CULTURAL MODELS OF FOOD AND SOCIAL NETWORKS AMONG MEXICAN IMMIGRANTS IN THE SOUTHEAST UNITED STATES

by

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ABSTRACT

This project used biocultural medical anthropology, cognitive anthropology, and social network analysis to examine the interrelationships among cultural knowledge, eating behaviors, and diabetes risk among a sample of Mexican immigrants in Alabama. Cultural domain analysis examined the cultural models of food among Blacks, Whites, and Mexicans (n = 81). A separate sample of Mexican immigrants (n = 50) participated in interviews about food beliefs and behaviors, migration, and social integration. A formal personal social network analysis was completed, as were anthropometric measurements and the collection of a whole blood sample from which to analyze percent hemoglobin A1c (HbA1c).

It was hypothesized that distinct cultural models of food would characterize the three ethnic groups. Increased social network interaction with Americans was expected to be positively correlated with Mexican immigrants’ competence and consonance in American cultural models of food. Finally, it was hypothesized that increased competence in American cultural models of food and increased social network interaction with Americans would negatively affect immigrants’ risk of diabetes.

Key distinctions were found among the three models, especially with regard to the salience of fruits and vegetables. Variation was evident in the competence in the cultural models of food along four dimensions of meaning—health, cost, convenience, and the desirability of foods. The personal social network analysis indicated that Mexicans were mainly interacting with White Americans, with varying frequency of interaction. The proportion of one’s network with which one shares meals was an important variable in this project, as it was associated with
competence in the American model of food. In the final logistic regression analysis, having an 
HbA1c percent above normal was predicted by competence with the White model of desirability 
that prefers unhealthier foods to fruits and vegetables as well as having at least one American 
alter with whom one shares meals on a weekly basis, controlling for age and moderate exercise. 
This project advocates for attention to social structural factors, cultural knowledge, and cultural 
consonance when examining the social production of health among immigrant groups in 
America.
LIST OF ABBREVIATIONS AND SYMBOLS

A1c / Hb A1c  Hemoglobin A1c, measured as a percent
BMI          Body Mass Index
CHP          Community Healthcare Providers
CSA          Community Supported Agriculture
F            Ratio of variances
LCG          Latino Community Group
MDS          Multidimensional Scaling Analysis
p            Probability of results or outcome
PROFIT       Property Fitting Analysis
r            Pearson product-moment correlation
rs           Spearman’s rho
SNA          Social Network Analysis
t            Computed value of t test
WC           Waist Circumference
WH           Waist-to-Hip
WHt          Waist-to-Height
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CHAPTER 1

INTRODUCTION

Immigrants in all countries must negotiate how they rectify issues of lifestyle, class, communication, and health in everyday life. These negotiations take place in many social venues—within the household, at the workplace, and at the dinner table. Sharing food is a culturally significant event that presents opportunities for the reinforcement and exchange of cultural knowledge. Partaking in a meal with someone involves the reflection upon relationships and the rules that govern them. The study of food sharing is informed by both material and interpretive approaches within anthropology—social structure is revealed and reified during mealtimes, which also serve as creative outlets for the fluid cultural construction of relationships.

This project addresses the process and negotiation of Mexican immigrants finding compañeros (companions) in Alabama, both in the literal sense and in the etymological sense—from the Latin: com (with) + panis (bread), one with whom you share bread.

This research seeks to determine how differential access to community social relations influences the ability of Mexican immigrants to incorporate on a cognitive level the knowledge and behavior of the community members in Tuscaloosa, Alabama, and how this process alters immigrant eating habits and health. The goal of this project was to systematically elicit and analyze the structure and degree of sharing of the cultural models of food of Mexican immigrants. These models were compared to the models of southern food in the same geographic locale. Analysis of the variation within and between the two groups using consensus analysis provided a measure for determining to what degree immigrant models of food may be
aligning with local Alabaman models. Actual food consumption was measured and compared to the cultural models of food using cultural consonance analysis. Measures of social network interaction with local community members in Alabama were used to explain the type of food model an immigrant was competent in and consonant with. Knowledge, belief, and social network interaction with Americans were linked to health outcomes, specifically diabetes risk.

It was hypothesized that distinct cultural models of food would characterize the three ethnic groups. Increased social network interaction with Americans was expected to be positively correlated with Mexican immigrants’ competence and consonance in American cultural models of food. Finally, it was hypothesized that increased competence in American cultural models of food and increased social network interaction with Americans would negatively affect immigrants’ risk of diabetes.

Diet, Culture Change, and Health

Research has suggested that culture change can have profound effects on diet. It is clear that Mexicans are bringing eating knowledge and practices of their own historical cuisine to the United States, but as many nutritional anthropology studies on diet and delocalization have shown, no immigrant cuisine can cross a border unscathed. Dietary changes among Mexican immigrants in the United States may increase the risk of chronic disease incidence among an already high-risk population. This research aims to determine the social and cultural factors that may influence dietary changes among Mexican immigrants in the southeast United States, with specific consideration given to fruit and vegetable consumption.

Theoretical Approach

Biocultural medical anthropologists seek to explore the human experience of disease and illness by exploring the relationship between biology and culture, under the assumption that
bodies are shaped by living in social, psychological, emotional, economic, political, and environmental realities (Goodman and Leatherman 1998). Medical anthropologists of the biocultural persuasion are concerned with how the mind and the body interact within the individual, and also, in a broader sense, with the relationship between the individual and the culture within which one resides. These relationships are important to this examination of food and health among international migrants.

In this study of how social network interaction affects cultural models of food and daily eating habits, intracultural diversity (Pelto and Pelto 1975) is addressed directly. Studying intracultural variation is facilitated by a theoretical orientation that uses a cognitive concept of culture and cultural models. Culture is theorized as both learned (internal) and shared (external) systems of knowledge (Goodenough 1981), and this definition addresses how local and meaningful knowledge affects the relationship between the individual and the cultural. This cognitive concept of culture can be used to account for variation in knowledge or expertise in a particular domain, and this is made possible by the testing of the distribution of cultural models through cultural consensus analysis (Romney et al. 1986). In addition, cultural consonance analysis (Dressler and Bindon 2000, Dressler et al. 2005a) allows a researcher to directly measure to what extent individual behavior matches the collectively shared cultural model. Cultural consonance has emerged as a sound tool for those researchers looking to bridge the gap between studies of thought and knowledge and studies of behavior and belief (Dressler et al. 2005b).

**Outline**

The next chapter describes the field of nutritional anthropology, and how it is informed by biocultural medical anthropology. Food systems research has been conducted by
anthropologists in many different contexts, and studies relevant to culture change, colonization, globalization, de-localization and migration are most relevant to this project. A brief explanation of debates about American foodways is presented, as well as a history of the development of Mexican cuisine. With the focus of this dissertation being on health outcomes, relevant literature regarding body composition and diabetes is also explained in this chapter. The chapter concludes with a discussion of acculturation research and proposes that the theory and methods used in this dissertation will aid researchers who aim to study culture change. Specifically, a cognitive concept of culture and social network analysis are used throughout this work.

The core concepts of social network analysis are presented in chapter three. Anthropology has concerned itself with the study of both whole and personal, or egocentric, social networks, and some early works that contributed to the field are described. Theoretical developments are also considered. Finally, a brief section on how social networks have been used by ethnographers closes out the chapter. Mexican immigrants’ social network interaction with Americans is the main independent variable in this dissertation.

Chapter four explores some of the literature regarding Mexican immigration to the United States. After a brief history of the complex relationships of Mexico and the United States, current trends and recent immigration discourse are discussed as being influential in Alabama’s political climate. The lives of both documented and undocumented immigrants are explored in terms of work, network formation, and social integration and settlement into a community.

The lives of immigrants who are living in Tuscaloosa, Alabama are framed in chapter five. Census data reveal that Latino immigration to the South is growing exponentially. Different aspects of immigrant life are presented, ranging from work and religion, to health care and community involvement. The food environment of Tuscaloosa is described in brief.
Chapter six reviews preliminary research results from a project conducted in Tuscaloosa on the negotiation of social identity in relation to food choice. Athletes, health-conscious individuals, and traditional southerners participated in interviews about health and tradition. This research was very influential in the development of the current project.

The procedures that were undertaken to address the hypotheses of this dissertation are explored in chapter seven. Three separate phases of research are described, as well as the data analysis methods that accompanied them.

Chapter eight presents in-depth descriptions of the lives of Mexican immigrants in Alabama. Specifically, their households, social integration, and food habits are discussed. Many quotes are presented that shed light upon their experiences in Tuscaloosa with work, with discrimination, and with acceptance. The participants talked about many aspects of food and eating with me, and quotes illustrate how food habits have changed and how they have remained the same since moving to Tuscaloosa. Two households with many structural similarities are presented as case studies, which illustrate the interrelationships between food and eating, work, social integration, and diabetes risk. Finally the chapter concludes with a discussion on how medical anthropology and the topic of embodiment can assist in understanding the relationships explored in this dissertation.

A sample of Americans was interviewed about their perceptions of Latinos in Tuscaloosa; the data from these respondents are the subject of chapter nine. The sample included members of the local Latino Community Group, as well as a set of health care providers from the community.

The second phase of the research is presented in chapter ten. Freelists and pile sorts were the primary method by which local knowledge about food was collected. Blacks, Whites, and
Mexicans participated in this phase. The structure and variability of cultural knowledge along four dimensions of meaning are explored. These four dimensions of meaning—health, cost, convenience, and desirability of foods—were salient to the participants to varying degrees. Multidimensional scaling was used on the unconstrained pile sort data, as was cluster analysis.

Chapter 11 explains how participant responses were analyzed and how they provide evidence for distinct cultural models of health, cost, convenience and desirability for Blacks, Whites, and Mexicans in Tuscaloosa. Key differences between the answer keys from cultural consensus analysis provide insight into the distinct food elements that define the three ethnic groups. PROFIT analysis was applied to the multidimensional scaling graphs, when appropriate.

The classic sociodemographic variables of the individuals in the third phase of the research project are presented in chapter 12, and the social networks of Mexican immigrant are described in chapter 13. Chapter 14 outlines the results from similar pile sorts and other cognitive tasks performed with a group of foods from the Black, White, and Mexican cultural models that were elaborated upon in chapters 10 and 11. Key differences in the model for the desirability of foods relate directly to the hypotheses of this project.

The interrelationships between social networks, cultural consonance, and diabetes risk are assessed in chapter 15. Specific hypothesis testing required that the focus of the data analysis be narrowed to the dimension of desirability, and food beliefs and behaviors of Mexican immigrants were found to be significantly associated with increased frequency of meal sharing with Americans in their social networks. Discussion and conclusions about this research project and how the results presented here can add to the development of theory and method within the discipline of anthropology comprise the final chapter of this dissertation.
CHAPTER 2
THE ANTHROPOLOGY OF FOOD, HEALTH, AND ACCULTURATION

Introduction

No one would dispute that eating food is a universal and meaningful human activity. Food-related behaviors are among the most socially patterned of human behaviors, and anthropologists have been studying foodways since the beginning of the discipline itself. Research on this topic has proved to be very fruitful, and anthropologists have learned about the variation in subsistence strategies with regard to the classification of food, preferences, availability and accessibility, distribution and sharing, changes in food habits, and the health consequences of diet. The study of human nutrition has also contributed to general knowledge about humans and the human experience. Anthropologists have been able to use studies of food and foodways to make conclusions about the ecological, symbolic, and social structural factors that contribute to how culture is organized (Messer 1984). Overall, the study of food has advanced anthropological theory and method, and as such has been an important development in the discipline as a whole (Mintz and DuBois 2002).

This chapter will examine a small fraction of the research that has been done with regard to food and how eating is understood to affect health, especially diabetes. The perspectives and approaches that have been taken by nutritional anthropologists, including a biocultural orientation, will be explored in relation to food and nutrition. Some case studies from nutritional anthropology will be used as examples, and there will be a focus on the understandings of American food as well as a discussion of the development and characteristics of Mexican
cuisine. The next section of the chapter will address general research on internal and external factors that influence food and culture change, especially prestige foods, and the processes of globalization and delocalization, which frame a discussion about the food habits of immigrants. Fruit and vegetable consumption is identified as an important variable in this research project, as it is closely tied to the risk of diabetes and obesity. Information about diabetes is presented, as well as a review of the studies done on the disease by anthropologists and public health researchers. Finally, a review of acculturation research as it has been applied to studies of food and diabetes is presented. The final section will highlight important debates about the use of acculturation, a discussion which will set up the progression of this dissertation. In short, it is argued that an understanding of the processes of culture change with regard to the eating habits of Latino immigrants is bolstered by the inclusion of cultural models in one’s research design. A more focused approach to the process of culture change, achieved through the examination of social networks as opposed to traditional measures of acculturation is also advocated. Once these measures are established (both cultural and structural), connections to health outcomes (like diabetes) can be made.

Biocultural Nutritional Anthropology

Scholars have been studying food and culture for over one hundred years. The earliest nutritional studies are outlined by Freedman (1977), who identifies research by Von Rechenberg in 1890 among Saxon weavers as being one of the first observational studies on diet. Other sociocultural studies of note are those of Goss, who studied the diets of low-income Spanish descendants in the American Southwest in 1897, and Atwater, whose research provided the first nutritional data on the American South in 1895. One of the first landmark anthropological investigations into food and foodways was done on Bantu society and economy by Richards.
(1932), who was trained as a social anthropologist under Malinowski. Richards’ (1939) next study focused specifically on the food habits among the Bemba in then-Northern Rhodesia. She was able to address the adequacy of the population’s nutritional intake, and tracked dietary changes as they related to seasonal availability and workloads, as well as negative feelings about reliance on agriculture (Richards 1977). Richards found that food events acted as a marker of social relationships in that society (Goody 1982). She was able to link larger-scale cultural change with changes in the eating habits of local women, demonstrating that the women took the brunt of these social changes that were happening—receiving less than adequate nutrition as a result. Kandel et al. (1980) consider Richards’ work to have strengthened and broadened the scope of nutritional anthropology, and she is considered to be a founding parent of nutritional anthropology. Richards’ conclusions about social relationships being played out through eating behaviors are applicable to the goals of this dissertation.

Much of the first nutritional work was being done in colonial settings (Ulijaszek and Strickland 1993), and was initiated with the intention to analyze and in some cases change the diets of native peoples. There are numerous case studies where food systems of those under colonial influence were altered, sometimes with deleterious outcomes on a population’s local economy, ecology, political life, and health (Freedman 1977). Eventually, scholars and governments began to recognize the utility of applying anthropology in colonial settings. In turn, through their fieldwork experiences, anthropologists began to understand the link between biology and culture, as well as the link between diet and health—interactions which are an important focus in past and present nutritional research.

Since Richards’ pioneering work using a functionalist approach, research on food and nutrition within anthropology has been studied with a number of different theoretical
orientations: structuralist (Lévi-Strauss 1965), materialist (Harris 1966, Harris 1997) and ecological (Jerome et al. 1980, Ulijaszek and Strickland 1993), symbolic or interpretive (Douglas 1966, Douglas 1982), and political-economic (Fitchen 1997, Franke 1987, Himmelgreen et al. 2000), to name a few. While all of these perspectives have merit when investigating food and culture, biocultural approaches have a particularly strong research agenda because of the ability to link biology and culture in both theory and method (Dressler 2005).

Biocultural anthropology has become more influential in physical and medical anthropology recently, especially since Goodman and Leatherman (1998) published a volume encouraging a discipline-wide synthesis between political-economic approaches and human adaptability approaches. Overall, the authors call to our attention the need to incorporate the effects of social life on biological processes.

A biocultural perspective in nutritional studies allows researchers to investigate more holistically how food is influenced by all sectors of society (Pelto et al. 2000), rather than just focusing on materialist or symbolic interpretations of human behavior. With this motivation to be as comprehensive as possible, biocultural anthropologists are able to integrate many theoretical perspectives when interpreting their data on food and eating (Goodman et al. 2000).

In order to explore food consumption as a result of both biology and culture, research hypotheses are formulated under the assumption that human bodies, behaviors, and ideas are shaped by living in social, psychological, emotional, economic, political, and environmental realities (Fieldhouse 1995).

**Anthropological Perspectives on Food Systems Research**

Pelto et al. (2000) have identified four general approaches to conducting research on food systems and nutrition. The first is the study of sociocultural processes on nutrition, where

Secondly, Pelto et al. (2000) classify some research on food as being concerned with nutritional conditions or health outcomes. Therefore, the study of food is being approached with attention to the social epidemiology of nutrition. Nutrient deficiencies and intake (Crooks 2003, Dixon et al. 2000, Neuhouser et al. 2004, Scrimshaw 2000), measures of growth (Bogin 2000, Martorell 2000), malnutrition (Chavez et al. 2000), obesity (Fitchen 1997, Ritenbaugh 1982), or diseases related to food consumption (Lieberman 2003, Lindenbaum 2001) are topics frequently studied with this research approach.

prescriptions (Douglas 1966, Laderman 1981, Simoons 1994), and knowledge and health (Smith et al. 2006). The theory and methodology of cognitive anthropology has been well matched with investigations into cultural knowledge of food and how knowledge affects eating habits. Researchers using cognitive theory and methods, such as Oths et al. (2003) and Newkirk et al. (2005), are in effect concerned with how the mind and the body interact within the individual, and also, in a broader sense, with the relationship between the individual and the culture within which one resides. This viewpoint is valuable when studying the biological yet culturally structured act of eating.

Lastly, Pelto et al. (2000) identify the fourth approach to nutritional studies as being focused on human adaptation. Anthropologists have studied how the food habits of a population have evolved over time, as well as how those food habits have influenced physical bodies, distributions of genetic traits, as well as behavior (see Stinson 1992 for a complete review). An understanding of the principles of human adaptation is important for biocultural research within medical anthropology and nutritional anthropology. Adaptation is defined as a process that bestows “relative benefit or necessity [which] can be applied to all levels of the biological and social hierarchies” (Mazess 1975:10). Adaptive changes can happen on multiple levels of the hierarchy, and a subsequent tenet of adaptation studies is that what is beneficial to one level may in fact be detrimental to another level. This tenet has gained support in part from research on the most significant nutritional adaptation in human history—the transition from hunting and gathering to agriculture in the Neolithic. Indeed, populations adopting agricultural subsistence techniques benefited at the expense of individual health (Cohen 1987, Cohen 1989). On a smaller scale, it has been found that food distribution patterns that provide more food for laboring adults in a large family may be an adaptive strategy that benefits the household as a
whole, but on an individual level, the household’s small children may suffer physical and functional consequences (Pelto et al. 1991).

Adaptation to the nutritional resources or stressors in the environment can mean genetic change, physiological change, or sociocultural change, and some classic case studies in nutritional anthropology have directly addressed these three responses. Dairying has been interpreted as a nutritional adaptation that resulted in genetic variation in lactose tolerance due to the presence or absence of lactase in the digestive system (Kretchmer 2000, Simoons 1973). Developmental plasticity in body size and small stature has been investigated as an adaptive response to nutritional deficiencies on the physiological level; this “small-but-healthy” hypothesis has been highly criticized by many biocultural medical anthropologists (Bogin 2000, Goodman and Leatherman 1998, Martorell 2000). Processing maize using an alkaline solution is a sociocultural adaptation that makes the niacin biologically more available during digestion, therefore reducing the risk of pellagra, and making maize an important agricultural staple in the cuisines of Mesoamerica (Katz et al. 2000, Bryant et al. 1985). Behavioral adaptation has been addressed in a study that evaluated caloric intake among four different socioeconomic classes in Brazil. The alcoholic beverages that favela dwellers consumed were explained as a coping mechanism for those individuals experiencing depressive symptoms (Dressler et al. 2004).

Biocultural research integrating genetic, physiological, and sociocultural adaptations has been done with regard to G6PD deficiency, fava bean consumption, and food taboos in Mediterranean populations and other populations suffering from malaria (Greene 1993, Katz 1987). However, more recent research has disassociated the taboos with fava bean consumption in populations with G6PD deficiency (Simoons 1998; Newkirk n.d.).
Cuisines and Culinary Cultures

Nutritional anthropologists have considered how people have adapted to foods, as well as how foods have been adapted to suit human nutritional needs in a particular environment—such as in the case where, over a long period of time, a culture group systematizes food knowledge and consumption behaviors into a cuisine. Any attempt to define the cuisine of a culture must take into account cultural knowledge and behavior, as well as biological needs, that contribute to food-related decisions; it is, therefore a truly biocultural endeavor. Many researchers have attempted to define cuisines, focusing on factors such as food preparation (Bogin 1991), as well as more inclusive definitions such as those by Rittenbaugh (1978) that consider the strategies and regulations for food distribution as well as the cognitive decision-making processes that lead to the distinction between food and non-food items. Farb and Armelagos (1980), using a biocultural, evolutionary, and adaptive perspective, identify four parts to a culture’s culinary traditions. To them, a cuisine consists of: the foods eaten; certain preparation methods; flavor principles (the herbs, spices, fruits, and vegetables, used singly or in combination in a predictable and patterned manner—see Rozin and Rozin 2007 for a detailed description); and rules for behavior during mealtimes. Fieldhouse (1995) elaborates upon their explanation of a cuisine and adds meal patterns and meal structures to the definition, an obvious nod to the work done by Douglas (1997). Fieldhouse defines a cuisine as “a style of cooking with distinctive foods, preparation methods, and techniques of eating” (1995:52).

Does the United States have a definable cuisine? Bogin (1991) and others (Anderson 2005) tentatively say yes, that there is a certain assortment of foods which can be called “American,” such as corn on the cob and hamburgers. Mintz (2002), however, disagrees and states that North America possesses a culinary culture but not a cuisine. The United States’
colonial history, large population, expansive and diverse environments, territorial expansion, immigration history, and high degree of geographical mobility lead Mintz to conclude that while regional cuisines might exist (e.g., Cajun and Pennsylvania Dutch), a national cuisine has not existed in our short history and does not exist now. He goes on to say that he does not have any optimism for a national cuisine developing in the future. Part of the reason for his argument stems from the continual influx of immigrants to our country, which has produced a group of second- and third-generation children. These individuals soon learn about the heavily promoted high status “American” foods such as soft drinks, snack foods, pizza, ice cream, and fast food, and they learn to eat them as well. However, Mintz reasons that eating these foods is merely a way to act out upper-class behaviors—that is, “people are becoming sociologically more alike, but it is really not clear that they are becoming culturally more alike” (2002:27).

Mintz goes on to say that there are foods and dishes from the regional cuisines that have the potential to tie American food habits together and form the basis of a national cuisine, and that these foods are in fact spreading throughout the country. However, he states that the legal rights to sell these food resources are being purchased by vendors who seek market exposure through commercialization and industrialization. The end result is the creation of a cheapened, dehydrated, or altered version of the original foodstuff—products which are not going to inspire any kind of culinary unity.

Americans take well to this constant development and innovation, as is evidenced by our supermarket spending habits (Nestle 2002, Nestle 2006). Of course there is also a relationship between our spending habits and the millions of dollars spent on advertising campaigns. Newly adopted foods are just as quickly forgotten when the latest trend hits the shelves. Mintz notes that in Europe, foods are also packaged and shared across regional boundaries, but they are not
as altered and marketed as they are here. Even if they were, Mintz suggests that the long-standing culinary in Europe traditions provide eaters with a standard by which to judge new foodstuffs, and that even in the presence of commercialization and persuasive advertising the trusted cuisines still guide eaters back to familiar foods. This statement can also be applied to other cuisines that have been identified around the world, including the food traditions found in Mexico. That is, it can be argued that certain traditional elements of Mexican cuisine persist, and that immigrants to the United States bring beliefs and behaviors about traditional Mexican food with them, in the form of culturally constructed (albeit variable) cultural models. The next section aims to review the history and characteristics of traditional Mexican cuisine. It is necessary to understand the origins of Mexican cuisine, in order to examine how changes such as colonialism and migration have affected it.

**The Staples of Indigenous Mexican Cuisine**

Scholars of Mexican foodways, while recognizing the long and complex history of Mexico, have made a distinction between the culinary traditions of the ancestors and descendants of the Aztec in the central Valley of Mexico and the ancestors and descendants of the Maya on the Yucatán Peninsula (Coe 1994, Pilcher 1998, Long-Solis and Vargas 2005). Of all of the groups to hold power in Mexico, the Mexica or Aztec culture was one of the most recent. That is, this was the group that Cortes and his army encountered in 1519. For this reason, and also because central Mexico is from where most immigrants to Alabama come, the central Mexican diet will be the focus of this section, and variation found in the foods of the Maya will be excluded from further discussion.

Before agriculture was developed in Mesoamerica (between 7500 and 5000 B.C.), the archaeological record shows that ancient Mexicans came to depend upon a diverse set of foods
and flavors such as amaranth, millet, maize, beans, chia seeds, avocados, turkey, turtles, rabbits, fish, shellfish, dogs, eggs, insects, squash, chile peppers, tomatillos, guava, jicama, yucca, cacti, wild greens, agave, plums, cherimoya and zapotes (fruits), blackberries, honey, spirulina algae, chocolate, and vanilla (Bryant *et al.* 1985, Coe 1994, Long-Solis and Vargas 2005, Pilcher 1998). After plant domestication began, wild food resources still made up an important part of the diet—it was not until 3500 B.C. that squash, maize, beans, and chiles were all being cultivated at the same time. The combination of foods that were feeding the people in 900 B.C. underwent few changes, and persisted until contact with Europeans in the 16th century (DeWalt 1983). The “holy trinity” of Mexican cooking has long been regarded as consisting of maize, beans, and squash. Coe (1994) remarks that this famous triad is a foreign invention, and eating these three foods alone was considered a culinary punishment by their native eaters unless chile peppers were present in the meal (Coe 1994, Wilson 1975). Chiles were a class-less food, being consumed by the elite and poor alike (Pilcher, 1998). Recent research by Baer (1998) in the northwestern state of Sonora has shown that flavoring with chile is used less than coriander or cilantro. Despite these regional variations, the Mexican diet as a whole can be characterized as consisting of maize, beans, and squash, along with the flavor principles of chiles, tomatoes, and lime (Rozin and Rozin 2007).

Corn products, and especially tortillas, are the basis of the Mexican diet and play a part in Mexican national identity (Pilcher 1998). Until the 1930s and 1940s the nutritional value of maize and tortillas was assumed to be inferior to wheat and wheat bread. After this was shown not to be the case, the relationship between Mexican identity and the consumption of corn tortillas grew stronger (Pilcher 2005). Around this same time, society-wide modernization and industrialization began to directly affect how tortillas were cooked and consumed, changing how
some Mexicans related to their food. Over time the processes of colonization and industrialization added wheat, rice, meat, fats, and sugar into the Mexican diet. Anthropological research on diets in Mexico as they exist after these changes took place has focused on food habits and how they have been influenced by household structure, economic factors, and class differences (Baer 1998, Baer and Madrigal 1993, DeWalt et al. 1980, Pelto 2000), changes in food production (DeWalt 1983, DeWalt 1986, Kaiser and Dewey 1991, Messer 1970) and tourism (Leatherman and Goodman 2005). Considering the rate of industrialization and globalization in the modern world, researching how foodways change is just as important as research on food traditions and markers of stability.

**Food and Culture Change**

Anthropologists have concerned themselves with understanding the motivations, processes, and consequences of culture change as long as they have been attempting to define culture itself. Anderson (2005) identifies ten cultural factors which can and have changed the foodways of the world. They are the environment, health and illness, economics, work dynamics, family and family work dynamics, politics, religion, status/role/class/prestige, fad and style, and permanent taste changes. He also mentions poverty and war as having particularly destabilizing effects on dietary habits. Factors that stimulate change in foodways can come from either internal or external sources (Fieldhouse 1995). Goody (2007) explores internal changes that have happened within certain cuisines of the world using social structural terms. He asserts that one way cuisines can change over time is with the intent to demarcate status and prestige between high and low classes. One characteristic of the high cuisines of the wealthy is a predilection towards foreign foods and spices. The continual renewal of elite identity could be maintained by the constant influx of new goods and knowledge into a high-class lifestyle,
something that the lower classes could not afford to emulate (Goody 2007). And if they could, the elite would respond by transferring their attention to something else in an attempt to reassert their distinction (Bourdieu 1984). The research on the cultural models of food among Brazilians has shown this effect: that over the period of about ten years, upper class groups reassessed the foods they considered to be prestigious (Newkirk et al. 2005, Oths et al. 2003).

