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Starved: Food Deserts in the Mississippi Delta

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STARVED: FOOD DESERTS IN THE MISSISSIPPI DELTA

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ABSTRACT

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This thesis examines the impact of food deserts on obesity, and builds a case for additional research on rural food deserts independent from urban ones. The Mississippi Delta consistently presents the highest obesity rates within the state, yet both the third unhealthiest county (Quitman) and the healthiest (DeSoto) are located in that region. One of the reasons there is such a large discrepancy between the health rankings of DeSoto and Quitman counties is that DeSoto is contained within the Greater Memphis Metropolitan Area, but Quitman is entirely rural. Previous research has focused on the prevalence of urban food deserts and resulted in scattered support from corporations like CVS and Walgreens to increase access to fresh fruits and vegetables; but the characteristics of urban food deserts and the solutions that are effective in resolving them are not always applicable to rural areas, where corporate presence is often limited to fast food restaurants. Using case studies of these two counties, this thesis identifies the challenges that are specific to rural food deserts and presents potential solutions.

Keywords: food deserts, food insecurity, Mississippi Delta

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1. INTRODUCTION: TWO SIDES OF THE COIN

Weight in America is more than just a number on the scale; it comes with a host of other issues influencing ethics, class, and health. Ironically, it is the culture that heralds thinness as a major accomplishment that is currently suffering the worst of a global obesity outbreak. Although weight has been traditionally addressed as an aesthetic issue, with fashion dictating the standards of beauty, the obesity epidemic has shed light on the reality that one's eating habits can shorten his or her lifespan. Less than a decade ago doctors were calling attention to the prevalence of eating disorders among adolescents. The fashion and entertainment industries were criticized for misleading a generation of young women to have unrealistic beauty and weight expectations, inadvertently inspiring them to resort to drastic measures like anorexia and bulimia to whittle themselves down to sample size. Now, the specter of obesity is upon us, threatening that the latest generation of children may be the first not to outlive their parents if childhood obesity rates are not reversed (Stoler 1).

The standout feature of the eating disorder and obesity epidemics is that they do not exist in the media at the same time; in fact, they seem to validate one another. Acknowledging a spike in eating disorders requires that obesity be made a back-burner issue. This is evident in the public backlash to media's standards of beauty. One statistic seemed to dominate reactions: the average American woman is a size 14 at 162.9 pounds (Vesilind). The media used this statistic to comfort ladies with the realization that most women are not as thin as the supermodels to whom the

fashion industry seems to compare them; however, the unspoken reality is the average American woman is overweight. Yet, rather than use that statistic to open a dialogue about preventing obesity, the media used it a as a sort of tu quoque, justifying a negative on the basis that it is popular. From this reaction came a surge of support from the fat acceptance movement, a collective that advocates equal rights and opportunities for the overweight. For example, they support the adoption of laws preventing weight discrimination and lobby against those that exploit the overweight, such as regulations that require the morbidly obese to pay for more than one seat on airplanes (Fletcher). The fat acceptance movement neglects the health risks associated with obesity, choosing instead to celebrate fatness, eschewing the concept of a "normal" body type. Additionally, retailers began the practice of size inflation or vanity sizing, adjusting numerical clothing sizes so that larger people can buy seemingly smaller clothes (Jackson). For example, a person who routinely wears a size six pant will be able to wear a four in certain stores. Rather than address the eating disorder epidemic alongside the collective weight gain of a nation, the media and retail industry took the indecisive approach of alternately championing the overweight and veiling girth with the allusion of smaller garments. By contrast, while the Centers for Disease Control and Prevention are desperately trying to raise awareness of the health risks associated with obesity, eating disorder awareness loses steam. It is once again acceptable to see diet headlines on magazines, purchase an Food and Drug Administration approved over-the-counter diet pill, and revoke advertising like Dove's Campaign for Real Beauty, which featured supposed real natural-looking women in commercials and print ads—their stretch marks, cellulite, and all.[1] For some reason, eating disorders and obesity occupy two

[1] Dove's 2005 Campaign for Real Beauty came under fire among allegations that their casting calls negated the ideals of the campaigns by specifically asking for "flawless" model types (Smith). A retoucher also described the challenges of photoshopping the images in order to make the women look natural and still beautiful (Collins).

different worlds although they appear to represent two sides of the same coin: the varied consequences of using food as social currency.

Food and weight have both been used as negotiating tools for class status. Through the 1890s, after which weight-loss items began to be introduced, heft was once regarded as a sign of wealth, indicating that a person was well-fed while thinness denoted poverty and hunger (Stearns 8-9). The trend changed as emphasis was placed on food quality rather than quantity; the poor were consuming too much of the wrong types of food and therefore gaining weight. Getting svelte became even more important as maintaining control of one's physique became a moral crusade. Losing weight was seen as building positive traits like discipline, which could be applied to other areas of life for guaranteed success. By contrast, excess weight became synonymous with laziness and gluttony. More importantly, people believed that they could control their class the same way they controlled their weight (Evans 156). In a morbid twist of the American dream, perseverance and hard work could render anyone upwardly mobile and thin. In reality, recent research on the causes of obesity indicates that socioeconomic class plays a role in what types of food people can access.

The term "food deserts" describes areas where people have little to no access to conventional grocery stores and fresh produce. Instead, residents in these areas rely on convenience stores and fast food restaurants to provide most of their daily calories. In an article in the *American Journal of Preventative Medicine*, researchers concluded that residents of food deserts have a greater chance of becoming obese than those who live in neighborhoods with a variety of food sources (Larson *et al*. 77). Julie Beaulac, Elizabeth Kristjansson and Steven Cummings found them to be much less common in Europe, which should prompt further

comparisons between American and other western food cultures to determine why an estimated 23.5 million Americans currently live in food deserts (Beaulac *et al*. 1; White House Task Force 49). The reason might lie in the lack of democracy in the American food system, in which quality foods are the most expensive while the most unhealthful options are the cheapest and most easily accessible, versus, for example, the French's acknowledgement that decent food is a basic right.[2]

The implication of food deserts in the obesity epidemic is a step in the right direction for two reasons. First, it places focus on the issue of food insecurity in America. In the late 1960s, Martin Luther King Jr.'s tour of poverty-stricken counties in the Mississippi Delta sparked national attention and led to federal reform of relief programs. These programs helped to ensure that people got enough to eat, but they only worked under the ideal condition that people had access to food. Interviews from this time period include those living in rural areas who were unable to use the aid they received simply because there was no grocery store to buy from or because they could not pay the transportation costs to get to the nearest grocery store. As a result, the programs were less effective than intended, and access problems persist today. Second, it places us in the position to eliminate food deserts once and for all. Gaps in food security have not disappeared over time; in fact, they have gotten wider. In urban areas, eliminating food deserts can be as easy as attracting the attention of a corporation. In low-income food deserts in Chicago, Walgreens redesigned its stores to devote floor space to fresh produce (Walker). Solutions are harder to find in rural communities that have little commercial presence beyond that of fast food restaurants. For the past generation, the overweight have endured the criticism that they are fat because they choose to eat unhealthy, processed foods; raising awareness of food deserts

[2] For a comprehensive comparison of French and American relationships to food and weight, see chapter 9 of Stearns' *Fat History*.

acknowledges that some people—and more often than not poor people—do not have much choice at all.

Mississippi has been scrutinized in the media for having the highest obesity rate in the nation for six consecutive years, and counties in the Mississippi Delta have consistently had the highest obesity levels in the state. There is a huge disparity between the health rankings of two counties in this region. Quitman County was the point of origin of the Poor People's Campaign in 1968, in which an estimated 50,000 marched on Washington D.C. to raise awareness of rural poverty and secure better relief programs. More than forty years later, the community is still entrenched in poverty and is the third unhealthiest county in the state (Snapshot 2010: Quitman). Its high obesity rate is simply another challenge to contend with, in addition to joblessness, population loss, and high crime. Just fifty-five miles away, DeSoto County is the healthiest in the state (Snapshot 2010: DeSoto). Its obesity, heart disease, and diabetes rates are below the state averages, and median income and education levels are above. This paper aims to use these two counties as a lens through which to explore the challenges facing rural food deserts, as well as possible solutions.

The first chapter looks at positioning obesity as a disease and explores conflicting arguments about the root causes of obesity. The second chapter is devoted to understanding the role of retail stores and the built environment in creating food deserts by viewing the evolution of supermarkets as a parallel to suburbanization and the convenience store's failure to act as a stopgap on food insecurity. The final chapter looks at the histories of Quitman and DeSoto counties to understand how their origins foreshadowed their current situations. I will also discuss their current efforts to curb obesity in their communities and the challenges they face in doing so.

Along the way, I offer potential solutions and examples of other communities' successes in diminishing food deserts.

2. POSITIONING AND UNDERSTANDING OBESITY

The attention given to the prevalence of obesity in recent years has led to much debate about its causes and much speculation about the existence of an actual epidemic. Biological, sociological, and environmental factors work in tandem to determine a person's relationship to food, and any imbalance can create the perfect conditions for predisposition to obesity. In America, where 66 percent of people are classified as overweight or obese (FASTSTATS), cultural influences, such as the development of altered foods, the symbiotic relationship between the food industry and the agencies designed to regulate it, and sensationalized media coverage, appear to increase imbalance.

Changes in America's food supply, eating habits, and physical activity have undoubtedly contributed to rising obesity rates, but they are not the only (and perhaps not even the primary) causes of obesity. Popular opinion suggests that while food choice, physical activity and eating habits might tell us much about an individual, the rapid growth of obesity requires broader causal analysis. Exploring trends using a public health approach would be useful to understanding and curbing the spread of obesity. The Institute of Medicine defines public health as "…what we, as a society, do collectively to assure the conditions for people to be healthy" (Gostin). This definition is particularly useful because it requires us to look beyond the role of the individual and address an obligation to share resources to create an environment of health and safety from which all individuals can benefit. Yet, food deserts are a prime example of how public health

falls by the wayside, providing nutritious choices for some and leaving others to cope with the consequences of food insecurity.

Food deserts are one factor in obesogenic environments, communities that promote obesity by limiting access to healthy food choices and opportunities for physical activity. In accordance with Zipf's Principle of Least Effort, in the absence of traditional grocery stores and fresh foods, desert residents will eat what is available to them: usually the caloric, processed foods sold in the gas stations and convenience stores they have access to (Glanz 331). The term "food desert" originated in Scotland, supposedly coined in the early 1990s by the resident of a public housing project. It was later incorporated into a report by the Low Income Project Team on disparities in food access and pricing in the United Kingdom for the government's nutrition task force in 1995 (Whelan *et al.* 2083). The concept was revived in America by the Mari Gallagher Research and Consulting Group, whose studies of food access in Chicago spawned similar studies in many urban centers in America ("About Mari"). Throughout the course of her work, Gallagher uncovered that the majority of the nation's food deserts were located in low-income areas that were inhabited primarily by minorities. The fresh foods that were available in these areas were often of lesser quality and sold at premium prices. Gallagher's research has been applied to communities across the nation, engendering a wealth of studies looking to identify food deserts as a contributing factor to the growing obesity problem.

An influential study funded by the Robert Wood Johnson Foundation identified four levels of nutrition environments: community nutrition environment, organizational nutrition

environment, consumer nutrition environment, and information nutrition environment (Glanz *et al*. 331-332). The community nutrition environment is defined as an assemblage of places that are available to the general public. Variables in the community environment include information about the types of food outlets in a neighborhood and their hours of operation, the number of fast food drive-throughs, and the locations of all outlets. The organizational nutritional community is made up of places that are only available to a defined population. Examples of organizational communities include homes, school cafeterias, or office lunchrooms. Consumer nutrition environments include variables like the availability of healthy products, their prices and placement, and whether they have available nutrition information. The informational nutrition environment includes variables like media coverage and advertising (Glanz *et al*. 331-332). These four environments work together to influence the food choices each person makes, and their factors can be offset or enhanced by demographic or sociological variables. For example, several studies have concluded that community nutrition environments with the least access to healthy foods and the highest number of fast food outlets were found in minority-dominated neighborhoods[3]. These environmental factors influence eating patterns, as evidenced by African Americans and Hispanics having the highest obesity rates in the country.

The body of research on food deserts has grown tremendously in the past decade, but it is still incomplete as the vast majority of information is tailored to or derived from urban communities. These studies have been successful in attracting major retailers to remedy the situation. Based on Gallagher's research in Chicago, the drugstore Walgreens expanded its grocery selection in some of its stores located in known food deserts with about 750 new items

[3] To read more about the links between race and/or socioeconomic class and food deserts, see Moore *et al*., Glanz *et al*., and Whelan *et al*.

(Walker). About a quarter of these Walgreens' store spaces is now dedicated to food (Walker). Gallagher said during her research one of the things she noticed was that drugstores were the only types of chain retailers in these communities. That ubiquity made placing more food items into Walgreens a viable option. CVS has added additional food choices in many of their stores, and Walmart has unveiled plans to supplement their superstores with smaller supermarkets located in cities rather than in suburbs (Walker). The urban food deserts are slowly shrinking, but the relationship between rural environments and obesity has not been exclusively studied, despite a collective understanding that the environmental variables and their effects on physical activity and food choice vary between urban and rural locales. The markers of a healthy urban community are not present in rural ones and the solutions that work in solving the challenges of urban food deserts are not necessarily suited to rural environments. For example, it is often suggested that people increase physical activity by walking or riding a bike to a destination rather than driving. But riding a bike requires neighborhood characteristics like mixed land use, high connectivity streets, and the presence of bike paths. Walking requires similar characteristics and the continuity of sidewalks. In urban samples, lack of sidewalks is considered a barrier to more walking, but in rural areas—where not having sidewalks is common—it was deemed an insignificant factor (Boehmer 412). In a study that examined the characteristics of rural obesogenic environments, obese subjects from low-income areas reported little to no access to venues and equipment for physical exercise. Those from higher socioeconomic backgrounds reported that fear of crime and traffic prevented them from pursuing outside activity (Boehmer 414). In order to find methods to fix rural food deserts, more attention and resources must be devoted to better understand them.

