL KICKBALL TOURNAMENT.
HOORAY!
ARE WE GOING TO PRACTICE?
YES. WE WILL PRACTICE AFTER LUNCH. BUT LESSONS COME FIRST.
AWWwwww
10

AFTER READING AND WRITING TIME, THE TEACHER HANDED OUT THE WEEKLY MATH QUIZ.
KEEP YOUR PAPER FACEDOWN UNTIL I TELL YOU TO START.
GRRRBL
DID ANYONE HEAR THAT?
OK, CLASS. YOU HAVE 10 MINUTES. BEGIN.
THINK THINK THINK
GRUMBLE GROWL
11


THAT'S IT. PENCILS DOWN. PAPERS ON MY DESK.
NAME: Hugo
IT'S TIME FOR LUNCH. ENJOY!
13

HUGO. COME ON! YOU'RE UP.
STRIKE ONE
STRIKE TWO
RUN, HUGO!
YOU'RE OUT!

18

AFTER THE HOUR-LONG BUS RIDE HOME...
Hugo
Hugo,
I'll be home from work at 7:00 pm
Mom

20

YOU HUNGRY, JOJO?
YEAH. ME TOO.

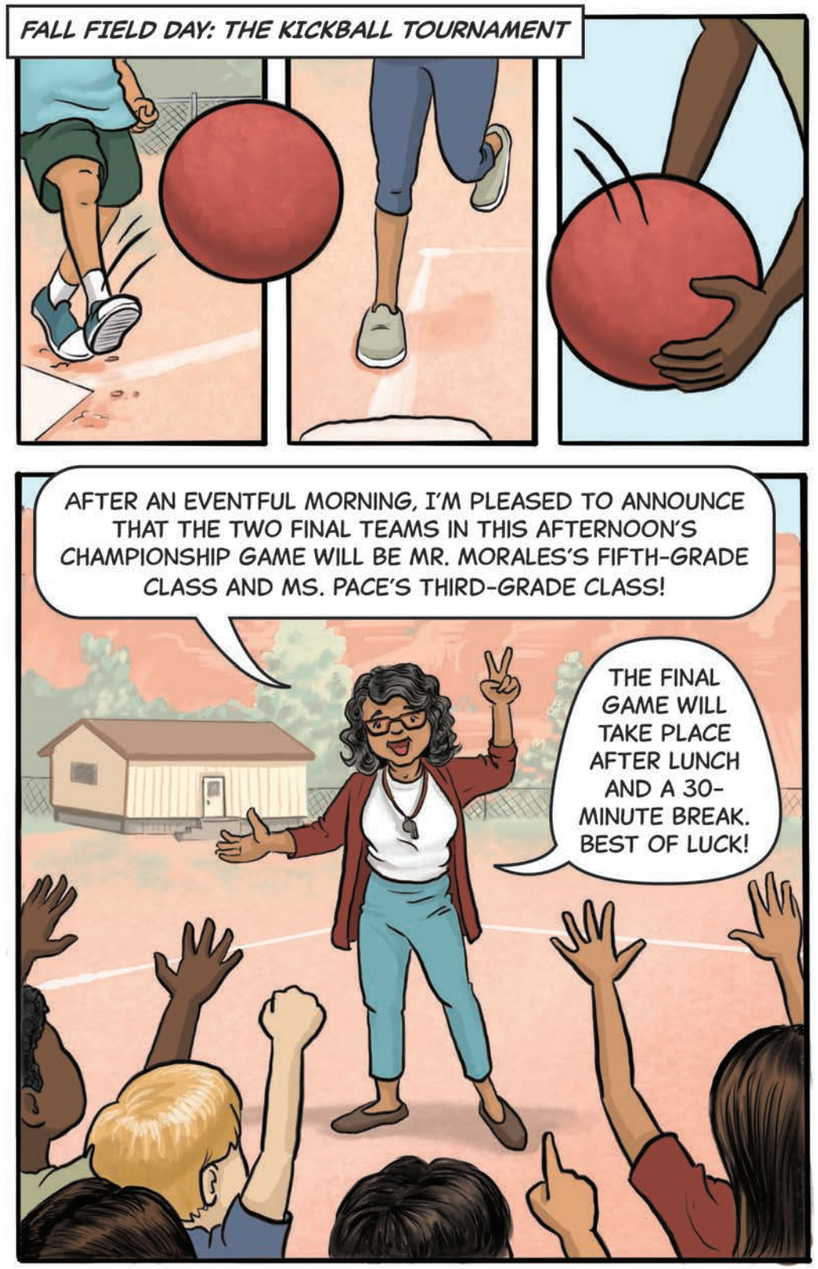
21

7:05 P.M. THAT NIGHT
HEY, HONEY. I'VE GOT SOMETHING FOR YOU!
DO I SMELL CHICKEN?
YEP. SIX NUGGETS JUST FOR YOU.
THANKS, MOM.
I GOT YOU SOME FOOD TOO.

23

HUGO AND HIS MOM PRETENDED TO BE PIONEERS ALL WEEKEND.
SMELLS SO GOOD.
A FEW GRIDDLE CAKES TODAY ♫ GO ♫ A LONG WAY.
PIONEER CHILI TASTES BETTER.
SUNDAY NIGHT 8:30 PM
WELL, MY LITTLE ADVENTURER. I KNOW IT WASN'T EASY, BUT WE MADE IT WORK, DIDN'T WE?
YEAH. BUT I'M READY TO BE DONE "PIONEERING."
ME TOO.