Elite tastes in Mexico also focused on foreign food—French food, to be precise. Pilcher (1998) reports that at least fifteen high-class cookbooks were published in the nineteenth century, but that the recipes, albeit creolized with chile peppers, never reached middle- or lower-class tables. In fact, many middle-class women took to hand-writing their own cookbooks at this time (Coe 1994, Pilcher 1998). Mexican haute cuisine has only recently begun to recognize and use indigenous foods. In the 1940s huitlacoche (or cuitlacoche), a black fungus that grows on maize, became a high-status food. It had been considered a food source for thousands of years—an approximate translation of the Nahuatl word is “excrement of the gods.” In English it is simply called “corn smut.” A European-trained, but Mexican, gourmet chef reintroduced the food by preparing it inside French crepes with a béchamel sauce (Pilcher 2003). In the 1990s the fashionable nueva cocina mexicana brought huitlacoche to restaurants abroad, and it is now considered a luxury food with the corresponding luxury market prices. The changing tastes of the elite and the commodification of the indigenous ingredient within global markets have inspired culinary tourism into Mexico (Pilcher 2003). This process has also inspired debates as to the legitimacy of attempting to define authentic ethnic food, as well as the motives behind the quest for authenticity by global consumers (Abarca 2004, Heldke 2007, James 2007, Pilcher 2003).
Colonization, Globalization, De-localization

Foodways have been changing internally and have been subject to constant influence from neighbors, yet food systems remained relatively well balanced, independent, and self-sufficient until the 15th century. The external processes of exploration and colonization by Europeans altered the pace of these changes and the balance of independent self-sufficiency within food systems (Fieldhouse 1995, Franke 1987, Pelto and Pelto 2000), although the changes were not instantaneous. Bindon (1988) found three patterns associated with increased modernization of Samoans’ diets—increased variety in food consumption with emphasis on store-bought foods, a shift away from traditional foods, and a shift towards replacing some traditional foods (such as staples) with more processed foods. Mennell et al. (1992) recognize Goody’s (1982) discussion of colonialism, de-colonialism, and migration as being extremely important to studying the development of a world cuisine. After agriculture and colonization, Bryant et al. (1985) identify industrialization and globalization as revolutions that have affected foodways on a global and local scale (see Mintz 2006, Pilcher 2006, and Wilk 2006 for discussions about globalization).

Pelto and Pelto (2000), delineate the concept of delocalization and its causes, consequences, and implications for health around the world. They define delocalization as the “processes in which food varieties, production methods, and consumption patterns are disseminated throughout the world in an ever-increasing and intensifying network of socioeconomic and political interdependency” (2000:269). This process has changed many aspects of the world’s food systems in the past two hundred and fifty years, and is one important feature of the suite of processes known as industrialization, modernization, or globalization.
Evidence of delocalization is observable on the local level, and could include the loss of energy self-sufficiency or the inability to escape the consequences of market fluctuations outside of the local context. Effects of the widespread dissemination of foods can be seen in the present-day meat-eating habits of Mexicans, who before colonization had only turkey, dog, eggs, and chickens, but who now rely heavily on the introduced foods of beef, sheep, and especially pork (Pelto and Pelto 2000). An example of the expanding global network that has begun to take control of food production is the increased demand, consumption, and production of sugar. Sugar as a commodity has transformed local tastes worldwide, and has created a powerful global enterprise. Mintz (2006) reasons that it was not until the British acquired their taste for tea and sugar that the beginnings of any large-scale changes towards a world cuisine began to happen.

Delocalization of food products also gives rise to an imbalance between industrialized and non-industrialized nations, with the latter having access to fewer foods and food products. Popkin (2004) insists that the burden of these changes is falling on the poor. Nutritional and social consequences of this imbalance are mixed: changes in the amounts of different carbohydrates, proteins, and fats available to eat may result in an increase or decrease in the consumption of vitamins and minerals. Infectious and chronic disease rates have changed, as well as physical growth rates and the age of menarche among women. Overall, delocalization entails changes in local economies, environments, lifestyles, and ideas, changes that are for the most part irreversible. The end result is the dependency of certain populations upon capitalist countries and corporations (Pelto and Pelto 2000).

An essential aspect of delocalization has to do with the movement of individuals through migration to cities from rural areas, or migration to different countries or continents. These individuals bring with them their knowledge of food and food preferences, and in the attempt to
preserve their foodways (if they are able to) makes them available for the members of the host society to adopt as an ethnic cuisine option. Anderson (2005) explains that in the United States, Mexican and Chinese foodways are more resistant to change than the foodways of other ethnic groups. The popularity of their cuisines among the general public supports continuity in their foodways, according to Anderson. Additional reasons why foodways do not change within these groups include the constant influx of new immigrants “renewing” the community, and the fact that immigrants often create dense neighborhoods by living with members of the same ethnic group. Other immigrant groups that did not live in close-knit ethnic enclaves out of necessity may have been more likely to blend into American society and lose some of their distinctive eating habits. Finally, compared with other immigrant groups, the proximity of Mexicans in the United States to Mexico means (in theory) more repeated border crossings. This constant re-connection to the homeland is also thought to support the retention of food habits (Dewey et al. 1984).

However, no immigrant diet can survive without some modification, and these modifications and preservations are becoming important in the field of nutritional anthropology. Recalling the quote of Pelto et al. (2000) about long-standing food habits as necessarily being adaptive, it is important to keep in mind how alterations to culinary systems affect health outcomes. The next section examines how migration has been studied in relation to food choices and health.

**Migration and Immigration: Effects on Diet**

Variation and change in food habits among immigrants living in another country are obviously complex issues that deserve attention from anthropologists. Food habits are changing all over the world in industrialized and non-industrialized contexts, and an increased rate of
immigration means that cuisines, as knowledge systems, are coming into contact and are being constantly renegotiated. Wallerstein’s (1976) theories about world systems can easily be applied to cuisines—that is, where foods or food habits originate is less important than where the power centers are. Therefore America’s lack of a unified culinary tradition is no less powerful of a force upon immigrant groups like Mexicans who are largely at a disadvantage in this country. Immigrants will always retain knowledge of their lifestyles and cuisines and use food for the purpose of group distinction. Food choice can also be used in the attempt to forge or maintain social connections and renegotiate one’s status in a new environment. Both of these processes of preservation and modification (or continuity and change) taking place among immigrant groups in a complex society like the United States will likely result in measurable intracultural diversity in knowledge and behavior. My research seeks to understand how these two processes are affecting food habits and health outcomes on a local level.

The eating habits of Latino immigrants have been extensively studied, by anthropologists and other researchers who conduct independent research and by those who use the Hispanic Health and Nutrition Examination Survey (HHANES) data—the most extensive source of data from 16,000 Latinos living in seven states in the US (CDC 2011b). In public health research, different measures of acculturation are often used to explain dietary change, and trends include eating fewer fruits and vegetables, and consuming more fat, sugary drinks, and alcohol as one becomes more acculturated (Perez-Escamilla and Putnik 2007). However, research results are often contradictory in these studies and reviews; Ayala et al. (2008) found that acculturated Latinos eat less fruit, rice, beans, and sugary drinks, but that there was no relationship to the amount of fat consumed. Latinos in the US South, and in particular, the state of Mississippi, have also been studied in terms of dietary acculturation. Gray et al. (2005) did a multi-stage
study where they interviewed community members and Latinos in a focus group, finally conducting individual interviews with Latinas. Out of 18 participants in this phase, four were from Mexico. Overall, the researchers observed a variety of trends from participant responses: individuals ate more vegetables, pork, chicken, sweet potatoes, hamburgers, and pizza since moving to the United States, but less fruit, fish and seafood, bread, corn, and tortillas than when they were living in their home country. Many explanations for changes in diet were discussed, and they include constraints from working long hours at their jobs and that food in one’s home country was fresher, cheaper, and healthier. Another study (Castellanos et al. 2011) in Mississippi among Latinos found that depression among men predicted lower fruit and vegetable consumption.

For studies specifically focusing on Mexicans, a trend towards eating less fruits and vegetables has been found by a number of researchers. Chavez et al. (1994) report less produce consumed by Mexican women the longer they have resided in the United States. Dixon et al. (2000) examined the third National Health and Nutrition Examination Survey (NHANES III) data to compare people born in Mexico living in the United States and those of Mexican descent who were born in the United States. Being born in Mexico was associated with eating less fat and fewer desserts, as well as more fiber and vitamins, coming in the form of more fruit, vegetables, grains, and legumes when compared to those born in the United States. In addition, those born in Mexico but living in the United States reported eating more foods considered to be traditional than those born in the US. These foods included cornbread, tortillas, beans, and rice. Neuhouser et al. (2004) compared the fruit and vegetable consumption of Mexicans to non-Hispanic Whites in Washington State. Overall, Mexicans ate more fruits and vegetables than Whites, but further analysis revealed differences among the Mexican sample. Acculturation,
here defined using a scale that measured language use, ethnic self-identification, and birthplace, was used to differentiate the Mexicans in this study. Those considered to be highly acculturated to life in Washington State ate less produce than those who were less acculturated.

These results from public health research are somewhat informative, especially regarding the trends of decreased fruit and vegetable consumption among Mexicans. However, Latinos are a heterogeneous group, and considering them as one population ignores diverse factors that are related to food and eating, such as the distinct culinary systems of the nations of Latin America and the Caribbean. Acculturation is also poorly defined and variably applied in many of these studies (further discussion about the use of acculturation will appear at the end of this chapter).

In addition, Latino immigrants come to the United States for different reasons, including escaping dangerous political situations (Perez-Escamilla 2009). Therefore, the perception of Latinos as being “legitimate” political refugees by residents of the United States may affect their entire experience as an immigrant that is in stark contrast to the experiences of Mexicans who are largely viewed as “illegal aliens.”

Compared to the work of public health, research by anthropologists tends to be less general, more context-specific, and more attuned to defining culture and variables related to culture when trying to explain dietary change among Latinos and Mexicans. Himmelgreen et al. (2007) collected data on diets both before and after migration to south Florida. Columbian women comprised the majority of their sample of 18 individuals. Changes reported by the participants since moving to the US included eating more fast food and processed food, as well as sugar-laden beverages. Participants reported less physical activity, less time for food preparation, and weight gain, and considered the changes in their diet and lifestyle to be negatively impacting their overall health. Lifestyle changes that came about after migration to
the United States included those related to both social structure and social interaction, and were understood to be factors that constrained food choices.

Dewey et al. (1984) completed a research study among low-income migrant and non-migrant Mexican families in northern California. The researchers were interested in three factors of dietary change: change in the consumption of traditional Mexican foods such as tortillas and beans; the addition of new American foods such as more processed foods; and a change in the consumption of foods common to both Americans and Mexicans, such as meat, milk, fruits, and vegetables. It was not stated if any observational data from previous studies contributed to how these foods were classified as traditional, new, or basic. The researchers asked questions about these three factors to get self-reported directional data (but not quantitative data) on how food habits have changed. Food frequency data of children was also collected and analyzed. Overall, Dewey et al. found that traditional foods—especially tortillas and beans—were for the most part retained by both migrant and non-migrant families, but that decreased consumption was significantly related to higher education levels. Consuming more of both the common and the new American foods was reported, but more so within the non-migrant families. The retention of traditional foods and the increase in basic and new foods was due in part to the increased availability of these foods as well as increased financial resources which could be used to purchase these foods. These results about traditional and American food consumption are of relevance to this project.

Dewey et al. (1984) also concluded that the introduction of new foods was found to be influenced by the presence of bilingual children in the household. Additionally, the children from both the migrant and non-migrant groups were not eating adequate vegetables in their weekly diet, and the children were definitely not eating five servings of fruits and vegetables per
day overall. Migrant children consumed fruits and vegetables thirteen times in a week (eight fruits and five vegetables) and non-migrant children consumed fruits and vegetables ten times (seven fruits and three vegetables). Within the households, mothers reported buying foods that their children asked for, even though she had never eaten them. Similar findings of household food choices being in part driven by children who consume inadequate produce have been found among American families in Georgia (Brewis and Gartin 2006). While this current work will not be able to examine explicitly the role of children in the household as gatekeepers of food and new food knowledge and behavior, these results are relevant to my own research, especially since a preliminary project suggested that fruit and vegetable consumption among adults in Tuscaloosa was low.

American diets are characterized by inadequate fruit and vegetable consumption (Patterson et al. 1990), and recent research completed in the southeast United States has reported daily family consumption to be as little as 0.25 servings of fruits and vegetables in the main evening meals (Brewis and Gartin 2006). A diet with adequate fruit and vegetable consumption is essential for diabetes prevention and treatment, and for other diseases such as obesity, cancer, and heart disease (Heimendinger et al. 2001, Nestle 1999). Dietary changes resulting in a decline in produce consumption may have significant consequences for the health status of Latinos, as they are faced with increased chances of disease incidence, such as a two-fold increased risk of diabetes compared to Whites (Flegal et al. 1991). The next section of this chapter reviews diabetes and how it affects populations worldwide. Both genetic and environmental factors are understood to contribute to the risk of diabetes, and the link between food intake and diabetes is clear. Mexican populations in the United States are
disproportionately affected by diabetes, and it is therefore a central goal of this project to
investigate how cultural knowledge and social structure affect the risk of diabetes.

**Epidemiology of Diabetes**

Diabetes is now a worldwide epidemic, with 346 million people being estimated to have
the disease. Ninety percent of these people have Type 2 diabetes (WHO 2011c). Over 25
million people in the United States (8.3% of the population) have diabetes, and it is estimated
that 7 million of those are undiagnosed cases. Between 2005 and 2008 it was estimated that
approximately 35% of adults over 20 years of age were “prediabetic,” based on fasting blood
glucose tests and/or tests of percent hemoglobin A1c (Hb A1c). Age-adjusted estimates show
that almost 12 percent of Hispanics in the US are diabetic, with 13 percent of those from Mexico
being diagnosed with the disease (CDC 2011a). Mexicans in the United States are almost twice
as likely to have received a diabetes diagnosis from a physician compared to White (non-
States have been found to have a 36% higher prevalence of diabetes than Mexicans in Mexico
(Stern et al. 1992). Complications from diabetes are more severe for Mexicans in the US than
for Whites especially with regard to higher rates of end-stage renal disease (US Office of
Minority Health 2010a). Sanjur (1995: 215) states that researchers have found many
explanations for this increased severity, including no medical care or lack of compliance with
medical advice, as well as genetic reasons.

**Biology of Diabetes**

This section provides an overview of diabetes mellitus, focusing on type 2 diabetes.
After a brief description of the disease, its causes, the diagnostic criteria using measures of blood
glucose and the recently approved (WHO 2011a) measure of hemoglobin A1c will be discussed.
Diabetes, a worldwide health epidemic, is a set of metabolic disorders that results from hyperglycemia. According to the World Health Organization (2006:5), “[i]t is associated with reduced life expectancy, significant morbidity due to specific diabetes related microvascular complications, increased risk of macrovascular complications (ischaemic heart disease, stroke and peripheral vascular disease), and diminished quality of life.” Diabetes can result from the absence of insulin in the body (type 1 diabetes), resistance to insulin (type 2 diabetes), or both conditions at the same time (ADA 2010a:S62). Gestational diabetes (GDM), experienced during pregnancy, is usually a short-lived condition that is reversed in the post-partum period, but one that may put both the mother and infant at increased risk for incidence of diabetes later in life. Diabetes can be caused by a number of genetic, environmental, and behavioral factors. Type 2 diabetes accounts for 90-95% of all cases in the world. Risk factors for developing type 2 diabetes include age, obesity and increased visceral adiposity, decreased physical activity, past GDM, hypertension, lipid abnormalities, and genetics.

Insulin is the hormone excreted from the pancreas in response to elevated glucose entering the bloodstream. Insulin enables cells to be receptive to glucose in the bloodstream, and also is the catalyst for the process of glucose storage (as glycogen) for later energy needs. One of the effects of hyperglycemia and either insufficient insulin secretion, insulin resistance, or both, is an increase in glycated hemoglobin, or glycohemoglobin. Hemoglobin variant A1c (others include A1a and A1b) comprises two-thirds of the hemoglobin in the blood, making it the easiest variant to measure. Hemoglobin that has glucose attached to it is prevented from effectively delivering oxygen to the cells in the body. In the normal, non-diabetic population, blood is made up of about 3.9—6.5% glycohemoglobin, but the presence of excess glucose in the blood can raise A1c levels higher—up to 20% in people with severely uncontrolled diabetes
mellitus. Diabetic individuals are encouraged to lower their A1c as close to the normal level of 6.0% without experiencing hypoglycemia, and well-controlled diabetics have ranges between 6.0 and 9.0% (WHO 2006).

Diagnostic criteria for establishing both high risk for developing diabetes (also called “prediabetes”) and for the incidence of diabetes itself has been amended over time (see current recommendations in Table X.x). Testing whole blood is the standard procedure, but recent efforts have been made towards validating non-invasive procedures such as testing one’s breath (Dillon et al. 2009). Before 2009, the ADA and the WHO recommended that health professionals perform either a fasting plasma glucose test (FPG; where food intake is restricted for eight hours before blood is drawn), or an oral glucose tolerance test (OGTT; where a glucose challenge of 75 grams of glucose is given to the individual before blood is drawn), which measure impaired fasting glucose (IFG) and impaired glucose tolerance (IGT), respectively. In 2009, the International Expert Committee reported on establishing Hb A1c as a diagnostic measure, with a cut point of >=6.5% (WHO 2011a). The committee remarked that individuals with an A1c percentage between 6.0 and 6.5 were at notably high risk levels for developing the disease, but did not set these values as cut points for prediabetes. Later research by the ADA (2010b) proposed a range of 5.7% to 6.4% as one in which people could be considered to be at high risk for diabetes and be labeled as prediabetic. A test of whole blood to measure Hb A1c was used in the final phase of this project. These cut off points in Table 2.1 were adopted to describe the characteristics of the sample (see chapter 12).

<table>
<thead>
<tr>
<th>Table 2.1: Cut points for high risk and diabetes incidence</th>
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<tbody>
<tr>
<td>High risk / Pre-diabetic</td>
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<tr>
<td>----------------------------</td>
</tr>
<tr>
<td>Fasting Plasma Glucose (FPG) mmol/l (mg/dl)</td>
</tr>
<tr>
<td>2-h PG in the 75 g OGTT mmol/l (mg/dl)</td>
</tr>
<tr>
<td>Hemoglobin A1c (%)</td>
</tr>
</tbody>
</table>

The percent Hb A1c in one’s blood can be affected by genetic variants of hemoglobin, persistent anemia, and diseases like malaria where blood cells have frequent turnover due to a shorter life span. Despite these potential drawbacks, using A1c as a diagnostic measure has a number of benefits, namely that individuals are not charged with altering their eating habits before visiting a clinic or doctor’s office, nor are they subjected to ingesting a large amount of glucose, which can have harmful effects (WHO 2011a ). As A1c is a longitudinal measure of glucose control over a period of 8 to 12 weeks, it gives a clearer picture of individuals’ insulin resistance than taking a measure at one point in time, making it an important addition to the toolkit of health care providers around the world.

Mexicans in the United States are a population of immigrants that are subject to conditions that may accelerate the development of type 2 diabetes if predisposed to the disease, conditions which may exacerbate the severity of the disease as it progresses. These conditions are economic, stemming from factors related to types of employment, and from low wages earned relative to what Americans earn for the same work. These conditions may cause stress due to discrimination, changes in daily physical activity and diet, and limited use of the American health care system. Additionally, while many immigrants may fall into pre-existing social networks or form new networks after immigrating, it is likely that crossing the border puts many family and friends who may provide financial and emotional support out of reach in times of need. Finally, cultural beliefs and behaviors may also affect diabetes risk among immigrants. The next section briefly describes the work done within anthropology on Latino populations and diabetes.
Anthropology and Diabetes

Lieberman (2004) identifies four main types of research on diabetes among anthropologists: 1) biological and genetic aspects of diabetes, 2) lifestyle influences including diet, 3) explanatory models of the illness, and 4) treatment—both self-care and via patient-practitioner interactions. These research topics have been combined when explaining diabetes among populations around the world. Genetic explanations for diabetes have come from ideas about the thrifty genotype (Neel 1962), modifications of the thrifty genotype for Samoan populations (Bindon and Baker 1997), and the thrifty phenotype (Hales and Barker 2001). Other biological research about diabetes often examines co-morbidity, such as with cardiovascular disease (Joos et al 1984), susto (Poss and Jezewski 2002), obesity (Popkin 2001), depression (Cabassa et al. 2008, Cherrington et al. 2006), and stress (Schoenberg 2005). Lifestyle and diet have been examined by Garcia de Alba Garcia et al. (2007), Savoca et al. (2001), and Stern et al. (1992), where one’s behaviors and beliefs are understood to be part of the environment in which diabetes care is negotiated. Explanatory models about diabetes causation and characteristics have received attention by researchers (Hunt et al. 1998, Daniulaityte 2004, Nudelman 1994, Schwab et al. 1994, Weiner 2001, Weller and Baer 2001, and Weller et al. 1999), and the use of cognitive anthropological methods have been well-suited in the study of intracultural variation in belief. Treatment, whether it is self-care (Garcia de Alba Garcia et al. 2007), or via interaction with a health care practitioner (Loewe 2000) has also been studied. Common themes in public health research revolve around interventions to promote behaviors aligned with biomedical models of diabetes care (Cleghorn et al. 2004). The contributions of social structural inequalities have also been investigated with regard to diabetes and diabetes control (Dressler et al. 1996, Scheder 1988).
Acculturation Explanations

Acculturation has been used as an explanation for both dietary change and diabetes among Mexican immigrants in the United States (Chavez et al. 1994, Dixon et al. 2000, Harley and Eskenazi 2006, Neuhouser et al. 2004, Pérez-Escamilla et al. 2001, Perez-Escamilla and Putnik 2007) and for a number of other health outcomes (Kaplan and Marks 1990, Kaplan et al. 2004, Sundquist and Winkleby 2000). The concept of acculturation has been used since at least 1880 (Hunt et al. 2004, Reichman 2006), and was developed in part to address the post-colonial experiences of Native Americans. There have been a number of definitions and revisions of these definitions since the 1930s, when the Social Science Research Council (SSRC) became interested in formalizing a definition of acculturation (Waldram 2009). The most often used definition is of Redfield et al.: “Acculturation comprehends those phenomena which result when groups of individuals having different cultures come into continuous first-hand contact, with subsequent changes in the original culture patterns of either or both groups” (1936:149). By the 1960s, interest in the concept had begun to wane within the discipline of anthropology, and by the 1980s very few anthropologists were using the concept in their articles (Hunt et al. 2004, Waldram 2009).

However, in the 1960s epidemiologists adopted acculturation as a way to explain health outcomes, and Chirkov (2009) suggests that current researchers seem determined to make acculturation measures work despite problems with both theory and method. The vast literature on acculturation measures suggests that this may be true (Waldram 2009). These debates center around a number of different themes such as understanding change among groups versus individuals, and change as being linear or nonlinear and unidimensional or multidimensional (Reichman 2004, Berry 2009, Chirkov 2009, Ryder et al. 2000). All of these developments are
proposed with the goal of better describing the behavioral, affective, and cognitive traits of acculturation, as well as the context and health effects of becoming acculturated (Reichman 2004). Scales have been developed that combine many traits that are hypothesized to change towards a mainstream or dominant cultural norm, and some have been developed specifically for Mexicans (Burnam et al. 1987). The Acculturation Rating Scale for Mexican Americans (Cuellar et al. 1995, 2000) is a scale that is widely used in acculturation research.

Hunt et al. (2004) contend that these developments among acculturation researchers have succeeded in making the concept more complex and the measurements more complicated, but that these efforts have not led to a better understanding of the concept or its effects on populations such as immigrants to another country. While criticisms of acculturation have been ongoing, the article by Hunt et al. (2004) organizes these critiques into a persuasive argument that acculturation measures should be abandoned until the problems have been rectified. Overall, the authors point to a lack of consistency in defining culture, culture groups, acculturation, as well as lack of focus on how culture change actually happens.

The issues Hunt et al. (2004) take with acculturation research are both theoretical and methodological. They summarized definitions of acculturation found in the literature (literature review being their primary data analysis method) and acknowledge that acculturation is often defined using four parts: 1) cultural difference, 2) identifiable groups, 3) cultural contact, and 4) cultural change. Each of these parts will be discussed below.

Cultural difference between two or more groups is an assumption that acculturation researchers cannot afford to make, according to Hunt et al. (2004). They contend that cultural traits must be measured for both groups in the acculturation equation, and that assumptions about cultural homogeneity are dangerous. That is, intracultural variation does make social science
research more challenging, but the difficulties encountered cannot be ignored entirely.

Furthermore, they argue that classifying one group as being “mainstream” and another as being “traditional” should be avoided. Finally, traits that are normally associated with a culture group—such as machismo or familismo with Mexican populations—need to be empirically evaluated instead of assigned to a person or group after simply determining their nationality.

Cultural sharing is also assumed to happen among bounded, identifiable groups. This approach is problematic to Hunt et al. (2004) for the same reasons that anthropologists have been advocating for the use of ethnicity rather than race as the marker that best identifies differences between and among groups (Chapman and Berggren 2005, Crews and Bindon 1991, Dressler, Oths, and Gravlee 2005). In addition, using blanket terms like “Hispanic” to refer to all Spanish-speaking groups in the United States ignores vast cultural differences among immigrants. The term Hispanic refers to having a history influenced by Spanish colonizers. Equating one’s identity with nationality is also risky; for example Mexico is comprised of many indigenous groups, with over 68 languages being spoken between its borders. In short, attention to cultural diversity is necessary in order to have a full understanding of the processes and properties of acculturation.

Thirdly, Hunt et al. (2004) identify problems with assuming that contact is taking place between culture groups, and specifically that contact between the groups has not happened before. The relations between the United States and Mexico are particularly pertinent to this point; individuals and institutions in these two countries have been continuously interacting since colonial times, and the economic, intellectual, artistic sharing has shaped the histories of both nations (Delpar 1992). When the United States acquired new territory after the Treaty of Guadalupe Hidalgo in 1848 and after the Gadsden Purchase in 1853, it also acquired new
citizens of Mexican descent. This contact between the people of the United States and Mexico is another reason why cultural traits of two assumed, bounded groups need to be elaborated carefully, especially in areas along the border where a large majority of the descendants of people living in the American Southwest at the time of this land acquisition are currently residing. Border crossings have happened at varying frequencies throughout history as well, further compounding the problems of assuming the nature of culture contact.

The nature of culture change itself is also challenged by Hunt et al. (2004). They assert that to legitimately document change, longitudinal data need to be collected. That is, without measurement of the “traditional” or “original” culture, then changes as they occur from hypothesized culture contact cannot be discovered.

The methodological problems that Hunt et al. (2004) summarize mainly stem from the use of a variety of proxy variables to measure acculturation. Just as they lament that an understanding of culture tends to be operationalized as and reduced to acculturation status, the use of a select few variables to represent (and reduce) acculturation status is problematic. These variables include language ability, ethnic self-identification, birthplace, current residency, as well as knowledge of historic events in the “host culture,” and one’s identification with particular family values or gender roles which are assumed to be part of one culture group or another.

Concerning the interpretation of results from acculturation studies, the authors note the overall trend of viewing acculturation as both negative and positive, depending on one’s research hypotheses. That is, acculturation researchers seem to want to have their cake and eat it too—low acculturation is interpreted as being protective towards one’s health (because one holds onto “traditional” family values, for example), while the same situation of low acculturation is interpreted as being harmful to one’s health (due to less compliance with biomedical advice, for
example). Finally, a larger issue plagues Hunt et al. (2004); an overemphasis on minority groups and their “traditional” or “folk” knowledge and lack of attention to the sociocultural contexts like poverty, social class, and education opportunities.

Many have acknowledged the criticisms presented above (Becker et al. 2010, Landrine 2004, Lopez-Class et al. 2011, Viruell-Fuentes 2007). Some researchers mention the problems that Hunt et al. (2004) bring up only in passing as a limitation or as an acknowledgement, while others have taken the criticisms of the concept more seriously. A few anthropologists have used the concept of acculturation recently (Patil et al. 2009, Hadley et al. 2007), doing so within public health journals.

I concur with Hunt et al. (2004) that a shift away from acculturation as the explanation for health outcomes and health disparities will not happen any time soon. The allure of the concept as a whole is strong, but without sufficient theoretical development of the concept and the rigorous application of specific definitions of culture, culture groups, and acculturation, the efforts to improve upon scales and measures are at best, misguided, and at worst, harmful to those populations being studied. Hunt et al. (2004:978) conclude that “one is continually struck by the juxtaposition of careful psychometric measurements on the one hand, and such free-wheeling meanderings about the supposed effect of unexamined cultural traits, on the other.” They offer suggestions to address the points summarized above, but call for a suspension on the use of acculturation due to their view that sufficient methods to measure cultural variation and culture contact do not exist.