The idea of public health is absent from the food industry's claim that obese people need to exercise more personal responsibility—an argument it has relied on to detract support from government programs that encourage more corporate transparency or promote healthy choices. Corporate giants claim that government intervention into Americans' shopping carts and refrigerators will lead to an overprotective nanny state (Brownell *et al*. 381). But, the argument absolves food manufacturers from their role in fattening consumers. Food companies do not always provide the necessary information for a customer to make healthful decisions, and the information that is on listed on the box and website, is often difficult for the average person to decipher. Well-respected nutritionist Marion Nestle, in the introduction of her tome, *What to Eat*, explains the painstaking methods she used in order to research her book. "I tell you this not to impress you with the extent of the research as to explain that this is the kind of effort it took *me* to figure out what was going on, and I am supposed to know about such things...It is not supposed to be obvious. Supermarkets have one purpose only: to sell food and make a profit, as large a profit as possible. Your goals are more complicated…"(6)

The issue of personal responsibility was a major factor in tobacco companies' fight against regulation. Perhaps the most prominent opponent of personal responsibility is attorney John Banzhaf. Banzhaf, who claims to use courts to force industry into increased regulations, was instrumental in getting cigarette ads off television and implementing smoking bans in public places. Now he is on a mission to refute the personal responsibility argument in obesity (Brownell *et al*. "Food Fight" 276). In 2004, inspired by a multitude of class action lawsuits against fast food retailers waged by Banzhaf and obese consumers, the federal House of Representatives voted on and passed The American Personal Responsibility in Food

Consumption Act, also known as the Cheeseburger Bill. The measure protects food retailers by preventing consumers from filing lawsuits against them on the basis that the retailers' food made them fat. It was a small victory for public health when the bill was rejected in the senate. Still, twenty-four states have enacted similar legislation, including southern states Louisiana, Georgia, and Tennessee (Trust for America's Health 41). In 2009, the beverage industry was successful in halting support of a proposed tax on sugared beverages when it launched a $24 million advertising and lobbying campaign (Brownell *et al*. 388). Though it may have been a successful argument in the past, personal responsibility has been weakened considerably with criticisms that it is illogical and unproductive. If personal responsibility about food choices is declining, then logically, personal responsibility would be dropping in other aspects of life as well. This would be proven through notable increases in irresponsible behaviors such as driving without a seat belt, unprotected sex, or drunk driving; yet, data shows that these behaviors are decreasing over time (Brownell 379-380). People are more responsible than in the past, yet weight management remains a struggle. Even with all of the coverage of obesity and the reclaimed interest in food movements like organic farming, locavorism, and slow food, people appear to be more unable, rather than unwilling, to make proper choices when it comes to what's on the plate. Blaming obesity solely on the individual also reinforces long-held weight-based stereotypes that use values of individualism to diminish a person's character. Under these values, a person is responsible for him or herself and through hard work and discipline a person should be able to take care of him or herself, which includes maintaining a healthy weight. By that logic, a person who is overweight is viewed as lazy or irresponsible and therefore deserving of the excess poundage (Stearns 124-125). Previous methods of trying to shrink the obesity rate by simply

telling people to lose weight have always been unsuccessful; but the robust $50-plus billion-a-year diet industry will attest that it is not for lack of trying (Delaney and Scherzer). At any given time, 70 million Americans are on a diet (Gaesser 40). The question at heart, though, is not why diets are ineffective at long-term weight loss but how Americans got so fat to begin with.

2A. Science and History: Understanding America's Weight Gain

There are several arguments that aim to explain or place blame for America's obesity increase. The most productive of these arguments explores the convergence of behavioral, societal, and environmental factors. As demonstrated in the discussion of personal responsibility, the choice of what to eat is not based entirely on the decision of a single person. Determining what is for dinner requires the perfect storm of circumstances. The choice to eat a hamburger might be determined by the absence of more desirable food; a lack of transportation that prevents access to more a desirable food; a health concern that prevents the consumption of a more desirable food; the limiting price point of more desirable food; lack of equipment to prepare a more desirable food; a long preparation time associated with a more desirable food; negative childhood associations with another food; positive childhood associations with hamburgers; the effects of advertising, etc. All of things, whether acknowledged or not, factor into our daily decisions. Even individual behaviors are not entirely predicated by personal responsibility or free will. Our behaviors are regulated by physiological impulses.

Homeostasis is the state of equilibrium in the internal conditions of the human body. Our bodies regulate homeostasis based on its responses to stress, a process called allostasis. Each

adaption takes a physical toll on the body, and this impression is known as an allostatic load. This allostatic load can throw off a person's homeostasis, causing the resulting chemical imbalance to influence a person's behavior and ability to handle daily challenges (Institute of Medicine 4-5). These imbalances have been implicated as a cause of stress and anxiety disorders. Each person handles stress differently, and while some cases are severe enough to require pharmaceutical correction, milder cases may be corrected by an individual's coping mechanism, such as stress eating. When a person encounters an isolated dangerous or stressful situation, the body releases cortisol, a substance that signals the body's functions to prepare to defend itself. The heart races, blood vessels constrict and metabolism adjusts to divert blood flow and energy to fast-acting muscles. When the situation passes, cortisol sends the signal to send everything back to normal (Hennessey and Dobson 14). Chronic stress differs because the body exists in a constant state of stress, producing more cortisol with no signal that the crisis has ended (Institute of Medicine 40-41). Because the metabolism adjusts under stress, a person will crave foods—preferably fatty and sweet foods. Comestibles high in fat and sugar sustain the body for longer, and the steady supply of cortisol stores the food as fat in the abdomen, where it can be easily accessed by the liver. Stress eating also serves a secondary purpose. Eating produces leptin, a hormone that alerts the brain that it is adequately supplied with energy, telling it to shut off the emergency response. As a result, eating lessens the symptoms of the stress reactions (Hennessey and Dobson 15).

Another way that biology contributes to obesity is though a series of genes that determine how much body fat a person stores. According to Jeffery M. Friedman, the predisposition to obesity is as heritable as height (856). These genes work in tandem to keep weight within a

stable range. When a person loses weight, the hormones kick into gear, increasing appetite to bring weight up to the previous level. When a person gains weight, the hormones act to decrease appetite and allow the weight to fall to the normal level (Hennessey and Dobson 13). A genetic malfunction, such as the inability to produce leptin, could severely affect the way someone interacts with food. A child in England was unable to produce leptin; as a result, her body never sent a signal to her brain saying she was full. At nine years old and 200 pounds, the girl was consuming more than 1100 calories in a single sitting. After being treated with leptin injections (there was no change in the types of food or the limit she was allowed to eat), the child's intake reduced to a more typical 180 calories at each meal and her weight dropped into the normal range (Friedman 856). Roughly 10 percent of Americans have been diagnosed with this type of genetic problem, an indication it might be a ripe topic for future research.

The second layer in the multilevel causes of obesity is human psychology. Much of a person's relationship with food is determined during childhood. This idea has long been referenced in eating disorder research, and is now becoming more relevant in the study of obesity. Parents' use of food affects that way children interact with it. For example, parents may restrict food as punishment or offer food as a reward. In a report that tested the correlation between eating disorder symptoms and family-food interactions, patients exhibiting symptoms of bulimia (binge eating and purging) frequently reported having grown up in environments where food was used as a reward (Puhl and Schwartz 291). In a separate study where patients reported their weights and childhood memories with food, obese patients reported more food rules that were enforced by parents. Not surprisingly, the one reported most was a necessity to eat all of the food on one's plate (Brink *et al*. 22-24). Another study showed that parental restriction of

unhealthy items increased the probability that children would eat more of those items when they were available.

Controlling children's behavior using food is an effective short-term strategy, and several parenting books advocate it, but its long-term effects are dubious. The body of research on the interplay of childhood food rules and adult food interactions are slim. However, though we are not sure how the two factors correlate, there is enough supporting evidence to make children the primary targets of the war on obesity. In 2010, First Lady Michelle Obama launched Let's Move, an initiative to end childhood obesity within one generation. "[Childhood obesity] isn't like a disease where we're still waiting for the cure to be discovered – we know the cure for this," Mrs. Obama said at a press conference launching Let's Move. "We have everything we need, right now, to help our kids lead healthy lives. Rarely in the history of this country have we encountered a problem of such magnitude and consequence that is so eminently solvable" (White House 1). Corrections to cultural shifts such as re-introducing children to fresh fruits and vegetables, improving food quality in schools, and increasing physical activity are paramount in building the types of attitudes that lead to healthy adults.

History provides some context for how humans as a whole and later Americans got to the point of obesity. Economic research suggests that the long-term growth of obesity can be attributed to technological advances. For millions of years, humans lived in a world of scarcity, genetically designed to eat as much as possible in times of abundance in preparation for impending famine. Through industrialization, we have found efficient ways to make food abundant, cheap, and tasty. Still, our bodies are filling in up in anticipation of a famine that is not coming. But industrialization also affected America's attitude toward physical activity. People

worked hard in developing ways to make food cheaper and reduce the amount of physical labor performed, so that they could have more leisure time. However, the result of that work created a faster pace of life. People could accomplish more in less time, thereby increasing their daily workload (Hill 853). Add to this, technological advances that reduced manual labor to the push of a button, and you have a civilization built upon stress with few outlets and far less physical activity.

In his *Time* article, "How We Grew So Big," Michael Lemonick explains that early humans spent the majority of their days focused on food: foraging and hunting, preparing, and eating. The early human diet was primarily composed of fruits and plants foraged from forests. Because they were low in calories, and therefore not filling for long, humans were in constant search of more food. Additionally, it was this diet of fruits which instilled in modern humans a substantial sweet tooth. About 7 million years ago, anthropologists estimate that humans began eating meat (Lemonick). The nutrients in it made it possible for humans to spread meals further apart. Also, it began the process of evolving less strenuous ways of obtaining food. The diet early humans ate, though similar in composition to current humans, was drastically different. Without developed transportation systems, early humans ate seasonally—strawberries from Chile, butternut squash from New York, and tomatoes from Ecuador never occupied their dinner tables at one time. The meat they ate was higher in protein and significantly lower in fat, thanks to their optimum diet, unlike commercially-farmed grain-fed meat that is bred with a higher fat content in order to impart more flavor. Additionally, the work of obtaining food provided constant activity for early humans (Lemonick). They could easily work off the calories they ate.

Though human diets evolved significantly over time, obesity did not become a noticeable issue until the 1970s. Until then, the threat of hunger and malnutrition eclipsed the fear of weight gain. Consider the bread famine that catalyzed the French Revolution in 1789, the potato famine in 1849 that resulted in mass exodus from Ireland, and the Great Depression in 1929; not having enough to eat was a major concern for some. The 1930s brought a shift in American ideologies about food. By this time, the government had made its first attempt at regulating the food industry, partly in response to Upton Sinclair's *The Jungle*, but the primary food crisis of the moment was malnutrition. Even though most Americans ate enough, they were not getting enough nutrients from their diets to sustain themselves. Malnutrition led to conditions like pellagra—an ailment that was common among sharecroppers who did not consume enough niacin and caused skin lesions, weakness, and eventually dementia. The dearth of nutrients was solved by enriching foods with vitamins and nutrients, ultimately starting the use of chemically-altered foods. From 1949 to 1959, food chemists came up with more than 400 preservatives and additives to revolutionize food preservation (Levenstein 109). This progress was not entirely embraced, and in 1958—amid scandal that hormones used in chickens contained carcinogens—a measure passed that required chemical food additives to be tested and proven safe for human consumption (Levenstein 134). By the early 1950s, post-war prosperity boosted Americans' incomes and food budgets considerably from the Great Depression. Processed foods now made up the bulk of their purchases. The presence of more women in the workplace undoubtedly aided the success of processed convenience foods.

Perhaps the first pre-cursor to the obesity problem was a cholesterol scare in 1961, during which the medical community advised people to eat less dairy and eggs because they were

proven to increase to cholesterol. According to William McIntosh, previous food scares stemmed from a disconnection between manufacturers or processors and consumers. Scares that claimed processed products were being tampered with by incorporating inedible fillers like ground clay or chalk to milled flour, or claims that the pesticides used in farming were detrimental to health, led to a distrust of the food processing industry. 1961 was the first time that a scare's claim was supported by scientific evidence. The American Heart Association was an active contributor to research that linked high cholesterol to heart disease, and it was a major force in the campaign to get consumers to stop eating eggs (McIntosh 533S), an early example of how the medical community, regulatory agencies, and food industry support one another. Once researchers linked polyunsaturated fats to reduced cholesterol, food manufacturers flooded the marketplace with entire ranges of product boasting polyunsaturated fats, like margarines, salad dressing, and mayonnaise substitutes. Consumers quickly replaced dairy products with these new items. By 1962, 22 percent of Americans claimed to have altered their diets in response (Levenstein 135-136).

The rise of fast food restaurants started in the late 1950s, but their most calamitous contribution to American culture was the concept of super-sizing. Super-sizing was the brainchild of David Wallerstein, who had increased concession sales in movie theaters when he realized that customers were too embarrassed to buy second servings of movie snacks but would pay more for them if they came in larger portions. Wallerstein applied the same principle to his work at McDonald's, and in 1994 it began offering super-sized options. The portion size of french fries tripled to 7 ounces while a super-sized soft drink weighed in at 42 ounces (Pollan 104-106). McDonald's discontinued its supersize program in 2006, after it was scrutinized in the

Morgan Spurlock documentary *Super Size Me*. The film documented Spurlock's health decline as he attempted to subsist entirely on foods from McDonald's for an entire month. He gained 24.5 pounds and a 13 percent increase in his body fat, and experienced a multitude of health complications during the experiment (Spurlock).

There have always been voices of reason during America's changing views on food attitudes, but food activism and the research that inspires it has come center stage in recent years. There has a push toward eating more fresh and organic foods, limiting the amount of genetically modified foods in people's diets. Countless books and documentaries aim to expose the deceptive practices of the food industry and the ineffective role of the United States Department of Agriculture and FDA in regulating it. As more research surfaces that digs deeper into the underlying causes of obesity, less bias and finger-wagging is directed toward the overweight. Moreover, as standards of beauty shift to embrace curvier women than previously, the taboo associated with being well-fed finds its rightful place as an issue of health, not confidence.

2B. What Obesity Epidemic?

From 1994 to 2005, journalists' and researchers' coverage of obesity in the mainstream media and in academic journals increased threefold (Sullivan), morphing weight—which used to be considered an aesthetic concern—into a matter of national safety. While there is no dispute that waistlines all over the globe are growing, there is some speculation that the obesity epidemic is being blown out of proportion. According to Paul Campos, law professor and author of *The Obesity Myth*, the assertions made by the medical community, media, and government are "97 to 100 percent false." "I do not think that what's going on here is some kind of conscious

conspiracy," Campos says. "What you have here is a kind of cult of thinness and a kind of pathological fear and loathing of body fat and of body diversity in general, [and it's] being transmuted into a set of propositions which are just very poorly supported by the extant data." Dissenters in the medical community, such as UCLA sociologist Abigail Saguy, do not necessarily doubt the existence of a national weight problem, but disagree with the rhetoric used to describe it. Saguy says that the term "epidemic" pathologizes a condition in a way that can lead to the alienation and discrimination of overweight and obese patients. Furthermore the alarmist literature surrounding the so-called epidemic plays into the weight-related fears of the mildly heavy.

The Oxford English Dictionary defines an epidemic as a disease that's "prevalent among a people or community at a special time, and produced by some special causes not generally present in the affected community" (OED). Both the OED and Saguy's definition, which describes an epidemic as the sudden and episodic spread of an infectious disease with implications of widespread death (Sullivan), obesity would need to be classified as a disease rather than a condition in order to even qualify. One of Campos' major criticisms of the obesity epidemic is that there is not enough information to support the notion that being overweight automatically equates to being unhealthy, but pathologizing obesity ignores the possibility that a person can be healthy at any weight (Campos 138). Furthermore, it would yield negative consequences by either stripping patients of complicity in their condition or placing additional blame upon them. Neither is ideal at a time when there is little conclusive causal research on obesity.

Though medical research has been open about the detriments of weight gain, there are several gaps in obesity-related studies. One of the largest is the growing sentiment that body mass index (BMI) is an unreliable measure of body size. BMI, or the Quetelet Index, was founded in the early 19th century by Belgian social physicist Adolphe Quetelet. Quetelet's formula divides a person's weight in kilograms by their height in kilometers. The resulting decimal tells a person size. 18.5 to 24.9 is considered normal, 25.9-29.9 is overweight, and 30 and above is obese (Hall and Cole 283). Quetelet, a pioneer in statistics, designed the formula to determine weight issues in populations rather than individuals; but, according to the CDC, the formula is an easy and inexpensive (and widely popular) method by which to determine the "thinness" of individuals.