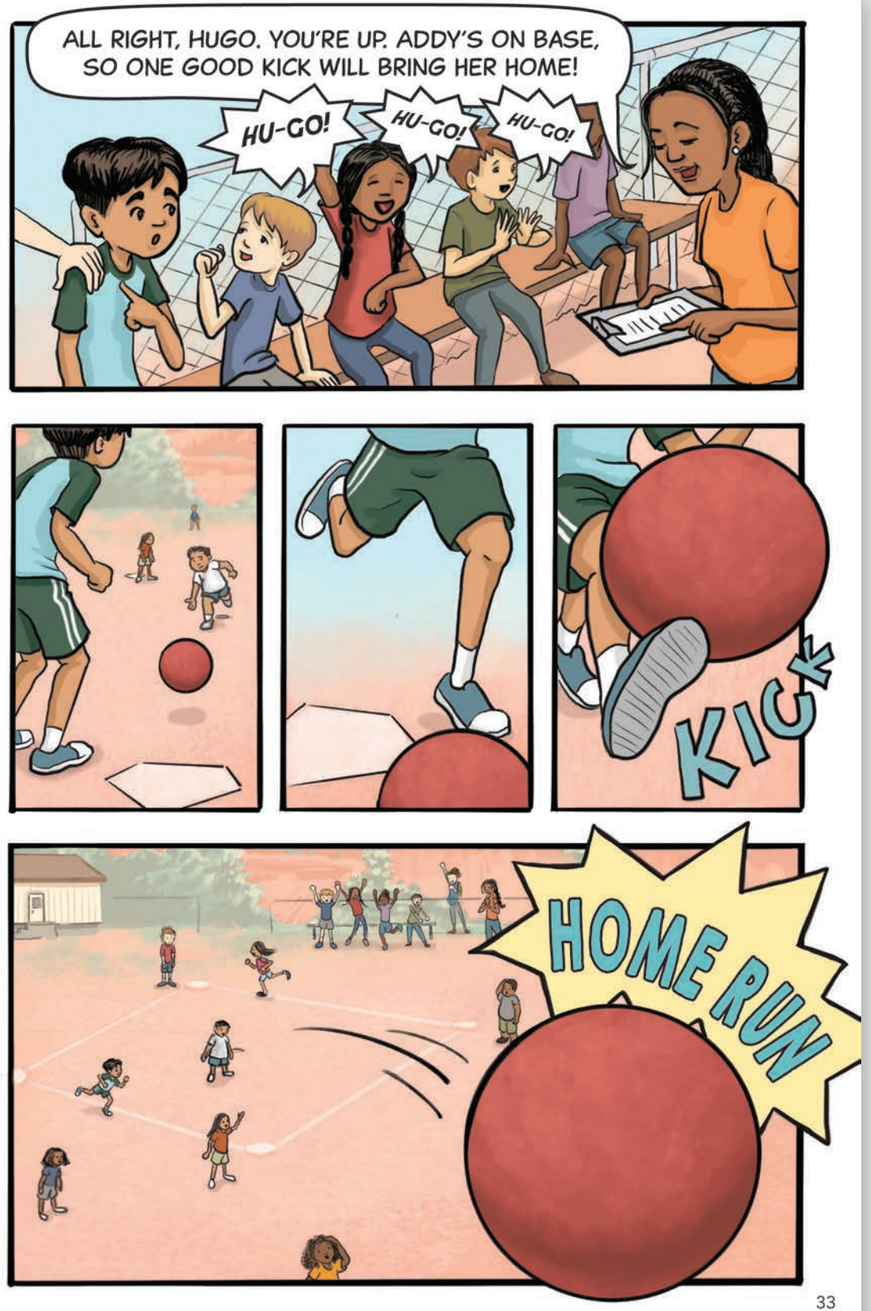
27


FALL FIELD DAY: THE KICKBALL TOURNAMENT
AFTER AN EVENTFUL MORNING, I'M PLEASED TO ANNOUNCE THAT THE TWO FINAL TEAMS IN THIS AFTERNOON'S CHAMPIONSHIP GAME WILL BE MR. MORALES'S FIFTH-GRADE CLASS AND MS. PACE'S THIRD-GRADE CLASS!
THE FINAL GAME WILL TAKE PLACE AFTER LUNCH AND A 30-MINUTE BREAK. BEST OF LUCK!

30

EWE, TUNA. SORRY, HUGO.
CHIPS
SAVE THOSE LUNCHES FOR ANOTHER TIME, KIDDOS! TODAY CALLS FOR A BIGGER CELEBRATION. WHO WANTS PIZZA?!
PIZZA
PIZZA
PIZZA
THANKS SO MUCH.
YOU'RE VERY WELCOME, HUGO.

31


ALL RIGHT, HUGO. YOU'RE UP. ADDY'S ON BASE, SO ONE GOOD KICK WILL BRING HER HOME!
HU-GO!
HU-GO!
HU-GO!
KIC
HOME RUN

33

To provide additional resources for the target audience, the last five pages of the book contain the following information: contributing factors of food insecurity in rural areas of America, how to recognize food insecurity in children, resources for those who are food insecure, and ideas for others to help combat food insecurity. Finally, the last page includes information on me as the author/ illustrator and insight into why I created the book.

FOOD INSECURITY IN RURAL AMERICA

CONTRIBUTING FACTORS:

Rural areas are losing population, losing jobs, and losing the ability to find work.[1] In addition, access to any food pantry, emergency food supplies, or food relief service is very limited in rural counties.[2]

When an area is spread out or has primarily dirt or gravel roads, just getting to a store to buy food can be a challenge. Likewise, the lack of transportation in rural areas also makes it difficult to even sign up for food assistance programs, let alone participate or travel to them. [3]

The lack of job opportunities leads to increased levels of poverty in rural areas, leaving little money to purchase or get access to food.

1. "Child Hunger In Rural America: Report On Child Food Insecurity in Rural Communities." *No Kid Hungry & Feeding America*. February 2020, https://bestpractices.nokidhungry.org/sites/default/files/2020-02/Child%20Hunger%20in%20Rural%20America%20Report.pdf.
2. Morris, Patricia M., Linda Neuhauser, and Cathy Campbell. "Food Security in Rural America: A Study of the Availability and Costs of Food." *Journal of Nutrition Education*, vol. 24, no. 1, Supplement 1, 1992, pp. 52S-58S, https://www.sciencedirect.com/science/article/pii/S0022318212801403, doi:https://doi.org/10.1016/S0022-3182(12)80140-3.
3. Haynes-Maslow, Lindsey, et al. "Examining Food Insecurity in the Rural United States: A Qualitative Study." *Share Our Strength and Feeding America*, 2020, pp. 1–12.