My answer to this suggestion of Hunt et al. (2004) to forgo any further research on culture change includes a theoretical and methodological proposal that addresses the definition of culture, cultural traits and intracultural variation, structural factors, as well as an examination of
the means or the process of culture change as it occurs through intercultural communication. While this is a cross-sectional study and therefore does not truly address culture change as it happens over time, these methods will contribute to an understanding of the topics discussed in this chapter. Specifically, a cognitive concept of culture, the elaboration of cultural traits using cultural consensus analysis, examining the lives of people through participant observation, as well as a detailed analysis of the social networks that may expose immigrants to new cultural knowledge attend to many of the suggestions that Hunt et al. (2004) expound upon in their concluding remarks.

Conclusion

This chapter reviewed the topics of food and culture, the relationships between food and health, and between migration and dietary change. Dietary change is understood to be a potential risk factor for Mexicans, given their increased risk for diabetes. Cut-points for determining prediabetes and diabetes were established. Anthropological research on diabetes was described briefly, and the concept of acculturation was critiqued, following the work of Hunt et al. (2004).

While I agree with Hunt et al. (2004) that culture cannot be a catch-all explanatory factor to understand how behavior, affect, and cognition change over time, we disagree that no methods exist to address these processes. The use of cognitive anthropology theory, cultural consensus modeling, and social network analysis are key steps forward in the examination of immigrant knowledge, behavior, and health in the United States. The next chapter outlines the history, characteristics, and uses of social networks, which are hypothesized in this research project to be the means through which knowledge about food and foodways in the southeastern United States are passed to Mexican immigrants.
CHAPTER 3
SOCIAL CONNECTIONS: ANTHROPOLOGY AND SOCIAL NETWORK ANALYSIS

Introduction

The social environment and social influence on individuals are vital topics of study within anthropology and other social sciences. One’s social environment is understood as affecting access to material and social resources, both of which influence behavior, knowledge, and health outcomes (Berkman et al. 2000). Durkheim (1951), in his classic and widely influential study, used familial, political, economic, and religious factors to explain the relationship between social integration and variation in suicide rates. Other seminal studies on social integration and health outcomes have been of use to medical anthropology, such as in the work of Cassel et al. and Scotch. Cassel et al. (1960) studied individuals in the Appalachians where people moved from a rural to an urban setting. Among people who were highly integrated in their formal rural settings and had moved to the city, he found less evidence of stress, indicating that they were able to become culturally integrated, and move beyond their previous understandings of how to live life. This was in comparison to those individuals who tried to retain their previous knowledge and behavior in a novel setting, becoming culturally incongruent and as a result, more susceptible to stress and disease. Similar findings were reported by Scotch (1963) among the Zulu. He considered humans to be biopsychosocial individuals who have patterned adaptive capabilities. Rapid cultural change meant that recent arrivals reported more symptoms of stress.
All of these studies successfully used a range of variables as proxy measures of social influence and the social environment, but proponents of a social network perspective have argued for more detailed data collection methods which they believe will better explain variance in human behavior and health outcomes (Berkman et al. 2000, Cassel 1976, McCarty 2004). Recent efforts (Berkman et al. 2000) to clarify measurements of social ties, social activity, social integration, and social support under the umbrella of a social networks perspective have led to a more holistic and promising model for how researchers study human ties and relationships.

This chapter has several aims. First, some basic assumptions and core concepts of a social networks perspective will be explored. Early work in anthropology that used and developed concepts of social networks and how to analyze them will then be considered. These concepts will be reviewed in a short history of social networks and how knowledge about ego’s alters, or one’s social associates, have been used in relation to anthropological data. The development and application of social network theory is the focus of the following section. A recent model of Berkman et al. (2000) is reviewed as it offers improvements to the network perspective. Finally, the chapter will summarize and evaluate some ethnographic research that has used a social networks approach. Personal networks and the construction of network profiles will be the overall focus of this chapter, as they pertain to the hypotheses of this dissertation.

**Core Assumptions and Concepts**

Social networks can be understood initially by noting some basic assumptions made by network researchers. Wasserman and Faust (1994:4) cited four essential points as being fundamental to using a network perspective. They have declared that:

- Actors and their actions are viewed as interdependent rather than independent, autonomous units
- Relational ties (linkages) between actors are channels for transfer or “flow” of resources (either material or nonmaterial)
Network models focusing on individuals view the network structural environment as providing opportunities for or constraints on individual action. Network models conceptualize structure (social, economic, political, and so forth) as lasting patterns of relations among actors.

They also explained how network structure, as well as the relational attributes of a network, are assumed to have an effect on the functioning of the group and on group members (Wasserman and Faust 1994). In personal networks, it is possible to use summaries of network composition as descriptive characteristics or attributes of an individual, which can then be used as independent variables to test hypotheses (McCarty and Bernard 2003). In this case individuals take a more central role in an analysis which assumes that, to some extent, “you are who you know.” Finally, most network analysts agree upon using empirical data and the scientific method. Social networks have been used as a general metaphor to explain observations, but most researchers argue that the perspective is better put to use by formally and analytically testing hypotheses (Johnson 1994).

An analysis of the structure and composition of social networks as well as the resources that flow through them is, as Mitchell states rather simply and effectively, “one way of understanding behavior” (1974:279). There are two distinct types of network analysis, the study of whole networks and the study of personal networks (Johnson 1994). Research on total personal networks is rare (however, see McCarty et al. 1997). Whole and personal networks have been defined respectively as “a finite set or sets of actors and the relation or relations defined on them” (Wasserman and Faust 1994:20) and as “the web of social relationships that surround an individual and the characteristics of those ties” (Berkman et al. 2000). Both approaches, as they can study relationships and the effects of those relationships on behavior and health, have made social network theory and methods increasingly appealing to anthropologists and other social scientists over the past sixty years (Wasserman and Faust 1994:3). In this
project, I was concerned with measuring the ties that Mexicans have to Americans in Tuscaloosa through their personal social networks.

Within whole networks, attention is given to how a group functions or interacts; research questions center around either the relations or the structure of a bounded social environment. Personal, or ego-centered, networks focus on how the alters of an individual affect one’s attitudes, behaviors, or other circumstances (McCarty 2007). Since the individuals at the center (the egos) of the networks studied do not necessarily have ties to each other, the investigation is considered to be quasi-relational (Johnson 1994). Research questions address either network profiles or estimates of the size of ego networks. While much research has been done on estimating network size (Bernard et al. 1990, Killworth et al. 1990, McCarty et al. 2001), the goal of this project was to collect personal network profiles and evaluate how characteristics of one’s social environment affect knowledge, behavior, and health.

A network is characteristically defined or described by two features: its attributes, or summaries of the characteristics of network members, and its structure, or the summaries of the ties among individuals. Many of these concepts were developed in relation to network visualization on computers; these programs have furthered the development of social network analysis (Johnson 1994). Networks can be visualized by using a number of computer programs such as EgoNet, UCInet, NetDraw, and Mage. Since this project is concerned with personal networks, only those concepts necessary to conduct an ego-centered analysis will be considered here. Terms relevant to whole or complete network analysis are described in detail in Wasserman and Faust’s (1994) volume.

Related to network structure, the size of a personal network is simply the number of ties or connections between ego, the central person of interest, and the alters of ego. Alters are the
individuals in ego’s social network. Density evaluates the degree of connection among ego’s alters. Network members can be more or less homogeneous, or homophilous, if alters share similar features such as social class or neighborhood of residence. Some researchers have suggested that people tend to have homophilous networks—that is, like begets like.

The composition of a social network can be measured by considering an alter’s relationship or social role to ego. These kinds of links or relations can be defined by any kind of relationship that pairs of actors might have, such as kin, economic, social support, interactional, or affective (Wasserman and Faust 1994:3-8). The type of support given to ego (social, emotional, material, informational) is also an important composition of social networks, as is the measure of multiplexity or uniplexity. Multiplex ties link two individuals in more than one social context, while uniplex ties are links between two people in only one setting or manner. These multiplex and uniplex ties can be evaluated in terms of their strength (Granovetter 1973), with strength and weakness being measured using a scale of one to five. Avenarius (2002) asserts that the more multiplex one’s network is, the more constraining that network is in terms of how many opportunities an individual has to expand their network or come across information in social settings. Frequency and duration of interaction can also be quantified among pairs of individuals (Avenarius 2002, Berkman et al. 2000, Wasserman and Faust 1994). Horizontal and vertical ties also characterize network relations. Individuals can have ties with people who are of the same social status (horizontal) or with those who have a status either higher or lower than themselves (vertical).

Measuring strength and weakness, homophily, and multiplexity of network ties are methodological tools that assist researchers in evaluating how network structure and composition affect ego. These concepts have also been considered to be theoretical elements of the social
network perspective, which will be discussed in more detail below. First however, it is useful to consider how anthropology has contributed to a network perspective.

**History and Early Works in Anthropology**

The coming of age of social network theory and analysis is truly a multidisciplinary endeavor, due to how and by whom the general concepts and methods were developed. Anthropology, sociology, social epidemiology, social psychology, as well as mathematics have contributed to the understanding, application, and methodology of social networks and their analysis. The foundations of network analysis in anthropology can be found in the structural-functional and functional work of Radcliffe-Brown and Malinowski. Radcliffe-Brown (1952) linked the study of physical structures in the natural world with the social structures of human beings and believed that a community functions by enacting its social structure. While Radcliffe-Brown studied collective social structure in Africa and the Andaman Islands, Malinowski (1922) focused on how an individual’s needs were met by social institutions in the Pacific. Social network analysis can address both research agendas—either the entire makeup of a group with the analysis of whole networks, or it can give closer scrutiny to individuals with regard to the context of their personal networks, using an ego-centered approach.

Mitchell (1974:280) suggests that the momentum towards a more formal social network analysis in anthropology came about partly because researchers experienced difficulties with the methods and interpretive tools used by Radcliffe-Brown and Malinowski. The use of traditional social categories such as kin groups, tribes, or villages—while well-suited for smaller societies with a more straightforward social organization—were not as useful in larger-scale and urban settings with a more complex social organization. In these cases, researchers struggled to explain significant social ties that cross-cut these groups (Berkman et al. 2000).
Whitten and Wolfe (1973) explain that there were two responses to these perceived difficulties. Some researchers attempted to redefine aspects of the functional paradigm, while others went on to shift their focus and develop different perspectives. The latter group’s response resulted in the development of transaction theories, as well as social exchange and action theory approaches (Mitchell 1974). The transaction theories in particular examined dyads, patron-client, and brokerage relationships. On an individual and group level, Wolf’s (1966) work in Mexico expanded upon Foster's (2002) dyadic contract to include the analysis of polyadic group relations—those among more than two people. These social ties were found to be horizontal or vertical in nature, and could serve to address one purpose or more than one purpose. Overall, Wolf was interested in both the formal relationships like *compadrazgo* (co-parenthood) dyads (Mintz and Wolf 1967) as well as informal polyadic groups that function outside of formal political or economic systems (Hewitt de Alcántara 1984).

Johnson (1994:115) asserts that all of these developments advanced the network approach and spurred additional clarification of social network concepts. At this time, as in many periods of paradigm shift, the resultant social network approach complimented rather than replaced the dominant theoretical orientation. Indeed, network analysis, as it investigates social structure and the daily enactment of social organization, has implemented core features of functionalism and structural-functionalism, and allowed for social ties to be operationalized in larger-scale context (Berkman et al. 2000).

The concepts and analysis of social networks were almost simultaneously developed in a variety of academic and field work settings throughout the 1950s and 1960s (Mitchell 1974). Social networks have been defined and applied differently by researchers and scholars in various disciplines depending on the research context and the research questions being addressed. In
anthropology, and particularly British social anthropology, the first work on social networks centered around families and their networks. The term social network was first coined by an anthropologist (Barnes 1954). In his work on Norwegian families, Barnes elevated the concept from a metaphorical and general understanding that social relations have an effect on society to an analytical and formal understanding that behavior can be correlated with network structure (Mitchell 1974).

Barnes conducted his research on a Norwegian island, and identified three types of social groups that organized the parish. He could easily classify and analyze the first two groups as existing because of geographical distance and work-based reasons. The third type of social group, deserving a more detailed definition and analysis, consisted of a varying overlapping assemblage of individual personal networks. He defined a network as “a system of social relations through which many individuals carry on certain activities which are only indirectly coordinated with one another” (1954:49). One’s network was described as being boundless and composed of individual’s kin, friends, neighbors, and acquaintances, some of whom are ascribed and some of whom are chosen. Barnes stated that people consider themselves to be the center of their social group, and that social ties are more likely to occur between people with similar social characteristics, such as between individuals of the same social class.

Bott (1957) studied twenty London families and examined nuclear family relations and their larger network. An anthropologist, she and others on her interdisciplinary team looked for patterns in social class status, length of time a couple had been married, proximity of kin, and length of residence. She found that the working-class couples were more likely to have “segregated” relationships in the domestic sphere, while higher class couples had “joint” role relationships, sharing tasks and time together more often. In addition, these role patterns
correlated with the connectedness (or density) of the family’s social network. She noted the existence of both positive and negative effects of dense networks on relationships between wives and husbands. This conclusion is important because it recognizes the complexity of social relations. That is, not all relationships can be considered positive social support that benefits an individual.

Finally, Bott examined how social norms and personal norms were formulated, validated, and reproduced depending on one’s family relationships and extended network. She concluded that in close-knit networks, individuals rely on each other for “norm validation,” but loose-knit groups employ less concrete and socially distant groups as a reference point for validation. Gluckman (1971) considered Bott’s hypothesis and results important for anthropology because they could relate back to field work and data from research in tribal societies. He stated that her work was congruent to that of Durkheim’s, because it explored what factors cause human relationships and societies to become more complex and specialized. For reviews of additional case studies of early network studies in anthropology, consult Mitchell (1974) and Johnson (1994).

Within American cultural anthropology, social networks were not given much attention until ethnosciencce and cognitive anthropology was developed in the 1960s and 1970s. The concept of culture was explored using methods and concepts from linguistics, and studies on culture and cognition resulted in a decidedly emic (or individually defined) perspective that considered culture as a system of shared beliefs (Johnson 1994). Behavior was interpreted in part by what was salient to the individual, namely their knowledge and beliefs that were variably shared with others.
Johnson (1994) saw four interrelationships between cognitive anthropology and social network analysis. First, from a methodological standpoint, the formal techniques of analyzing a particular domain used by scholars of linguistics, ethnosciences, and cognitive anthropology were easily applied to studying the structured nature of social relationships. Secondly, structured kinship systems in different societies were one of the first topics studied by cognitive anthropologists (for more work on kinship and social networks, see Foster and Seidman 1981, 1989). As cognitive anthropology matured, researchers (Pelto and Pelto, 1975) recognized the need to focus on intracultural variation as well as agreement. Soon after, structured social relationships were viewed as a major factor that affects variation within a social group, also promoting the use of social networks as an analytical tool. The fourth point Johnson (1994) considered to be important was the development of the cultural consensus model (Romney et al. 1986) which allowed for culture as a concept to be empirically measured. Johnson (1994) has affirmed the importance of anthropology in the formation and formalization of social network concepts, theory, and methods, attributing it to participant observation during ethnographic fieldwork. The tendency and need for anthropologists to unpack how individuals are enmeshed in their social environment, he suggests, led almost naturally to an analysis of networks.

**Developments in Social Network Theory and Application**

Part of Mitchell’s (1974) review tackles the question of whether or not a theory of social networks exists. He states that certain early proponents of the social network perspective, including Barnes and Bott, all refuted the idea that there was a social network theory, electing to describe the approach as a simple concept or orientation within anthropology. Kapferer (1973) saw the perspective as merely a method for data collection and analysis. Others argued that social networks could help expand exchange theory or role theory, but that it was not a discrete
theory itself. Mitchell (1974:283) disagreed and stated that it was in fact possible for "propositions… [to] be derived from a consideration of the characteristics of social networks…"

Twenty years later, Johnson (1994) considers Mitchell vindicated, and confirms the existence of a social network theory. Johnson cites algebraic approaches to kinship analysis and work in sociology, computer programming, and especially cognitive anthropology as evidence of theoretical advancements in network studies (1994:116). Anthologies about social networks emerged as early as the 1970s with entire sections dedicated to theory and theoretical development (Boissevain and Mitchell 1973).

Berkman et al.’s (2000) attempt to synthesize multiple concepts and clarify a model of social networks as it relates to health is a very important indication that theoretical ideas have in fact developed and are progressing as time goes on. The authors reviewed Durkheim’s concepts of social integration and health as well as those of Bowlby, who proposed that early social environments and social support during childhood (and later in marriage) affect socialization and adult health. Berkman et al. (2000) clearly outlined the benefits of conducting research using a network perspective, and their suggestions for making network research more cohesive and consistent are a significant contribution. The authors note that in other fields, early network studies were dedicated to elaborating upon network structure and how the lack of ties led to an increased risk for mortality. Later work spent energy on measuring the qualitative aspects of social relationships, such as social support. In this more recent work the presence and absence of social support was seen as more important than the structure of the network, and studies investigating social support (and social networks) have become numerous (Cohen and Syme 1985, Gottlieb 1981, Wellman 1981). The authors recognize the utility of such work, but seek rather to operate under the assumption that social support, while a “primary pathway by which
social networks may influence physical and mental health status…is not the only critical pathway” (Berkman et al. 2000:846). To them, the social, political, and economic context on the macro-level is vital to understanding effects on health status and cannot be ignored by any researcher seeking using a social networks perspective for hypothesis formation, data collection, and analysis.

Berkman et al. (2000) proposed a blend of both the structural and qualitative aspects of past network studies, calling social network researchers back to their Durkheimian roots. The result was a conceptual model that integrated macro (“upstream”) and micro (“downstream”) factors. That is, the authors argued that society-wide circumstances like the political climate, economic conditions, discrimination, poverty, and war shape the structure and attributes of networks. Networks then offer both opportunities and constraints upon micro-level “psychosocial mechanisms” through the pathways of social support, social influence, social engagement, interpersonal contact, and access to resources. Finally, these complex processes shape various health pathways, whether it is health behavior, or psychological and physiological outcomes.

In this project, it was expected that the varied integration of immigrants into the local community through social network interaction will differentially expose individuals to knowledge of modern lifestyles and foodways. There are many social structural conditions that affect this process, but for the purposes of this project only a few will be examined in depth. To be sure, racism, socioeconomic status, poverty, inequality, immigration laws and immigration reform, as well as the fact that our country is in a period of wartime and an economic recession all act as structural constraints, contributing to Latino immigrants’ experiences here in the United States.
While this model of Berkman et al. (2000) advocates admirably for a more holistic research design and analysis, there is no mention of how cultural models fit into these processes. An individual’s cultural knowledge and social behavior are cultural forces in their own right and have been shown to have an impact upon psychosocial mechanisms, health behaviors, and psychological and physiological pathways. Cognitive anthropology, and its use of cognitive cultural models as an analytical construct, has enabled many researchers to examine, among other topics, participants’ accuracy in reporting interactions within their social networks. In effect, these studies on participant accuracy attempted to measure discrepancies between reported behavior and actual behavior.

Freeman and Romney’s (1987) research indicated that individual recall is subject to two types of error. People can forget or fail to report an interaction, resulting in lost data, and individuals can supplement their reports with interactions that did not happen. They concluded that cognitive models of daily interactions interfere with the accuracy of reported or perceived interactions. Killworth and Bernard (1976) had found similar results that individuals’ perceptions varied from the observed interactions, and that they varied based on cultural norms or usual patterns of behavior. That is, this tendency to resort to cultural models resulted in reported social interactions skewed towards the average. Yet Freeman et al. (1989) contended that even informant accuracy of 50% is not enough of a problem to forgo using participant self-reports in social network analysis. They argue that recall of social interactions, while not a good indication of actual interpersonal contact, is a good measure of the regular, relatively stable, and structured social ties that surround an individual. Overall, participant accuracy and bias in reporting interactions can complicate research on social networks, but it does not seem to be a problem of such magnitude to preclude the methods and analysis from being successful.
Freeman and Romney’s (1987) research on the relationship between individual cognition and behavior in the context of social network interaction is related to research that has been done on cultural models and the ability to enact those models, or cultural consonance (Dressler 2005). In many studies, consonance with cultural models and high social integration have been found to have positive effects on health (Berkman and Syme 1979; Cassel 1976; Dressler and Bindon 2000), but in some cases the relationship is more complex. For example, Chavez et al. (2001) report that Latinas who were more consonant with doctors’ models of reproductive cancer were less likely to seek out screening for those cancers, but more likely to do so if the women were consonant with Anglo women’s models of cancer. McDade (2001) explains that among adolescents in Western Samoa a high level of social integration had a negative effect on immune function in households with material lifestyle incongruity. High social integration in this case created more stress, presumably due to the inconsistencies of trying to exist in two vastly different social realities at one time. This may also be the case among Mexican pregnant women who have lived since childhood in the United States, and who were found to have a very low-quality diet. The women were described as being in a marginalized state, having given up their traditional practices yet still being without the means to access adequate social support and health services (Harley and Eskenazi 2006). The dissertation research conducted in Tuscaloosa addressed how immigrants, having spent varied amounts of time in the United States, with varied amounts of contact with community members, have become integrated into the local community to the point that their social networks may influence daily diet choices, providing direct implications for the future health of the Mexican immigrant population.
Ethnography of Personal Social Networks

Ethnographic literature on US Latinos who decide to settle and work towards community-level incorporation has been explored in relation to social networks. Social networks are often assumed to be beneficial to an immigrant, but some research suggests that networking may be more complex, especially when considering changes in network composition and long-term community incorporation (Hagan 1998). Over time, both strong and weak ties (Granovetter 1973) to the community may develop through many different social venues, providing opportunities for one’s cultural models and behaviors to be shaped and negotiated. Wilson (1998) examines the strong and weak ties in Mexican immigrants' social networks, and how social networks "mature" (Durand and Massey 1992) over time to include weak ties with a large number of people, and stronger ties with a fewer number of people. For this reason, number of strong and weak ties was an important variable in this dissertation. Wilson (1998) cites the importance of both dense and diffuse social networks for the transmission of social capital among Mexicans in the United States. Undocumented individuals in the southeast United States were found to be more likely to have larger social networks than did documented immigrants, the focal points of which were often employees of tiendas (grocery stores). These individuals promoted interaction between Americans and Latinos by providing important information about job and housing opportunities and connecting people who could share social and economic resources (Griffith 2005).

Chavez (1991) argues that the immigrant experience is an unnaturally extended transition stage in the rite of passage (van Gennep 1960) of becoming “incorporated” into a community. Chavez raises some important questions with regard to Anderson’s (1983) “imagined community,” namely the disconnect that can occur when an immigrant imagines himself or
herself to be part of the community, yet the community does not reciprocate as expected. Chavez (1991) mentions reliable employment, having a family, the accumulation of capital, and English language skills as factors necessary for immigrants to begin to be incorporated. His work on undocumented immigrants in the San Diego area illustrates how, even after individuals achieve significant social and economic resources, they remain in a marginal state with no end in sight to their liminality (Turner 1974). A marker of importance that he implies but does not directly mention is the immigrant’s social ties to the larger community. This research directly examined social network interaction and perceived integration into the local community and its effects on dietary changes. It was expected that the more one identifies with local Alabamans with the goal of community incorporation, the more one interacts with community members—thus stimulating change in cultural models of food. Similarly, it was expected that if an individual living and working in the community does not hold the goal of incorporation, less social interaction with community members leads to the retention of Mexican foods in the daily diet.

Conclusion

Anthropology, and especially cognitive anthropology, has played an important role in the history, development, and use of a social networks perspective, and has contributed to and advanced anthropological knowledge (Johnson 1994). There are many benefits to using social networks in research design and analysis within anthropology. The structure and characteristics of the social environment can be defined with precision and, because of this, can be operationalized to assist in answering questions about how human behavior and health are affected by patterned interactions and relationships (Wasserman and Faust 1994). The network perspective allows for analysis not only of social actors but also the relationships between those
social actors (Galaskiewicz and Wasserman 1994). The findings of Barnes (1954) and Bott (1957) highlight another advantage of this perspective—that geographic or kinship-based definitions or boundaries of what constitutes a community might not be reflected in participants’ actual, lived social networks. That is, social networks, if individually defined, are an emic measure of social structure that can be compared to etic or normative definitions (Berkman et al. 2000).

Most important to this research, however, is the fact that the analysis of social networks allows for an understanding of the connections among individuals as well as the social and cultural context in which communication and the creation and transmission of cultural knowledge takes place. Social networks are comprised of the individuals who have the potential to rally resources that can (directly or indirectly) enable one to access culturally salient information or materials which would positively or negatively affect the experiences of everyday life (Berkman et al. 2000). Individuals are placed in a social environment, partly of their own design and partly due to structural constraints, and their knowledge and behavior can be recorded and quantitatively analyzed with regard to the collective knowledge, behavior, and characteristics of the people who surround them. An investigation into social networks, the distribution of shared cultural models, and cultural consonance offer a clearer picture of how health behavior and physiological outcomes are affected by meaningful and patterned relationships.
CHAPTER 4

THE ANTHROPOLOGY OF MEXICAN IMMIGRATION

Introduction

The purpose of this chapter is to review the anthropology of Mexicans in Mexico and the United States. Attention will be paid to the demographics of the Latino population in the United States, in the South, and in Alabama. Research on the experiences of individuals who decide to cross the border into El Norte, as well as the factors that affect border crossing and settlement experiences will be discussed. Anthropological work is presented on the differences between documented and undocumented Mexican immigrants, which brings up a discussion of the opportunities and barriers that immigrants face in U.S. society, as understood through political economic theory in anthropology. Anthropologists have documented the cultural characteristics within Mexican society, including gender, family, kinship and social support, religion, work, and poverty.

After a brief history of migration to the United States is presented, including information on recent immigration laws, the above topics as they inform research about community formation and social integration are reviewed. Overall, this chapter proposes that more research needs to be done with respect to the social incorporation of Mexicans into US society, the measurement of culture and the processes of culture change, and the effects of culture change on health outcomes. As Mexicans are a relatively new population to the Southeast and to Alabama in particular, a lack of research—anthropological or otherwise—is significant as the group faces many social and health problems that are not being addressed.
History of Mexican Migration to the United States

The 2000 mile border between Mexico and the United States has been crossed and re-crossed with varying intensity over time. Between 75,000 and 95,000 Spanish-speakers became US citizens after the border was created in 1848. It is estimated that at this time approximately 2000 people moved south to remain Mexican nationals, living in border towns. Shortly after the territory was acquired, the American Southwest began massive development projects that brought Mexican workers across the border, but massive migrations did not happen until modernization efforts in Mexico during the Porfiriato. These modernization projects included the displacement of five million peasants who became landless and began to travel north towards the cities along the new railroad lines designed to ferry cash crops to the United States (Raat 2004, Chavez 1998, González and Fernandez 2002). From 1900 to the Mexican Revolution of 1910, the number of immigrants increased from 2600 per year to 50,000 per year (González and Fernandez 2002). The US government and some private corporations began actively seeking a Mexican labor force, in the form of reduced taxes upon entering the country, and in the form of actual recruitment in Mexico by enganchadores (from enganchar—to hook or catch) who brought individuals back to work. Mexicans were seen as a less threatening work force than other ethnic groups like Asians or Eastern Europeans (Massey et al. 2002, Chavez 1998), because they were perceived as temporary laborers with inferior skills.

During the Great Depression, United States popular opinion blamed economic problems on Mexicans (and all foreign immigrants), who were charged paradoxically with profiting both from the welfare system and from American jobs. About 500,000 individuals voluntarily or involuntarily found themselves back in Mexico as a result. The US Border Patrol, established in 1924, was largely responsible for the deportations (Massey et al. 2002). Until this point,
immigration was largely unregulated. Illegally crossing into the United States was made a punishable crime in 1929 (Feliciano 2001), one of a number of actions along with deportations that served as a symbolic cure for Depression-era hardships (Massey et al. 2002).

Public sentiment changed during the labor crisis of World War II, during which time over 150,000 workers legally entered the United States during the first three years of the bracero program. The population of undocumented individuals rose as well during this time—increasing to over 880,000 in 1950, as hiring restrictions against employers were virtually non-existent. Calavita (Massey et al. 2002) reported that in 1954 when Operation Wetback began, INS (Immigration and Naturalization Service) officials rounded up over one million undocumented workers, some of whom were given bracero papers and then driven back to the agricultural fields from which they were taken. These efforts appeased both the agricultural sector, which needed laborers, and the public, who felt more secure with an increasingly militarized border (Massey et al. 2002). By the end of the program in 1964, almost five million individuals had crossed the border into the United States (Massey et al. 2002), an increasing number of them women (Wilson 2000).