Several recent studies explore BMI's limitations, including the medical community's divergence from its intended purpose. BMI does not take into account a person's body composition (Hall and Cole 284). Because it was created with the intention of seeking out the amount of sedentary people in populations, it does not account for percentage of body fat, muscle mass or bone density. Because muscle weighs more than fat, an elite athlete with low body fat would be more likely categorized as overweight or obese than someone with more fat than muscle. Famed actors Brad Pitt and George Clooney, both recipients of *People*'s Sexiest Man Alive award, have BMIs that classify them as overweight and obese respectively ("Ocean's 12 Tons"). Additionally, BMI is distorted for people with extreme heights. For example, a person who is 4'11 is healthy up to 120 pounds, while a person who is 6'6 is obese at 260 (BMI Table). Body composition is increasingly important when factoring in recent studies which claim that those who carry fat primarily in the waist are at increased risk for cardiovascular stress than

those who carry it in the hips and thighs. The overwhelming shortcomings of BMI, the measurement that acts as the foundation of obesity research, necessitates that people review the results of this research cautiously.

In a presentation titled "Big Fat Politics," University of Chicago associate professor Eric Oliver blamed the myth of the obesity epidemic on the "obesity mafia" a coalition of government health agencies, drug companies, and academic researchers who work in tandem to disseminate incorrect weight-related information and capitalize on the weight fears of Americans for profit. By Oliver's account, the food, diet and medical industries rely upon one another for success: food companies or pharmaceutical manufacturers fund the research that links obesity to disease, and the CDC uses that research to encourage Americans to take control of their health by losing weight, which prompts Americans to seek out diet foods and weight loss pharmaceuticals (Oliver 29). According to Mark Bittman's *Food Matters*, the United Soybean Board was the primary funder of studies linking the consumption of soy protein to a reduced risk of heart disease and in the prevention of prostate cancer. The Almond Board of California teamed up with Unilever, the manufacturer of Take Control margarine, to solicit a study encouraging the consumption of raw almonds, tofu and margarine in order to reduce cholesterol. The results of the soy study became the source of the FDA advertisement of the health benefits of soy (Bittman 61). Even with all of the diet aids on the market, Saguy estimates that 75 to 85 percent of people who use a commercial weight loss plan regain the weight within three years (Sullivan). Campos describes the practices of the diet industry as analogous to a corrupt used car salesman. "It's as if someone sold you a car and it seems to work well for the first four months and then the door fell off. You take it back to the dealer and the dealer says, 'Well, the reason the door fell off is because you're

a bad driver. So here, buy another car, and drive it better so the doors don't fall off.' Now, nobody would buy cars on that basis…but with weight loss products that's what happens pretty much every time" (Campos Transcript).

The media promotes the idea of an obesity epidemic by covering only the most newsworthy (read: extreme) studies, and reporting as though there is no scale of weight and slightly overweight individuals are subject to equally severe risks as those facing people with the most advanced cases of obesity. Because it is easier to quantify weight trends rather than those of diet and exercise, this method also feeds into a nationwide fear of body fat, casting the media as yet another participant in Oliver's conspiracy theory (Oliver 32). All of these factors add to a large amount of information leading Americans to believe that (a) they need to lose weight and (b) obesity is threatening our way of life and possibly our existence. Absent is any determination of the ideal healthy size or any reliable information on how to lose weight and keep it off; all that is available are alarmist cries from medicine and media that tell Americans they are too fat to be healthy but offer no concrete solutions to the problem. "I think we've just taken the anorexist frame of mind and just simply normalized it to the point where now we look at extreme thinness as normal and everything else as being pathological," Campos said. "[It's] the equivalent of what would happen if you had a bunch of people who were alcoholics and didn't know they were alcoholics, giving advice about social drinking to everybody" (Campos Transcript).

Regardless of how you label it, the effects of obesity are staggering. In the twenty years between 1980 and 2008, the adult obesity rate has risen from 15 to 34 percent. As of 2009, a reported 68 percent of all Americans are overweight or obese (Levi *et al*. 9). Childhood obesity rates have tripled since 1980, and percent of American children 2-19 are either overweight or

obese (Levi *et al*. 9). Obesity is a contributing factor in the three leading causes of death in the United States: heart disease, cancer, and stroke. Diabetes may be the next publicized epidemic, as 20 million Americans are currently afflicted and another 57 million are pre-diabetic (CDC fact sheet)—suffering from prolonged elevated blood sugar levels that can lead to diabetes if uncorrected. In a report published by the U.S. Department of Health and Human Services, the Surgeon General estimated that treatment of overweight and obesity related illnesses accounted for 10 percent of the U.S.'s health costs: roughly $147 billion annually (2001 U.S. DHHS 10), and obesity-related illnesses claim approximately 112,000 American lives each year[4] (2010 U.S. DHHS 2) . Childhood obesity and its related illnesses have become such a large issue that the *New England Journal of Medicine* reported in 2005 that this generation of children could be the first not to outlive its parents if the childhood obesity rate is not reversed (Olshanksky *et al*. 1140-1143).

On the periphery are statistics that allude to multiple hypotheses about how Americans became so large. Americans now consume 25 percent more calories than they did in the 1970s. About 32 percent of our calories are consumed outside of the home, up from 18 percent in the 1970s (Bittmann 44). Every year, 9 billion chickens, 100 million pigs, 250 million turkeys, and 36 million cows are slaughtered for American consumption (Bittman 21-29). By contrast, soybeans and corn account for half of America's annual harvest, and sixty percent of soybeans go to the production of processed foods. The remainder is used to feed animals and make soybean oil. Half of the corn grown in America is used to feed animals. The other half is used in the

[4] The 2001The Surgeon General's Vision for a Healthy and Fit Nation miscalculated the number of obesity-related deaths at 300,000 annually. The corrected figure was listed as 112,000 in 2010.

production of high fructose corn syrup, canola oil and ethanol (Bittman 23). In any case, of America's largest agricultural exports, almost none make it to the produce department.

These statistics are not meant to place blame on the average American, but simply to express an imbalance of power between food producers, the government agencies in place to regulate them, and the consumer who is ultimately at the mercy of them both. It seems that the largest issue in America's obesity whatchamacallit is misinformation.

2C. Obesity and the South

According to a 2010 report published jointly by Trust for America's Health and the Robert Wood Johnson Foundation, all ten of the states with the highest adult and nine of the states with the highest childhood obesity rates in the nation are located in the southeast (Levi *et al*. 4). From 1986 to the present, the southeast has been consistently heavier than the rest of the nation (CDC); and for the past six years, Mississippi has been the fattest state in America. Currently, Mississippi has an adult obesity rate of 33.8 percent (Levi *et al.* 9). It also leads the nation in hypertension and physical inactivity, and has the second-highest diabetes rate (Levi *et al*. 18-20). One of the most readily used arguments to reason the rotundity of the region is its culinary heritage and caloric, high-fat, and sugar-laden dishes. Still, blaming the southern diet solely is a scapegoat for a multitude of other compounded factors that work together to shape the region's health. Much of the south remains rural, and it is not uncommon for residents to live more than three miles from a grocery store. Public transportation and pedestrian walkways are scarce, limiting residents' physical activity. All of the states with the highest obesity rates also

displayed the highest poverty rates. Poverty and food insecurity in the region are as problematic to some residents today as they were 100 years ago. Surely other areas of the United States are dealing with these problems as well, but their effects have had more impact in the south, which warrants a thorough examination of the region.

While blaming the southern diet is an unproductive task, food is an excellent entrance point through which to view other aspects of southern culture that influence regional eating attitudes. Historian and Mississippi native Marcie Cohen Ferris wrote in "The Edible South," "Food is entangled in forces that have shaped southern history and culture for more than four centuries....when we study food in the south, we unveil a web of social relations defined by race, class, ethnicity, gender, and shifting economic forces (3)." These forces may help to explain some of the disparities in obesity rates. African Americans have higher obesity rates than any other racial group in the south. Those with the lowest-income and education levels are at an increased risk of being overweight or obese. Though these statistics are similar throughout the nation, they hold more weight in the south, where they may explored as possible legacies of centuries of racial inequality and substantial economic disparity.

There may be no better place in the south to consider the interplay of history, social and economic forces, and obesity than the Mississippi Delta. If Mississippi is the most obese state in the nation, then the Delta is the most obese region of the state. Situated between the Mississippi and Yazoo rivers in the northwest portion of the state, the Delta runs approximately two hundred miles in length and eighty miles across at its widest part, encompassing 17 counties (Bolivar, Carroll, Coahoma, DeSoto, Holmes, Humphreys, Issaquena, Leflore, Panola, Quitman, Sharkey, Sunflower, Tallahatchie, Tunica, Warren, Washington, and Yazoo) on 7,110 square miles of land

(Cobb *v*). Its rich land, once thought to be the most fertile in America, was the headquarters of the cotton industry; the invention of the cotton gin combined with the brutal and arduous task of growing and processing cotton spurred the growth of America's slave trade.

During the Reconstruction era, Mississippi's plantation economy shifted to one of sharecropping—a system by which freed people contracted with planters to work plots of land in exchange for a part of the yield. Many former slaves became sharecroppers to their former masters, further complicating an already fragile labor system. Though sharecropping gave former slaves more independence than they previously had, the system used debt as an effective means of tying laborers to the land. In the aftermath of the Great Depression, many Delta residents were pushed out of work as planters began mechanizing their farms. Additionally, from 1910 to 1940, roughly two million African Americans fled the south in search of better work opportunities in factories up north. Those left behind were devoid of work in a location without any other industry. In *Breaking the Land*, Pete Daniel argues that the combination of mechanization, war demands, and government policy ultimately reconfigured the South's labor system (156).

While agriculture is still a major part of the Delta's income, cotton is no longer its biggest export, though its legacy continues to affect current residents. Joblessness is a chronic problem, and the unemployment rates of Delta counties, which hovered at 8-10 percent from 2001 to 2007 increased to between 10-17 percent by December 2008, exceeding both the rest of the United States and Mississippi. Half of residents between the ages of 18 and 64 are unemployed. (MDC Research 4). The median household income in the Delta is less than that of the remainder of the state, and there is a disparity between the incomes of whites and blacks in the region. In 2007, whites in the Delta made $44,055, while African American Delta residents made less than half of

that—$21,165 (MDC Research 4). Most of the 17 counties that comprise the Delta have a teen pregnancy rate higher than 20 percent (MDC research 11). Reports of inordinately high levels of disease among Delta residents are not hard to find. According a 1976 article in the *British Medical Journal* entitled "Life in the Delta," the three most common diseases among patients at a free-of-charge federal health center were diabetes, hypertension, and obesity. Patients never recovered from these illnesses because they `missed their appointments, routinely forgot to take their pills, or failed to lose weight. One doctor wrote upon leaving the Delta, frustrated by the lack of funding and support from the government, "Unlike the developing countries with which we compare the Delta there is enough money and enough people to make a big impact on the area. It is the attitudes and willingness of people both black and white that are not enough" (Style 953). Today, residents of the Delta are still battling the same issues they encountered nearly thirty years ago.

In the remainder of this paper I intend to explore obesity in the Delta and the conditions that either promote or inhibit it using case studies of two counties in the Mississippi Delta. Quitman County, with an estimated 8,000 residents, is typical of most Delta counties. It is ranked the third unhealthiest county in Mississippi, with an obesity rate of 39 percent (Snapshot 2010: Quitman). By contrast, neighboring DeSoto County, with a population of 158,719 is the state's healthiest county (Snapshot 2010: DeSoto). Its obesity rate is not significantly lower than Quitman's at 32 percent, but its demographics are significantly different. Hernando, the county seat of DeSoto, has been covered widely in the media for its efforts to reverse its obesity rate through community-based efforts. My hypothesis is that the difference between Quitman and

DeSoto counties has a lot to do with their locations and access to resources. Quitman Country is entirely rural, located about 20 miles off of Interstate 55, the state's main artery. The DeSoto County border is roughly 10 miles outside of Memphis, TN. Its proximity to the city has sped up the urban development of neighboring towns, transforming them into bedroom communities for families looking to escape city life. Even located in a rural area of Mississippi, DeSoto exists as a suburb of Memphis. Its residents are better-educated, its median income is higher, and its residents have access to resources unavailable to those in Quitman. By exploring the dichotomy between these two counties, both in the same broken region of Mississippi, I intend to show the importance in researching food deserts and the need for environment-specific approaches to remedying them.

3. THE ENVIRONMENT AND OBESITY: SUBURBANIZATION, THE EVOLUTION OF FOOD BUYING, AND THE CREATION OF FOOD DESERTS

One of the factors that informs the way we relate to food is our environment, or the areas in which we conduct most of our daily activity. Glanz *et al*. identified four types of nutrition environment: community, organizational, consumer, and information. Our community nutrition environment is the collection of places where people get access to food, including grocery stores, fine dining and fast food restaurants, corner stores, farmers' markets, gas stations, etc (331). An inadequate supply of grocery stores and places selling fresh produce or an imbalance of places selling healthy food versus those selling unhealthy options can produce food deserts and skew the way consumers buy food. A 1998 study published in the *Journal of the American Dietetic Association* found that taste and cost were the two most important factors that determine the foods Americans buy (Glanz *et al*. 1125-1126). In food deserts, where people purchase foods primarily in convenience stores and fast food restaurants, the cheapest foods are often the unhealthiest. Researchers have found that low-income neighborhoods and those inhabited primarily by minorities are more likely than middle-class white neighborhoods be classified as food deserts (Moore *et al*. 329). Moreover, more African Americans and Hispanics across class lines are overweight and obese than their white counterparts. My hypothesis is that this is less of a contemporary race issue than a residual effect of suburbanization in America. Exploring the history of suburbanization and the evolution of supermarkets in America can lend insight to how low-income and minority communities became those most affected by food deserts.

Post-World War II prosperity and white flight are typically identified as catalysts for suburbanization. Though suburban growth increased significantly following the end of World War II, residential and commercial areas were decentralizing long before the war or Civil Rights Movement. The term "suburb" was introduced on the 1880 census of New York, suggesting that by then the city would have already had a significant number of defectors to outlying areas (Stahura 131).[5] Residential development in these areas was the catalyst for commercial development in the suburbs, and unsurprisingly, retailers were among the first businesses to move into these burgeoning neighborhoods. Grocery stores were among the retailers that capitalized significantly on suburbanization, consolidating or closing their stores in urban centers in order to refocus their sights on more affluent consumers. By examining the evolution of grocery stores alongside the evolution of suburbs, it is possible to uncover a clearer picture of why urban food deserts exist and further complicate the idea that any one factor is to blame.