WARNING SIGNS OF FOOD INSECURITY

IN CHILDREN:

- *They ask about food every day, and they're not picky about what they eat.*
- *They suddenly lose or gain weight but don't change their activity level.*
- *They hoard snacks and food.*
- *They bully others or behave badly.*
- *They have a poor attention span, memory, or trouble concentrating.*
- *They are hyperactive or impulsive.*
- *They show aggressive or antisocial behavior.*

Jessica Schoen, a marketing manager for Feeding America [4]

Food insecurity has been proven to impact a person's physical, developmental, emotional, and social health in a negative manner. Young children, in particular, suffer significant setbacks in these areas when their nutritional needs are not met.[5] Their growth and development is particularly vulnerable to improper nutrition, adversely affecting their physical and mental health and learning outcomes.[6]

4. Schoen, Jessica. "How to Tell If a Child Is Facing Hunger." *Feeding America*, 5 Oct. 2018, www.feedingamerica.org/hunger-blog/how-to-tell-if-a-child-is.
5. Loopstra, Rachel, and Valerie Tarasuk. "Severity ofHousehold Food Insecurity is Sensitive to Change in Household Income and Employment Status Among Low-Income Families." *The Journal of Nutrition*, vol. 143, 8 (2013): 1316-23, doi:10.3945/jn.113.175414.
6. Howard LL. "Does Food Insecurity at Home Affect Non-Cognitive Performance at School? A Longitudinal Analysis of Elementary Student Classroom Behavior." *Economics of Education Review*, 2011; 30(1):157–176, https://doi.org/10.1016econedurev.2010.08.003.

IF YOU'RE HUNGRY:

- Tell a teacher at school, a school administrator, or a trusted adult that you don't have enough food at home.
- With a parent or guardian's help, sign up for reduced-price or free school lunch.
- With a parent or guardian, go online to . . . ***www.FeedingAmerica.org/our-work/hunger-relief-programs*** to find out what hunger-relief services are available in your area. Even if the main source of assistance seems far away, they will often work with schools or youth programs near you to get you the help you need. They can connect you with the following programs:

HELP THOSE WHO ARE HUNGRY:

- Talk about the issue and raise awareness in your community
- Recruit community sponsors
- Address transportation in rural communities
- Volunteer
- Donate funds
- Raise funds
- Host a food drive
- Go online to . . . ***www.FeedingAmerica.org/take-action***

GRAPHIC NOVEL AVAILABILITY

I am currently working on partnering with an existing national charitable organization to get the graphic novel Hungry published and distributed. However, if that effort does not come to fruition, I intend to pursue a grant for the funds to do an initial print run of the book and distribute it through food banks or schools. If that does not work eithert, I will submit the book for traditional publication or upload it to Amazon and offer the graphic novel as a print-on-demand book through Kindle Direct Publishing.

Chapter 5

CONCLUSION

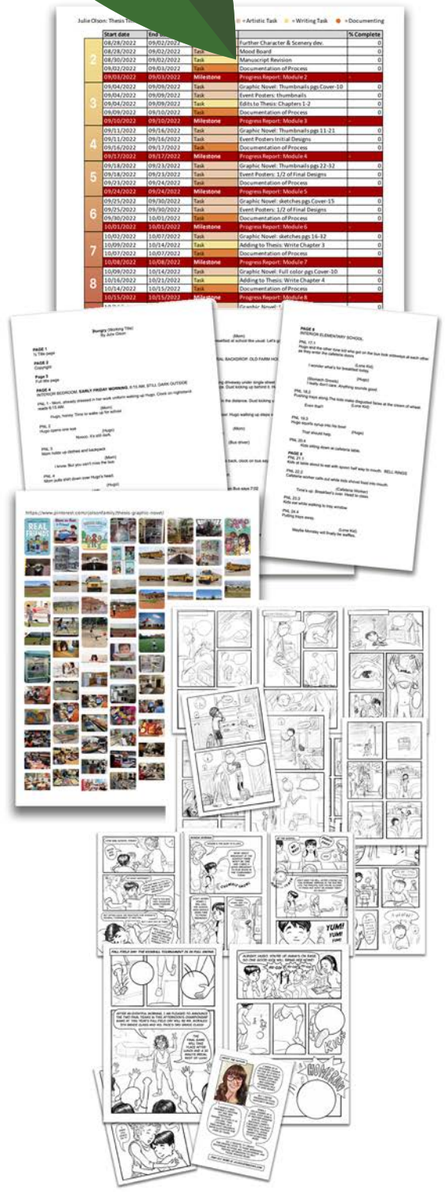
In summary, the research presented herein proves food insecurity in children leads to malnutrition, mental deficits, and social impairment. However, many households with children in rural communities in the United States lack the income, education, awareness, and transportation necessary to mitigate this problem. To effectively reduce the rates of childhood food insecurity in this country, studies report a need to recruit more community sponsors, increase reimbursements for meals, reduce administrative barriers, address transportation challenges in rural areas, and improve program outreach (Current 5–3). If these needs are left unaddressed, the rates of food insecurity will continue to rise, primarily due to the current state of economic depression, inflation, high-interest rates, and increased food and fuel costs.