Immigration bills were passed by Congress in the late 1960s and throughout the 1970s, establishing quotas regarding how many immigrants from every country may enter the United States. Restrictions were tightened for the naturalization process, and as legal immigration declined, undocumented individuals entering the US increased significantly. This was in part due to sanctions on employers for hiring undocumented individuals that were not seriously being imposed until the 1986 Immigration Reform and Control Act. The IRCA increased funds for border patrol and gave 2.3 million Mexican immigrants legal citizenship. This congressional bill was in part a response to the increasing number and visibility of immigrant communities, despite
the fact that the number of settlers was far outweighed by the number of temporary migrant workers—workers who were not settling down among Americans. The settled communities were found in the "gateway" states of California, Texas, Arizona, New Mexico, Illinois, and New York, which had the highest populations of Mexican immigrants (Massey et al. 2002). Despite prohibitions against hiring undocumented workers, it is estimated that 200,000 people crossed the border each year between 1986 and 1990 (Chavez 1998).

The United States hoped that the 1994 passing of the North American Free Trade Agreement would bolster the Mexican economy and reduce the number of undocumented immigrants in the country. However, sufficient jobs were not created. In addition, as American markets opened up to Mexico, increased familiarity with standards of living reinforced the desire to achieve higher standards of living. Needless to say, undocumented immigration to the United States continued. Another important effect from IRCA and NAFTA legislation was that the new citizens of Mexican descent were free to move around the country and settle in new destinations such as the southeastern United States (Zúñiga and Hernández-León 2005).

**Current Trends in Latinos and Mexican Immigration in the United States**

Census data from 2010 indicate that the group referred to as Hispanics or Latinos (hereafter referred to as Latinos) comprise 16 percent of the total U.S. population, or about 50 million people. In the past ten years, there was an increase of 15 million Latinos (Humes et al. 2011). Latinos of Mexican descent make up the majority of this uptick, with the population increasing by 54 percent to a total estimated count of almost 32 million Mexicans in 2010. The U.S. South saw a 57 percent increase in its Latino population, with the ethnic group becoming 16 percent of the total population in these states, including Alabama. Even though the Latino
population more than doubled in ten years, Latinos account for less than 4 percent of the population in Alabama (Ennis et al. 2011).

Despite this substantial growth, the South is still considered to be a non-traditional or atypical settlement location for Mexican immigrants (Hernández-León and Zúñiga 2000 and 2002). All of these estimates are under-representative of the actual number of Latinos in the South, due to the difficulty of measuring undocumented individuals. For example, the Latino immigrant population in Tuscaloosa county was officially estimated as 2803 in 2000 (US Census Bureau 2005), but was informally estimated by local service providers as 7000-8500 people in 2006 to reflect the presence of undocumented individuals. Informal state-wide estimates for undocumented Latinos made in recent years (Jones 2006) are as high as 50,000 individuals, bringing the total estimated Latino population in Alabama to 135,000. This figure is now obviously outdated, as official counts for Latinos in Alabama have exceeded 185,000. It is clear that Alabama is an appropriate setting for anthropological research on this ethnic group—research that can help shed light upon how immigrants adapt to new destinations, what kinds of experiences they encounter upon arrival, and how long-term settlement affects their knowledge, their behavior, and their health.

**Immigration Discourse in America and in the South**

Immigration of Latinos, and especially Mexicans, is a salient topic in the national discourse, and has become even more rigorously debated as the country currently faces a serious economic downturn. Legislation restricting the lives and livelihoods of immigrants was passed in a number of states, Arizona being the first of many. Alabama has followed this political trend, with H.B. 56 passing in early 2011. This law seeks to criminalize being an undocumented immigrant by imposing harsh penalties for residency and even traveling through the state, to say
nothing about holding jobs or accessing health care services. The law as it was originally written also threatens Americans with class-C felonies for assisting undocumented persons, such as by providing transportation or employment to a person without verifying their immigration status first. The data for this research were collected before this legislation was drafted, so the conclusions made herein apply to a research setting and population that has changed rapidly, due to the fear resulting from this legislation (although it has not yet gone into effect) and from the April 2011 tornado which affected many neighborhoods within which Mexicans had their homes and businesses.

Chavez (2008) has argued that a “Latino Threat” narrative has emerged in U.S. discourse, which postulates that Latinos are unlike any other past or present immigrant group that has entered the United States. Undocumented Latinos are seen as unwilling or unable to integrate, instead coming to American with the purpose of “invading” or “taking back” the land that they believe belongs to them. Chavez and others (Grebeler et al. 1970, Telles and Ortiz 2008) have completed careful studies of undocumented immigrants, and have provided evidence that social structural factors and the political economy of the relations between the U.S. and Mexico have influenced the patterns of Mexican immigration more than any cultural failings, insidious plans to live off of our welfare system, or intention to take jobs from Americans.

**Experiences and Characteristics of Undocumented and Documented Immigrants**

The anthropological research of Mexican immigrants in the United States is similar in approach to the classic studies conducted in Mexico by Redfield (1930), Lewis (1959, 1970, 2002), Foster (1965, 1967, 2002), and Wolf (1966, 2002). Continuities between the two include a focus on community studies, the analysis of conflict and social power, economic and labor issues, gender and family issues, and social interaction and social networks. One of the earliest
community studies of immigrants in the United States was completed in 1930 by Gamio (Durand and Massey 1992), who sought a better method to estimate numbers of Mexican immigrants. He also examined seasonal migration patterns through the analysis of monetary remittances. Rubel (1966) and Achor (1978) completed rather traditional ethnographies of Mexican communities in Texas. Whiteford (1979) proposed the notion of the "extended community" in her research of immigrants in Texas. She observed that individuals on both sides of the Texas-Mexico border crossed—legally and illegally, and often multiple times in one day. The extended community is therefore a more sound approach to the study of movements within a group, as opposed to just observing what happens on one side of the border. Alvarez (1995) argues that this work was important in that it expanded the approach of community studies to include the idea of transnationalism. Chavez (1988) applied this idea of a community that overlaps two nations to the household, which could be "binational," having both documented and undocumented individuals under the same roof.

Rationales for undocumented immigration have been studied in terms of economics and employment (Massey et al. 1992) and in terms of following in the footsteps of previous migrants to join them in the United States. Anthropological studies have also provided additional information about gender roles, family life, education, and religious beliefs of immigrants in the United States.

Women and children have long been left out of the literature on immigration to the United States, due to preconceptions that women are passive and that their husbands or male family members are the only active agents in deciding to migrate. In earlier research it was taken for granted that men migrated first, for economic reasons (Cerrutti and Massey 2001), and that men migrated more often than women. Recent research has shown that men and women are
entering the United States in increasingly equal numbers. Women are also more likely to settle and remain in the US if they have children while they are here (Marcelli and Cornelius 2001). The rising number of immigrant women and their children in the United States has put increased pressure on US social and health services. Wilson (2000) takes a Marxist approach and states that legislation like California's Proposition 187, which was developed to specifically limit the access of undocumented individuals to welfare services and public education, is a direct attack on the production and reproduction of the immigrant work force. Wilson argues that these legislative efforts are not intended to drive immigrant labor back to Mexico, but to create a "costless" work force more suited to the capitalist ideals held in America. Chavez (2008) has also commented on how the stereotypes of Latinos and especially Latinas have contributed to fears about uncontrolled reproduction.

Gender was identified as an important variable in this project. Much research has been done within anthropology comparing women and men in Mexican society, and as immigrants in U.S. society. The public versus private orientations of men’s and women’s cultural identities in Mexican societies have been researched (Matthews 1985), as well as the cultural personalities of machismo and marianismo. Gender roles and identity are constantly being negotiated throughout any culture’s history, but in Mexico the prevailing idea is that men participate in a “cult of virility” and live their lives in the public sphere, working and providing for their family as the patriarchal head of household. Women are seen as participating in a “cult of feminine spirituality,” where they withstand endless sacrifices to protect their families and direct the moral paths of their children. Women live their lives in the private, domestic sphere of Mexican society, being more in charge of child care and performing the duties of a functioning household (Stevens 1973).
Chavira-Prado’s (1992) research explores families and households and presents women as being somewhat dependent on men. Women’s duties include those inside the domestic sphere, but if a job outside the home is added to the expectation of fulfilling traditional gender roles, women become more susceptible to stress. This work mirrors that of Finkler’s (1994), whose landmark study on Mexican women explored the idea that social disorders create a build-up of “life’s lesions,” which cause increased morbidity throughout one’s lifetime. These social disorders stem from inconsistencies between ideal gender roles and relationships between men and women, and their lived realities. These inconsistencies stem from tensions being played out in the negotiation of social structure on a small and large scale, and over time increase the risk of morbidity for women in Mexico. Overall, Finkler argues for a holistic study of culture and structure in order to understand the embodiment of life’s lesions and their biopsychosocial expression.

Immigrant household structure and family life has been explored in a number of different ways. McConnell (2008) recognizes that different Latino groups have many social structural factors that often prevent them from obtaining or remaining in adequate housing. These issues include the cost of housing, the inability to accumulate wealth, location and transportation, housing quality, changing household structure, privacy, and reproduction. The author contends that housing outcomes for Latino immigrants affect physical and mental health. Fields and Casper (2001) found patterns in household size relating to the length of time that individuals have lived in the United States, with households getting smaller the longer one has resided here. Blank and Torrechina (1998) use a life-course explanation to describe the structure of Latino households over time. The authors found that neither language ability nor hardships from financial problems or unemployment were related to extended family living. Family members
who changed their living arrangements to live in larger groups did so because of the birth of children, or to care for elderly family members at the end of their lives. Regardless of the size of the household, immigrant families are faced with daily negotiations of their cultural and ethnic identity while living in the United States, especially if there are children in the household (Phinney and Ong, 2007).

Families and households are sources of social and economic support, and the stage on which gender role and generational negotiations take place. In this research, I did not focus on social support, but questions about household composition and the proximity of family members were asked as a partial gauge for how connected a participant was to their family, especially since meal sharing is an important part of family dynamics.

Variation in the religious beliefs of Mexican immigrants is a topic that I would like to explore more in the future, especially with regard to the differences between those with a Roman Catholic faith and those who attend Evangelical or Protestant Christian churches. Mexico is largely Roman Catholic, but researchers (Espinosa 2005, Bastian 1993) have found that many Mexicans are converting to Protestantism, and others (Leon 1997) have documented that this is a pattern that is found after one enters the United States. The structures of these two types of religious institutions are very different, with one Catholic Church and administration being placed in a geographically-delimited parish. In the same region, however, dozens of Protestant churches may be available for immigrants to attend. Catholic churches are not Latino-run in Tuscaloosa County, but many “storefront” Protestant churches are run by Latinos, having Spanish signage visible from the roads. Catholic churches often have to reorganize to accommodate immigrant parishioners, to hold a separate Spanish service, for example. Gill (1990) suggests that a Pentacostal conversion for immigrant women is beneficial, because it
enables them to expand their social networks and get social and instrumental support while still behaving within their domestically-focused traditional gender role.

Work and employment is another domain that was acknowledged by this research as being vital to the lives and well-being of Mexican immigrants. The type of work one does has a major impact on one’s experiences in the United States. Agricultural farmworkers may migrate around the country to pick the fruits and vegetables that are sold in America’s supermarkets. Latinos fill the gaps in this sector of the job force, since White and Black Americans do not desire low-skilled, low-pay jobs that require one to move from region to region following harvests (Bailey 2005, Griffith 2005). Jobs in more urban areas that Mexicans are likely to fill include manufacturing, landscaping, cleaning, cooking, service jobs at restaurants, and construction—which also may require a semi-migrant lifestyle. Another niche that Mexicans occupy in the American labor force is at fisheries and in poultry plants. The Southeast is one of the major areas where poultry factories abound (Griffith 2005). Informal economies also exist, and may take the form of food preparation, child care, and mechanic work. Chavez (2001) notes that part time work is suited to immigrants who have just arrived in the U.S., as this frees up more time for immigrants, and especially women, to have time for household duties and child care. Women are therefore often found to be less employed in studies of immigrant communities. Work can be permanent and full-time; day-laboring is a strategy that immigrants resort to when they do not have steady employment. These short-term jobs put immigrants at risk of being taken advantage of, and communities in which highly visible day-labor petitioning occurs (on street corners or in front of businesses, for example) community tensions tend to run high (Valenzuela et al. 2006). Immigrants are likely to be hired to do unskilled, hard labor jobs, and may not be given the same rights and benefits that American workers receive. Each type of
job poses unique risks for occupational health problems like accidents and exposure to pesticides, as well as other risks like discrimination and theft from employers and coworkers (Morales 2002). Experiences also differ widely for documented and undocumented immigrants who participate in formal and informal economic pursuits.

Work, Networks, and Settlement

Economic pursuits in the United States have been explained in terms of the quality and quantity of information that flows through social networks. Networks were found to draw immigrants to a certain locale once information about reliable jobs is spread (Wilson 1998). In more general research relating economic endeavors to characteristics of immigrants, Durand and Massey (1992) explain that due to the history of the bracero program, agricultural workers are more likely to be documented, compared to urban workers. In addition, having specialized workforce skills was more likely to be associated with a legal status. Two anthropological studies, one in North Carolina and one in Louisiana, found that undocumented Mexicans were more likely to create permanent communities in the United States compared to documented workers. In North Carolina, Griffith (2005) interviewed workers without papers, and workers with temporary employment visas issued by the H-2 program. This program reviews the cases of immigrants who have been offered a seasonal job in the United States. The requirements for an H-2 visa are strict—the individual needs to document that a job has been offered, that fulfilling the job will not take work away from American citizens, and that there is a specified ending date to the job in question. Visas are valid for up to one year, and are renewed yearly for a maximum of three years’ time. Griffith described the open and unguarded manner with which undocumented workers spoke about their illegal status, their employment, and their income. Griffith reported that these people were more likely to share personal information that might
identify them later, compared to those workers with H-2 visas. The workers with the H-2 visas were more guarded due to the exclusive nature of having paperwork, and due to fears that their employers or other community members would punish them. The legal workers were very vulnerable to their employers, who controlled their working hours, where they lived, and deducted rent money out of their paycheck. A violation of these restrictions could mean that their H-2 visas would be revoked.

The undocumented workers, on the other hand, experienced somewhat more freedom. They were more likely to have larger social networks with stronger ties, as opposed to the H-2 workers who were comprised mostly of young single men who moved away from their families once they received their visas. The undocumented families brought with them their own economy, consisting of people who provide childcare services, food preparation, or vending services, and consisting of people who organize voluntary community projects. Griffith examined how tiendas (grocery stores) were the hub of social network activity, providing important services and information as well as food and other goods for their clients. These families were also more likely to participate in church services, send their children to school, and create permanent communities. In this community the need for health care and social service programs oriented towards Mexican immigrants was recognized, and these programs have been developed. Advances such as these only make settling down more attractive, for both undocumented workers and temporary H-2 workers (Griffith 2005).

Community incorporation was also researched in two towns in southern Louisiana (Donato et al. 2005). In one town, workers were recruited by employers from Mexico and given H-2 papers upon arrival. Employers insisted upon mandatory housing and held the passports of the workers until their contracts were completed. This high level of control and involvement of
the employers restricted the physical and social movement of their employees. Since food and shelter was provided near the workplace, arenas for social interaction were not readily available, creating an isolated environment for the immigrant workers. Immigrants had very unfavorable views of their employers and the town in which they worked. In contrast, the community members had very few negative feelings about the Mexican population. The relative invisibility of the Mexican community did not threaten the townspeople, and the lack of perceived problems meant that there was no effort to establish health care or social services for the immigrant population.

The Mexican population in the second Louisiana town consisted of mostly undocumented workers. Employers had much less control over their workforce, and the immigrants lived in their own rented housing—much more visible to the larger community. As a result, community complaints and political efforts were made to restrict the immigrant population's access to social services and local businesses, despite the fact that the Mexicans solved the town's labor shortage crisis. In contrast, the Mexican population viewed the flexibility of their living conditions much more favorably. Social networks were more active in the second town, and the workers perceived their needs as being met by the community, despite its hostility (Donato et al. 2005).

Research on Mexican immigrants has shown that recent movements to the Southeast may be driven by the desire to create permanent settlements, reunite family members, and enter into preexisting social networks. As the Southeast is a “secondary” destination, the accumulation of social capital from Latinos’ experiences in previous US destinations may facilitate community formation, incorporation, and diversification (Garcia 2005, Hernández-León and Zúñiga 2000 and 2002). However, these new destinations may lack the social or material resources that places like the American Southwest have developed over time, complicating the incorporation of
Latinos into communities (Zúñiga and Hernández-León 2005). Social integration in non-traditional settlement communities may be variable, and immigrants may experience resistance from White community members in some aspects of everyday life, such as the workplace (Engstrom 2001, Studstill and Nieto-Studstill 2001). Examining the social network ties that immigrants form with Americans in the workplace and in other social venues where cultural knowledge could be shared was an important part of this research.
CHAPTER 5
RESEARCH SETTING

The purpose of this chapter is to briefly describe the research setting, in terms of demographics as well as the businesses, churches, health care options, and community festivals that Mexicans are involved in. The setting as it relates to food and eating will also be briefly discussed regarding food that is purchased (in stores and restaurants) and that which is self-produced and food that is eaten in the domestic versus social party settings.

Research for this project took place in and around the city of Tuscaloosa, the seat of Tuscaloosa County, which is located in west central Alabama on the Black Warrior River. It is centrally located in the southeast United States, being 200 miles inland from the Gulf of Mexico port city of Mobile, Alabama. Interstate 20/59 runs through the edge of the city, and this route can be travelled 300 miles to the southwest to New Orleans, Louisiana, and 200 miles to the northeast to Atlanta, Georgia. Tuscaloosa is approximately 60 miles southwest of Birmingham, Alabama, the largest city in Alabama and is located 100 miles from the capital city of Montgomery. Tuscaloosa is the fifth most populated city in the state.

In 2010, there were 90,468 residents of the city of Tuscaloosa. Approximately thirty thousand non-residents swell the population of Tuscaloosa to almost 120,000 during the school semesters, due to the influx of students at the University of Alabama, Shelton State, and Stillman Colleges.

Tuscaloosa is 41.4 percent African American while Tuscaloosa County is 31.2 percent and the state is 26 percent. According to the U.S. Census Bureau, in 2010 approximately 64.6
percent of Tuscaloosa County’s population identifies as non-Hispanic white, 31.2 percent identifies as Black, and the remaining population identifies as Hispanic or Latino (3.0%), Asian (1.8%), American Indian or Alaska Native (0.2%), or other/multiple races (1.0%).

The median age of Alabama residents was 37.9 in 2010. Almost 84 percent of adults living in the county have at least a high school education or equivalent, a number which is comparable to state and national percentages. Approximately 27 percent of county residents have an education that goes beyond a bachelor’s degree, higher than the state percentage of 22 percent, but similar to the national percentage of 27.5 percent. In the year 2010, the median household income ($41,842) and per capita income ($22,489) were comparable to state-wide medians, but lower than national medians ($50,221 for household, and $27,041 per capita). In Tuscaloosa County, 20 percent of individuals fell beneath the poverty line, figures that are higher than state percentages of 17.5 percent as well as the national percentages of 14.3 percent.

Over 30 percent of those employed in Tuscaloosa in 2000 were involved in educational, health, and social services, compared to approximately 19 percent statewide, with The University of Alabama remains a prominent feature in the city’s economy. Today, a major source of industry growth in Tuscaloosa is manufacturing. Phifer Wire is the worldwide leader in the production of insect screens. They also weave a wide variety of fabrics for commercial and industrial use. The JVC plant produces a high-quality optical media discs such as dvds, cds, and Blu-ray. Both factories employ many Latinos. PECO foods is a poultry-processing plant located on the west side of the city of Tuscaloosa. There are many restaurants, furniture, gift, and clothing stores, as well as photographers and other local businesses that are successful in downtown Tuscaloosa. Downtown and major residential areas of the city are almost encircled by long strips of hotel, restaurant, gasoline, and other business chains, including shopping malls,
movie theatres, and supermarkets. There is another such business area across the river in Tuscaloosa’s twin city, Northport, Alabama.

Bilingual signage is becoming more common in different types of businesses in Tuscaloosa. For example, Lowe’s has very extensive signage throughout their store, and K-Mart has implemented Spanish language announcements that run over their loudspeakers. Smaller businesses and grocery stores are reaching out to Spanish-speaking customers as well, as seen in Figure 5.1.

![Bilingual signage](image)

**Figure 5.1:** Bilingual signage.

Nationally, Hispanics own more businesses (8.3%) than do Blacks (7.1%). Tuscaloosa County statistics for Blacks are 13.3 percent, while data for Hispanic-owned businesses are not available. Businesses owned by Latinos in Tuscaloosa County have become more numerous and visible in the past ten years. These businesses include restaurants that cater to American clientele as well as those smaller, less-decorated establishments that cater to mostly Latino clientele. Figure 5.2 shows a mostly American-clientele restaurant, and a restaurant owner at an establishment that served mainly students due to its close proximity to the University.
Figure 5.2: Restaurant and restaurant owner.

Figure 5.3 depicts a *carnicería* (butcher shop) that serves its fresh meat in a number of hot dishes and sandwiches, including carnitas and menudo on the weekends. Many Latino-owned businesses switched hands or closed while I was doing my interviews; Figure 5.3 also shows a house that had been converted into a tienda which closed because it was not making enough money.

Figure 5.3: Butcher shop and a closed tienda.

Latino-owned tiendas are spread throughout the city. These establishments sell a number of things including packaged and sometimes fresh food, beverages, calling cards, clothes and shoes, music cds, calling cards, dishes and other homeware, and party supplies like piñatas. Four
tiendas are depicted in Figures 5.4 through 5.5. Other types of Latino businesses include *peluquerías* (hair salons) and internet cafes.

![Figure 5.4: Tiendas and an ice-cream shop.](image)

![Figure 55: Tiendas in Tuscaloosa.](image)

There are two Catholic churches in Tuscaloosa, seen in Figure 5.6. The largest church holds a Spanish Mass every week, as a separate service from American parishioners. The smaller church holds fewer Masses, but is host to special occasions for the Latino population, such as baptisms, funerals, and *quinceños* ("sweet-fifteen" birthday/coming-of-age celebrations).
Protestant churches for Latinos abound in Tuscaloosa, most of which can be found as “store fronts.” These churches are Latino-run, and Spanish-speaking only. Service times are usually advertised on the home-made signs out front. Examples of these churches can be seen in Figure 5.7.

Health care options in Tuscaloosa include the DCH Regional Medical Center, which is the main hospital within the city limits. The University Medical Center provides prenatal and maternity care to Latinas, and has a full-time female Spanish interpreter on staff. The Good Samaritan Clinic is located downtown, and the Maude L. Whatley Health Center is located on
the west side of town, and provides primary health care, dental checkups, and medical tests including those for HIV/AIDS.

The Maude Whatley clinic is one of many organizations within Tuscaloosa that participates as a Hispanic Service Provider of Tuscaloosa. This group plans a large informational health festival once a year called *Brazos Abiertos* (Open Arms). At this festival, the clinic offers many medical tests for free, including blood sugar, HIV tests, blood pressure, bone density, and eye exams (see figure 5.8, on the top).

In addition, there is a mobile clinic that stations itself at different points around the county on a fixed schedule. In this mobile unit, the same services listed above are offered, in addition to dental checkups (see figure 5.8, on the bottom).

![Figure 5.8: Free medical tests.](image-url)
At these *Brazos Abiertos* festivals, local businesses, churches, school employees, and other social service providers present information about themselves to the Latino community. Very unhealthy party foods and some Mexican restaurant foods are served to the festival patrons year after year. Debate about serving healthier fare is always squashed by those of the Hispanic Service Providers who want to create a party atmosphere at the festival (see figure 5.9).

![Figure 5.9: Party foods chosen for *Brazos Abiertos.*](image)

**The Food Setting in Tuscaloosa**

This section reviews briefly the social and political history of foodways in the United States, focusing on the history of the southern states\(^1\). The foodways in Tuscaloosa have been influenced by this culinary history, but Tuscaloosa is a large city with modern and diverse foodways.

Modern mainstream culinary culture in the United States has been influenced by the colonial settlement patterns and historical events that characterized the newly formed nation

\(^1\) Portions of this section are reproduced with permission by the American Anthropological Association (see Appendix E).
Historically, British, Dutch, and German cooking were normalized, having dominated the public and private menus of today’s society. However, regional variation in eating habits developed, especially distinguishing the southern states. The unique natural and social environment of the southeastern United States shaped the region’s foodways throughout history.

One of the reasons that the southern states can be distinguished from the northern states was their early dependence on specialized agricultural products. Plantation systems in the 19th century were exceedingly prosperous due to the long growing season, and many farmers used their land for one or two cash crops (such as cotton or sugarcane), relying on other sources for their subsistence needs (Hilliard, 1972). During the 19th and early 20th centuries, vegetables were not part of the ideal diet. At the time, the basic diet of most southerners would have been salt pork, a simple corn bread or other corn dish, sweet potatoes, possibly rice or a vegetable, and coffee sweetened with molasses. More wealthy whites were able to afford better cuts of meat, white flour biscuits, gravy, refined sugar, and desserts (McIntosh, 1995). The heavy reliance on corn, and the ease of raising and preserving pigs meant that southern food became known for its “hog and hominy,” especially for the poorer working class. Pork consumption characterizes traditional southern food to the present day (Hilliard, 1972).

Some African foods that were introduced to the South became widely consumed by whites, such as black-eyed peas, watermelon, peanuts, okra, and sorghum. The consumption of these foods provided some sense of continuity from food patterns in Africa for the enslaved. Also, because they were given so few and such poor rations, there was an increased reliance on vegetables, which may have resulted in a better health status than that of their holders. There is no doubt that some of the dishes characteristic of the South are the result of the ingenuity of the
enslaved who had a limited food supply. These foods might have been presented on the slaveholders’ dinner table—a possible explanation as to how they have been incorporated into traditional southern cuisine (McIntosh, 1995).

Although the natural environment affected southern food choices, the social environment probably had more to do with the differences from the northern states and also within the region. The hierarchical plantation systems, the constant influx of Africans comprising an enslaved class, and social class differences among whites affected regional variation, as well as constraints on the food supply during the Civil War, Reconstruction, and the Great Depression (McIntosh, 1995). During the Civil War, some farmers switched from cotton to food crops, and it has been hypothesized that vegetable consumption increased at this time. When the war was over, economic and social problems were widely distributed throughout the South. Transportation routes were destroyed, and the work force was chaotic due to the newly freed African-American population seeking wages. Immigrants to the United States settled in the northern states to avoid this competition, and as a result, the North became more urbanized and diversified, while the southern region was left to rebuild itself (Hooker, 1981).

Food habits, especially among the poor, generally remained the same after the Civil War. During the Great Depression, southern blacks and whites were still relying on corn, molasses, and salt pork for the majority of their diet (McIntosh, 1995). Increasing industrialization in the food industry slowly began to change the rural and agricultural region, as did the growing awareness of nutrition and food safety (Hooker, 1981). Processing of food became more widespread and preferred in the early 20th century, meaning that households throughout the country no longer had to rely on seasonal foodstuffs (Goody, 1997).
The southern US states in general and Tuscaloosa in particular have been influenced by the distinct social and political history that characterizes the region. Elements of traditional southern cuisine are evident in the responses of some of the participants. However, there are many options available to consumers in Tuscaloosa in terms of items available at different grocery stores and specialty food shops, as well as a growing number of restaurants in the area. To be sure, there are a substantial number of traditional barbeque joints and “meat-and-three” dining establishments, where customers choose one main dish accompanied by up to three side items, such as vegetables, but also items like macaroni and cheese and potato salad. Many fast food chains dominate the main commercial thoroughfares, of which there are three. Some chains operate multiple franchises within the city limits. Family style fast food restaurants such as Olive Garden are also present. Tuscaloosa also offers a number of Thai, Japanese, and Italian, and Indian options. Upscale restaurants tend to retain a southern flavor, but use organic and local ingredients, free-range meat, and detailed touches from professional chefs. One of the newest upscale restaurants bills itself as a “two-hour dining experience.” Major grocery chains such as Publix, and regional chains like Bruno’s and Piggly Wiggly offer Tuscaloosa residents their food staples. A handful of produce stores and stands provide fruits and vegetables; in addition, informal sales of watermelon and peaches are common when these fruits are in season. The main farmer’s market offers locally grown produce to city residents. A newer farmer’s market that caters to the University crowd has invited some of the farmers from the traditional market, but has also included retailers from coffee shops and bakeries as well as live music once a week on campus. Finally, there are a few Community Supported Agriculture (CSA) groups available to area residents. CSA participants buy a “share” of the farm, and receive up to 40 weeks of organic, local produce.
It is recognized that all of these options described above are not available to everyone in the city and county, as transportation and economic difficulties may prevent people from accessing the food that they want to eat. For some of the participants in this project, the closest place to obtain food was a convenience store attached to gas stations, places unlikely to sell fresh or healthy food like fruits and vegetables. Joining a CSA can be especially exclusive—a full share of the farm’s produce can cost 600 dollars, and people may wait a couple of seasons on a waiting list before being offered a spot.