Suburbanization diffused the population from city centers to new communities on the outskirts of town. Urban theorists have categorized the factors that contributed to the development of suburbs into two group: push factors (negative qualities that influenced residents to leave city centers) and pull factors (positive qualities that encouraged them to resettle in suburban environments). Urban push factors include high crime, poor-quality public schools, congestion, and traffic. Suburban pull factors include lower housing prices, larger tracts of land,

[5] This does not dismiss the influence of white flight, white residents' exodus from communities primarily inhabited by blacks, on suburbanization. It has been confirmed through several studies, including Collins and Williams's, "Segregation and Mortality: The Deadly Effects of Racism."

and the decentralization of industry from the city center that made it possible for people to find jobs and conduct daily business without needing to go into cities.[6]

According to Peter Mieszkowski and Edwin Mills, migration follows the theory of natural evolution. In places where commerce is located in the center of the city, residential areas are naturally developed on the outskirts of town. Central areas of the city are developed first; and as they fill up, construction continues on the fringes of town. Because there is more space available in these suburbs, developers are able to build larger homes. Whereas in the past, high-income individuals settled at the centers of town while less affluent residents lived in outlying areas, advanced transportation systems and the lure of larger, newer housing led to a role reversal: affluent residents abandoned cities, leaving the low-income to occupy the smaller, older, cheaper homes at the city center. This theory of evolution results in income stratified communities, and these communities make it easy to maintain hegemony in socioeconomic background, education level, race, and ethnicity. This type of market segmentation is useful to businesses weighing in which neighborhood to open a new location, and residents' desire for a homogeneous community might be mirrored in its commercial outlets.

The modern grocery store changed dramatically in response to suburbanization. Evolved from thousands of years of bartering goods at posts along trade routes, these posts evolved into public markets in the centers of towns; but as more immigrants established permanent residence in America and towns grew to accommodate them, the markets were supplemented by privately-owned dry goods dealers and general stores located in each community so that people did not

[6] For an examination of urban and suburban push and pull factors, see Mieszkowski and Mills or Marshall and O'Flaherty.

have to travel to the city to get foodstuffs. These merchants dealt in sundries, dry food items like beans and grains, seeds, and household items. Through the 1930s and 40s, markets were full-service: customers would simply tell clerks what items they needed, either in person or by phone, and the clerk would retrieve it. Produce was still primarily home-grown or purchased at produce markets or greengrocers. Meat, which was still too expensive for everyday consumption, was either personally hunted or purchased from butchers. Some stores offered home delivery, and many consumers purchased groceries on house credit accounts (Smith "Convenience Stores" 265).

In the agricultural south, the company or plantation store was more than just a place to buy food and supplies: many saw it as responsible for maintaining post-reconstruction labor relations by keeping tenant farmers tied to the land through the use of credit. The sharecropping system allowed landowners to rent land parcels to tenant farmers in exchange for a portion of the crop they harvested. Tenant farmers purchased seed and farming equipment, as well as food, clothing, and household items on credit from on-site company stores, with the understanding that the cost would be deducted from whatever the crop yielded after harvest. Often, tenant farmers were left with little money or in debt to the store, and therefore worked off the debt the next season while continuing to purchase supplies and food on credit (Ownby 67-68).

The self-service grocery store is a Southern creation credited to Clarence Saunders and his Memphis-based chain, Piggly Wiggly. Saunders modified his store so that customers could select their own items by incorporating the use of shopping baskets, placing checkout stations at the front of the store, and requiring customers to pay with cash rather than on credit. In 1917, Saunders patented his "Self-Serving Store" and other stores began to convert to self-serve

models as well, albeit later ("Clarence Saunders" 261). Until the supermarket was created, people shopped for produce and meat at separate retailers than those from whom they bought dry goods. By the 1920s, dry goods stores, butchers, and greengrocers attempted convenience by clustering into a single shopping center, allowing the consumer to get everything he or she needed in one place even when buying from several retailers. The supermarket merely took that concept one step further by consolidating purchasing to one retailer. Small, mom-and-pop establishments were the testing grounds for early supermarkets, but once the idea became successful, large chains caught on and began converting their stores to larger one-stop shops as well. In many cases, they replaced several smaller markets with one large supermarket, creating pockets of inaccessibility that would get worse as depression-era consumers began utilizing supermarkets more because they offered a wider selection of products for lower prices, putting thousands of independent grocers out of business throughout the 1930s and 1940s (Smith "Grocery Stores" 266). By the 1950s and 1960s, supermarkets were eager to capitalize on the suburbanization of America. Many chains began relocating their stores from urban centers and opening new stores in the suburbs, where there was an underserved and affluent body of consumers. Chains rarely straddled both the urban and suburban markets. Those that moved to the suburbs mostly abandoned urban locations and those that ignored the suburbs, such as A&P, forfeited their claim to that share of the market and eventually dwindled in influence.

Between the 1960s and 1990s, several chains experimented with the concept of a superstore—places where consumers could buy groceries along with clothing, household goods, and anything else they needed. Sam Walton's Walmart is one example of a superstore that has left an indelible mark on American culture. Walmart started in 1962 as a discount store, and grew

significantly using the aggressive tactic of buying out or displacing local chain markets. By 1975, though it only had stores in eight states, Forbes ranked Walmart the number one general merchandise retailer in America (Walmart). The company was later criticized for killing privately-owned grocery stores.

Convenience stores are also important players in the story, as their initial purpose was to inhibit the development of food deserts by bridging gaps in supermarkets' service. They were developed to supplement conventional grocery stores, which often had limited hours, were crowded, or simply too far for people to jaunt down to as needed; but over the past three decades the role of corner stores has changed significantly and their value to rural and urban food deserts has grown tremendously. Jefferson Green, manager of the Southland Ice Dock in Dallas, Texas, is credited with starting the first convenience store after realizing that sometimes customers needed to make purchases when grocery stores were closed. Because his store was opened seven days a week from 7 a.m. to 11 p.m., he was open more often than the local grocery stores, so he expanded his offerings to include staples like bread, milk, and eggs. One of the founders of Southland Ice Company capitalized upon Green's idea and began selling these items at the remainder of his dock locations (Smith "Convenience Stores" 146). These convenience stores made it easy for customers to purchase foods after grocery store hours, but they also made it possible for people who lived too far from the city to replenish their stock of staple foods in between trips to make groceries.

As with suburbanization, the end of World War II marked a growth period for the convenience store industry as well. It seemed that these small stores were the solution to the development of suburban sprawl and the ever-expanding supermarket. Convenience stores

offered quick service, whereas a quick trip to the market was becoming more arduous as supermarkets continued to grow in size. The smaller stores also moved into communities too small to warrant a supermarket. Self-service gas stations changed the convenience store business model. At the start of the 1970s, only seven percent of convenience stores doubled as gas stations. Currently, about 80 percent sell gas (NASCOnline). Selling gas has to impact the role of convenience stores because, though they used to sell staples in order to fill the gaps in the hours and customer service left by grocery stores, the sale of gas made them more accessible to customers on the go. Currently, mini-marts devote more shelf space to junk food like chips, candy, and soda than to household staples. Yet, the reality is that convenience stores continue to service the gaps in coverage left by major grocery stores—only the gaps are wider than ever before and the food they are selling is of less quality than that previously sold. According to the USDA, roughly 23.5 million Americans live more than one mile from a grocery store. Of them, 2.3 million live in rural areas more than 10 miles to a grocery store (Ver Ploeg *et al*. iii). These satellite stores, meant to bridge gaps in food insecurity, are in many families' cases, the center of food purchasing.

In an article published by Public Radio International (PRI), a 2009 study linking corner stores to childhood obesity prompted the Los Angeles City Council to propose a measure limiting the number of new corner stores allowed to open in the low-income area of South L.A (PRI). As a former resident of South L.A., I can vouch for the scarcity of conventional food sources in that neighborhood. In a one mile radius surrounding my former home, I could reach seven corner stores, three food trucks, and two fast food restaurants before reaching a privately-owned grocery store with a limited selection of foods. Even if I chose not to leave my house, a

litany of mobile food vendors passed down my street ready to pull over at the slightest wave of a hand: ice cream and snow cone carts, homemade tamales sold out of igloo coolers pushed in pilfered shopping carts, a donut truck, and fresh corn slathered with mayonnaise and chili were daily offerings.

In an interview with PRI, Jeff Lenard, the spokesperson for the National Association of Convenience Stores expressed disappointment in the proposal, claiming that the convenience store model has been successful in other parts of the world and that the stores would like to be a solution to the obesity problem rather than the cause of it. Japan provides perhaps the best example of convenience stores running at maximum efficiency. Since the first 7-11 opened there in 1974, Japan—a country with an obesity rate less than half that of the U.S.—has become home to more than 41,000 convenience stores (Harden). Though they do have a massive influence on Japanese daily life, they operate differently from their American counterparts. Japanese convenience stores are limited to fixed size of 100 square meters and 2,500 products. What they lack in product choice, the stores make up for in service offerings. Customers can pay utility bills or income taxes, check baggage for bullet trains, drop off laundry to be cleaned, make home cleaning appointments, change diapers, take shelter in an emergency, or simply buy lunch or a wine cooler (Harden). Absent is the junk food that floods the aisles of American convenience stores. By contrast, American 7-11 stores sell an estimated 100 million hot dogs and 60 million pastries every year (Smith “Convenience Stores” 146).

Measures like that proposed by the L.A. City Council vilify corner stores as opportunistic junk food pushers, but Japanese convenience stores prove that the number of corner stores in an area has less effect on the health of a population than does the items that these stores provide

access to. This proposal, though well-intentioned, could backfire by limiting the growth of businesses that are willing to open in communities typically ignored by supermarkets. A report published by the USDA's Economic Research Service identified several reasons that grocery stores avoid opening in low-income neighborhoods. The reasons vary from rural to urban environments (yet another reason to research rural and urban food deserts independent from one another). Those most pressing in rural environments are the reduced access, higher operating costs, and competition from existing community stores and restaurants (Ver Ploeg *et al*. 88). The advantage to opening in rural spaces is that there is land available and it might be cheaper than what is available in metropolitan areas. Yet, any discount or tax incentives could easily be eaten up if the cost of transporting merchandise from distribution channels is higher because the store is farther out. Also, a limited population might mean limited profits, especially if a new grocery store is forced to contend with established corner stores and restaurants. A grocery store that faces high fixed costs, like rent or security costs, might raise prices or sell a smaller selection of products in order to meet its budget. All of these factors influence a retailer's decision to open in one community over another. Corner stores, on the other hand, are resilient and typically unaffected by competition from supermarkets because there are often several in each community and their selling point is convenience rather than quantity or quality of products. Perhaps a more productive long-term plan would be for local governments to find solutions that make low-income areas more desirable places for supermarkets to open, while in the short-term modifying existing corner stores so that they can better serve residents. A survey of corner store owners identified barriers to selling fresh produce, such as expensive refrigeration systems, their vendors did not sell fresh produce, or did they not have the training to work with it.

The connection between suburbanization and supermarket history is one theory of how food deserts originated. Unfortunately, there are too few theories about how to correct them. For low-income areas, like Quitman County or even South L.A., adding a few grocery stores will not be enough to resolve deeply embedded health issues. For others like DeSoto County, eliminating a food desert was an easy fix that did not include the construction of a new supermarket. Each community requires a different approach to resolving its issues, and in the next chapter, I will explore the two strategies used by Quitman and DeSoto counties.

4. CASE STUDIES OF QUITMAN AND DESOTO COUNTIES

The previous chapter explored the connection between the environment and food relationships, and looked at the role suburbanization played in the creation of food deserts. This chapter will include case studies of two counties in the Mississippi Delta—Quitman and DeSoto—that are struggling to resolves challenges like food deserts and obesity. Though DeSoto and Quitman have striking differences, I have chosen to compare these areas because of their similarities. Both areas are rural, at least partially. Quitman County is entirely rural and located about twenty miles from Interstate 55, Mississippi's major artery. DeSoto, the fast-growing county in the state, is considered a part of the Memphis Metropolitan Area, but it remains thirty-two percent rural (Snapshot 2010: DeSoto). Both counties have had to contend with the loss of their predominately agricultural job markets—though the areas responded to the loss of industry differently. Size matters in the equation that determines adequate balance of food outlets in a location, and though Quitman and DeSoto are similarly sized—404 square miles and 478 square miles respectively—their food environments vary dramatically (U.S. Census "Quitman" and "DeSoto"). Arguably, these two counties' most prominent shared characteristic is a large obese population. Though a project jointly sponsored by the Robert Wood Johnson Foundation and the University of Wisconsin Public Health Institute currently ranks DeSoto as the healthiest county in the state, its health statistics are only marginally better than state averages (Snapshot 2010: DeSoto). What does it mean to be the healthiest county in the fattest state in America? It means that DeSoto's adult obesity rate is 32 percent compared to the state's 34 percent, that 11 percent

of its residents are diabetic instead of 13 percent, that only 30 percent of its residents are inactive instead of 32 percent (Snapshot 2010: DeSoto). Just below state averages is Quitman County, with a population that is 40 percent obese, 14 percent diabetic, and 36 percent physically active (Snapshot 2010: Quitman). Despite all of these similarities, DeSoto County is the healthiest and Quitman County is the third unhealthiest in the state. In this chapter, we will explore the differences between these locations, as well as how they affect the way each community tackles its food insecurity and obesity problems.

4A. Finding Food in the Delta: A History

Unraveling race from poverty and from a discussion of food in the Mississippi Delta is an impossible task, and this link might provide some insight as to how two of its counties—Quitman and DeSoto—have handled their challenges with food access and obesity. Though the Delta is primarily known for its role as the seedbed of America's cotton industry and the origins of blues music, it also had a strong multicultural history in which food became currency in the fight for freedom and respect.[7] Few places in American history have had as much racial and economic disparity as the Mississippi Delta. Its agricultural labor system was designed in a way that prevented the development of a solid middle class: wealth was concentrated among the planters and poverty was typical among the agricultural workers, of which the majority were black. It is difficult to ascertain how few planters controlled the bulk of farmland because census data during the height of sharecropping counted each tenant-run farm as an individual farm, but

[7] For examples of food and culture in the Delta, see Marcie Cohen Ferris's "The Edible South" and *Matzoh Ball Gumbo*; and Thornell's "Struggling for Identity in the Most Southern Place on Earth: The Chinese in the Mississippi Delta"

it was common for large plantations to have as many as twenty to thirty families in their employ (Langsford and Thibodeaux).

Food purchasing for sharecroppers occurred primarily at the plantation commissary. Commissaries were stores located on plantation grounds that stocked dry goods, clothing, and farming equipment that sharecroppers needed to work. Sharecroppers purchased their goods in the commissary on credit, and the final tally was deducted from the harvest. Contrary to expectation, most tenant farmers did not produce much of their own food. A 1939 USDA report, entitled, "Plantation Organization and Operation in the Yazoo-Mississippi Delta Area," revealed that food took up the bulk of items advanced to sharecroppers on credit. Though many families did grow produce on patches beside their homes, more people did not either because they did not have the land to do so, did not want to maintain the garden, or did not know the value of fruits and vegetables in their diet. Livestock was scarcely owned by sharecroppers, and when it was, it was usually not enough to count as a major contributor to a family's food needs. Thus, most families did their food shopping on credit at the commissary (Langsford and Thibodeaux 49-50). In *American Dreams in Mississippi*, Ted Ownby highlights a recent trend among historians to dispel the widely-disseminated notion that commissary owners encouraged workers to spend more on credit in order to keep them in debt, thus securing continued labor (Ownby 62). Still, black consumers were forced to contend with the widespread belief that they were wasteful and frivolous spenders. This belief, combined with the planter class's supposed paternalistic responsibility, provided some justification for planters restricting access to certain consumer goods or limiting wages, preventing them from shopping anywhere but the plantation, and denying blacks mortgages that suppressed the development of black-owned retail establishments.

Black-owned businesses did exist, and funding was secured through partnerships where several people combined small sums of money, but they were scattered around Mississippi and held little influence in one region. In 1883, Ownby says, the Delta only had two black-owned general stores (75). These stores no doubt provided solace to black shoppers, but the number would not have been high enough to service the entire black community. Thus, black consumers were forced to contend with the racial challenges in the daily quest for food.