Fortunately, research also shows that art and design drive others to charitable action when

- ***the color palette is emotionally inviting or influential***
- ***the designs are placed in observable locations***
- ***the art displays a desired action, activating the viewer's mirror neurons and influencing a similar action by the viewer***
- ***the art humanizes a victim to rouse empathetic sentiments and social obligation***

DRIVEN BY RESEARCH

As I created my deliverables, I focused on implementing these proven methods to achieve the greatest chance of diminishing food insecurity for children in rural America. But to encompass all three points, I completed two separate projects. The "event signage" final visual solution uses research-based color psychology and strategic placement in observable locations to influence others. At the same time, the graphic novel *Hungry* displays desired actions and humanizes victims of food insecurity to produce charitable action. Even though these projects may seem disconnected, they become more influential if combined. For example, a festival-type event could be held, using the provided signage, to raise funds for the food insecure and to promote the graphic novel, which humanizes the victims, raises awareness, provides information, and supports the cause.



POWERED BY PROCESS

Since this double project was such a huge undertaking, creating my research-based deliverables included meticulous planning, hours of designing, creative problem-solving, various methods of creation, and tremendous time-management skills. For each project, I researched formats and size constraints, final materials and printing methods, and collections of imagery and typefaces. Then I paused the design work to write a compelling, humanizing story about a research-based, fictional, food-insecure child in rural America. Next, I sketched out multiple ideas for each graphic-novel page and each type of sign. After completing the plethora of design ideas for both projects, I created more refined digital renditions and the final art using Adobe InDesign for the signage and Procreate on the iPad for the graphic novel. Finally, I completed the graphic novel text and layout in InDesign. To complete the deliverables, I compiled the files into formats ready for download or publication and created the following website link to host the files: **jujubeeillustrations.com/uploads/FinalSignage.zip** and **jujubeeillustrations.com/uploads/GraphicNovel.zip**.

ACHIEVING THE VISION

Ideally, people will employ these final visual solutions, the signage and the graphic novel, together to affect change in their local communities across the country. In particular, I hope to reach children suffering or who have a friend suffering from food insecurity through the graphic-novel deliverable. Many food-insecure children do not have a proper adult advocate and may not even be aware of the available resources. However, I hope the book *Hungry* helps children understand how to get help, where to get help, and when to get help. Ultimately, these works of art and design will bring awareness to the issue, encourage activism and volunteerism, and provide information to help those seeking relief. Through projects such as these and other charitable efforts, we can reduce food insecurity for children in rural America.

HELP FEED THE CHILDREN.

Photo : *Take a Bite Out of Fall*, by Patrick Fore on Unsplash

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Appendix

Page VI

Photo: *Reese is Sad*, by Donnie Ray Jones, This work is licensed under a Creative Commons Attribution 2.0 Generic License (https://creativecommons.org/licenses/by/2.0/). https://www.flickr.com/photos/donnieray/25771614245,

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Page 99

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