In summary, Tuscaloosa and the surrounding area is a research setting with diverse food options available. The history of the region as well as the availability of both traditional and modernized foodstuffs affect how people conceptualize food and how they actually eat in their day-to-day lives. Keeping these relationships in mind, this dissertation seeks to explore how Blacks’ and Whites’ cultural knowledge may be being passed to recent immigrants from Mexico. The next chapter outlines the results of some preliminary research that was conducted in Tuscaloosa, providing further insight into the cultural models of food of that immigrants may be learning about as they work and make their lives here over time.
CHAPTER 6
PRELIMINARY RESULTS ON FOOD RESEARCH IN ALABAMA

Food and Social Identity

Preliminary research was conducted on the cultural models and food habits of different social identity groups in Tuscaloosa, Alabama. This research was conducted during the fall of 2003 and the spring of 2004.

A closer look at food choice has indicated strong relationships with biological, environmental, and cultural factors, implying that food choice can be a highly individual matter and, at the same time, influenced by culturally prescribed food norms (Douglas 1982). Food choices within cuisines can shed light on what kind of cultural meanings we attribute to ourselves and others (Fischler 1988). The identities thus formed can help to position us in a coherent cultural framework in a world where continued globalization offers a new menu almost every day. Food choice is a complex issue that is intimately related to one’s social identity. One’s identity consists of the social and cultural constructions combining individual and collective understandings that meaningfully locate an individual in a particular cultural context. Identities are on one hand an individual’s guide for behavior, and on the other hand are used by others as influential cues during the negotiation of daily social interactions. The concept of identity is also distinct in that it expresses both similarity and difference to others in society (Jenkins 1996; see Ashmore et al. 2004 for a discussion on the multidimensionality of identity). Bourdieu’s (1984) reasoning that consumption contributes to overt displays of the self and

2 Portions of this chapter are reproduced with permission by the American Anthropological Association (see Appendix E).
ultimately, one’s lifestyle, is applicable to this discussion of social identity. Bourdieu states that people “distinguish themselves by the distinctions they make,” including what food choices they make (1984:6). How one comprehends and consumes culture is a marker of one’s place in society, or social identity. This study was specifically concerned with the eating habits of day-to-day life, as well as how the cultural meanings of food structure, and are structured by, one’s social identity.

Food is central to one’s social identity, because the self is often asserted through a feeling of belonging to a certain social group that has particular eating habits. By associating with one group, a distinction can be made between it and other groups that eat differently. Identity construction concerning food results from a lifelong interaction between historical, biological, psychological, economic, social, and cultural factors that contribute to what one chooses to eat (Fischler 1988). In this research, I chose to examine the variation in the eating habits of those people who have moved away from the generally accepted or mainstream social identity. That is, the comparison is between mainstream and alternative eaters. “Mainstream” or “traditional” eaters are the majority in the community, and are those who have eating patterns that are considered to be normal based on the local history of the area. Two groups hypothesized to have alternative identities, athletic and health-conscious eaters, were chosen for comparison. “Athletic” eaters are those who are eating to address specific concerns about energy and physical performance. “Health-conscious” eaters are those often abstaining from animal products (especially meat), eating less packaged and processed foods, and consuming more vitamin supplements (Kandel et al. 1980). I argued that notions of mainstream and alternative identity could be studied in relation to the food choices that constitute a cuisine, and furthermore, that identity confirmation would be evident in an individual’s eating habits. The ultimate goal then,
was to examine how the meanings of food-related situations reinforce the meanings of one’s most salient identity.

**Methodology**

The groups of interest here, athletic, health-conscious, and traditional eaters, came from various community and University outlets. Traditional southern eaters were obtained for the project from one of the many local “Meat and Three (vegetables)” diners close to the downtown and University areas. Concerning the health-conscious category, people from a local health food deli and grocery store were invited to participate. For the athletes, the coach of the University crew team was similarly contacted, and informants signed up after an informational meeting was held. Names of additional informants were also collected after individual interviews had been conducted. Using this snowball sampling method, I inquired if the participant knew any other friends or family (who also ate at the diner, for example) who would be interested in completing the interview. In this manner, quota and convenience sampling methods were utilized, resulting in a non-random, purposively selected sample of forty-five informants. Institutional Review Board approval was granted and the data were collected mainly from January to early May 2004.

For the first sample, comprised of five participants from each social identity group (n = 15), the elements of the domain were elicited through structured and semi-structured cognitive tasks. Freelist of foods commonly eaten by the participants were generated, and food items mentioned throughout the interview were compiled and initially analyzed, based on their frequency of occurrence in this first phase of the research.
Thirty-three foods were selected to be part of the second phase. Table 6.1 is a complete list of the food terms that were selected.

| Table 6.1: List of 33 food items used in the preliminary research interviews. |
|-----------------|-----------------|-----------------|-----------------|
|                | Athlete         | Health          | Traditional     | General         |
| Carbohydrate   | bread           | whole wheat     | cornbread       | cereal          |
|                |                 | bread           |                 | pasta           |
| Protein        | eggs            | fish            | pork            | chicken         |
|                |                 |                 |                 | beef            |
| Vegetable      | sweet potatoes  | broccoli        | peas            | salad           |
|                |                 |                 |                 | green beans     |
| Fruit          | bananas         | oranges         | potatoes*       | ---             |
|                |                 |                 |                 | ---             |
| Snack Item     | chips           | ice cream       | cobbler         | ---             |
|                |                 |                 |                 | ---             |
| Drink          | water           | milk            | sweet tea       | ---             |
|                |                 |                 |                 | ---             |
| Miscellaneous  | vitamin supplement | organic food | casserole       | fast food cheese |
|                |                 |                 |                 | ---             |
| Categorical    | ---             | ---             | ---             | meat            |
|                |                 |                 |                 | carbohydrates   |
|                |                 |                 |                 | vegetable       |
|                |                 |                 |                 | fruit           |

*No salient fruit was identified in the traditional interviews, therefore potatoes, a food that was mentioned frequently, was substituted.

The second sample (n = 30) was interviewed using information garnered from the first sample. Ten new participants from each of the three groups were recruited for further cognitive tasks. These included pile sorts of the thirty-three food terms, and then ratings of each food item, also accomplished through pile sorting. The initial task was an unconstrained pile sort, where each of the informants placed the note cards into groups based on their own criteria of similarity. Then, informants were asked to rate the thirty-three foods along three different dimensions—the energy-content of the foods, the healthfulness of the foods, and the traditional nature of the foods. These last three sorting tasks were chosen to mirror the three groups that were chosen for this study, with the energy category corresponding to the athletic group. Energy as a dimension was chosen under the hypothesis that athletes would be concerned with this particular distinction.
among the foods they eat. For the food frequency task, participants were given a chart listing the same thirty-three foods that were presented on the note cards. I asked each person to rate the foods in terms of how many days in the past two weeks they have been eaten. That is, a ‘zero’ rating meant that the food had not been consumed in the past fourteen days. Likewise, a ‘fourteen’ indicated that at least once a day the particular food had been eaten. The purpose of these interviewing techniques was to collect quantitative and qualitative data in order to delineate the cultural models that are present in the community, and assess how behavior matches up with this knowledge. Whether or not there was cultural agreement among the participants, it was hoped that the analysis of the data would provide information on the effect of social identity on food choice.

Data were analyzed using Anthropac version 4.98.1 (Borgatti 1992) and SPSS for Windows version 11.0. For all of the statistical tests performed in SPSS, a probability value of .10 was identified as being sufficient, due to the small sample size and exploratory nature of this project. The unconstrained pile sorts were analyzed using non-metric multidimensional scaling (MDS) and hierarchical cluster analysis. Cultural consensus analysis was used to assess agreement on the three dimensions used in the rating task. If consensus was determined along the dimensions of energy, health, and tradition, it was then possible to use the consensus analysis output for Property Fitting (PROFIT) analysis with the MDS graph. Lastly, the food frequency data were analyzed using cultural consonance, after which the consonance scores were compared using ANOVA.

The data gathered on food consumption frequency were evaluated using cultural consonance analysis. Once a dominant model has been identified, cultural consonance can be measured with the purpose of indicating which individuals exhibit behavior that is consistently in
accordance with the cultural model. That is, cultural consonance scores helped me to better understand if people were following the models in their day-to-day lives—if eating behaviors were consistent with knowledge about food. This method has been particularly well suited to studying health outcomes and disease risk (Dressler and Bindon 2000; Dressler et al. 2005a). In order to calculate the consonance scores, the answer key from the consensus analysis output was used to identify which foods are most characteristic of the energy, health, and traditional food models. Individuals were given a score from zero to two in order to indicate if they ate none, a little, or a lot of these thirty-three foods, based on their response from the food frequency task. The zeros, ones, and twos were then simply added up across the list of foods to create the consonance score. Those individuals with the lowest score would be the least consonant, and vice versa. It is important to note that although one might know which foods best represent the model, determined by a high competence score, one might not choose or be able to eat those foods, thus resulting in a low consonance score. Once individual scores are calculated, it is then possible to see if any one group is more consonant than the others, by comparing mean consonance scores using ANOVA tests.

**Preliminary Research Results**

Over sixty percent of the sample was age thirty or younger, with the median age being twenty-four years. Concerning the ethnicity of the participants, 93.3% identified themselves as white. No African Americans signed up to participate in the study. All but one participant had at least some college education. In my sample, 26.7% of the participants reported making less than $10,000 in the past year. The large number of full-time student participants who were otherwise unemployed most likely contributed to these data. Overall, this sample seems to be somewhat younger, mostly white, and more educated compared to city, state, and national
statistics reported from census data (United States Census Bureau 2000). Table 6.2 presents the descriptive characteristics for this sample.

<p>| Table 6.2: Demographic characteristics for the preliminary research sample. |
|--------------------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|</p>
<table>
<thead>
<tr>
<th>Athlete</th>
<th>n = 15</th>
<th>Health</th>
<th>n = 15</th>
<th>Traditional</th>
<th>n = 15</th>
<th>Total</th>
<th>n = 45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex (% female)</td>
<td>8</td>
<td>53.0</td>
<td>9</td>
<td>60.0</td>
<td>5</td>
<td>33.0</td>
<td>22</td>
</tr>
<tr>
<td>Ethnicity (% White)</td>
<td>13</td>
<td>87.0</td>
<td>15</td>
<td>100.0</td>
<td>14</td>
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<td>10</td>
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<td>---</td>
<td>1</td>
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<td>1</td>
<td>6.7</td>
<td>2</td>
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<td>---</td>
<td>---</td>
<td>---</td>
<td>1</td>
<td>6.7</td>
<td>1</td>
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<td>2</td>
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<tr>
<td>-Over 50,000</td>
<td>2</td>
<td>13.3</td>
<td>9</td>
<td>60.0</td>
<td>2</td>
<td>13.3</td>
<td>13</td>
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</tbody>
</table>

The thirty-three food terms that were selected from the first round of interviews are graphed using non-metric multi-dimensional scaling. Each food item is compared to every other food, and is plotted on the graph in a way that maintains the perception of the participants concerning which food items should be together. That is, similar items are represented as having closer proximity, while those food items that are seldom or rarely sorted together are plotted further away. In Figure 6.1, the distances between items correspond to their similarity or dissimilarity according to the cultural schemas of the participants. In other words, similarity is preserved as distance in this graph. This same unconstrained pile sort data was also analyzed using hierarchical cluster analysis. This procedure may be used to delineate the food items that were pile sorted into discernible groups.
Figure 1 also shows the groups that were created based on the cluster analysis. These methods provide an appropriate analysis of the unconstrained pile sort data, as the elliptical clusters are representative of the reasons that the participants used to create various piles. Most informants said that they grouped the cards based on what they knew of the U.S. Department of Agriculture food pyramid categories.

![Figure 6.1: Multi-dimensional scaling diagram from preliminary research.](image)

The dimension of health was analyzed using consensus analysis in Anthropac. Every food item was rated on a three-point scale as being most to least healthy. The first eigenvalue was found to be 20.4, which explains 89% of the variability in the respondents’ answers. The ratio of the first to the second factor was extremely high—13.7 to 1. Estimated knowledge of the participants was also very high, with an average of 0.82. This high average competence indicates
a close correspondence between individual ratings of the foods and the collective consensus analysis ratings of the foods. Based on these results, it is possible to conclude that there is a single, strong model for the dimension of the perceived healthiness of foods.

The athletic group seems to be the most knowledgeable of the three, as seen by their tight clustering at the center of the data point spread in Figure 6.2. The average competence for the group was 0.88. The means for the health-conscious and the traditional group were 0.82 and 0.75, respectively. The mean differences in competency among the three subgroups was found to be significant ($F = 3.4, p = .05$). A post-hoc LSD test was performed after the ANOVA, which demonstrates that there are significant differences ($p = .02$) between the athlete group and the traditional group. That is, the athletes have significantly more knowledge about the healthfulness of the foods than the traditional group, but not the health-conscious group.

![Figure 6.2: Distribution of competence scores in the dimension of health.](image-url)
The fact that the athletes had the most similar answers is not surprising, considering the nature of the athletic group—that it was comprised mostly of individuals who were part of a cohesive sports team. Participants in every group presumably are subject to the same barrage of news reports, magazine and newspaper articles, and television advertisements that discuss which foods are and are not healthy. The athletes, however, had another source of information from which to obtain additional knowledge about health—the crew team coach. He has a professed interest in sports, nutrition, and education, and told me that he tries to impart healthy eating knowledge to the team members whenever possible. The team members spent time together every day at practices, were friends, and even roommates. Some athletes mentioned that they ate with other team members on a regular basis. Their close interaction provided many opportunities for knowledge about the healthfulness of particular foods to be accumulated and refined. As a result, the athletes can be thought of as a more cohesive social group compared to the other two. It must be noted, however, that the team does not receive funds from the University (the coach volunteers his time), and it was therefore assumed that the team members would be faced with the choice of eating for athletic reasons, rather than being obliged to eat a certain way by a University-sponsored athletic program. This flexibility and opportunity for personal dietary choice among informants was identified as being important for the goals of this project. Even though one group has proved to be more knowledgeable, the high eigenvalue ratio indicates that overall knowledge on healthy foods is substantial and widespread regardless of one’s social identity.

The cultural key provided by Anthropac outlines what the culturally correct answers are estimated to be, considering the competence levels of all of the informants. Those foods that are considered to be most healthy are oranges, fruit, bananas, broccoli, and water. The foods least
likely to be considered healthy were sweet tea, ice cream, and cobbler, with chips and fast food tying for the least healthy foods among the thirty-three terms. Table 6.3 presents the cultural key, listing the foods and their rating (expressed as a weighted average ranging from three to one), from most healthy to least healthy.
Table 6.3: Consensus analysis cultural answer keys for the health and traditional dimensions, and the overall frequencies for the three groups. The foods are rated from most (three) to least (one), and frequency is measured in times eaten in the past two weeks.

<table>
<thead>
<tr>
<th></th>
<th>Health</th>
<th>Trad</th>
<th>Freq</th>
<th></th>
<th>Health</th>
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<th></th>
<th>Health</th>
<th>Trad</th>
<th>Freq</th>
</tr>
</thead>
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<td>1.7</td>
<td>organic food</td>
<td>2.81</td>
<td>1.07</td>
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<td>pasta</td>
<td>2.01</td>
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<td>7.5</td>
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<td>2.86</td>
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<td>3.5</td>
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<td>1.19</td>
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<td>2.83</td>
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<td>milk</td>
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<td>11.2</td>
<td>sw. potatoes</td>
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<td>casserole</td>
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<td>2.42</td>
<td>2.91</td>
<td>3.4</td>
<td>sweet tea</td>
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<td>1.6</td>
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<td>2.82</td>
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<td>fast food</td>
<td>1.00</td>
<td>2.62</td>
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</table>
The thirty informants of the second group also rated the food items in terms of their energy content. When consensus analysis was performed, it became clear that there was no agreement among these participants due to the low eigenvalue ratio of 1.7. In addition, the average estimated knowledge of the 30 informants was very low—0.12, with a high standard deviation of 0.52.

Tradition as a dimension had a high level of consensus among the 30 participants. The eigenvalue produced for the first factor was 15.2, and this first factor explained 77.8% of the variability in the answers of the respondents. The ratio of 6.8 to 1 between the first and second factor indicates that there is a good deal of agreement about what food items are considered to be traditional. The average knowledge of the participants was 0.69, with a standard deviation of 0.18. Upon examining each informant’s competence scores, I noticed that there were two individuals outside the main cluster in the sample. Both were athletes, with knowledge scores of -0.09 and 0.36. Interestingly, both of these participants identified themselves as “Italian Americans,” and alluded throughout the interview to the kinds of meals that they and their families share. Although the participants were instructed during the traditional rating task that “traditional” food was to mean what people around the local area usually eat, it seems that these two athletes had a different cognitive schema when sorting the cards. If these two individuals are removed from the sample, the average estimated competence of the twenty-eight remaining participants increases to 0.73.

I was interested to find that the health-conscious eaters and not the traditional eaters were the most knowledgeable group in this dimension, with only two scoring below the original average of 0.69. The mean competence for this group was 0.75. The mean competence of the athletes was 0.59, and was 0.73 for the traditional eaters. Figure 6.3 is a graph representing the
distribution of these competence scores. Concerning the knowledge scores of the health-conscious group, I think it is possible that the alternative identity of health consciousness has been achieved through extensive learning about the perceived negative aspects of the traditional food dimension. That is, in order to reject the mainstream model, individuals must come to a clear understanding of what exactly it means to be a traditional eater. The question remains as to whether or not the means for the different groups were significantly variable. An ANOVA test was performed to see if social identity could explain some of the variability in the responses. The test did not support the hypothesis that the health-conscious group possesses more knowledge about the dimension of tradition at a significance level of .10, although it was very close (F = 2.3, p = .12). Although the means of the groups were not found to be different, a Levene’s test demonstrated that there is a significant difference among the variances of the three groups (F = 2.6, p = .10).

![Box plot showing the distribution of competence scores for Traditional, Athlete, and Health groups.](image)

**Figure 6.3:** Distribution of competence scores in the dimension of tradition.
The cultural answer key presents some noteworthy information when the foods that were ranked as traditional are compared to the foods that were ranked healthy, as seen in Table 3. The foods that were rated as most traditional were sweet tea, cornbread, chicken, meat, and beef. Those foods rated least traditional were organic food, vitamins, whole wheat bread, broccoli, and pasta. When I compared the most and least healthy foods to the most and least traditional foods, I noticed that three of the most traditional foods—sweet tea, cornbread, and beef—were listed among the top ten least healthy foods. Similarly, broccoli, whole wheat bread, and organic food, considered to be some of the least traditional foods, were rated as being among the most healthy foods. A correlation was performed to test the cultural answer keys for tradition and health. The ranked data for all of the 33 foods in both of these dimensions were found to be negatively correlated and highly significant ($r = -.50$, $p < .01$). That is, this correlation test provides evidence that the foods considered to be traditional are not considered to be healthy, and vice versa.

While much information was collected concerning the way people perceive aspects of food and eating in a cognitive sense, it is necessary to examine what the participants report as actually eating in their day-to-day lives. This examination is necessary in order to determine if there is a correlation between one’s cultural models (knowledge) and food choices (behavior). Food frequency data were collected and variability among the responses from those in the different subgroups was observed. Table 6.3 lists the general food frequency data averaged for all three groups. The frequency data specific to each social identity group can be found in Table 6.4.
Specifically, it appears that athletes are drinking more milk, while those who consider themselves to be health-conscious are drinking less. In addition, athletes seem to be eschewing white bread for wheat bread, rating it higher than the total mean. Athletes also reported eating the most meat, fruit, and cereal when compared to the other groups. They also seemed to eat the

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<th>Traditional Mean Frequency (n=10)</th>
<th>Total Mean Frequency (n=30)</th>
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</tr>
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</tr>
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<td><strong>SW POTATO</strong> 0.2</td>
<td><strong>SW POTATO</strong> 0.4</td>
</tr>
</tbody>
</table>
least cobbler, cornbread, and organic food. Health-conscious eaters, while consuming somewhat less milk, reported eating slightly more carbohydrates than the athletes or traditional group. Healthy eaters consumed more potatoes, chips (which tied with fast food as least healthy), organic food, and fish than any other group. Foods eaten less than the other two groups were ice cream, pasta, and eggs. Those in the traditional group consumed the most bread, vitamins, fast food, and beef compared to the other two groups. Sweet potatoes, oranges (rated as the most healthy food), and pork were the foods that were reported as being eaten the least by traditional group members. Compared to the other two groups, pork was consumed the least by the traditional group, which raises questions about the salience of pork in the traditional southern diet, as suggested by the literature.

The food frequency data are somewhat consistent with the modern meal structure described by Douglas (1982). While Douglas reported that meat was the “centerpiece” of the meal in Britain, the food frequencies suggest that the focus of the meals eaten is on those foods that are regarded as staples—carbohydrates. However, when participants were asked to create an ideal menu for solitary and social eating situations, most people mentioned the meat of the meal first. Specifically, when asked about solitary meals, a meat item was listed first 56% of the time. For menus created for social meals to share food with family or friends, meat was mentioned first 71% of the time. So although participants might actually be eating a larger quantity of mashed potatoes and rice, the meat is identified as being “what’s for dinner.”

There seems to be a certain level of homogeneity in the food frequency data in Table 6.4. It was surmised that even if people knew the same model of food regardless of their group designation (as was evidenced using the consensus analysis data), there might still be some differences in consumption that would correspond to social identity. I was specifically interested
in what kinds of differences existed, especially regarding the consumption of foods thought to be healthy. PROFIT analysis supported this focus on the healthy foods, by using multiple regression to investigate if the dimensions of health and tradition shaped the first unconstrained pile sorting task. The knowledge about health was found to be a factor that was strongly driving the groupings of the thirty-three foods, with a multiple R of 0.85. Tradition had a multiple R of 0.49. It is interesting to note that health was such a significant factor even before I mentioned the concept of healthy versus unhealthy foods to the participants. That is, before I made rating the foods according to healthfulness a conscious task, the PROFIT analysis shows that participants had already used this dimension to make meaningful distinctions among the food items. Following the direction of the two labeled regression lines in Figure 6.1, it is possible to see that in general, foods become less healthy as they become more traditional. Again, I wanted to check if there were patterns in healthy food consumption that could be observed without simply summing or averaging the frequencies for each group. Cultural consonance analysis provided just such a tool for this task. Eight of the top ten most healthy foods were used. Water was left out due to its high daily consumption in each group, and peas were left out due to extremely low consumption in each group. Each individual was rated on their consumption from zero to two, and the consonance scores could therefore range from zero to a maximum of sixteen if an individual received a rating of two for each of the eight foods. The actual range was from four to fourteen. Those with the lowest scores were the least consonant, eating less of the healthy foods than those people with the highest consonance scores. It is possible to see the diversity among the three groups regarding who is eating the healthiest in Figure 6.4. The athletes are tightly clustered with a high mean of 10.9, indicating that they are eating many of the foods that they know to be healthy. Some of the health-conscious individuals had a consonance
score higher than the most consonant athletes, but their overall mean score is about the same, 9.8. The mean consonance of the traditional group, 7.7, was well below the overall mean of 9.5. It is important that in general, everyone knew the model of healthy eating, but the athletes and health-conscious people have slightly more competence, or knowledge. It seems that the athletes and health-conscious people know more, but they also consume more of what they know to be healthy, as indicated by their consonance scores. The average consonance scores were found to differ significantly from one another ($F = 3.95, p = .03$, $t_{LSD, p} = .02$). Again, the athletes are eating more of the most healthy foods, followed closely behind by the health-conscious and then the traditional folks. It is clear that consonance analysis has unpacked the variation in the consumption patterns of the three groups. In short, it is possible to conclude that differences are emerging from the overall agreed-upon core diet of all of the participants in this sample.

![Box plot of consonance scores for different groups](image)

**Figure 6.4:** Distribution of cultural consonance scores for healthy eating.
The sample as a whole can be considered to be operating under one shared cultural model concerning how people in this small city in the American South think about food. Evidence has been presented that supports that health is one of the driving forces behind what participants choose to eat. The consensus for the health ratings of foods was higher than any of the other tests, suggesting that the agreement on this dimension is widespread among all of the informants. In terms of their actual eating practices, patterned variation by social identity group was found.

**Discussion**

It has been determined that participants were conceptualizing food based on a shared cultural model. Qualitative analysis of the interviews indicated that information about the negative health consequences of a high calorie, high fat diet with little vegetable or fruit consumption has permeated the models of the participants in this study. The results of the interviews on the healthfulness of food is evidence that the information being presented to the public is being comprehended, but implementation of that knowledge through actual eating practices has been only variably successful in certain groups of the general population. Qualitative analysis has also suggested that most of the participants are in possession of a traditional background that has influenced their beliefs about food, as well as their patterns of consumption. It seems that these participants, while growing up with a traditional model of what food items make up a meal, are situated at a particular cultural locus where knowledge about the connections between food and health is becoming more widespread—not just in the southeastern United States, but in the entire country. Some participants seem to have embraced this new knowledge about health, fusing it with their existing traditional cultural model. This altered model, focused on obtaining better health, is affecting how people think about food and eating. However, this cognitive shift has not yet compelled all people to change their actual eating
habits, according to the data presented here. Their attitudes toward food are similar, and, particularly along the dimensions of health and tradition, agreement was also found. It seems that the strongest consensus concerns the healthfulness of food. These data are similar to the results that Newkirk et al. (2005) found in Brazil, where the dimension of health was found to be the most salient when people were interviewed about food in general and their eating habits in particular. Notably, this finding provided evidence that cultural models of food in Brazil had changed over the past ten years, as the dimension of prestige was determined to be the most important factor driving food choice in the past (Oths et al. 2003). What forces are driving the adoption of this new healthy model in the United States, and how much of the mainstream model has to be altered in order for patterns of consumption to change are questions that would be worthwhile to pursue through further research. The sample as a whole appears to operate under one shared cultural model concerning how they think about food. Yet substantial intracultural variation among the groups was present. For some of the dimensions tested, one group or another had significantly more knowledge than the other two groups. Upon examining the mean competence for each task by subgroup, it was found that the health-conscious group has more knowledge in the traditional dimension. The athletic group was found to possess more competence in the dimension of health.

The results from consensus analysis demonstrate that people in the sample have a shared model of food. According to the consonance analysis, the same cannot be said for the actual eating practices. Only some people are eating healthfully, and there seems to be a link between doing so and having an alternative identity. These differences may have to do with social class in terms of education and income. The athletes were all college students who were raised in middle to upper-middle class families. The health-conscious people were a bit older, the most
educated group, and the group that made the most money. The social class of the athletes and the health-conscious group was basically the same, while the traditional folks made a lot less money and had slightly less education. It seems then that the people with the most money and education—the athletes and the health-conscious people, are somehow setting the standard and driving the consensus about the healthiness of food. Health knowledge was also found to be concentrated in the upper class for Newkirk et al. (2005), who use Williams (1995) to suggest that this knowledge in fact is used by the upper class to uphold their social position and preserve differences between themselves and the lower classes.

Boster (1999) has remarked that intracultural diversity is the result of differential learning opportunities across the lifetime of an individual. It may be that higher class individuals in this sample are exposed to and are able to consume more of the culinary options that are culturally defined as being healthy. That is, the higher class individuals have the material and social resources to be able to shape and access this knowledge of healthy eating, and then follow up on this knowledge by distinguishing their eating habits from those of other groups. This is similar to the findings of Oths et al. (2003) regarding cultural distinction for high-class individuals in Brazil, as well as the findings of Warde et al. (1999) in England. It seems that to reflect on a model of eating—in an attempt to move away from it—means that you are likely to know more about it. The individuals in this sample possess overlapping cultural models, which are used in the mundane social situations of everyday life as flexible and fluid expressions of their identities. Yet one can know something without believing it or behaving it. This is true for the traditional group, because their actions have not caught up with their knowledge of healthy food. Cognitive anthropology can be useful to answer future research questions concerning when individuals arrive at the point where they begin to eat differently—that is, when this knowledge about health
will actually affect their behavior. Cultural consonance analysis, by incorporating a link between the cultural and the individual, was able to measure these differences; providing support for the statement that “adequate measurement in anthropology depends on the degree to which it reflects collective meaning” (Dressler et al. 2005b:348).