The Delta once had a thriving immigrant community, and its development of a non-agricultural middle class complicated the region's racial binary. Jewish, Italian, Chinese, and Syrian-Lebanese immigrants comprised a significant part of the Delta's population. While some of these immigrants purchased plantations, many of them opened businesses as retailers, financiers, or mechanics. Jewish immigrants were businessmen and financiers, the Italians were mechanics and farmers, the Syrian-Lebanese dealt in real estate and entertainment, and the Chinese opened grocery stores (Adams and Gorton 290). Acting within the racial dynamics of the Delta was difficult for immigrants because they were neither black nor white, and though the Chinese faced less discrimination in the Delta than they did in places like California, they were still considered colored by the plantation elites. Though the Chinese would struggle for acceptance in the closed society of elite whites, their groceries primarily served black consumers, at long last providing an alternative to plantation commissaries (Thornell "Culture" 197-198). According to Thornell, the first Chinese-owned grocery in the Delta opened in 1874, and the largest number of stores was recorded in 1960 ("Struggle" 63). While the growth of supermarkets influenced the closing of privately-owned groceries around the nation, it was not a large problem for rural areas. For the Delta's Chinese grocers, their children grew up and sought

opportunities for higher education and better jobs elsewhere, leaving no one to take over the family business. According to a USDA report, "Food can be a powerful community organizing tool. Ethnic foods can provide strong bonds between community members that help lead to unity in solving other community issues (Ver Ploeg *et al*. 99)." As these grocers moved out of the neighborhood, along with the other businesses and signs of a bustling community, areas of the Delta became shells of their former selves. Previously thriving commercial districts became rows of vacant and dilapidated storefronts.

Even when neighborhoods were thriving and there were places to purchase food, not everyone had the money to do so. Hunger and malnutrition, as well as the diseases they caused, were so common that a 1968 report on malnutrition in America declared, "Mississippi and hunger are synonymous in the public mind" (Citizens' Board 11). The report, entitled "Hunger, USA," examined the prevalence of hunger and malnutrition across America, but was prompted by the level of need in Mississippi. In the winter of 1965, a band of black men entered an abandoned Greenville, Mississippi air force base and passed out pamphlets saying, "We are here because we are hungry and cold and we have no jobs or land" (Citizens' Board 11). Though they were removed from the premises, their cry for help did lead to concerted efforts to create new avenues through which people could access food and take advantage of federal relief programs. The government heralded the switch from commodity food distribution to food stamps as a success. By 1968, 470,000 Mississippians received food stamps, making it the largest distribution in the country. However, in 1967, the Civil Rights Commission issued a memo explaining that participation was declining over time because the food stamps program was less effective than distributing commodity food (Citizen's Board 11-12). In fact, many people quit the

food stamp program because they could not afford it. One Mississippian claimed that she qualified for $99 in food stamps at a cost of $52, but her welfare benefits only allotted her $27 a month (Citizens' Board 59). A Hazard, Kentucky woman addressed the challenge of getting food when you live in a rural community. Her food stamps cost $4, but the cost of using them was much higher. She lived 18 to 20 miles from the nearest market and had no car, so she had to pay an additional $3 for transportation every time she needed to shop. Also, there was only one small store, leaving her no choice but to pay the inflated prices for groceries (Citizens' Board 75-76).

The Mississippi Delta is not long past its days of hunger. *LaLee's Kin: The Legacy of Cotton*, a 2001 Academy Award- nominated documentary, showed the level of poverty still prevalent in some Delta counties. The film follows LaLee, a 62-year-old resident of Tallahatchie County, as she struggles to raise her great-grandchildren with very few resources. Unable to afford running water, she and the children siphon it from the local fire department, filling up empty bleach bottles and emptying them into paint buckets later in the night for the children to bathe in. Along the way, the documentary includes vignettes of other residents' struggles, among them an illiterate elderly woman who is learning to write her own name for the first time, after she was robbed of her savings by someone able to duplicate the "X" she had written on her bank account's signature card and a school principal struggling to prepare students for a standardized test that would restore the school's accreditation.

Food was an unspoken character in the film. In the 1960s, LaLee's family would have likely been starving, but the children in the film appeared lithe and fit while LaLee was stout. LaLee teaches her granddaughter to economize by advising her to get the most value from her ingredients by adding finely-chopped bologna to spaghetti. The meat is versatile (and more

inexpensive and readily-available in a food desert) than ground beef, and the cook can use a few slices to flavor the spaghetti and still have leftovers for additional meals. LaLee explains that she has been cooking since she was young, and part of her income comes from selling home-cooked lunches from a borrowed van from a local factory. In another scene that simultaneously touched on growing obesity and crime rates, LaLee's daughter encourages her young son to steal LaLee's case of sodas. Though the food in the film is never addressed, the accumulation of what is shown can easily be found a local corner store: nearly everything unhealthy and mostly in single servings. Yet, through the duration of the film, it is evident that LaLee, like so many others, was simply doing the best she could.

4B. Quitman County: The Face of American Poverty

"...A more probable development in the area will be the adoption of large-scale labor-saving machinery in cotton production when cotton harvesters are perfected and proved to be economical...This development, if rapid and widespread, undoubtedly will be associated with a tremendous displacement of labor on plantations, and a serious situation of human adjustment will probably prevail..."

—Plantation Organization and Operation in the Yazoo-Mississippi Delta Area, 1939 (47)

Quitman County has repeatedly been listed by U.S. census data among the poorest counties in America. The rampant poverty there was first publicized after Dr. Martin Luther King came to Marks in 1966 to preach at a friend's funeral. He was shocked by the conditions people endured, and moved to tears by the sight of a teacher quartering an apple as lunch for four hungry children. That visit inspired King to organize a Poor People's Campaign, a movement

intended to persuade Congress and President Lyndon B. Johnson to secure better housing and relief for poor families by marching on Washington D.C. King selected Marks, Mississippi as the point of origin from which to lead a mule train to the nation's capital. It took three years to organize the march, but weeks before its planned start, King was assassinated in Memphis, TN. Undeterred, more than 50,000 people marched. They set up tents on the national mall and camped out for six weeks in a shantytown they named Resurrection City (Cass 4-5). During the ordeal, Senator Robert Kennedy, another advocate of poor people's rights who was appalled by the conditions he saw in Mississippi, was assassinated in Los Angeles. The Poor People's campaign was considered a failure by most because it failed to produce immediate results, but it ultimately led to reformed welfare and relief programs that did help needy people, even if it did not lift them entirely out of poverty. These reforms included the expansion of the food stamp and national school lunch programs, both of which continue to provide support for low-income families in the county.

Presently, about 35 percent of households in Quitman County live below the poverty line. The county is 69.5 percent black, and 29.3 percent white, with only 0.2 percent of both Asian and Native American residents (U.S. Census "Quitman"). The major towns in the county are Marks —the county seat—Lambert, Sledge, and Falcon. It is probable that the impoverished people living in Quitman today are the descendants of those living there in the 1960s. The reforms that came out of the Poor People's Campaign did help families put food on the table, but they did little to remove persistent barriers to poverty. There are virtually no jobs in town. By 2008, all of the town's factories were nonoperational. The most coveted positions were those available in the local McDonald's and Bumpers restaurants (Cass 16). The casinos at Tunica, 40 miles away,

were once heralded for creating jobs and elevating a community that Jesse Jackson labeled "America's Ethiopia" in 1987, but even the gaming industry was hard-hit by the last recession and are laying off employees. The lack of jobs and resources in Quitman have led to a 17 percent population decline from 2000 to 2009, with residents fleeing to find better opportunities (U.S. Census "Quitman"). According to a 2010 report entitled, "Strengthening the Rural Economy," Quitman County is indicative of all three major challenges facing rural areas and labor: higher poverty levels and limited income, a smaller number of people at working age (20-64) which makes it difficult to bring jobs into these communities because there is the assumption that there will not be enough people to fill them, and a larger proportion of rural residents are on disability and unable to work (Council of Economic Advisers 7). The community is unable to gain the attention of any corporations to move in and restore life to the area. It cannot even command the attention of its few affluent locals.

In *"Held Captive": Child Poverty in America*, a project sponsored by the Children's Defense Fund, Pulitzer Prize-winning journalist Julia Cass asked Marks mayor Aubrey Collums how white families with money and children keep them occupied. Collums replied that there were no white families with children and money in town. Either the children had grown up and moved away, or the families were poor and facing the same setbacks as other families struggling with poverty (Cass 18). It seems that even in a place with such racial disparity, poverty is less of a race issue than a place issue. The underlying question is whether the few affluent residents of the county invest in it at all. For example, one wealthy family in Marks has walled itself off from the community by building a collection of homes for family members on a cul-de-sac called "Self Circle" (their surname is Self). The multistory mini-mansions sit on a cul-de-sac at the end

of a street lined on both sides with old, dilapidated homes. By building their homes in a circle, they do not have to see the poverty just down the street, and yet they must confront it every time they leave their homes to conduct business.[8] These homes, and thus the people in them, are a startling contrast to the conditions found mere steps from their doorways.

In 2010, Quitman County once again made the news for its level of poverty, only this time malnutrition was not the issue at hand; obesity is now the plight of the poor. PBS NewsHour toured Lambert, MS as a part of its coverage on American food deserts. In the report, Dr. Al Rausa, who served as a Mississippi public health worker for nearly 40 years, acknowledged that there has been a shift in the community's health problems from malnutrition to obesity and diabetes (Bowser). Forty percent of Quitman County's residents are now obese, and part of this shift can be attributed to the decline of its food environment, with fast food outlets and corner stores filling the gaps left by markets. Resident Jennifer Hoskins remembers that when she was growing up in Lambert, it was a thriving town with both a grocery store and dry goods store. The merchandise could be supplemented with home-grown produce since many families still gardened (Bowser). The picture now is much bleaker.

Troy Blanchard and Thomas Lyson determined that rural counties without cities with populations of more than 2,500 and not adjacent to metropolitan areas have the highest number of populations with reduced access to fresh foods (3). According to the USDA Food Environment Atlas, the 8,391 residents of Quitman County fit those criteria, serviced by three grocery stores, four convenience stores, three sit-down restaurants, and two fast-food outlets. Neither the county seat, Marks, nor Lambert have grocery stores. PBS's account revealed that

[8] The description of Self Circle was derived from my own trip to Marks.

Lambert had only one convenience store that acted a grocery store for the entire town. On the day they visited, there was no fresh produce and the items they did have, such as bologna—like that LaLee peppered her spaghetti with—was high in price (Bowser). Both fast food restaurants, McDonald's and Bumpers, are located in Marks. The McDonald's does not serve salads and does not make typically make the healthier broiled chicken sandwiches on the menu, so the majority of the fare consumed is burgers or fried (Bowser). The imbalance of outlets where one can purchase the components of a healthful meal versus junk food is further complicated by what money can buy you in these different types of stores. The *Time* article "Getting Real about the High Price of Cheap Food," reported that one dollar could buy either 1,200 calories worth of potato chips, 875 calories of soda, 250 calories of fresh vegetables, or 120 calories of fresh fruit (Walsh). Buying cheap (or buying junk) among low-income families is the easiest way to stretch the dollar, ensuring that there's money leftover when meal time rolls around yet again.

Battling obesity in Quitman County is a challenge when there is already so much more to overcome. Isolating the issue is neither a priority nor an option because the resources to put up a fight against it are simply not there. Instead the community has to find and fund solutions that can eliminate more than one problem at a time. For example, investing in recreational facilities would provide a safe place for children to play outside of school, encourage physical activity, and possibly act as after-school childcare for working parents. Several grant-funded projects and organizations have attempted to resolve some of the outstanding problems in Quitman County, but ultimately they leave before effecting much change because of insufficient funding. "Eating Good and Moving Like We Should" is the latest program to be defunded before making a full impact on Quitman. The goal of the program was to promote healthy eating and additional

physical activity among elementary school students in the Delta by providing nutrition education to school personnel, parents, and students. One of the major benefits of the program was that it sent registered dietitians and child nutrition specialists into Delta schools to train and assist school foodservice personnel. During the first year of the program, dietitians worked with school lunch staff to better serve students facing issues like food insecurity or food allergies, conditions that are not typically addressed within the National School Lunch Program. In subsequent years, students were exposed to new types of vegetables when they built and maintained school gardens (Knight).

According to Dr. Kathy Knight, director of "Eating Good and Moving Like We Should," there are not nearly enough trained nutritionists active in schools and, although the hired professionals do meet USDA guidelines, they are not necessarily running the nutrition programs efficiently. Dr. Katie Wilson, Director of the National Food Service Management Institute, which provides nutrition training for school nutrition employees, emphasizes the importance of nutrition education in schools, "You can have all the rules and regulation you want, but if the person does not have a background in nutrition for foodservice management, there's absolutely no way that person can even follow all those rules and regulations because they don't have the know-how." At Quitman County Elementary School, an "Eating Good" registered dietician was able to correct a cafeteria budgeting mistake by altering the lunch menu, resulting in savings of $70,000 in food costs and a more nutritious and flavorful menu (Knight). The school's original menu met USDA standards, but the reformed one better met the needs of students and the school's budget.

The "Healthy and Hunger-Free Kids Act of 2010" will mandate that every school have a professionally-trained nutrition director, but Knight is unconvinced the law will be enforced because many school districts cannot afford better-trained personnel. It was difficult to find registered dietitians when she did have funding, Knight said, especially those willing to move and work from communities like Marks. "Eating Good and Moving Like We Should" sidestepped this issue because of its relationship with the University of Mississippi, allowing dietitians to live near campus in Oxford, and travel to the Delta for meetings with personnel and families. This strategy worked best because it gave dietitians the security they needed and allowed them to see many more patients than they would have if they worked at just one school. By the end of the 2008-2009 school year, the program's dietitians had assisted more than 1,200 patients in Quitman and Panola counties (Knight). An additional residual affect of the new legislation might be job reduction in the county. The school district is Quitman's largest employer (Cass 11) .

"People assume that [the program] is not important or not wanted [because it's funding was pulled], but that's not true," Knight says. "It's been very well-received." Fifty-three percent of participants claimed to have changed their diets in response to what they learned from the program, and 63 percent reported increased consumption of fruits and vegetables. Seventy-seven percent of students reported increasing their exercise (MS Dept. of Ed). The program also worked beyond individual schools, building a network of child nutrition professionals to better advocate the needs of students. Throughout its three years in the Delta, the program made notable progress, but recent congressional cuts on earmarks defunded the program. By the time

the grant was revoked for "Eating Good and Moving Like We Should," the students at Quitman County Elementary had not yet gotten to harvest anything from their school's new garden.

Other programs that remain in place for the moment face the continued struggle of operating on limited budget. Youth Opportunities Unlimited (YOU) is funded in part by the Netherlands' Bernard Van Leer Foundation, a project that came to Mississippi because its statistics were worse than any other applicant's. The YOU headquarters are based in Lambert, and though it is one of the only recreation centers for Quitman County children, it is closed on weekends unless church members volunteer to supervise because there is not enough funding to pay employees overtime (Cass 18). Money is a constant barrier to progress in Quitman County and until it can find financial support, issues like food insecurity are inevitably placed on the back burner.

However, county-level projects are not the only ones with the means to effect change. Small, community-based efforts can be just as effective. In 2010, the non-profit WhyHunger toured the Delta to find community-based programs that are bridging the gaps in food access. Mississippians Engaging in Greener Agriculture (MEGA), located in Bolivar County, was one of the organizations they found. Its leader, nurse Dorothy Grady-Scarborough, runs the program's demonstration garden, encouraging citizens to grow organic produce and teaching them how to do so. The organization is closely tied to a local Baptist church, and Grady-Scarborough enlists congregants' help in tending the garden and distributing the garden's bounty to elderly residents (Smith "On the Road"). According to the USDA, community food projects have the potential to unify communities and often have unforeseen positive effects, such as reduced vandalism or crime rates (Van Ploeg *et al.* 99). For underserved rural communities, they can simultaneously

increase access to fresh food, increase physical activity, and provide recreation for youths and the unemployed.

4C. DeSoto County: Mississippi's Fastest-Growing County

DeSoto, Mississippi's healthiest county, has had a different history from Quitman. Perhaps the largest difference between Quitman and DeSoto is environment. While Quitman is far removed from any metropolitan area, DeSoto was established so close to the border of Memphis, Tennessee, that a surveyor's error overlapped the two territories (DeSoto Genealogical Society). According to a history of the county written by its genealogical society, DeSoto has had several examples of its progress and resilience, bouncing back from the destruction of the Civil War and countless economic setbacks since. One of the most striking features of the town's history is its relationship to food. Even though it sat on the on the edge of a major city, DeSoto residents continued acting out the region's agricultural heritage. Like most Delta communities, cotton provided the basis for its economy during the 19th century. The agricultural culture of the region carried into the kitchen, with many families growing their own produce and raising their own livestock. Hunting and fishing were primary forms of recreation. Due to the large number of dairy farms, DeSoto was named the dairy capital of Mississippi. Farmers banded together to form a marketing body for their product, the Mid-South Milk Association, and one of its promotions was a making June dairy month. Many farmers supplemented their dairy operations by raising cattle. Cotton was slowly being phased out as the top agricultural export, as farmers

switched to growing wheat and soybeans. By 1970, soybeans replaced cotton as the county's most planted crop (DeSoto Genealogical Society).

1958 marked a turning point in the development of DeSoto County, when Governor Ross Barnett approved the sale of homes in the unincorporated community of Southaven. Within two years, the neighborhood swelled to 1,000 residents. The early 1960s brought additional changes that would create the perfect conditions for the county's rapid growth. Dover Elevator Company opened in Horn Lake in 1963, and Holiday Inn selected Olive Branch as the site of its hotel and golf course in 1969, both bringing non-agricultural jobs to the region. In 1964, I-55 was extended through Hernando, the county seat, and into Memphis, connecting DeSoto to major tourism destinations at the endpoints of I-55, Memphis and New Orleans, as well as the rest of the nation. In 1988, Baptist DeSoto Hospital opened, bridging the healthcare void ever-present in the Delta. The convergence of these events ultimately shifted DeSoto from an agrarian-based economy to an industrial one, and its lifestyle from agriculturally-centered to suburban. By the late-1990s, all but three of its dairy farms had shut down and few small farmers remained in business. Amid all of these changes, its population has risen steadily (50 percent in the last decade alone), with it serving as a bedroom community for Memphians reacting against the crime, high prices, and challenges of city life (U.S. Census "DeSoto").

The demographics of DeSoto County are practically a counter-story to those of Quitman. It has a much higher population (158,719) and even larger racial imbalance; 75.3 percent of DeSoto is white, 21.8 percent black, 0.4 percent Native American, and 1.3 percent Asian. The household income, home values, and education levels are drastically higher. Though roughly 35 percent of Quitman County residents live below the poverty line, only 9.4 percent do in DeSoto

(U.S. Census "DeSoto"). While Quitman's demographics consistently fall below state averages, DeSoto's consistently exceed them. DeSoto County also has a much broader food environment: 18 grocery stores, four supercenters, 28 farms with direct sales, and four farmers' markets offset its 62 convenience stores, seven specialty food stores, 108 fast food restaurants, and 107 sit-down restaurants. Only 2 percent of its residents live further than one mile from a grocery store with no transportation, and only one household is categorized as food insecure (USDA Food Environment Atlas "DeSoto"). An additional luxury is its proximity to Memphis and all of its resources.

Still, 32 percent of DeSoto residents are obese (Snapshot 2010: DeSoto). Because the county does not fit the causal profile found in many obesity studies (minorities in low-income areas are often the ones at a higher risk for obesity and its related illnesses), the reasons might be more closely associated with the built environment. This is challenging to research because DeSoto is neither entirely metropolitan nor entirely rural, and it does not squarely fit into the scant body of research done to link the built environment to obesity. Rural and urban environments have different expectations for physical activity. A study published in the *American Journal of Health Promotion* found that subjects with higher-incomes cited poor aesthetics and feeling unsafe from crime as barriers to physical activity (Boehmer 415). According to a USDA report entitled, "Access to Healthy and Affordable Food: Measuring and Understanding Food Deserts and their Consequences," "Projects must be "community-based" not "community-placed" to be successful in the long term...[they] must come from the community and must be a solution to the perceived needs for improving food security in their community" (Ver Ploeg *et al*. 97). Outside organizations face a tough time implementing top-down programs in rural

communities because they rarely utilize the input of residents. Because DeSoto is an anomaly, the success of its anti-obesity measures depends on its officials' willingness to listen to the needs of its residents and implement the appropriate changes.

While DeSoto has a high obesity rate, its biggest accomplishment thus far is making concerted efforts to reverse the degree of obesity in the community. Perhaps the most vigilant leader in the county's plan to build a healthful environment is Chip Johnson, mayor of the rapidly-growing county seat, Hernando. Hernando is located in the center of DeSoto, and had an estimated population of 15,000.[9] Johnson has received national recognition for his town's improvements, including a 2010 award from Blue Shield and Blue Cross of Mississippi Foundation recognizing Hernando as the healthiest hometown in the state and a trip to the White House where he represented his town at an event for "Let's Move" (Blue Cross). In an interview with NPR, Johnson says he won his election based on a health and wellness platform because the residents of his town were interested in making health-based improvements. He later spoke at the Southern Obesity Conference, where he realized the impact of childhood obesity and made a goal to eliminate it (Martin). That goal led to his decision to transform Hernando into a community that promoted wellness, but it was the support of the Board of Aldermen and his constituents, as well as changes that affected three of the major community food and activity environments, that ultimately made the programs successful.

Johnson has added a broad array of recreational facilities to Hernando's community activity environment. Although Hernando is fairly affluent town, there is still a small portion of

[9] As of the latest available census, Hernando has a population of about 8,000. Is it rapidly growing, and Johnson estimated the city's population at 15,000 in an interview with NPR.

its population that lives in poverty. Johnson made reaching these people a priority in his plans, building a community center adjacent to the poorest neighborhood. Two years later, they added a farmers' market three blocks from the neighborhood so that residents could walk to it. According to Johnson, in one week, more than one thousand people came to the market where 36 vendors sold fresh local produce, canned goods, baked goods, and plants (Pou). When Johnson took office five years ago, Hernando did not have a Parks Department, but now it has five parks, walking trails, bike lanes, and additional sidewalks—all things that promote physical activity among residents. Trail users have been found to be more likely to meet physical activity standards (Boehmer et al. 414). In conjunction with the Safe Routes to School program funded by the U.S. Department of Transportation, Hernando built an additional $213,000 in sidewalks (Pou). A publication issued by the White House Task Force on Childhood Obesity reported that children in areas with restricted access to walking paths, parks, and playgrounds faced a 20 percent to 45 percent greater risk of becoming obese (49). Programming has enhanced Hernando's organizational food and activity environments, places that are only available to certain populations. For example, Johnson removed the soda and snack vending machines in the city hall once he was elected. City employees are encouraged to participate in program called Healthy Eating and Living in Hernando. Hernando schools, which are out of Johnson's jurisdiction because they are part of a county school district, participate in an "Eat Right, Play More" program which provides healthier food choices, vending machine makeovers, and extra recess time. School District employees sponsor a "Biggest Loser" challenge and track their BMIs to determine who has lost the most weight (Blue Cross). The information activity environment is altered merely through using social networking sites like Facebook to keep resident informed of

recreational programming, information on the farmers' market, and any other town news. Hernando has made significant progress in building a healthy community, even though Johnson says it only five percent closer to its health goals. He feels the reason that he and his town have gotten recognition is because they have initiated change (Martin).

As in many communities, the major challenge to making improvements in the town was funding them. Although it is a high-income town, low taxes meant that the budget for such projects was small. "People want to hear what a small town is able to do working within the confines of a small budget," Johnson told Memphis's *Commercial Appeal* in 2009 (Crum). "We've been very creative and worked very hard and people like to hear that story." Johnson turned to private granting agencies like the Robert Wood Johnson Foundation and Project Fit America, which sponsored the construction of twelve playgrounds around the city. In 2010, Hernando received Blue Cross & Blue Shield of Mississippi Foundation Award for being the healthiest hometown in Mississippi. With it, they received a $50,000 grant to further their goals (Blue Cross).

Quitman and DeSoto counties are two locations contending with the same obesity issues, but it is quite clear why DeSoto has been successful in building healthy communities for its residents. First, DeSoto County had a strong community base to begin with. Unlike Quitman County, which has been stuck in cyclical poverty for generations, DeSoto has been expanding steadily. It does not have a significant amount of poverty that takes precedent over the need for other community progress. Quitman, on the other hand, is struggling to build not just a healthy

community, but a community in general. Prioritizing goals in a project that large, with so few resources, is daunting. DeSoto residents also have a higher education levels and better access to medical care due to the proximity of DeSoto Baptist Medical Center. Residents of the Delta have been reported to have limited access to health care, but an area with a major hospital and thus a large medical community is more likely to prioritize health and wellness than a community without access to preventative medical care. Despite their relatively close obesity rates, Quitman and DeSoto counties are light-years apart in their progress in eliminating food deserts and solving obesity, primarily because DeSoto has already laid down a foundation to end these problems over time. It is discouraging that Quitman cannot make the same changes, but until some continued investment occurs in the region, it is in a catch-22. Without investment, the community will make no progress; and without progress no company will want to invest. Without jobs, even the finest grocery store cannot eliminate that county's desert.

4. CONCLUSION: MISGUIDED MISSISSIPPI

A 2009 *Time* article by Claire Suddath asked a question on the minds of many Americans as Mississippi clenched the top spot yet again as the fattest state in the nation, "Why are southerners so fat?" The reporter's answer was simple: a mix of poverty, lack of sidewalks, deep-fried everything, and hot, humid weather that made exercise undesirable (Suddath). The article represents the inadequacies in the way we discuss obesity in America. Historically, the south has been used as an other to compare to the greater north, and the issues attributed to the region have resulted in a loss of collective responsibility and the practice of heaping blame on one area of the country. By its very existence, this article is an extension of that idea. Obesity is not a uniquely southern problem. Although rates have risen faster in the south than in the rest of the America, every region has been working its way up the scale. Of course, there is a reason to look at obesity from a regional standpoint; just as urban and rural environments require different solutions, cultural environments need specialized treatments as well. Differentiating southern obesity from northern obesity, or simply acknowledging southern obesity and ignoring its wider prevalence, does not open a dialogue to discuss causes or solutions. It merely passes the buck. A more constructive approach would be trying to understand how American attitudes toward food and exercise promote weight gain. Even abroad, the proliferation of American fast food restaurants

has led to excess poundage. Identifying these cultural triggers would be more productive than perpetuating stereotypes.

Rest assured that Mississippi is not taking its role as fattest state in the nation lying down. It has enacted legislation and funded programs devoted to making the state healthier over the past few years, including granting $740,000 to the city of Meridan to install additional sidewalks and supporting an initiative by the Washington County Health Department to hold nutrition classes for public benefits recipients (MS Dept. of Ed. 18 and 28). Yet, in many ways both Quitman and DeSoto counties are representative of Mississippi as a whole. The state can be likened to the Delta of America. Like Quitman, it is among the poorest states in the nation, and its demographics often fall short of national averages (U.S. Census "MS QuickFacts"). However, like DeSoto, the state is growing, bringing in diverse industries, and adapting to new situations. Lowering obesity rates will need to take many other issues into consideration, including how to cure food insecurity in a state where 51 percent of residents live in rural areas. The entire state is currently classified as a food desert (USDA Food Atlas). The battle that Mississippi has ahead of it is long, and it will take innovative approaches to be successful.

These innovative ideas are sometimes misguided, pitting two priorities against one another. Tourism is a major component of Mississippi's plan for economic development. As of 2008, it was the sixth largest employment industry in the state and contributed more than $390 million to the state's general fund (MDA/TD 4-5). The Mississippi Tourism Development used television ads within a 500 mile radius depicting scenes of Mississippi culture to attract visitors. Among these ads was a television spot that showcased the state's culinary options set to Memphis Minnie's song "Keep On Eating." The commercial seemed to undermine any efforts

the state has made toward addressing its obesity problem, opting instead to capitalize on the stereotypes of Mississippians as indulgent or gluttonous by encouraging tourists to indulge in the same type of behavior. Jennifer Spann, program director of public relations for the Mississippi Development Authority, said in a telephone interview that the tourism board has not considered how to be sensitive to Mississippi's current obesity problem while still promoting its culinary heritage. Instead, Spann says that the commercial does not attempt to veil Mississippi's image as fattest state in the nation; its focus is to highlight the culinary heritage and diversity of dining options here. It is the customers' responsibility to make informed and healthful decisions about their consumption. Though fresh produce and fish were featured among the traditional images of southern cookery, like cast iron pots, fried catfish dinners, and the unofficial mascot of the southern kitchen, the pig, the tone of the commercial was not balance but the blatant promotion of gluttony. The commercial's parting message was, "Eat all you want, baby." An editorial in the *Natchez Democrat* criticized the mixed messages the commercial sent to Mississippi residents, who, while not the intended targets of the commercial were still exposed to it: "A government-funded commercial, complete with the Mississippi logo, that says 'Eat all you want baby' sends entirely the wrong message. What's next? The governor lighting up a cigarette, saying it's cool and encouraging children to smoke...Making a dime is important, but no one would think it right to promote Mississippi cigarette sales" (Cooper). This commercial shows how difficult it is to adequately prioritize the needs of a state with numerous drawbacks. Increasing revenue is crucial to funding programs that will help to solve the crises Mississippi is dealing with but the act of making money should not sacrifice residents' health. Advertising is very persuasive, and it would

be interesting to know how these commercials shape Mississippians' perceptions of how serious obesity really is in the state.

On the other end of the spectrum, three members of the Mississippi House of Representatives wrote and presented a bill that would penalize restaurants certified by the state Board of Health for serving food to obese people. As expected, the bill was widely criticized for its insensitivity and was never passed. John Read, one of its authors, said that he never intended for the bill to be enacted into law; he simply hoped that it would draw attention to obesity as a statewide issue (Hellmich). Getting people invested in changing their eating habits is a worthy goal, but the bill went about it the wrong way. Obesity is not something that can be fixed by force, especially without any understanding of its causes. An investment for more research into the factors contributing to obesity in Mississippi might yield better action steps toward a healthier population. Eliminating food deserts, increasing nutrition education, and making significant improvements to the built environment will yield progress in the fight against obesity and potentially re-shape communities that are currently ravaged by poverty.