Conclusion

This project provides a window onto the understandings about food in one southeastern U.S. community. The study of food habits among the human species is an extremely complex task, and it has become clear that many influential and interrelated factors affect how individuals and groups make decisions about food and eating. The participants in this study have provided evidence that they are operating with one cultural model concerning the domain of food. While agreement and knowledge is variable and spread out among the informants, certain generalizations can be formulated. Individuals in the three groups share cultural knowledge about the beliefs and behaviors surrounding food. There is agreement about what foods are traditional, and there is strong agreement in the dimension of health when it comes to food. Health seems to be the most salient dimension for the individuals who were interviewed. Consonance analysis demonstrated that cultural factors are influencing people to eat the same core diet, with some variation according to one’s social identity. The cognitive anthropology techniques used in this project have proved to be useful for the investigation of this particular domain. Knowledge about food, health, and eating are becoming ubiquitous regardless of one’s social standing or identity, and distribution of that knowledge has become more widespread and shared. However, social identities are at work shaping the food choices of individuals in the southeastern United States.
While all three groups strongly shared a cultural model of healthy food, the data showed that fruit and vegetable consumption in the traditional southern group was inadequate—less than the recommended five servings per day, yet individuals in the athletic and health-conscious social identity groups consumed more of these healthy foods. This disconnect between cultural knowledge of healthy food and actual eating behaviors is a significant finding, especially since Alabama is one of nine states in the Southeast where the prevalence of obesity is over 30%. This preliminary research was extremely influential in the development of my dissertation project. Mexicans bring their varied foodways to the United States, and may use food as a marker of their identity. However, these food habits may change over time, as immigrants are living in new environments which may present many daily challenges. I examined intracultural variation in the cultural models of food of Mexicans, and the variable proximity to and social interaction with family, friends, acquaintances, and coworkers that contribute to differences in the daily lived experiences of Mexican immigrants. Each interaction with social network alters presents an opportunity for social learning about food, health, and life in the southeastern United States. Overall, this current research will enable me to explain how variation in immigrants’ knowledge and behavior are becoming embodied and are differentially affecting their physical well-being.
CHAPTER 7

METHODOLOGY

Introduction

There were several objectives for this research project. The primary goal was to determine how cultural knowledge, imparted in part through inter-ethnic communication, was impacting the knowledge, behavior, and health of Mexican immigrants living in Tuscaloosa. Specifically, the purpose of this project was to determine if and to what extent Mexican community members’ social network interaction with Americans affects Mexican cultural models of food, food consumption, health status, and health behaviors such as physical exercise and fruit and vegetable consumption. In order to accomplish this objective, several steps needed to be taken, which will be detailed in this chapter.

Research Design

Quantitative and qualitative structured and semi-structured data collection techniques were used throughout this project. Primarily, traditional ethnographic participant-observation was coupled with cognitive anthropological data collection methods and anthropometric data collection and an Hb A1c measure during interviews with participants. The methods used varied according to what phase of the project was taking place. Most interviews took place in the city of Tuscaloosa and in Tuscaloosa County, with a few taking place in other counties with individuals who had significant social ties to other people from Tuscaloosa city and/or County.

Over a period of 25 months (July 2007—August 2009), 141 formal interviews were conducted, with many other informal interviews and participant-observation opportunities
occurring during this time as well. There were three phases of data collection. Phase 1 consisted of qualitative interviews with members of the Latino Community Group and other community health care providers. Blacks, Whites, and Mexicans were interviewed for Phase 2, and Mexican community members only participated in Phase 3. Both Black and White community members were included in Phase 2 so as to collect data on both ethnic groups whom Mexicans may be interacting with. The literature and preliminary conversations with community members suggested that Mexicans were interacting with Whites more so than with Blacks, but I would not be able to know that for sure until Phase 3 when the formal social network analysis was completed. Therefore, to avoid presuming who Latinos were modeling themselves after, Blacks were included in the research design.

**Ethnic Group Terminology**

Throughout this dissertation, certain terms are used to describe the various groups interviewed for this project. Thus far, I have made reference to Americans, Latinos, Mexicans, Whites, and Blacks. A word on these identifiers is necessary before proceeding, especially since my hypotheses refer to differences between certain ethnic groups, namely Americans and Mexicans. It is recognized that Mexico is a country in Central America—that is, that all Mexicans are Americans. Descendants of those people who became US citizens after land in the southwest US was ceded by Mexico in the mid-nineteenth century are native to our country (but perhaps mistakenly identified as immigrants!). The term American, as used in this dissertation, is the colloquial identity marker that refers to those people born within the United States. In the United States of America, it is recognized that while the country is changing demographically, the country has historically been comprised of White Americans descended mostly from Europe. However Whites in this country have origins from many places other than Europe, but they still
are known as Whites in the United States. Therefore, the term White will be used as opposed to
Euro-American, which I feel is limiting. Every participant was asked an open-ended question
regarding what they considered their race or ethnicity to be. Most Whites identified themselves
as Whites, or as Caucasians. Similarly, people of African descent called themselves African
American or Black. Therefore, these terms are used throughout this dissertation. All of the
Mexicans except one identified themselves as “Hispano” or “Latino.” One woman who was
born in Mexico stated during the interview that the human race was the only race, and that she
did not recognize terms that identified people otherwise. As the term “Hispanic” refers more to
the colonization of American peoples by the Spanish, the term Latino was used throughout this
project to refer to individuals whose cultural origins lie in Latin America. All of the participants
in Phases 2 and 3 were of Mexican descent, and I use the term Mexican to refer to them. One
woman was born in the United States to first generation immigrants. When I use the word
Latino to talk about my participants, I am also referring to those people in Phase 1. In this first
part of the project, I interviewed one descendant of a family who had lived in the American
Southwest since before the land was part of the United States. I also interviewed a man who
identified himself as American, but Chicano, and the last Latino I interviewed in Phase 1 was a
Salvadoran woman.

Sampling

One of the hallmarks of cultural consensus analysis used in all phases of the research is
that it can be conducted using a small number of informants. Romney et al. (1986) provide a
guideline for how many informants are necessary in order for the technique to succeed with a
particular confidence level. It was determined that seven informants with an average
competency of 0.60, have an 85% probability of correctly answering the questions with a 95%
confidence level. Using this information, twelve individuals from each of the three ethnic groups (n = 36) were selected for the first step of Phase 2 (2a), and fifteen individuals from each ethnic group (n=45) participated in step two of Phase 2 (2b). For the third and final phase of the research, fifty Mexican community members were asked to participate. Given the unknown parameters (mean and standard deviation) of the major predictor variables to be used in the final data analyses, relevant power tables could not be consulted to estimate how many individuals are needed for this phase of the project. A sample of 50 was chosen with the expectation of providing a reasonable opportunity to detect any significant associations (see Table 7.1 for a breakdown of the number of participants interviewed for each phase).

<table>
<thead>
<tr>
<th>Phase</th>
<th>Primary methods</th>
<th>Black</th>
<th>White</th>
<th>Latino</th>
<th>Total</th>
</tr>
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<tr>
<td>1</td>
<td>Preliminary interviews</td>
<td>0</td>
<td>7</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>2a</td>
<td>Freelisting tasks</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>36</td>
</tr>
<tr>
<td>2b</td>
<td>Pile sorting and rating tasks</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>45</td>
</tr>
<tr>
<td>3</td>
<td>Pile sorting, ranking, SNA, anthropometry, A1c</td>
<td>--</td>
<td>--</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>27</td>
<td>34</td>
<td>80</td>
<td>141</td>
</tr>
</tbody>
</table>

Non-random purposive, convenience, and quota sampling were used throughout the project, as the undocumented status of the immigrant population precluded a random sample being taken. Snowball sampling was used during the project as well, but was recognized as a method that has the potential to build artificial consensus into a dataset. Snowball sampling was not used extensively in the first two phases of the project, but was used more in the third phase out of necessity. As I continued my project during the spring and summer of 2009, I received information that more and more Latinos were leaving Tuscaloosa to look for work elsewhere after losing their jobs. I did interview several men who had recently lost their jobs over that summer. Many other people who were contacted, mostly men but some women, expressed an interest in participating in an interview but either had to leave town to work (either temporarily or permanently), or could not find the time to meet with me because their jobs required long
working hours. It was clear to me that the economic downturn in the United States was affecting all community members at this time, but Mexicans reported to me that they were forced to leave town to follow work, or work long hours without lunch breaks, something the Americans I spoke with did not report. These working conditions are not a new challenge for a migrant/immigrant population, however the economic conditions at the time did appear to affect my ability to locate Mexican individuals and their ability to make and maintain interview appointments, requiring me to rely more on snowball sampling in the final research phase.

Throughout the project, equal numbers of females and males were recruited. Gender was an important variable to consider in this research because it was hypothesized that Mexican females and males may have different opportunities to interact with American community members, given the household and gender dynamics described in traditional Mexican ethnography. Nine couples, either married or in a free union/common law marriage, were interviewed during this project with the purpose of seeing if any differences emerged when comparing the daily experiences of wives and husbands with regard to food knowledge and eating habits.

There was no minimum time in the United States or Alabama required of the Mexican sample. It was expected that participants will have spent varied amounts of time in the United States, therefore having varied numbers of Americans and Tuscaloosans in their social networks. This variation facilitated comparisons that were used to account for differences in cultural models and eating behaviors. It was expected that there will be a linear relationship between time spent in the United States and the number of social network contacts one has in Tuscaloosa. As a result, time spent in the US and Tuscaloosa will be controlled for in one of the final multiple linear regression analyses that will be used on the data (described below).
Participant Recruitment and Participant-Observation

Participants were recruited from a host of different locations and sources in Tuscaloosa and Tuscaloosa County. As I started to expand where I looked for participants, I sought to include both American community members who may not have extensive knowledge or contact with Mexicans as well as those individuals who, through desire or necessity, do interact with other ethnic groups. As I became familiar with the different social venues that Mexicans were involved with, I contacted Mexicans and Americans at these places and at surrounding locales. My goal was to access the places where Mexicans live, work, play, and worship, but also recruit participants from those shared spaces where Blacks, Whites, and Mexicans interact.

I contacted people of all ethnicities via telephone, mail, email, and in person. Participants contacted me for interviews and for social invitations in person, by phone, email, and occasionally through online networking services such as Facebook and Hi5, the latter of which is an online service popular in Latin American countries. In the case of the online networking services, the individuals in question had either met me before or had a close friend who had already been in contact with me. That is, these online messages to me were not unsolicited.

As described in the previous chapter, my involvement with the Latino Community Group over five years’ time has allowed me to develop close relationships with some of the core members of the group, as well as become introduced to a much larger group of meeting attendees who come less frequently, or who come intensely but for a short period of time.

My fieldwork and participant recruitment truly began with my attendance at these meetings in 2005, which continues to the present day. Another graduate student and I contacted the then-current leader of the LCG, who invited us to come in for an informal interview. He and his assistant/replacement-in-training outlined for us the “who’s who” of the Latino Community
Group at that point in time, as well as other individuals who they thought might be amenable to hearing from us. He also warned us about certain individuals who were active in the Latino community, but perhaps did not have Latinos’ best interests at heart. These included people who were involved with helping Latinos, but who profited financially from their interactions with Latinos.

Not all of these initial interviews with LCG members were so informative and pleasant. Certain individuals with intense professional (and personal) ties to the Latino community were justifiably hesitant to share their knowledge with me in a formal interview setting, despite the fact that they were relatively open during the LCG meetings about certain characteristics of the Latino community. Over time, I gained their trust and I have been able to conduct repeat interviews with these key informants as our relationships grew stronger.

Using recommendations from LCG members, from others in the community and the University who had some familiarity with the Latino population in Tuscaloosa, and from research done using the local newspapers and other sources, my usual first step was to take a day and drive to a number of locations I had recently learned about and in most cases, talk to people there. These included residential locations (neighborhoods, mobile home parks, and apartment complexes), businesses, churches, parks, schools, libraries, clinics and hospitals, and various University locales.

For example, when I learned that specific elementary and middle schools in the county had higher Latino enrollment than other schools, I would explore these areas to become familiar with the kinds of neighborhoods Mexicans lived in. Latinos live in mixed, mostly poorer neighborhoods. I returned to many of these places during my research project to conduct interviews in participants’ homes. That is, the information gathered from LCG members and
other sources about where Mexicans were likely to be found was accurate and useful to me. I 
learned of many other locations on my own. I obtained permission to post flyers in certain 
locations (by the mailboxes, on public telephones, or on vending machines) at some of the more 
populous apartment complexes and mobile home parks in Tuscaloosa.

I also visited as many Mexican and Latino businesses as I could. Whenever I heard of a 
tienda or restaurant I had never been to, I always made it a point to go there and, in the case of 
the tiendas, usually buy something small like a bottle of water, a soft drink, or a couple of 
mangos. Regardless of whether it was a Mexican/Latino business or an American business, I 
found that the employees were much more open to me if I patronized their establishments. If 
there were no other patrons waiting to be served, I introduced myself and told them briefly about 
how I was studying the food habits of different groups of people in Tuscaloosa. I then asked to 
speak with the owner or the manager of the establishment, so that I could ask permission to leave 
some flyers on the counter or post them on the door or in the window where passersby would see 
them. When asking permission of the managers about the flyers, I also asked if it would be 
appropriate to speak to the employees about participating in an interview, on their own time, and 
not in their place of employment. In some instances, the owner or manager would take the time 
to gather his or her employees so that I could speak with them and distribute my contact 
information right then and there. In other cases, the owner/manager said they would post a flyer 
in the break room or otherwise let the employees know. If the manager or owner was not 
present, I stated my intent to the employee to return another day in the hopes of gaining 
permission. When consent to leave flyers was obtained, I usually returned within a week to say 
hello, replenish the stack, and in the case of Mexican/Latino tiendas, buy more mangos.
One of my first LCG participants, a health care professional, suggested that I seek out additional people who worked in the health care field, noting that some of them had strong, negative opinions about providing services to Latinos. Therefore, I contacted a number of clinics and other health care establishments, but most of them did not return my calls or were repeatedly unavailable despite trying to set up phone appointments during which I could introduce myself. I was able to get in touch with and interview the director of a reduced-cost/free clinic and a nurse who organizes free health screenings and informational programs for Latinos. A doctor at the University Medical Center was contacted similarly. All provided primary health care to Latinos. A nurse and a pharmacist were also interviewed. Finally, I also interviewed two women who provided in-home hospice care, though not to Latinos—although one woman had a non-Spanish speaking (Mexican indigenous) boyfriend and several other Spanish-speaking Latino friends and acquaintances. Some of these American participants had mixed feelings about Latinos in Tuscaloosa, and providing care to them, while others maintained a more positive and open attitude.

Churches, schools, ESL programs, and other American establishments that provided services or programs to Latinos were sent formal letters and copies of my IRB approval (Appendix A) asking for permission to work within their systems. I was formally presented before three separate religious congregations during their Sunday services, sometimes more than once, and I was personally allowed to address the congregations on two occasions. Additionally, I was given clearance from several administrative officials in the local education systems to contact teachers and other staff for interviews. However, while I received authorization from higher-up administrative officials to contact parents of Mexican students enrolled in their district, the consent to do so from officials/principals at individual schools never materialized.
Presentations were made to two ESL/GED classes in Tuscaloosa after consent was given by the program administrators and the churches and other sites at which the classes were taught.

Events designed to promote health care or social services to Latinos were also a source of participants, especially the Brazos Abiertos (Open Arms) festivals. I had attended meetings since 2005 and have attended each festival since 2006, and in both 2008 and 2009, I reserved a table with the purpose of displaying my research findings to-date and recruit more individuals for my project. In addition, I attended smaller programs sponsored in part and hosted by one of the Catholic Churches in Tuscaloosa. These included a two-hour program on women’s cardiovascular health and weight management, a day-long program promoting various opportunities—to learn English, information about how to register your children in school, and a very popular presentation by a local bilingual lawyer who spoke on everything from what to do if stopped by the police, to how to get a tax-ID number. The church also hosts a Latina-run health promotion group, and I attended meetings there occasionally. This group is composed of Latinas who help organize programs like the ones mentioned above, with the meetings being facilitated by a bilingual American who is employed by a nearby university. Finally, I attended a breast cancer screening and informational presentation put on by the Department of Public Health and was able to introduce myself to women there.

As some participants, mostly women, became my friends, they invited me to a number of social events. I accepted invitations for lunch, dinner, and coffee dates, pool party cookouts, children’s and adult’s birthday parties, baby showers, sending-off parties for people returning to Mexico, quinceañeras (“sweet-fifteen” birthday/coming-of-age celebrations), “ladies night out” parties, holiday meals, yoga classes, church services, and church social functions. At some of these social events I was encouraged by the hostess or host to tell their friends about my work, or
was introduced to guests personally. The core group of these gatherings was a number of
Latinas, most from Mexico. Other group members (both female and male) were from other
countries such as Columbia, Costa Rica, and Ecuador.

Finally, on a number of occasions my research assistant and I spoke with groups of men
playing futbol (American soccer) at two of the larger public parks in Tuscaloosa. During the
warmer months, men would gather around 4 or 5 and start playing until dark. We would be sure
to arrive before the games started, so as not to interrupt playing time. At one field, we were
generally well-received on multiple occasions but did not linger, instead chatting briefly and
exchanging contact information. We also visited a park where a more formal league was having
a playoff game. It was not as easy to talk with the Latino men in this case, even when they were
at rest. During this particular day, all-Latino teams were playing all-White or mixed Black and
White teams (who were also playing each other), and the interactions on the soccer field seemed
to be racially charged. While I heard the normal competitive (if foul-mouthed) banter on the
field, more seemed to be at stake than just winning the game. Even though we spoke with a
Latino team leader and received consent to talk with one of the teams he was in charge of, we
left after realizing that no one would be open to us on this particular day.

In summary, a variety of techniques enabled me to become familiar with the geographic
locations where Mexicans lived, worked, ate, played, and worshipped. In addition, my
involvement with the LCG members and my continued social involvement with the Mexican
participants facilitated recruitment from many different places, and provided opportunities for
more in-depth participant observation. Both Black and White Americans who had social
interactions with Mexicans were sought as participants in and around the areas where Mexicans
lived and worked, but those Americans from Tuscaloosa who had limited knowledge of Latinos in general also were interviewed.

**Interview Procedures**

Institutional Review Board approval preceded any data collection (see Appendix A). Training required by the IRB office included general biosafety education, modules on collecting biological material, lab orientation and training, and demonstration of finger-stick procedures.

Interview schedules were developed over time, along with informed consent documents. Before submission to the IRB office, these materials were translated by a Spanish graduate student and back-translated using a bilingual professional on the University of Alabama staff. The same Spanish graduate student, a bilingual undergraduate student, as well as three University English Language Institute students I knew over the course of a year and a half as Spanish-English conversation partners also helped translate materials while they were being developed. All interview schedules were pretested before they were presented to research participants to identify and correct for errors and test for overall coherence. Most interviews with Latinos were conducted in Spanish; the three Latino LCG members from Phase 1 and three other Mexican women from Phases 2 and 3 opted to conduct the interview in English, but my assistant was still present at these interviews in case any interpretation assistance was necessary.

My research assistant, Angel Narvaez-Lugo, accompanied me during participant recruitment, scheduled interviews over the phone and in person, and helped interpret and assist with data collection during most of the interviews conducted in Spanish. He is a bilingual Tuscaloosa community member, though not of Mexican descent. I was told on a couple of occasions that his being Latino provided me with a certain amount of “street cred” among the people I came into contact with, and since he was not a member of the Mexican community there
may have been less of a perceived risk that other Mexican community members would find out about their personal information. He accompanied me on most of my interviews that occurred in Spanish, and on a handful of interviews that happened in English (some with Latinos, some with Black or White participants).

For all interview participants, the first task was to set up an appointment where there would be privacy. This condition was made explicit to the participants, and while their homes were often the most private place, sometimes residences were not private and other arrangements had to be made. Sixty-two percent of the Latinos who participated invited me into their homes to do the interview, while only 24% of Americans did the same. Other locations where interviews took place were: a private office or location on the University of Alabama campus, various branches of the Tuscaloosa Public Library, restaurants with an informal atmosphere, church social rooms, and participants’ workplaces. When interviews or solicitation happened at places of employment, every attempt was made to clear my activities with the owner or manager, explaining in detail the interview procedures and time and privacy requirements. Even after these efforts, in one instance I was asked to leave a business by an owner even though the manager-on-duty (his wife) had consented to my presence before his arrival.

During the interview sessions I and my research assistant reintroduced ourselves in the first few minutes. I always reminded the participants that I was a student, and that I was interested in the food habits of different culture groups in Tuscaloosa. The several different parts of the interview were reviewed, and then the informed consent document was read out loud. Every person was given a chance to ask questions before they were asked to sign two copies of the document, which I then signed as well. Participants took home one of the signed copies. Afterwards, participants signed or marked a receipt for a fifteen dollar gift card to Target or Wal-
Mart that they received as an incentive. Before beginning the questions, I always spoke aloud a conversational script that reminded participants that everything was confidential, and that they could ask questions at any point during the interview. I asked every participant if I could use a voice recorder, and every participant gave their consent.

The interviews consisted of various parts depending on the phase of the research. Participants in all three phases answered various sociodemographic questions and a varying number of open-ended questions. The sociodemographic variables were age, education, employment status, occupation/job description, ethnicity, marital status, religion, and household composition. Every participant was asked how long they had lived in the Tuscaloosa area, and all Mexican participants were asked their place of birth (city and state), and to give me a history of all of the places they had lived. With this information, I was able to estimate how long individuals had lived in different parts of Mexico, the United States, and Alabama. Usually these questions occurred at the end of the interview.

Phase 1 consisted of open-ended questions for the Latino Community Group members and the Community Health care Providers. Phase 2a consisted of a freelistings task and the Phase 2b interview schedule asked participants to complete an unconstrained pile sorting task, four rating tasks, and a food frequency task in the form of a 14-day dietary recall. After these structured tasks, both Phase 2a and 2b participants were asked open-ended questions about their eating habits and their life. Phase 3 interviews consisted of an unconstrained pile sort, four ranking tasks, a food frequency task, and more structured questions regarding food, family composition, life history, involvement with the Tuscaloosa community, a formal social network analysis, questions regarding the participants’ health status, physical activity, language ability, and media access and use. In addition, anthropometric data were collected (height, weight,
percent body fat, waist and hip circumference) and a finger-stick allowed for a drop of whole blood to be analyzed for percent hemoglobin A1c (HbA1c). A few open-ended questions were asked as well. At the conclusion of every interview in every phase of the research project, everyone was given a chance to add more information, ask questions, and/or clarify their answers. Each phase will be discussed in the following sections of this chapter.

**Phase One Data Collection Methods**

Attendance at the LCG meetings assisted me in the creation of my interview schedule for Phase 1. At the meetings, I was able to identify recurring themes in the conversation of the members, and formulate questions based on my research goals. Phase 1 preliminary ethnographic interviews used open-ended questions so that I could become familiar with the American and Mexican communities in Tuscaloosa. The target population for these interviews included members of the service committee known as the Latino Community Group, as well as with Community Healthcare Providers, all of whom were in direct contact with Mexicans and other Latinos in Tuscaloosa.

Interview questions addressed their experiences with the Latino population, including their perceptions of the food habits and social network interactions of Latinos with community members. The LCG members were asked to help identify key informants in the Mexican immigrant community. These open-ended interviews also addressed the participants’ own food habits throughout their life histories—especially fruit and vegetable consumption, food availability, preparation, and cost. Basic demographic information was collected at the end of every interview. Interviews ranged from 36 minutes to over 90 minutes, with an average duration of just over one hour.
Phase One Data Analysis Methods

The qualitative data were coded for recurring themes that the participants talked about during the interviews. It became clear that these ten individuals could not be considered as one social group, as the attitudes of the Community Health Providers regarding Latinos in Tuscaloosa differed from those of the Latino Community Group, whose explicit mission was to help Latinos obtain the same level of service provision that Black and White community members are able to access. Therefore, the responses from each group were considered separately and compared.

These interviews were also used to help guide the sampling for the freelisting part of Phase 2a. Specific information was collected about what kinds of community members (teachers, doctors, employers, coworkers, store clerks, church workers, neighbors, friends, etc.) that Mexicans in Tuscaloosa were thought to be interacting with on a daily basis. These types of individuals were then sought as participants in this project (both specific individuals via snowball sampling, and within the general population of Tuscaloosa), in order to access the local knowledge to which immigrants are being exposed.

Finally, the responses from the preliminary interviews helped to shape the open-ended questions in future interviews. Some participants were aware of other issues within the Latino and American communities that I was able to address in later interview schedules.

Phase Two Data Collection

Phase two consisted of two steps—a freelisting activity in which the elements of the model were elicited (Phase 2a), and, after those elements were defined, a separate sample of participants completed a pile sorting task and ranking tasks using four dimensions of meaning (Phase 2b). Both of these steps will be discussed separately as each sample group was distinct,
and due to the fact that Phase 2b (the pile sorting and ranking tasks) were derived from results of the freelist activity in Phase 2a. It should be noted that the participants in Phases 2a and 2b were asked questions only about the food habits of their own ethnic group. It is only in the third phase of the research project that the main sample group of Mexican immigrants was asked to evaluate parts of all three cultural models.

For both Phase 2a and 2b, open-ended questions were asked of the participants after the structured tasks. Specifically, I asked each person to give me their life history and describe their eating habits from childhood until the present. I asked about fruit and vegetables—how often they were consumed in the past and present, participants’ perceived ease and difficulty of including produce in their daily diet, and concerns about cost. Individuals were asked to walk me through a typical day in their life, and report what foods they ate during a typical day. I asked questions about media exposure and the perceived effects of advertising on food consumption. Individuals were asked about what stores they frequent, and many people visibly enjoyed making a sample grocery list for me. I also inquired if there were any foods that they grew or if there were foods that they could not presently obtain while living in Tuscaloosa.

Other open-ended questions for Phase 2a and 2b centered on what participants thought about other ethnic groups in Tuscaloosa, including their food habits. Americans were asked specifically about Mexicans and where they see the ethnic group around town. Participants were asked to speak about whether they thought Mexicans were planning on settling down, and how Tuscaloosa would change if more Mexicans did settle down and make Tuscaloosa their permanent home. Mexicans were asked about their life in Tuscaloosa, and what kinds of people (of any ethnic group) that they typically talk to. I asked them to estimate how many Blacks and Whites they spoke to during the course of a normal day, and how many Black and White people
they considered to be their friends. I inquired of the Mexican participants if they felt accepted by the Tuscaloosa community, and what they thought of the food and eating habits of Blacks and Whites. Finally, I asked if they thought that living among Blacks and Whites in Tuscaloosa had changed the way that they ate. The next sections review the structured tasks and data analysis in more detail.

**Phase 2a: Freelisting Methods**

The purpose of this segment of the research project was to determine the elements of the cultural model within the cultural domain of food and eating. Overall, freelists are useful in that they provide the elements or items that are relevant to a given cultural domain—in this case, the elements are the foods that are important and relevant to the populations being studied. For this project, participants were asked to “list for me the foods you eat and the foods that are eaten by the people you know.” The phrasing of this and other prompts were pre-tested among members of the college community (with Whites and Latinos) with success. It was decided that requiring the participant to think about foods that they and their social associates consumed would be of value, and would possibly expand the freelist results so that they would include more than just the participants’ favorite or regularly-eaten foods. In this manner, participants moved beyond reporting only their behavior towards accessing their shared cultural knowledge about what people in general eat. Demographic and open-ended questions (outlined above, and available in the interview schedule in Appendix B) followed the freelisting activity.

Deciding how many freelists to collect is also a central concern when implementing the freelisting method. While Weller and Romney (1988:14) suggest that twenty to thirty freelists should be collected, twelve individuals from each of the three ethnic groups (total n=36) were recruited for the freelisting interviews. For this project, a cumulative list of food terms specific
to each ethnic group was kept throughout the interviews, and there was little change in the list regarding the frequency of core items after the tenth freelist within each group. That is, during the eleventh and twelfth interviews few new terms were added that affected what the top ten most listed items were. Therefore, it was decided that twelve participants from each group would be a satisfactory stopping point. Even with extremely large sample sizes, it is unreasonable to think that freelisting will elicit every single element in the domain of food. Undoubtedly, new items would emerge after even fifty freelists, especially given the dynamism of the food domain and the creativity that people use when thinking about, talking about, and preparing food. Researchers can, however, be relatively certain that they can capture the most important components of a cultural model with freelisting methods. Qualitative data collected after the freelists can help verify that core food items identified during the freelist activity are salient to the participants; this was certainly the case for these 36 interviews.

Sometimes freelists are a written task but if literacy among participants is a concern—as it was in this project—freelists can be generated verbally. Each participant was told that all of what they said would be written down during the freelist task; this written list was used as a neutral prompt for the participants if they paused for any length of time. Interviews ranged from 30 minutes to over two hours, with an average duration of just over one hour.