Food deserts are only one potential cause of obesity, and this paper is not exhaustive in its exploration of them. Additional research should follow-up on communities in flux like DeSoto to see if over time their efforts do result in lower obesity rates. Studies on rural communities would benefit from determining the absence of other types of businesses in food deserts. People without access to grocery stores might also lack banks, doctors' offices, and/or post offices. Does the lifestyle of low-income rural residents impact health in other ways than obesity, and how does their access to or lack of preventative care affect their odds of becoming obese or seriously ill? There is no clear cut reason for why America is currently in the midst of an obesity crisis, but by

attempting to understand the contributing factors, we can all make informed decisions to reverse its effects.

LIST OF REFERENCES

"About Mari." *Mari Gallagher Research and Consulting Group*. Web. 29 Nov. 2010. <http://www.marigallagher.com/about/mari/>.

Acme Fresh Market Inc. "A Short History of The F.W. Albrecht Grocery Company." *Acme Fresh Market*. Acme Fresh Market Inc. Web. <http://www.acmestores.com/history.html>.

Adams, Jane, and D. Gorton. "Confederate Lane: Class, Race, and Ethnicity in the Mississippi Delta." *American Ethnologist* 33.2 (2006): 288-309. Web.

Baker PhD, MPH, Elizabeth A., Mario Schootman PhD, Ellen Barnidge MPH, and Cheryl Kelly MPH. *The Role of Race and Poverty in Access to Foods That Enable Individuals to Adhere to Dietary Guidelines*. Original Research. 3rd ed. Vol. 3. Washington DC: Centers for Disease Control and Prevention, 2006. Print.

Balko, Radley, Kelly Brownell, and Marion Nestle. "Are You Responsible for Your Own Weight?" *Time* 7 June 2004. Web.

Beauliac, Julie, Elizabeth Kristjansson PhD, and Steven Cummins PhD. *A Systematic Review of Food Deserts, 1966-2007*. Publication. 3rd ed. Vol. 6. Washington DC: Centers for Disease Control and Prevention, 2009. Print.

Bittman, Mark. *Food Matters: a Guide to Conscious Eating with More than 75 Recipes*. New York: Simon & Schuster, 2008. Print.

Blanchard, Troy, and Thomas Lyson. *Food Availability & Food Deserts in the Nonmetropolitan South*. Publication. Vol. 12. Starkville, MS: Southern Rural Development Center, 2006. Print. Food Assistance Needs of the South's Vulnerable Population.

Blue Cross & Blue Shield of Mississippi Foundation. *Here's to a Healthy Hernando! Healthiermississippi.org*. Blue Cross & Blue Shield of Mississippi, 30 June 2010. Web. <http://www.healthiermississippi.org/healthy_hometown_winners.php>.

Body Mass Index Table. Digital image. *National Institutes of Health*. U.S. Department of Health and Human Services. Web. <http://www.nhlbi.nih.gov/guidelines/obesity/bmi_tbl.pdf>.

Boehmer PhD, Tegan K., Sarah L. Lovegreen PhD, Debra Harie-Joshu PhD, and Ross C. Brownson PhD. "What Constitutes an Obesogenic Environment in Rural Communities?" *American Journal of Health Promotion* 20.6 (2006): 411-21. Web.

Bowser, Betty Ann. "Mississippi 'Food Deserts' Fuel Obesity Epidemic." Audio blog post. *PBS NewsHour*. John S. and James L. Knight Foundation Et Al., 3 June 2010. Web. <http://www.pbs.org/newshour/bb/health/jan-june10/food_06-03.html>.

Brink, Pamela J., Kristi Ferguson, and Anju Sharma. "Childhood Memories Abut Food: The Successful Dieters Project." *Journal of Child & Adolescent Psychiatric Nursing* 12.1 (1999): 17-25. Web.

Brownell, Kelly D., and Katherine Battle Horgen. *Food Fight: the inside Story of the Food Industry, America's Obesity Crisis, and What We Can Do about It*. Chicago: Contemporary, 2004. Print.

Brownell, Kelly D., Rogan Kersh, David S. Ludwig, Robert C. Post, Rebecca M. Puhl, Marlene B. Schwartz, and Walter C. Willett. "Personal Responsibility and Obesity: A Constructive Approach to a Controversial Issue." *Health Affairs* 29.3 (2010): 378-86. Web.

Campos, Paul F. *The Obesity Myth: Why America's Obsession with Weight Is Hazardous to Your Health*. New York: Gotham, 2004. Print.

---. "Paul Campos and The Obesity Myth." Interview by Steve Gibson. *Truth-Driven Thinking*. Podcast. 17 May 2006. Radio. Transcript.

Cass, Juila. *"Held Captive": Child Poverty in America*. Rep. Washington D.C.: Children's Defense Fund, 2010. Print.

Center for Consumer Freeddom. *Ocean's 12 Tons*. *Center for Consumer Freedom*. Center for Consumer Freedom, 10 Dec. 2004. Web. <http://www.consumerfreedom.com/pressRelease_detail.cfm/r/79-oceans-12-tons>.

Centers for Disease Control and Prevention. *National Diabetes Fact Sheet: National Estimates and General Information on Diabetes and Prediabetes in the United States, 2011*. 2011. Fact Sheet. U.S. Department of Health and Human Services, Atlanta.

Citizens' Board of Inquiry into Hunger and Malnutrition in the United States. *Hunger, U.S.A.: A Report*. 2nd ed. Boston: Beacon, 1969. Print.

"Clarence Saunders." *The New Encyclopedia of Southern Culture: Foodways*. Ed. John T. Edge. Vol. 7. Chapel Hill: University of North Carolina, 2007. 261-62. Print.

Cobb, James C. *The Most Southern Place on Earth: the Mississippi Delta and the Roots of Regional Identity*. New York: Oxford UP, 1994. Print.

Cohen Ferris, Marcie. "The Edible South." *Southern Cultures* 15.4 (2009): 3-27. Print.

Collins, Lauren. "Pixel Perfect." *New Yorker*. Condé Nast, 12 May 2008. Web. <http://www.newyorker.com/reporting/2008/05/12/080512fa_fact_collins?currentPage=1>.

Cooper, Julie. "Mississippi Sending Mixed Obesity Messages." *Natchez Democrat*. Natchez Democrat, 2010 July 2010. Web. <http://www.natchezdemocrat.com/2010/07/21/mississippi-sending-mixed-obesity-messages/>.

Council of Economic Advisers. *Strengthening the Rural Economy*. Rep. Washington D.C.: Executive Office of the President of the United States of America, 2010. Print.

Crum, Mark. "Hernando Mayor Chip Johnson Leads Fight against Childhood Obesity » The Commercial Appeal." *Commercialappeal.com*. Commercial Appeal, 11 Oct. 2009. Web. <http://www.commercialappeal.com/news/2009/oct/11/hernando-mayor-leads-fight-against-childhood/>.

Cummings, Steven, and Sally MacIntyre. ""Food Deserts"—Evidence and Assumption in Health Policy Making." *BMJ* 325 (2002): 436-38. Web.

Daniel, Pete. *Breaking the Land: the Transformation of Cotton, Tobacco, and Rice Cultures since 1880*. Urbana: University of Illinois, 1986. Print.

Delaney, Trevor, and Lisa Scherzer. "10 Things the Weight-Loss Industry Won't Tell You." *SmartMoney*. Dow Jones & Co. Web. <http://www.smartmoney.com/spending/deals/10-things-the-weight-loss-industry-wont-tell-you-13677/>.

DeSoto County Genealogical Society. "A Brief History of DeSoto County, MS." *Desotoms.com*. DeSoto County Government. Web. <http://desotocountyms.gov/about>.

Eberhardt, Mark S., and Elsie R. Pamuk. "The Importance of Place of Residence: Examining Health in Rural and Nonrural Areas." *American Journal of Public Health* 94.10 (2004): 1682-686. Web.

"Epidemic." Def. 1a. *Oxford English Dictionary*. 2nd ed. 1989. Print.

Evans, Alex. "Greedy Bastards: Fat Kids, Class War, and the Ideology of Classlessness." *Historicizing Fat in Anglo-American Culture*. Ed. Elena Levy-Navarro. Columbus: Ohio State, 2010. 146-172. Print.

"FASTSTATS - Overweight Prevalence." *Centers for Disease Control and Prevention*. Centers for Disease Control and Prevention, 18 June 2010. Web. <http://www.cdc.gov/nchs/fastats/overwt.htm>.

Fletcher, Dan. "The Fat-Acceptance Movement." *Time*. Time Inc., 31 July 2009. Web. <http://www.time.com/time/nation/article/0,8599,1913858,00.html>.

Ford, Paula B., and David A. Dzewaltowski. "Disparities in the Obesity Prevalence Due to Variations in the Retail Food Environment: Three Testable Hypotheses." *Nutrition Reviews* 66.4 (2008): 216-28. Web.

"The Fred W. Albrecht Grocery Co. — Company History." *Find Funding with Banks, Investors, and Other Funding Sources | FundingUniverse*. Web. 04 Apr. 2011. <http://www.fundinguniverse.com/company-histories/The-Fred-W-Albrecht-Grocery-Co-Company-History.html>.

Friedman, Jeffrey M. "A War on Obesity, Not the Obese." *Science* 299 (2003): 856-58. Web.

Gaesser, Glenn A. "Is It Necessary to Be Thin to Be Healthy." *Harvard Health Policy Review* 4.2 (2003): 40-47. Web.

Glanz, Karen, James F. Sallis, Brian E. Saelens, and Lawrence D. Frank. "Healthy Nutrition Environments: Concepts and Measures." *American Journal of Health Promotion* 19.5 (2005): 330-33. Web.

Glanz, Karen, Michael Basil, Edward Maibach, Jeanne Goldberg, and Dan Snyder. "Why Americans Eat What They Do: Taste, Nutrition, Cost, Convenience, and Weight Control Concerns as Influences on Food Consumption." *Journal of the American Dietetic Association* 98.10 (1998): 1118-126. Web.

Gostin, Lawrence O. *Public Health Law and Ethics: a Reader*. Berkeley, CA: University of California, 2010. Text-only Electronic.

Hall, D M B, and T J Cole. "What Use Is BMI?" *Archives of Disease in Childhood* 91 (2006): 283-86. Web.

Harden, Blaine. "Japanese Stores Take Convenience To a New Level - Washingtonpost.com." *The Washington Post: National, World & D.C. Area News and Headlines - Washingtonpost.com*. The Washington Post, 8 Nov. 2008. Web. <http://www.washingtonpost.com/wp-dyn/content/article/2008/11/07/AR2008110703512.html>.

Hellmich, Nancy. "Restaurants as Obesity Cops Doesn't Sit Well - USATODAY.com." *USATODAY.com*. Gannett, 8 Feb. 2008. Web. 29 Nov. 2010. <http://www.usatoday.com/news/health/2008-02-05-obesity-restaurant-law_n.htm?loc=interstitialskip>.

Hennessey, Jaime, and Andrew Dobson. "Leptin as Fat Orchestrator." *Reviews in Undergraduate Research* 2 (2003): 12-18. Web.

Hill, James O., Holly R. Wyatt, George W. Reed, and John C. Peters. "Obesity and the Environment: Where Do We Go From Here?" *Science* 7 Feb. 2003: 853-55. Web.

Holsten, Joanna E. "Obesity and the Community Food Environment: a Systematic Review." *Public Health Nutrition* 12.3 (2008): 397-405. Web.

Hotez, Peter J. "Neglected Infections of Poverty in the United States of America." *PLOS* 2.3 (2008): E256. Web.

Institute of Medicine. *Health and Behavior: The Interplay of Biological, Behavioral, and Societal Influences*. Washington D.C: National Academy, 2001. Print.

"Interview with Dr. Katie Wilson." Personal interview. 28 Mar. 2011.

Jackson, Kate M. "0 Is the New 8." *Boston Globe*. New York Times Co., 5 May 2006. Web. <http://www.boston.com/news/nation/articles/2006/05/05/0_is_the_new_8/>.

Knight, Kathy. "Eating Good and Moving Like We Should." Southern Studies Brown Bag Lunch & Lecture. Barnard Observatory, Oxford, MS. 2 Mar. 2011. Lecture.

---. "Interview with Dr. Kathy Knight." Personal interview. 28 Mar. 2011.

LaLee's Kin: the Legacy of Cotton. Dir. Deborah Dickson, Susan Frömke, and Albert Maysles. Perf. LaLee Wallace and Reggie Barnes. Maysles Films, 2001. DVD.

Langsford, E.L., and B.H. Thibodeaux. *Plantation Organization and Operating in the Yazoo-Mississippi Delta Area*. Tech. no. 682. Washington D.C.: U.S. Department of Agriculture, 1939. Print.

Larson, N.I, M.T. Story, and M.C. Nelson. "Neighborhood Environments: Disparities in Access to Healthy Foods in the U.S." *Journal of Preventative Medicine* 36.1 (2009): 74-81. Web.

Lemonick, Michael D. "How We Grew So Big." *TIme* 7 June 2004. Print.

Levenstein, Harvey A. *Paradox of Plenty: a Social History of Eating in Modern America*. New York: Oxford UP, 1993. Print.

Levi, Jeffrey, Serena Vinter, Rebecca St. Laurent, and Laura M. Segal. *F Fas in Fat: How Obesity Threatens America's Future*. Rep. Robert Wood Johnson Foundation, 2010. Print.

Marshall, Harvey, and Kathleen O'Flaherty. "Suburbanization in the Seventies: The "Push-Pull" Hypothesis." *Journal of Urban Affairs* 9.3 (1987): 249-62. Web.

Martin, Michel. "Mississippi Town Joins Plan To End Child Obesity : NPR." *NPR.org*. National Public Radio, 15 Feb. 2010. Web. <http://www.npr.org/templates/story/story.php?storyId=123668463>.

McCurry, Justin. "Japanese Grab Girdles as Obesity Crisis Looms | World News | The Guardian." *Latest News, Comment and Reviews from the Guardian | Guardian.co.uk*. Guardian News and Media Limited, 2 Mar. 2006. Web. <http://www.guardian.co.uk/world/2006/mar/02/japan.justinmccurry>.

McIntosh, William. "The Symbolization of Eggs in American Culture: A Sociologic Analysis." *Journal of the American College of Nutrition* 19.5 (2000): 532S-39S. Print.

Mieszkowski, Peter, and Edwin S. Mills. "The Causes of Metropolitan Suburbanization." *Journal of Economic Perspectives* 7.3 (1993): 135-47. Web.

Mississippi Bureau of Long-Range Economic Development Planning, MDC Research Committee, and Special Task Force for the Revitalization of the Mississippi Delta Region. A Time of Reckoning: Testing the Will of Change in the Mississippi Delta. Publication. Chapel Hill: MDC, 2009. Print.

Mississippi Department of Education's Office of Healthy Schools, comp. *Obesity in Mississippi*. Rep. 2010. Print.

Mississippi Development Authority/Tourism Division. *Fiscal Year 2008 Economic Contribution: Report of Tourism in Mississippi*. Rep. Jackson: Mississippi Development Authority, 2009. Print.

Mississippi Food Television Commercial. *YouTube*. Mississippi Development Authority/Tourism Division, 19 Dec. 2008. Web. <http://www.youtube.com/watch?v=f62SMsU5h_U>.

"Mississippi QuickFacts from the US Census Bureau." *State and County QuickFacts*. U.S. Census Bureau. Web. <http://quickfacts.census.gov/qfd/states/28000.html>.

Moore, Laetitia V., and Ana V. Diez Roux. "Associations of Neighborhood Characteristics with the Location and Type of Food Stores." *American Journal of Public Health* 96.2 (2006): 325-31. Web.

Nestle, Marion. *What to Eat: an Aisle-by-aisle Guide to Savvy Food Choices and Good Eating*. New York: North Point, 2006. Print.

Oliver, J. Eric. *Big Fat Politics: The Real Story Behind America's Obesity Epidemic*. Oxford: Oxford UP, 2005. Print.

Olshanksky, S. Jay, Douglas J. Passaro, Ronald C. Hershow, Jennifer Layden, Bruce A. Carnes, Jacob Brody, Leonard Hayflick, Robert N. Butler, David B. Allison, and David S. Ludwig. "A Potential Decline in Life Expectancy in the United States in the 21st Century." *New England Journal of Medicine* 352.11 (2005): 1138-145. Web.

Ownby, Ted. *American Dreams in Mississippi: Consumers, Poverty & Culture, 1830-1998*. Chapel Hill: University of North Carolina, 1999. Print.

Pollan, Michael. *The Omnivore's Dilemma: a Natural History of Four Meals*. New York: Penguin, 2006. Print.

Pou, Jackie. "Mississippi Mayor Leads Charge against Obesity Epidemic | Need to Know." *PBS.org*. PBS, 26 July 2010. Web. <http://www.pbs.org/wnet/need-to-know/health/a-success-story-in-the-fight-against-obesity/2474/#>.

PRI, and WNYC, prods. "Corner Stores Linked to Childhood Obesity | PRI.ORG." *The Takeaway*. WNYC, New York, NY, 19 Oct. 2009. *PRI: Public Radio International*. Public Radio International, 19 Oct. 2009. Web. <http://www.pri.org/health/corner-stores-contribute-childhood-obesity1682.html>.

Puhl, Rebecca M., and Marlene B. Schwartz. "If You Are Good You Can Have A Cookie: How Memories of Childhood Food Rules Link to Adult Eating Behaviors." *Eating Behaviors* 3 (2003): 283-93. Web.

"A Short History of the Convenience Store Industry." *A Short History of the Convenience Store Industry—NASConline*. The Association of Convenience and Fuel Retailing. Web. <http://www.nacsonline.com/NACS/Resources/Research/History/Pages/default.aspx>.

Sloan PhD, David C., Allison L. Diamant MD, MSHS, LaVonna B. Lewis PhD, Antoinette K. Yancy MD, MPH, Gwendolyn Flynn, Lori Miller Nascimento MPH, William J. McCarthy PhD, Joyce Jones Guinyard DC, and Michael R. Cousineau DrPH. "Improving the Nutritional Resource Environment for Healthy Living through Community-based Participatory Research." *Journal of General Internal Medicine* 18 (2003): 568-75. Web.

Smith, Andrew F. "Convenience Stores." *The Oxford Companion to American Food and Drink*. New York: Oxford UP, 2007. 146. Print.

---. "Grocery Stores." *The Oxford Companion to American Food and Drink*. 1st ed. New York: Oxford UP, 2007. 285-86. Print.

Smith, Brooke. "On the Road with WhyHunger: Community Grown - A Mississippi Delta Tradition." *Whyhunger.org*. Why, 14 July 2010. Web. <http://www.whyhunger.org/news-and-alerts/why-reporter/1068-on-the-road-with-whyhunger-community-grown-a-mississippi-delta-tradition.html>.

Smith, Hortense. "Craigslist Ad Hints That Dove Wants "Real Women," but Only If They're Flawless." Web log post. *Jezebel*. Gawker Media, 26 June 2010. Web. <http://jezebel.com/#!5573505/craigslist-ad-hints-that-dove-wants-real-women-but-only-if-theyre-flawless>.

"Snapshot 2010: DeSoto." *County Health Rankings*. Robert Wood Johnson Foundation and The University Of Wisconsin Population Health Institute, 2011. Web. <http://www.countyhealthrankings.org/mississippi/desoto>.

"Snapshot 2010: Quitman." *County Health Rankings*. Robert Wood Johnson Foundation and The University Of Wisconsin Population Health Institute, 2011. Web. <http://www.countyhealthrankings.org/mississippi/quitman>.

Spann, Jennifer. "Interview with Jennifer Spann." Telephone interview. 11 Apr. 2011.

Stahura, John M. "Suburban Development, Black Suburbanization, and The Civil Rights Movement Since WWII." *American Sociological Review* 51 (1986): 131-44. Web.

Stearns, Peter N. *Fat History: Bodies and Beauty in the Modern West*. 2nd ed. New York: New York UP, 2002. Print.

Stoler, Felicia D. *Childhood Obesity*. ACSM Official Comment. Indianapolis: American College of Sports Medicine. Print.

Style, A. "Life in the Mississippi Delta." *British Medical Journal* 1 (1976): 952-53. Web.

Suddath, Claire. "Why Are Southerners So Fat? - TIME." *TIME.com*. Time Inc., 9 July 2009. Web. 29 Nov. 2010. <http://www.time.com/time/health/article/0,8599,1909406,00.html>.

Sullivan, Meg. "Obesity Epidemic Overblown, Conclude UCLA Sociologists." *University of California*. University of California, 15 Nov. 2005. Web. <http://www.universityofcalifornia.edu/news/article/7647>.

Super-Size Me. Dir. Morgan Spurlock. Perf. Morgan Spurlock. Samuel Goldwyn Film, 2004. DVD.

Thornell, John. "A Culture in Decline:The Mississippi Delta Chinese." *Southeast Review of Asian Studies* 30 (2008): 196-202. Web.

---. "Struggle for Identity in the Most Southern Place on Earth: The Chinese in the Mississippi Delta." *Chinese America: History and Perspectives* (2003): 63-70. Web.

Trust for America's Health, and Robert Johnson Wood Foundation. "Mississippi Public Health Data - Trust for America's Health." *Trust for America's Health - Preventing Epidemics. Protecting People*. Trust for America's Health, 2010. Web. 29 Nov. 2010. <http://healthyamericans.org/states/?stateid=MS>.

U.S Bureau of the Census. Profile of General Demographic Characteristics: 2000 (Hernando City, MS). 2000. Raw data. Washington, D.C.

U.S Bureau of the Census. State & County QuickFacts (DeSoto County, MS). Raw data. Washington, D.C.

U.S Bureau of the Census. State & County QuickFacts (Quitman County, MS). Raw data. Washington, D.C.

U.S. Department of Health and Human Services. *The Surgeon General's Vision for a Healthy and Fit Nation 2010*. Publication. Rockville: Office of the Surgeon General, 2010. Print.

U.S. Department of Health and Human Services. *The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity 2001*. Publication. Rockville: Office of the Surgeon General, 2001. Print.

U.S. Department of Agriculture. Food Environment Atlas—DeSoto County, MS. Raw data. Washington D.C.

U.S. Department of Agriculture. Food Environment Atlas—Quitman County, MS. Raw data. Washington D.C.

Ver Ploeg, Michelle, Vince Breneman, Tracey Farrigan, Karen Hamrick, David Hopkins, Phil Kaufman, Biing-Hwan Lin, Mark Nord, Travis Smith, Ryan Williams, Kelly Kinnison, Carol Olander, Anita Singh, Elizabeth Tuckernathy, Rachel Krantz-Kent, Curtis Polen, Howard McGowan, and Stella Kim. *Access to Affordable and Nutritious Food: Measuring and Understanding Food Deserts and Their Consequences—Measuring and Understanding Food Deserts and Their Consequences: Report to Congress*. Rep. Washington D.C.: U.S. Department of Agriculture, 2009. Print.

Vesilind, Emili. "Fashion's Invisible Woman." *Los Angeles Times*. Tribune Co., 1 Mar. 2009. Web. <http://articles.latimes.com/2009/mar/01/image/ig-size1>.

Villaire, Ted. "Decline of Physical Activity." *Www.pta.org*. National PTA. Web. <http://www.pta.org/topic_decline_of_physical_activity.asp>.

Walker, Rob. "Walgreens Tackles Food Deserts." *New York Times* [New York] 12 Nov. 2010, Sunday Magazine sec.: MM32. Print.

"Walmartstores.com: History Timeline." *Walmart Corporate: History Timeline*. Walmart. Web. <http://walmartstores.com/aboutus/7603.aspx>.

Walsh, Bryan. "Getting Real About the High Price of Cheap Food - TIME." *TIME.com*. 21 Aug. 2009. Web. <http://www.time.com/time/health/article/0,8599,1917458-1,00.html>.

Whelan, Amanda, Neil Wrigley, Daniel Warm, and Elizabeth Cannings. "Life in a 'Food Desert'" *Urban Studies* 39.11 (2002): 2081-100. Web.

The White House. Office of the First Lady. *Remarks of First Lady Michelle Obama: Let's Move Launch*. *Whitehouse.gov*. The White House, 9 Feb. 2010. Web. <http://www.whitehouse.gov/the-press-office/remarks-first-lady-michelle-obama>.

White House Task Force on Childhood Obesity. *Solving the Problem of Childhood Obesity in a Generation*. Report to the President. Washington DC: Executive Office of the President of the United States of America, 2010. Print.

APPENDIX

Body Mass Index Table

	Normal						Overweight					Obese										Extreme Obesity																
BMI	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**	**50**	**51**	**52**	**53**	**54**
Height (inches)	**Body Weight (pounds)**																																			
58	91	96	100	105	110	115	119	124	129	134	138	143	148	153	158	162	167	172	177	181	186	191	196	201	205	210	215	220	224	229	234	239	244	248	253	258
59	94	99	104	109	114	119	124	128	133	138	143	148	153	158	163	168	173	178	183	188	193	198	203	208	212	217	222	227	232	237	242	247	252	257	262	267
60	97	102	107	112	118	123	128	133	138	143	148	153	158	163	168	174	179	184	189	194	199	204	209	215	220	225	230	235	240	245	250	255	261	266	271	276
61	100	106	111	116	122	127	132	137	143	148	153	158	164	169	174	180	185	190	195	201	206	211	217	222	227	232	238	243	248	254	259	264	269	275	280	285
62	104	109	115	120	126	131	136	142	147	153	158	164	169	175	180	186	191	196	202	207	213	218	224	229	235	240	246	251	256	262	267	273	278	284	289	295
63	107	113	118	124	130	135	141	146	152	158	163	169	175	180	186	191	197	203	208	214	220	225	231	237	242	248	254	259	265	270	278	282	287	293	299	304
64	110	116	122	128	134	140	145	151	157	163	169	174	180	186	192	197	204	209	215	221	227	232	238	244	250	256	262	267	273	279	285	291	296	302	308	314
65	114	120	126	132	138	144	150	156	162	168	174	180	186	192	198	204	210	216	222	228	234	240	246	252	258	264	270	276	282	288	294	300	306	312	318	324
66	118	124	130	136	142	148	155	161	167	173	179	186	192	198	204	210	216	223	229	235	241	247	253	260	266	272	278	284	291	297	303	309	315	322	328	334
67	121	127	134	140	146	153	159	166	172	178	185	191	198	204	211	217	223	230	236	242	249	255	261	268	274	280	287	293	299	306	312	319	325	331	338	344
68	125	131	138	144	151	158	164	171	177	184	190	197	203	210	216	223	230	236	243	249	256	262	269	276	282	289	295	302	308	315	322	328	335	341	348	354
69	128	135	142	149	155	162	169	176	182	189	196	203	209	216	223	230	236	243	250	257	263	270	277	284	291	297	304	311	318	324	331	338	345	351	358	365
70	132	139	146	153	160	167	174	181	188	195	202	209	216	222	229	236	243	250	257	264	271	278	285	292	299	306	313	320	327	334	341	348	355	362	369	376
71	136	143	150	157	165	172	179	186	193	200	208	215	222	229	236	243	250	257	265	272	279	286	293	301	308	315	322	329	338	343	351	358	365	372	379	386
72	140	147	154	162	169	177	184	191	199	206	213	221	228	235	242	250	258	265	272	279	287	294	302	309	316	324	331	338	346	353	361	368	375	383	390	397
73	144	151	159	166	174	182	189	197	204	212	219	227	235	242	250	257	265	272	280	288	295	302	310	318	325	333	340	348	355	363	371	378	386	393	401	408
74	148	155	163	171	179	186	194	202	210	218	225	233	241	249	256	264	272	280	287	295	303	311	319	326	334	342	350	358	365	373	381	389	396	404	412	420
75	152	160	168	176	184	192	200	208	216	224	232	240	248	256	264	272	279	287	295	303	311	319	327	335	343	351	359	367	375	383	391	399	407	415	423	431
76	156	164	172	180	189	197	205	213	221	230	238	246	254	263	271	279	287	295	304	312	320	328	336	344	353	361	369	377	385	394	402	410	418	426	435	443

Source: Adapted from *Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: The Evidence Report.*

VITA

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EDUCATIONAL BACKGROUND

University of Mississippi, Oxford, MS—Master of Arts in Southern Studies, May 2011
Thesis advisor: Dr. Kathryn B. McKee
Thesis title: *Starved: Food Deserts in the Mississippi Delta*

Boston University, Boston, MA—Bachelor of Science in Journalism, May 2009
Concentration in print/magazine journalism
Liberal arts concentration in French

EXPERIENCE

Graduate Assistant, Southern Foodways Alliance, Oxford, MS — 2010-Present
Compiled research for "The Great Migration and Southern Cooking in New York City," a panel discussion sponsored jointly by the Southern Foodways Alliance, Museum of the City of New York, and Mississippi Development Authority/Division of Tourism. Assisted with event logistics for the 2009 and 2010 Southern Foodways symposiums. Composed themed event bibliographies for the 2009 Buford Highway Field Trip and 2010 Southern Foodways Symposium. Catalogued oral histories and transcripts from The Southern BBQ Trail, an SFA documentary project, for the finding aid in J.D. Williams Library special collections archive.

Contributor, *New Encyclopedia for Southern Culture*, Oxford, Mississippi — 2009-2011
Authored articles on Louisiana State Penitentiary and Bacon's Rebellion for the forthcoming volume on violence. Wrote article on obesity in the south for forthcoming volume on science and medicine.

Office Administrator, Marc Marmel Luggage, Los Angeles, CA — 2008-2009
Supported the staff of a Los Angeles-based luxury leather goods line. Designed promotional materials for the collection, including lookbook, press book, e-mail blasts, and business plan. Provided IT support for all computers (Mac and PC) and office equipment. Co-managed the company finances. Coordinated all domestic and international product shipments. Maintained inventory of all product assemblies and components. Managed travel schedules of the owner and director of operations.

Editorial Intern, *Nonprofit Quarterly*, Boston, MA — 2005-2007
Edited and fact-checked articles for national publication that reports on the management challenges of nonprofits. Contributed bylined article to online sponsor. Corresponded with artists and image libraries to secure rights to art for each issue. Created PDF reprints of the magazine's published articles and uploaded them to NPQ's e-commerce site.

Editorial Intern, *License! Global*, New York, NY — May-September 2007
Copyedited articles and wrote for two monthly features in a B2B publication covering the retail licensing industry: "Last Word," a back-page Q-&-A with a recently-hired licensing executive and "Who's News," a front-of-book section on the career changes of licensing professionals. Assisted with the production of daily mini-magazines distributed at the Licensing International Expo. Managed online database of recently-signed and available licensing opportunities.