**Phase 2a: Freelisting Data Analysis Methods**

These terms were entered verbatim into formatted text files and imported into the ANTHROPAC program, after individual freelist data were tabulated and cleaned to remove any identical terms. The ANTHROPAC program compiled the individual freelist data, outputting a master list of all of the foods that were listed, with the most frequently mentioned terms at the top of the list. A group of freelists, when analyzed across participants, produce a “core set” of
items or terms, as well as a list of idiosyncratic or unique terms. It can be assumed that the existence of a core set of terms from a sample of respondents is evidence of a shared cultural model of which they are a part. Interviews can result in freelists with few or many terms, but even in short freelists the core set of items can usually be found. A more thorough explanation of how terms were chosen appears in the Results section, but in general, most of the terms which were chosen for the next phase were the most salient and the most frequently listed food terms.

Three separate master lists were created, one each for Blacks, Whites, and Mexicans. Within every ethnic group’s master list, I searched for synonyms so that I could familiarize myself further with the terms that participants were using to describe their food. Synonyms in freelist data are encountered often, both within a single interview and between two or more interviews. Clarification from participants regarding these similar terms was at times necessary in order to determine if people were referring to the same food items or if they should be considered separate elements. If respondents are referring to the same food items, then these terms can be condensed by seeking out similar terms and attempting to identify the most general term (or alternatively, the most frequently listed term) to include it in the final set of food terms, if deemed appropriate. Again, it is important to become very familiar with all of the terms that emerge from freelisting methods; as Fleisher and Harrington (1998:74) point out, the analysis of freelists is a kind of “mini-linguistic analysis” where one codes, identifies synonyms, and recognizes themes in participants’ responses.

During this process of synonym clarification and condensation, I became more comfortable with the data and was able to infer a bit about the structure of the food domain as well. One of the ways I examined the structure of the data was to look at the terms according to what United States Department of Agriculture “food group” they belonged. These food group
terms have changed recently, as the USDA has moved from the “MyPyramid” food groups of grains, vegetables, fruits, milk, meat and beans, oils, and discretionary calories (Britten et al. 2006) to the “MyPlate” food groups of grains, vegetables, fruits, dairy, and protein. Additional information can be found on two additional categories, oils and empty calories from solid fats and added sugars, which the USDA describes but does not include in the “MyPlate” recommendations (USDA 2011). The introduction of food group structure to the freelist data was my imposition, but it was not unsupported many participants from each group spoke about “food groups” or the “food pyramid” during their interviews. However, the terms they used were sometimes variations of the terms proposed by the USDA; participants usually spoke about the nutritional properties of the foods rather than their constitution. For example, “carbohydrates” was the label most often used to describe the foods that the USDA calls “grains,” with potatoes and pasta and rice being included in the carbohydrates group. In contrast, beans were overwhelmingly considered a vegetable and usually were not classed as being grouped with meats or proteins. When using the food groups to refer to the freelist data, I adopted these label variations and food inclusions that the participants used instead of the USDA categories. Using this structural framework, it was possible to compare each of the groups in terms of how many foods within each food group were listed by what percent of the sample. Differences in the frequency and saliency of fruits and vegetables were of particular interest to me; this diversity will be noted in the chapter on the freelist data analysis results.

Respondents also used these general food groups as terms in their actual freelists, and when this happened, each person was asked “what kind of meat/vegetables/fruit?” after they spoke the general term aloud. These general, food group categories can give some insight into which types of foods are important, and overall the three general terms of meat, vegetables, and
fruit were listed often and were calculated to be very salient to the participants. However, it is
much more instructive to have people recall specific meats, vegetables, and fruits when
attempting to piece together the elements of a group’s cultural model.

While analysis of the freelist terms does give us insight into the elements and the structure of the cultural model of food for each ethnic group, even more useful information can be collected when one uses a sample of the terms generated for pile sorting and ranking activities on a separate sample group. Choosing how many and what terms to include in the next stage was determined by a number of factors. The number of final terms needs to reflect the core, salient terms that are important to the participants, but there is some room for hypothesis testing where idiosyncratic terms or terms of historical or ethnographic significance can be added to make the final lists more reflective of the variation present in the data. The quantity of terms chosen needs to be small enough to be reasonable for further stages of research; Weller and Romney (1988:16) suggest that 24 terms may be an adequate number, but that there is some leeway if it is decided that a project warrants more terms. In previous research (Szurek 2006), 33 food terms were used for pile sorting and rating tasks. After the freelist data were analyzed, it was decided to include 36 items from each group for the second step of phase two. Overall, 57 distinct terms were used, some of which overlapped across the three ethnic groups.

Phase 2b: Pile Sorting and Ranking Methods

The purpose of Phase 2b was to use the elements identified in Phase 2a to determine the structure of the domain of food for the three ethnic groups, and examine the distribution of cultural knowledge. Unconstrained pile sorting and ranking tasks using the 36 foods identified in Phase 2a were the activities used to achieve these goals. Food consumption was measured in the form of a 14-day dietary recall, and additional qualitative questions were asked (see
Appendix C). A separate sample consisting of fifteen new individuals from each ethnic group (n = 45) participated in this phase of the project.

Unconstrained pile sorting is useful at finding what kind of structure is applied to the elements in a cultural domain, and the use of cards allowed participants to group the 36 foods using their own criteria of similarity. That is, the unconstrained nature of the pile sort meant that individuals chose how to put the cards in groups, or let them stand alone. Participants are in effect being asked to use their cultural models of food to indicate spatially through pile sorting part of the cognitive structures in their minds.

Thirty-six note cards were created for each ethnic group’s final list of foods. This process involved printing labels with large-sized font and affixing them to the note card along with a relevant photo or photos. These 36 cards were assigned a number using a random number table (Weller and Romney 1988) and the cards were laminated. Each participant was presented with the cards in the same order for every single task. That is, the cards were re-ordered from 1 to 36 during the interview. Several sets of cards enabled me to reorder one set while the participant was working with another during the interview.

The photos were selected in consultation with some key informants, who were asked if the written food word could be misconstrued by what was depicted in the images, and vice versa. Every attempt was made to include food images in their raw or unprocessed form, as well as in cans or packages that people recognize and consume. While every effort was made to keep the photos as neutral as possible, it is possible that the images influenced how participants used the cards. This risk was deemed necessary, however, because of the likely possibility that I would encounter people with limited literacy skills. Indeed, there were several participants who told me that they could not read during the interviews, and I suspected that others had difficulty.
Realizing this risk, I decided to discuss with each participant the photos on the cards before the interview started. I stated that the photos on the cards were only meant to serve as a guide, since foods come in many different forms and not all of the forms were pictured on the cards. I cautioned participants to think about the food in general and not focus on how the food was prepared in the photos. I always invited questions at this point and throughout the interview.

Once this information was given to the participants, I asked them to start the pile sort. Specifically, I told participants to “Please go through all of the cards and put them into piles in the way that makes the most sense to you.” After the person indicated they were finished, I told them that my research assistant and I were going to read the piles out loud and record the groupings on the interview schedule pages. This allowed for the groupings to be included on the voice recording, and it gave the participant a chance to change any of the piles if they desired. I then asked a series of questions about why they grouped the cards the way they did, and I also asked each person to name each group.

The next task was to have each person rank order the 36 foods using four dimensions of meaning that emerged as being important to participants. These dimensions of meaning were chosen after analyzing the Phase 2a interviews and after completing unconstrained pile sorts with three members of each ethnic group. These nine people (who later completed the ranking tasks), were asked to describe in detail their unconstrained pile sort groupings and answer a set of qualitative questions about their eating habits and their ideas about food. After this analysis, I decided on health, cost, convenience, and desirability of foods as the four dimensions of meaning for the ranking tasks.

Since one of the goals of this project was to determine the relationship between cultural knowledge, eating habits, and health, health as a dimension of meaning was chosen. It was also
the most salient dimension for my previous research on food in Tuscaloosa (Szurek 2006); the ties between food and health were often referenced during this project’s interviews. Cost was an issue that came up during the Phase 2a interviews, especially when I asked participants about fruits and vegetables and possible barriers to consumption. The ongoing economic downturn made the cost of food more of an issue for participants, and at the time of my decision to include cost as a dimension of meaning for the ranking tasks, several news pieces had recently covered the rising cost of food purchases in America. Convenience was a topic that was also discussed during the Phase 2a interviews, and as people discussed the busyness of their daily schedules, the ease of preparation and accessibility of certain foods was important to them. Similarly, when asked about the barriers to produce consumption, some individuals mentioned that fruit and especially vegetables (since they had to be cooked) were less convenient and were therefore not consumed as much as perhaps people knew they should have been. Finally, the desirability of foods was often referenced in interviews. People enjoyed talking about eating the foods that they liked. It was also thought that the tastes of the Mexican sample might be a measure/marker that would vary and something that that could be correlated with a number of different variables, such as cultural consonance or length of time in Tuscaloosa. It was expected that the preferences of foods might change the more one becomes acculturated to American models of food.

These four ranking tasks were completed using the note cards from the unconstrained pile sort. However, these tasks are not considered as pile sorts, even though they use the cards. For each ranking task, I asked the participants to use all the cards and place them in three piles—for example, the three piles for the first ranking task would be most healthy, somewhat healthy, and least healthy. Then, I asked the participants to rank order the most healthy cards, placing the number one most healthy food face down on the table, with the second and third most healthy on
top of that. The participant was asked to do the same with the other two card groups, creating a complete ranked set of cards from most healthy to least healthy, numbered from 1 to 36.

After the pile sort and ranking tasks were complete, a food frequency analysis was done using a composite list of all 57 food terms from the three ethnic groups. Participants were asked to give each food a score from 1 to 14, with the score indicating how many days in the past two weeks that the food had been consumed. Finally, the latter half of the interview consisted of the same types of qualitative questions asked during the freelisting interviews, and the same demographic and household composition questions. Interviews ranged from 35 minutes to just over 2 hours, with an average length of 70 minutes.

**Phase 2b Data Analysis Methods**

A number of different analyses were performed on the data collected in Phase 2b. Pile sort and ranking data were entered into Anthropac 4.98, and demographic information into SPSS. The unconstrained pile sort data were analyzed using multi-dimensional scaling (MDS) and cluster analysis in Anthropac. The MDS technique uses a proximity matrix from the unconstrained pile sort data and creates data points on a graph so that the distance between them corresponds to the frequency with which individuals grouped the cards in the sorting task. Sturrock and Rocha (2000) identify a stress level of 0.34 for a 36-item matrix that is scaled in two dimensions as being acceptable. It is ideal to have as low of a stress value as possible, as this indicates that the MDS plot represents the proximity matrix data well (Borgatti 1996). Cluster analysis classifies the foods into meaningful groups on the MDS graph.

Cultural consensus analysis was performed in Anthropac to determine the degree of sharing among participants on the four dimensions of the ranked food terms. Consensus analysis produces several types of information. First, a factor analysis of respondents is performed, to
evaluate the degree of agreement among them. Consensus can be determined if the eigenvalue ratio of the first to the second factor is three to one or greater. The second type of output from consensus analysis is a correlation coefficient that evaluates the cultural competence of each individual. This measure is an assessment of the approximate amount of knowledge or expertise that a person has relative to the responses of the entire group. Thirdly, cultural consensus analysis generates the “answer key,” that is, the approximation of what the culturally correct response to each question is, based on an evaluation of the elicited replies of the entire sample, with a greater weight given to the responses of the more competent individuals. Competency scores for each individual were entered into the SPSS data file. When a single cultural model was identified for each sample group, PROFIT analysis, using multiple regression, was used to establish the relationships among the dimensions of meaning for the unconstrained pile sort data. If these relationships exist, PROFIT analysis regression lines were drawn onto the MDS graph.

The food frequency data were entered into an SPSS data file. Average reported consumption was calculated, and consumption of the 57 foods was examined relative to ethnicity, gender, age, income, and education.

**Phase 3 Data Collection Methods**

A separate sample of 50 Mexicans living in and around Tuscaloosa was interviewed for the final and primary phase of the research project (see Appendix C). There were several data collection goals to this phase: 1) discern how the inclusion of food terms salient to Blacks and Whites will be handled during pile sorting and rating tasks along the dimensions of health, cost, convenience, and desirability (analysis methods: MDS and cluster analysis, consensus analysis and PROFIT analysis), 2) collect food frequency data in the form of a two-week recall in order to assess the degree to which individuals are following, in their daily eating habits, their own
ethnic group’s cultural model of food as well as the cultural model of food of Blacks and Whites (analysis methods: cultural consonance analysis), 3) learn more about the family life and life history of participants, 4) collect data regarding the social networks and social interaction of participants, and 5) collect data on health status, record anthropometric measurements, and measure Hb A1c using whole blood from a finger stick. Each of these procedures will be described in turn.

**Unconstrained Pile Sort and Ranking Tasks**

These fifty individuals completed an unconstrained pile sort and ranking tasks similar to the participants from Phase 2b, but did so with a list of the most characteristic and salient foods from both groups. That is, the foods under scrutiny in this phase were comprised of a combination of unique food items from the Black and White cultural models as well as from their own cultural model. This method is based on the work done by Chavez et al. (1995) who examined how Latina immigrant women, Chicanas, Anglos, and biomedical physicians used their cultural models to semantically structure the causes of cervical and breast cancer. The list of causes was an amalgam consisting of causes freelist from each of the culture groups. That is, in the final sample, participants were asked to rank causes that were highly relevant to their cultural model, as well as causes that were of uncertain relevance due to the fact that they were generated by another culture group. In this same manner, the main sample group of Mexican immigrants were asked to use their cultural models of food to rank the importance of foods all three models along the same dimensions used in phase 2b (health, cost, convenience, and desirability).

Thirty-two foods in total were selected for this phase of the research. The foods common to all three ethnic groups were removed from the entire list of 57 foods, leaving only the unique
and the shared foods behind.; some of the Black and White unique foods were similar, and both
Whites and Mexicans shared coffee among their unique items. Soup and Mexican food in the
Black and White models were deemed to be covered adequately by the Spanish terms *sopa*, and
*caldo*, and *tacos/enchiladas*, respectively. Finally, the Soul Food meats term from the African
American cultural model was subsumed into the Spanish *menudo* term; since these “other meats”
are used in the making of menudo, it seemed redundant to have both terms especially since the
Mexican participants would not necessarily be familiar with this subset of southern American
food. However, *otras carnes* (other meats) were still asked about during the food frequency task,
discussed below. Considering these changes, the resultant terms were 32 in number (see results
chapter for list of foods).

Additional changes were made to the cognitive tasks in this third phase. Since this
interview schedule was longer than the previous phases, the foods were rated rather than rank
ordered because of time constraints. All of the foods were rated on a three-point scale: most
healthy, somewhat healthy, and least healthy, for example, instead of rated on a scale from 1 to
32.

Data were entered into ANTHROPAC as they were for Phase 2b, and the same MDS,
cluster, and consensus analyses were performed. Sturrock and Rocha (2000) identify a stress
level of 0.33 for a 32-item matrix that is scaled in two dimensions as being acceptable. Again,
lower stress indicates a better fit for the data represented on the MDS plot. In the case where
there were shared cultural models, PROFIT analysis regression lines were drawn onto the MDS
graph, when appropriate.
Other Food Questions

Additional questions about food were asked during the Phase 3 interview; these questions inquired about fruit and vegetable accessibility, and the influence of cost and quality upon an individual’s decision to purchase fruits and vegetables. I also inquired as to what business/store that sold any kind of food was the closest to the participant’s residence, and which grocery store participants frequented the most. Two questions about food consumption asked participants to estimate how often they were unable to buy all of the food that they needed and how often they were unable to eat when they wanted to during the course of a normal (working) day.

Food Frequency Data Collection and Analysis

Food frequency data were collected for each participant as well. Each participant estimated how many days in the past two weeks all 57 foods were consumed. Cultural consonance analysis was performed using these data in order to assess the degree to which individuals follow their own group’s cultural model of food, and the degree to which they eat in accordance with the Black and White models of food. The food frequency data is a rating of how often each food is consumed. Individuals were asked how many days in the past two weeks each of the foods was eaten, and each food was then coded to give a score ranging from zero to fourteen. Cultural consonance can then be determined by constructing a data matrix that allows for a correlation to be performed for each individual’s reported behavior (the zero to fourteen frequency ratings) and the answer keys from the consensus analysis output from ANTHROPAC. The answer keys approximate the collective knowledge of which foods are most salient to the model, and therefore the correlation coefficient (the consonance score) was calculated for each individual to indicate to what degree their behavior represents collective cultural models.
Family Life and Life History

Questions about the family life, family proximity, and life history of the participants were asked during the interview as well. Family was recognized as being a powerful influence on one’s food habits, regardless of how close or far away family members are. Family members can reinforce traditions, and family members—especially school-aged children—can introduce new foodstuffs into an individual’s diet.

Household characteristics were explored first. Participants told me their relationship to every person living in their household, who the head of the household was, and whether any children attended school. If children were going to school, I asked if they ate the lunches provided by the school system, and if they preferred eating school lunches or the lunches brought from home. I also asked each participant with school-aged children to tell me more about the food habits of their kids. If the children asked the participant to buy any specific foods, these foods were listed and the participant told me with what frequency the child/ren ate the foods, and how often they themselves ate those foods.

The presence and number of family members, as well as their specific relationship to the participant, were also recorded. That is, I inquired as to how many and which family members, if any, were living in the participants’ neighborhoods, in the vicinity of the City of Tuscaloosa, in other parts of the state of Alabama, in the southern part of the United States (including Texas, Mississippi, Alabama, Tennessee, Georgia, Florida, North and South Carolina, and Virginia.). Participants told me if both, one, or neither of their parents were born in Mexico. The birth city/town and every city lived in since was also recorded, along with the duration of residence in each place. A rough timeline of the person’s life could then be sketched out. I asked how long participants had been living in Tuscaloosa.
Ethnographic notes on family life were also recorded during and after interviews. Notes on the dwelling included estimates of number of rooms, existence of furniture and electronics, and an inventory in the kitchens, if possible.

Social Integration and Incorporation

Social interaction with others, community incorporation via activities in Tuscaloosa, and one’s self-reported sense of integration into the community were also considered to be an important part of how cultural knowledge is passed on and reinforced while immigrants are living here. Participants were asked directly to rate, on a four-point scale, how much they feel that they are part of the Tuscaloosa community at the present time, and how much they want to become more of a part of the community in the near future. I asked if they participated in different community activities: church, classes for ESL instruction or job-related instruction, and voluntary service (in churches, in classes, in children’s schools). I also inquired as to how much interaction people had with their neighbors.

Regarding additional social interaction with Tuscaloosa community members, I inquired about how many people (ethnicity unspecified) were known before moving here. “Knowing” someone was defined to each participant as “someone who you are familiar with, with whom you have had contact with in the past two years, and who would recognize you” (McCarty, 1996). Additionally, I recorded how many close friends each participant reported as having. Close friends were defined to every individual as “those people in confidence who help you make decisions and are people with whom you share personal details of your life.” The ethnicities of each of these friends were recorded. Finally, I asked about their family’s and friends’ conversations with Black and White Americans. Each participant told me how many Blacks and Whites they knew and how long their average conversation with any person of both ethnicities
would be. These specific and hypothetical questions about knowing and talking with Americans led into the formal social network analysis that took place next. These questions also elicited some more information about what kinds of Americans Mexican immigrants are talking to during the course of a normal day.

**Social Network Data Collection and Analysis**

Data collection on the American social networks of each participant was a significant part of the interview as a whole. This analysis was not concerned with shared knowledge or cultural models of social interaction. Rather, the analysis consisted of determining the actual daily interactions with Alabamans or other people from the United States. Specifically, individuals were asked to “please name up to five Americans that you know.” The definition of knowing someone was standardized as it was for the social interaction questions described in the previous section. Participants were directly asked to include Americans in their lists, and Latino-Americans, as they were defined by the participants, while not excluded, were rarely mentioned. Fifteen questions were asked about each alter; a sixteenth question asking if the alter in question had more, less, or the same amount of income as the participant was dropped during Phase 3 as the question seemed to make the respondents uneasy. These fifteen characteristics asked about each alter were sex, age, ethnicity, estimation of educational level, current occupation, religion, city of residence, marital status, number of children, number of children in school, length of time known, relation to the participant, frequency of verbal contact, frequency of meal sharing (daily/weekly/monthly/yearly/less than yearly/ and never), and strength of relationship on a scale of 1 (very strong) to 5 (very weak).

The social network analysis questions were in part adapted from those often used in the EGONET personal network analysis software program (McCarty 2004). As much information
as possible was collected for each American individual ("alter") that the participants listed in their social networks. The same questions were asked of each of the alters in a systematic fashion, such that the participants were able to anticipate the answers for each alter without being specifically asked how old each alter is, for example. That is, for this part of the interview, the participant could in most cases see the chart into which I was entering their responses, and I asked the questions “across,” meaning that I inquired about the age of each of the 5 alters and then moved onto their ethnicities, education, et cetera. Other social network researchers have found it useful to ask “down,” meaning that all of the characteristics about one alter were asked and then the same set were asked about a separate alter. If the person did not know the information being asked, an answer of “don’t know” was accepted and coded accordingly during data entry (McCarty 2004). It was expected that not all of this personal information would be known about all of the alters on the list.

Finally, one of the characteristic parts of an egocentric social network analysis is asking about the relations among the alters named by the respondent. Each alter-to-alter relationship pair was evaluated, and the participant categorized the relationships as being 1) very good friends, 2) friends, 3) acquaintances, 4) family members with very good relationships, 5) family members without very good relationships, 6) non-existent (i.e., the alters do not know each other), and 7) of unknown status.

The collection of social network data comprised a large portion of the 60 to 90 minute interviews conducted in Phase 3. These data were entered into SPSS, and percents (proportions) were calculated to represent attributes of each person’s network. All of the alter characteristics were entered into the EGONET program after the interview was over (EGONET was originally
designed to be used in the field with the respondent entering the data in). EGONET analysis provided information on the characteristics of these small networks.

The most important social network variables for this project had to do with frequency of interaction, and frequency of meal-sharing, which were used to explain variation in knowledge, belief, and behavior.

**Health Status, Health Problems, and Physical Exercise**

After the extensive social network analysis, the interview schedule shifted to the topic of the participants’ health and physical activity. I first asked them to consider their overall health status, and rate it on a scale of one (very good) to four (very poor). The participants indicated if they did, did not, or did not know if they suffered from the following conditions: diabetes, high blood pressure, a heart condition/sickness, having a pacemaker (asked due to contraindications of using a scale with bioelectric impedance functionality in next section of the interview), allergies, allergies to latex (latex-free gloves would then be used for the finger stick procedure). I asked participants if they had any other problem or sickness, if they were currently taking any medications, if they had health insurance, and if they had been seen by a doctor in the past 12 months.

In the next three questions, I described physical activity at various levels of intensity and gave examples of each of those types of activities, asking for how long each type of activity was performed during the course of a normal, working day. Examples of light activity were walking, and doing light chores around the house. Moderate exercise was described as those activities which raise one’s heart rate noticeably, and could be performed on the job, at home, or doing aerobic exercises such as jogging or jumping jacks. Heavy exercise were activities that one accomplished using sustained and strong effort: manual labor jobs like heavy lifting or carrying
from construction or heavy gardening work, masonry, commercial laundry operation, etc. Each person estimated the number of hours or minutes that each type of activity was performed. These categorical and interval data were entered into the SPSS program.

**Anthropometry and Hemoglobin A1c Whole Blood Test**

Many precautions were taken to ensure that each participant was fully informed of the procedures to take place during all stages of the interview process. Each person was given many opportunities to ask questions and/or refuse to proceed with the anthropometry and collection of whole blood via a finger stick, starting with the informed consent document. No one refused the procedure after being read and signing the informed consent. Some participants were interested in having a copy of their measurements; these were distributed to them on an index card at the end of the interview.

General biosafety and lab training was undertaken through the University of Alabama’s Environmental Health and Safety division, and additional training for the finger stick procedure and disposal of biohazard waste materials were conducted by Dr. Jason DeCaro of the Anthropology Department. Pretesting of anthropometric measurements was made possible by the help of some anthropology graduate students. Additional anthropometry and finger stick pretests were carried out on key informants from Phase 2 interviews. In both situations feedback was solicited on the verbal instructions as well as the order and performance of the procedures themselves.

The anthropometric measurements were always collected first; this allowed for participants to be active and get the blood flowing in their body before the finger stick. First, height (stature) in centimeters was measured using a stadiometer. A stadiometer is a vertical staff upon which metric measuring units are affixed. A rectangular piece perpendicular to the
staff is attached to a moveable part which enables the height of the piece to be slid up and down onto the top of the participant’s head (Frisancho, 2008). Everyone was instructed to take off their shoes and socks, heavy sweaters or overcoats, and hats, which would prevent measuring accurately. The research assistant stood facing the participant, and ensured that the stadiometer was perpendicular to the floor, and that the person was standing up straight. Everyone was instructed to stand with their feet as wide as their hips, and to stand up straight, with shoulders back and head held high (but without overextending the neck). The stadiometer was placed equidistant between their feet, and touched their buttocks, shoulders, and back of the head. At the moment of measurement, each person was instructed to take a deep breath. The moveable piece was brought down onto the top of their head. Measurements were read aloud to the research assistant, who recorded them on the interview schedule.

The research assistant also ensured that the tape measure was level when I measured the circumference of the waist (abdominal) and hips (buttocks) of the participant. Also following procedure instructions from Frisancho (2008) and verbal instruction from Jason DeCaro, the tape measure was used around the smallest part of the abdomen, at the natural waist (usually at the navel), and the largest part of the hips and buttocks. For the waist measurement, everyone was instructed to take a breath and relax their body, especially their stomach region. For hip measurement, I bent down to hip level to ensure that the tape measure was encircling the largest part of the buttocks.

An electronic scale with bioelectric impedance functionality was used to measure weight in kilograms, and body composition (percent body fat). As Frisancho (2008:23) states, measurement of percent body fat “is based upon the principle that fat-free mass and body fat differ in their abilities to conduct an alternating electric current at low frequencies….the fat-free
mass, composed largely of electrolyte-containing water, will readily conduct an applied electric current, whereas fat is a poor conductor.” Participants removed cell phones, wallets, keys, and other artifacts from their person before beginning. The scale was cleaned with an alcohol pad in the presence of the participant, and each person’s gender, athletic status, age, and height was entered into the scale before the participant stepped on. No participants were actively training as an athlete, therefore the non-athlete gender-appropriate selection was always used. I ensured that the feet were centrally placed on the scale electrodes—two sensors for each foot under the top part of the foot including the toes, and the heel. The scale took only a few seconds to report their weight and percent body fat.

These anthropometric measurements were useful in the calculation of a number of different indices. Body mass index (BMI) is a relative measure of weight in kilograms per square meter of body height (Frisancho, 2008). It is calculated with the following formula: BMI (kg/m²) = Weight/Height². BMI allows weights to be compared while taking into consideration the fact that shorter people may weigh less, and taller people may weigh more. BMI is widely used in the medical and lay communities, but the measure does not account for weight due to muscle mass versus weight due to fatty tissue in the body.

An individual’s waist-to-hip (W/H) ratio can be calculated with abdominal and hip circumferences. This ratio may be a better indicator of adiposity and how fat is distributed on the body compared to others (Frisancho, 2008). Lower fat distribution is indicated by a W/H ratio of less than 1, where the hips have a larger circumference than the waist. When hip circumference is smaller than the waist circumference, the W/H ratio is greater than one, suggesting a greater amount of abdominal adipose tissue and smaller gluteal muscles (Frisancho, 2008).
After the participant stepped off the scale, all of us then sat down again for the finger stick to test for Hemoglobin A1c (Hb A1c, or just A1c), which is measured as a percent. Percent Hb A1c is a longitudinal measure of one’s blood sugar levels over a period of 8 to 12 weeks. A short, conversational script reminded the participant of the procedures to be undertaken. First, I put on a new pair of gloves, with the left hand going on first. All materials for the finger stick were laid out by the research assistant; an individually-wrapped alcohol pad, the lancet, the different parts of the A1c testing device, a Whatman whole blood spot card, an adhesive bandage, and the red biohazard-marked sharps disposal container. Right- or left-handed dominance was assessed; the lancet was used on the opposite hand as the dominant hand usually was more calloused from work activities. To avoid problems with callouses that tend to form on the hands of people who do intense manual labor, lancets that made the most profound punctures were used (Owen Mumford Unistick 2 Super), and these were single-use safety lancets where the needle retracted after the side-release button is depressed.

I massaged the person’s forearm, hand, and finger to ensure an adequate supply of blood in the finger. The second, third, or fourth (ring) finger was selected. After the short massage, I cleaned the finger with the alcohol pad, and set the pad aside on the plastic Ziploc-style bag (i.e., not directly on the participant’s furniture!). I primed the lancet by pushing in the stopper on the top and twisting it off. The lancet was placed perpendicular to the surface of the skin, and moderate pressure was used. On the count of three (spoken aloud), I depressed the side button. The first drop of blood was wiped away, and then the finger was gently massaged with a downward motion to ensure blood flow out of the puncture.

The blood drop was first touched to the pipette-like part of the A1c testing kit; only 10 microliters (µl) of whole blood was necessary to fill up the pipette. This amounted to one large
drop of blood. This pipette was quickly snapped into the second part of the A1c testing kit—the container for dilution buffer, which contains ferricyanide in a buffered detergent solution. The part was shaken 5-6 times and allowed to sit. This process lasted only 4-5 seconds, after which time I took the participant’s finger again and massaged up to 4-5 drops of blood onto the Whatman whole blood spot collection card. Upon finishing this task, I gave the participant the alcohol pad to press upon the puncture, which usually stopped the bleeding. Nevertheless, I placed an adhesive bandage over the puncture spot; only a few refused the bandage, calling it unnecessary for such a small puncture, but most seemed assuaged by the bandage.

After the bandage was put on, I finished the A1c test. The third part of the A1c test was the test cartridge unit into which the blood solution was placed. This test cartridge had a much stricter time requirements for use; it was recommended that the unit be opened and used within two minutes. I opened the test cartridge, slid it into the test kit, waited for the go-ahead notice, and depressed the buffer solution unit into the receptacle on the cartridge slide. I confirmed that the test kit countdown was progressing, and showed it to the participant, who was often keenly interested in the process.

The test ran for 5 minutes, during which time a last set of questions about language ability and media use were asked. Since the test kit and the slide with the blood solution still had to be handled at the end of the 5 minutes, I kept my gloves on and this was explained to the participant. Therefore, while I asked the questions while the test was running, the research assistant recorded the answers. After the questions were finished, I reported the results to the participant, in percent form. At the beginning of the finger stick procedure, each person was told what the function of the A1c test was—to test for the levels of glucose or “sugar” that one has had in their blood during the past eight weeks. People were very interested in if their levels were
“normal,” but I reminded them that I was not a doctor and that my intention was not to assess normality or diagnose a disease. I would be able to tell them their level of A1c, and that research about A1c had indicated that an A1c level of 4.0-6.4% was thought to carry with it a lower risk of diabetes than a level of 6.5% or higher. I said that doctors were still discussing what level is the best for diagnosing diabetes, and that if they had any questions about their result they could ask me, but if I did not know I would get them in touch with someone who would be able to discuss it with them. So, this dialogue ensured that the participant was aware of commonly accepted standards of health professionals regarding specific A1c levels. Their level was reported to them, and they were reminded about what the health professionals had said. In a small number of cases, individuals’ levels were above the range ending in 6.5%, which has since been determined as the cut point for diagnosing diabetes (ADA 2010b). In all cases, regardless of their A1c level, individuals were offered information about free or reduced-price clinics in town at which they could talk to a nurse or doctor about their A1c level. This information was compiled in a bound booklet put together by the Latino Community Group. I offered the opportunity for me and my research assistant to help them set up an appointment to go to either of these two places if desired. I reminded the participant that they had my name and cell number to contact me in the future, if desired. To date, no one has called for help with this.

The Whatman card was allowed to dry before being placed into a manila envelope—these cards were removed from the envelope immediately after the interview or at the end of each day and allowed to dry overnight before being placed in a freezer in the lab of Dr. Jason DeCaro. Future analyses on these blood spots may include cytokines, antibodies, and acute-phase proteins. This information was included in the informed consent; participants were told that the tests might not happen right away, but that when I had results, I would make every effort
to contact them if they desired to know what I had found. The slide was removed from the A1c test kit with the gloves on, and all materials were put into the biohazard sharps box. The test materials were put away, and a set of final open-ended questions were asked before I ended the interview.

**Language and Media Use Questions**

Interview questions about language ability and media consumption were asked toward the end of the interview. Individuals self-rated their Spanish and English language speaking proficiency on a four-point scale, and they also estimated the amount of time they spend per day watching television in Spanish and English, reading the newspaper or magazines in Spanish or English, and for how long they visit internet pages in Spanish and English.

Final questions were open-ended and consisted of a general food/life history question, and questions about how their food habits have changed, over the course of their life and since living in Tuscaloosa. For this phase of the project, interview length ranged from 51 minutes to 2 hours and 20 minutes, with an average length of 90 minutes.

**Other Ethnographic Research Procedures**

Many interviews turned into social occasions and often involved eating food and preparing food. Interviews did not take place during meal-time, except on two occasions where individuals (both African American males) wanted to participate, but were only able to find the time during their lunch breaks. Other than these two individuals, most chose other times, especially when I told them it would take longer to complete since the interview required them to manipulate note cards and otherwise be fully engaged.
Data Analysis

Data analyses will be described in detail throughout each chapter. Data were analyzed using Anthropac version 4.98.1 (Borgatti 1992) and SPSS for Windows version 13.0. A significance level of .10 was identified as being suitable for the detection of a Type I error in statistical tests, due to the exploratory nature of this project.
CHAPTER 8
MEXICAN IMMIGRANTS’ LIVES IN ALABAMA: HOUSEHOLDS, INTEGRATION, AND FOOD

Introduction

Open-ended questions were used throughout this project so that participants could address various topics of interest in their own words. This chapter will focus on presenting the thoughts and experiences of Mexican immigrants living in Alabama, and will address a number of different themes relevant to the hypotheses of this dissertation. Throughout the project, I was invited into the homes of many of the participants. The duration of these home visits ranged from an hour to four hours, and afforded me a glimpse into the private lives of my participants. Some homes were visited repeatedly. In this chapter, I will first discuss some general observations from these home visits, with regard to the types of living conditions of Mexican immigrants. There were differences among the households of married individuals and groups of unrelated males who were living together. Second, there were differences in the types of neighborhoods within which these different household structures were found. I will also discuss the foodways within some of these households by describing a set of meals that I ate in people’s homes.

Participants had both positive and negative things to say about living in Tuscaloosa, and had differing views on their interactions with White Americans. Most people expressed negative thoughts about African Americans in Tuscaloosa. Mexican immigrants were aware of certain changes in their lifestyle since moving to Tuscaloosa, and some expressed that their eating habits had changed. Others reported that besides being unable to find certain brands or certain
ingredients or spices, their foodways had not changed. A few people discussed learning about new American food through their interactions with Americans. Participants expressed mixed views about American food in general. Short quotes will be presented to illustrate the above themes. Pseudonyms are used throughout this chapter.

In the last part of the chapter, I offer a more in-depth look into the lives of a few Mexican immigrants via two household case studies. Finally, I conclude by offering thoughts for future research and by suggesting a theoretical body of work in biocultural medical anthropology that might inform these research questions.

**Mexican Homes**

I visited many Mexican apartments, trailers, and houses while doing my fieldwork, and I also went to a number of different fiestas that were celebrated both in homes and in public parks. This was an essential part of obtaining information about my participants, and I welcomed every opportunity that I had to see how people lived. The homes I visited varied greatly; I went to lower class apartments in Alberta City, duplex apartments in middle class neighborhoods and government housing, and one upscale apartment complex that had a pool and a pool house with exercise equipment that had personal flat screen televisions. I visited lower, middle, and upper class neighborhoods filled with single family dwellings. Houses intended for a single family sometimes also contained another relative, an un-related boarder or friend, or one or more additional families with children. Trailer parks are located in diverse areas of the county: some mobile homes are placed very close together upon gravel, concrete, or upon dusty dirt roads (see Figure 8.1), while others are laid out according to a park’s specific plan. Most had some grass in front, and the nicest trailer parks had many trees, speed bumps, a main office with locked mailboxes, playgrounds, pools, cook-out areas, and signage advertising the speed limit and to
watch for children. In one neighborhood of trailers I visited, each one was surrounded by a dense thicket of woods, making the neighbors almost invisible.

Figure 8.1: A small neighborhood of mobile homes along a dusty road in Northport

I visited two upscale neighborhoods in which Mexicans lived. These neighborhoods were recent developments in Tuscaloosa, having their names advertised at the entrance through impressive stonework signs. The streets were wide and winding, and the houses were very large. Some had multiple chimneys, others had stained glass and gas lamps decorating the front door. Most had two- or three-car garages. The yards tended to have privacy fencing at least six feet high and the lawns were well maintained. These two houses that I visited had two stories, and had large living rooms, separate formal dining rooms, multiple bathrooms, and new kitchens with ample counter space and an additional full-sized eat-in area. Both houses had patios off of the back of the house. One house was furnished well but had fewer decorations—it was thought that the two toddlers in the house might have made an abundance of knickknacks or art
impractical. The second house, however, seemed professionally decorated. Artwork consisted of large framed prints and different types of sculptures. The living room had large leather couches and chairs. Many houses I visited had large flat screen televisions, but this house had a formal entertainment system. Thick drapes and Persian-style throw rugs accented the rooms.

One of the multi-family dwellings I visited was located on the eastern side of Tuscaloosa. The house looked like all of the other houses on that busy road, but the family had added on two additional bedroom/bathroom apartments to comfortably house the three families living there. Six adults and five children lived in the home. We did not get to see these apartments, but family members came and went quietly through a door in the living room during the interviews that took place there. The living room was massive—there were three couches along one side of the room, on the other side was a small flat-screen television on a coffee table. One corner of the room was dedicated to children’s plastic toys and a multitude stuffed animals. The room was decorated on the walls only with ceramic dolls in glass cases, and numerous prints of Jesus and the Virgin of Guadalupe. The kitchen was packed—there were two tables, many chairs, and a few high-chairs. The kitchen was clean but obviously used often. A scent I grew to love over the course of my fieldwork filled the air—the smell of old cooking oil matched equally with the pungent smell of the bright purple *Fabuloso* liquid cleaner. The backpack in which I carried my interview supplies held this scent for a month after interviews were over.

Not all houses my research assistant and I visited were clean. On a Monday morning in May, we drove to a trailer park off of Skyland Boulevard, just outside of Tuscaloosa. It was a bumpy road—in fact the speed bumps were unnecessary since the road was in such bad condition. Two rows of trailers lined the pock-marked road, on the left and right. They were set at an angle from the road. Most of them were in pretty bad shape, with multiple cars, garbage,
broken furniture and plastic, broken stairs, and cardboard boxes lining the driveways. The porches were unpainted and many appeared to be constructed using mismatched materials. We passed the house and turned around at the end of the road to come back towards the trailer. Two little Latina girls were playing on plastic tricycles in the road. I slowed the car to avoid hitting them. One girl smiled and waved, but neither made an effort to get out of the way.

We parked off to the side of a minivan, and walked up to the porch. The porch gate was made of faded plywood. The wood of the porch was stained in many places where it seemed that food or beverages had been dropped. Food wrappers, children’s toys, and other junk were on the floor. Three rows of clean laundry obscured our view towards the back of the trailer. As soon as we hit the steps, a small Chihuahua dog came at us and started barking. It had painted toenails. We cooed at the dog, but didn’t touch it. It sniffed my toes under the plywood gate. Almost simultaneously, a skinny girl came out and looked at us, then went behind the laundry to put something down back there. I asked if the participant was there. She went back in the house and then came out a few moments later and told us to come in.

We entered the house and I was struck by how messy it was. There was trash and detritus everywhere. Inside the house there was a good amount of furniture—two couches, an easy chair, and a small entertainment center were in the living area. The large open room also contained a kitchen with a dinette set off to the side. But the mess overwhelmed it all. The kitchen counters were covered with dirty dishes, food containers, and plastic bags. The kitchen table was the same—hardly an inch was clean. A pile of trash was in the middle of the floor, next to an empty 40-gallon waste can. “I haven’t cleaned all weekend, so that’s what I’m doing now,” the participant said.
We were offered a seat on the couch. She came over and sat on a rolling chair, her other daughter, the greeter, sat on the second couch. The dog, when it was inside, sat on an easy chair in the corner. He went in and out with the other two younger girls who were there. There were sunflower seed husks and bits of food on the floor. Trilobites and small ants roamed around on the floor and on us during the interview; I brushed them off periodically. The house smelled faintly of urine. I couldn’t tell if it was the dog’s or a baby’s urine. There was a floor sweeper by the door. The radio was playing loud music when we got there and the participant had her daughter turn it off after we discussed using the voice recorder. The participant was recently married, but her new husband did not live with her and her five children. Her daughter who greeted us was stoic, and she stayed with us for most of the interview. She acted very protectively at first, and clarified to me in English when I did not understand. She was eleven. I was very aware of her taking on the role of interpreter for her mother, and I would warrant that this is something she does on a regular basis.

I observed that single men living together tended to live in messy conditions similar to the situation described above. They often had less furniture, and used things like cardboard boxes or crates for tables or chairs. The living room of a two-story apartment near the large Catholic church that we visited contained only mismatched ottomans to sit on. Another housemate was cleaning when we arrived; he furiously swept the carpet on the stairs, and then swept the dirt out the front door before leaving. Four men lived there in total, but easily twice that many came and went as we conducted the interview. It seemed like a party house. Occasionally, the smell of old beer and vomit wafted out from the kitchen.

Another trailer that we visited housed five men, aged 45 to 17. The oldest man acted as the head of household; he worked in a Mexican restaurant. Another man worked at Alabama
Liquidation, which is an auction company. He moved vehicles around the different auction lots. The remaining three men, including the 17 year old, worked in the local chicken factory. The trailer was almost empty when we entered except for one easy chair and a kitchen table and chairs. There were some boxes on the floor as well. The participant told everyone that we needed privacy—so we sat at the kitchen table. There were two bedrooms, one on either end of the trailer. There was one easy chair that was constantly occupied while we were doing the interview, and at one point the 17 year old vacated it to allow one of the older men to sit there. There were bottles of hot sauce and a room-temperature container of mayonnaise with a Spanish label on the table. Fast food wrappers were on the kitchen counter. The refrigerator seemed to be used as a cabinet. A glimpse inside from when a housemate opened it revealed little except for condiments, boxes of cereal, and cans of soda. After this interview, I had to wash each of the laminated note cards and wipe down my clipboard and all the supplies I used for the finger stick. It smelled like syrup and hot sauce coated the table.

In a couple of cases the apartments in which single men lived together seemed very orderly. Also in Alberta City, I visited a participant who lived with four other men. All were in their 20s and 30s and all lived in this small, one bedroom apartment. The kitchen was not a separate room, rather it was set up more like a hallway with the appliances and a small counter space lining the walls on either side of the walkway from the living room to the bedroom. There were four air mattresses and one cot in the bedroom. All of the beds were made. A rosary hung low on the wall near one of the air mattresses. A laundry basket and an empty box from a restaurant were used as tables during our interview. One box with a tortilla logo was filled with someone’s personal belongings. Everything was neatly placed, but the floor was dusty. Cereal boxes were stacked on top of the refrigerator. A calendar from a local tienda was on the wall.
next to a calendar from a tienda in Mexico showing a photo of a topless woman on it. They had a phone and an answering machine in the corner. On another wall was a picture of Jesus, and a bottle opener and a mirror hung on nails by the entrance. These men lived very cramped but efficient lives.

The single family dwellings were often located in nicer neighborhoods than were the mobile homes. These houses had front lawns, paved driveways, somewhat private backyards, and mailboxes by the road. In one case, the seemingly picture-perfect experience of a Mexican family living in a neighborhood like this was marred by some nasty American neighbors who regularly complained about people coming and going at the house in which the Mexicans lived. This neighbor had my car towed while I was there, lying that it had been abandoned for over 24 hours, and exaggerating how much of the car was parked on his grass (only one-half of one tire, in reality). I had been there for a little under two hours. I walked to this neighbor’s house to ask about my car after the interview was over, not knowing about the tension between these two households. A young white male with a shaved head and two Doberman pincers answered the door. I think he assumed that the car belonged to immigrants—he seemed increasingly surprised to learn the details of my predicament; that we were visiting his neighbor to conduct interviews for a University-approved project and that my car, parked on the street in front of his house, was missing. He blamed the call on someone else, but told us the name of the tow company before ending the conversation and shutting the door. My research assistant and I went back to the participant’s house; he understood the situation immediately and gave us a ride to the tow company. The participant ended up knowing the owner, and I was not charged for the tow, only for the gas mileage. Participants’ experiences with discrimination will be discussed in the second half of this chapter.
The dwellings in the more middle-class neighborhoods varied. Some young couples with babies and toddlers had less furniture and more playpens, children’s toys, and child-sized table and chairs in their living rooms than couples with older children. Families with older children had homes that were thoughtfully decorated from what I saw, with more knickknacks and mementos in the living rooms and kitchens (see Figure 8.2 for photos taken after interviews were conducted in participants’ homes). I saw representations of the Virgin of Guadalupe depicted in prints, but also as figurines, clocks, on candles, on pillows, and on beach towels hung on the wall. People also had family photos, crochet work, and framed bible verses in these lower to middle class homes. Two kitchens that I saw had obvious themes. One had all kinds of apple plates, towels, and artwork, while the other was decorated with every imaginable form of rooster.

![Figure 8.2: A kitchen and a living room in two separate home visits.](image)

Using homes as work spaces was evident in some cases. Figure 8.3 depicts a family making tamales to sell to other Latino families in Tuscaloosa. Home-food preparation was one way for women to make money while they were staying at home caring for children. In Figure 8.3, two homemade piñatas are shown.
Figure 8.3: Economic enterprises within the home: making tamales and piñatas

These were being made to sell to tiendas or families and were another small source of income for this family. In this photo one can also see a large screen television and other audiovisual equipment of the type that I often observed in family homes.

Household Foodways

Plants were cultivated and animals were raised for food and as pets in a few Mexican homes. Cilantro and chiles were the plants most often grown. I only met one woman who had an extensive kitchen garden (see Figure 8.4).

Figure 8.4: A large kitchen and container garden in Tuscaloosa

She took my research assistant and me out back after our interview was done, and she and her children showed us each species of plant that was growing. They cultivated corn, tomatillos, epazote, hierba buena, squash, and peppers. Her three daughters told us about the fruit that they gathered from the trees in their backyard, and their mother encouraged them to
bring out the bowl that was chilling in the refrigerator. They were *capulin*, a species of cherry that grows in Central America. The family was surprised to discover a tree in their backyard, and they pick the fruit whenever they can. They were delightfully tart. Photos of the capulin and of some chiles from another woman’s home are depicted in Figure 8.5.

![Figure 8.5: *Capulin* gathered by a family and cultivated chiles.](image)

Animals raised for food within the city limits included chickens and ducks (Figure 8.6). Outside of the city limits a family of four lived in a trailer on the husband’s boss’s land. They took care of the land and the animals. They had a cow that did not give milk anymore, and their 50 chickens had recently been killed off by what the family suspected were raccoons. They also had goats, one horse, and a dog under their care. In Figure 8.6, a participant brings up a baby goat from behind the barn with her daughter. Pets of participants most often were dogs. One family kept caged peacocks and peahens (inside the city limits).

![Figure 8.6: Animals found within and outside of the Tuscaloosa city limits.](image)
Food that I ate in people’s homes varied, depending on whether it was a meal for just the family or if it was a meal to celebrate a social gathering of some sort. I was fortunate enough to be invited to eat many meals with my participants. One meal prepared by a Mexican man is presented in Figure 8.7. This meal consisted of seasoned rice with peas, sautéed ground beef with tomatoes, and broad beans and onions. Tortillas and hot sauce complemented this spread. The second image shows freshly steamed tamales that my research assistant and I took home after an interview (Figure 8.7).

One of the best meals I ate was prepared by a woman who had a sick daughter. She was making a *caldo de pollo* (chicken broth) for her daughter, with large chunks of carrots, onion, and zucchini. In order to make the *sopa* for the rest of the family, she added noodles and prepared a variety of accompaniments (see Figure 8.8).
When we arrived, the daughter had already been vomiting for a long time. She was able to come out and politely say hello at one point. She tried to eat her caldo, but after a few bites went back to bed. We ate the sopa with avocado slices on the side. Each of us squeezed one quarter of a lime over our bowls. In addition, a mixture of beans and spicy chorizo was rolled into warm corn tortillas and dipped into the sopa (see Figure 8.9). The participant also held in her left hand a long, skinny green chile. She punctuated her meal with crisp bites.

She served us a strawberry licuado (homemade smoothie) with this meal. To make this drink, she blended up strawberries, milk, vanilla, and condensed milk, which she then mixed
with water in our glasses (see Figure 8.10). This beverage was thick and tasted heavenly alongside the salty broth of the *sopa* and the heat of the chorizo.

![Figure 8.10: The process of blending a strawberry *licuado*.

One final meal to describe was made by a woman born in Guadalajara, Mexico but raised in Texas. Her family owned a Mexican restaurant, and she made this meal for her American family and friends (she married a White American), calling it *taquitos tapatíos*, or Guadalajaran tacos—*tapatío* being a descriptor of one from this city. The *taquitos* were filled with shredded beef and rolled and briefly fried in oil. These were topped with either fresh Mexican *crema* (cream) or sour cream, as well as shredded cheese, lettuce, and tomato. The beans were cooked with chicken broth, and were flavored with onions, tomatoes, salt, and cilantro. The rice was cooked with onions, garlic, canned tomato sauce, and salt (see Figure 8.11).
Being able to share these meal experiences with my participants was extremely valuable. I helped prepare food only sometimes—by making guacamole, or by being tasked with stirring the bean pot—but more often than not I was treated to the kindness and hospitality of a group of people who were thrilled that I was so keenly interested in their foodways and their lives. I felt welcomed by them as they served me, even when they gauged my expression expectantly and jovially after I took a bite of something they thought might be too spicy for me. I learned about more than just their foodways in this project, however. I learned about how they shared food with Americans, what kind of relationships they had with Americans, and how people in Tuscaloosa treated them. During these interviews at people’s homes I learned not to take anything for granted, as I was surprised a couple of times to walk under sheets of plastic or through a door held shut with rope onto a rickety porch and then enter a comfortable and tastefully decorated trailer with newer kitchens and living rooms with large televisions, clean wall to wall carpet, and sometimes amenities such as leather couches and formal dining room sets. I was also, on a couple of occasions, surprised by the tears that came when people described

*Figure 8.11: Taquitos tapatíos, or Guadalajaran tacos.*
the difficulties that they were currently facing in their lives. The second half of this chapter explores the experiences of Mexican immigrants in their own words.

**Immigration, Work, and Discrimination**

Most participants expressed similar reasons for emigrating from Mexico to the United States. These reasons were to find a better job and make more money, to provide for one’s family (both in Mexico and in the United States), and to offer their children better opportunities. However, two men expressed that they came to the United States to escape unpleasant or even dangerous situations. A 37 year old father of two who worked in a Mexican restaurant as a server left to avoid confrontations with his father. He said:

> I feel better here. I do not have the pressure of my father in Mexico. He is very strict and mean. Here I feel free. I do not have to answer to anyone. I live my life with my wife and children (MP11).

Mateo, a 31 year old landscaper had the most compelling reason for leaving Mexico—his life was being threatened. The details of the situation that caused this confrontation were not discussed; as Mateo told his story he immediately transitioned into talking about the discrimination that he has experienced here:

> I came because my boss killed my brother. And that same day, she shot at me three times. I was across the road, where all the traffic passed. There were many cars. It just kind of grazed me. I went to go look at the wall, and there were big bullet holes in the wall. They were the hollow-point bullets that expand. She hit my brother here (*participant points to face*) and it exploded out the back. That is why I came here. I have heard that she wants to kill me still. I like Mexico because that is where I was born, but…I cannot ever go back. (*pauses*) Well, I can go, but I do not know if I will return! (*laughs*) It is hard because here sometimes you just feel really bad, the police ask if you are illegal. They ask me, they ask my children. Sometimes you get to the point where you get really upset (M50).

Our interview was rescheduled because he had been getting over an illness episode for which he was taking penicillin, brought over from Mexico. He went to work every day even though he
felt sick. His boss routinely makes him work eight hours without a break. I asked him if it bothered him that his boss did not give him a break, and he said:

Yes, it bothers me. Because if I do not get my break, that is why I go to McDonald’s to eat. We will eat it on the way so I am not hungry at work. There is a lot of racism, even among the bosses….they pressure you.

Mateo said that he did not feel as if he were part of the Tuscaloosa community now and he only somewhat wanted to be part of the community in the future. He attributed this lack of interest to experiencing discrimination, by both Blacks and Whites. In recounting a previous job that he held at the University, he referenced again the pressure he felt at the hands of others, saying:

It is hard being here. …I reported the discrimination at the university, and they said I could get a lawyer and fight, but I just quit. There were some Guatemalans and Mexicans there, and there were 30 or 40 Americans and they would talk really bad about you. And I understand some English and so I answered them and I said “what is it to you?” And they just got really ugly, it was almost going to go to blows. There is a lot of pressure, and that is what makes you want to do bad stuff sometimes. I come from a hot-blooded family already. And then all of my brothers have been shot at, one has been shot and killed, and I would never want to have that in my life. Never (M50).

A similar story was told to me by a 37 year old single man who had just quit his job working on natural gas lines. He was living with a White American man in small two-bedroom apartment in Alberta City. He said problems on the job, stemming from them saying that he was short and ugly, caused him to quit. He said:

That is why I had to stop working. …I always stand up for my rights, you know, whatever is right for me. So that is why they hate me. And the other Mexicans over there, they just look at the floor and accept whatever they want to do with them. And I am not like that. If I have to fight I am going to stand up for myself for my rights. So I am not going to let anybody step on me. And that is why they hate me. And they were very hypocritical also. And that is the main problem that I had. I had to quit instead of working unhappily. I was making almost 700 dollars a week but I prefer to be happy than to be in that environment for more time. I just quit (MP3).
Both of these men knew that they were being treated unfairly in the workplace, and both had the initial reaction of fighting back. However, instead of following through with their complaints, they extricated themselves from these negative situations. Fear of being discovered as an undocumented immigrant may have played a part in the decisions of Mateo—he was acutely aware of his undocumented status, and he was the only person in the entire sample who referred to himself as “an illegal.” He also acknowledged that these negative comments made him feel angry enough to want to physically fight, but instead he left, just as he had left Mexico. It is unknown if the second man was undocumented or not (this question was not asked during the interviews). Another man also talked about avoiding law enforcement and possible racial profiling late at night, even though he was here legally. He said:

The police here ask you about everything. ‘Where are you going?’ Maybe it is because we are Hispanic, I do not know. ‘What are you doing? Where are you going?’ They ask a lot of questions. That is why we do not go out at midnight (MF3).

**Negative Experiences with Americans**

I also asked participants to tell me what they thought African Americans and White Americans thought about Latinos living in Tuscaloosa. Only one person equated the status of Mexicans with the status of African Americans, saying: “We both feel like we are treated very badly by white people” (MP3). Most of the comments about African Americans were negative.

Sofia is a woman in her 30s who lived in a very upscale neighborhood outside of Tuscaloosa. She did not interact with many Blacks, but she was well-connected within the Latino community, and she knew people who lived in mobile home parks in town and were neighbors with many African Americans who:

try to take advantage of them. My friends tell me about it. I do not have any contact with African Americans. They go to the store, for example, and a Guatemalan friend of mine got into a fight with an African American lady because she [the African American] told
her to pick up something that she had not dropped. The lady was very disrespectful! I told her ‘you could have said something’ but she did not say anything. (MP9)

Many comments were made about how African Americans were thought to dislike Mexicans because they were taking all of the jobs in town. Others stated that African Americans especially saw Mexicans as targets for robbery. A restaurant worker who spent his weekends with his family in Tennessee had a rather nuanced view of relations between African Americans and Mexicans that included work, pay, assimilation, competition, and citizenship. He said:

they say that we take jobs away, but we work more. We work more than them and they pay us less. They say that we do not speak English, that we assimilate slowly to the [American] culture. That is why here in Tuscaloosa there have been a lot of murders of Mexicans by African Americans, because they know that they [Mexicans] have a lot of cash on them because banks do not give them bank accounts. And a lot of African Americans think that we are taking jobs away but we really do not take jobs away. That is what I think they think of us—that we are in competition with them. But no, they are actually superior to us. They are Americans as well. We are not illegal residents or undocumented as some call us. They have more advantages than us. They should not think that way (MF3).

A 32 year old man who moved to Hoover when he was 19 years old now lived in Northport and owned a Mexican restaurant there. He was careful not to generalize about all Blacks, but he said that “in some cases, the Blacks (morenos) dedicate themselves to stealing. They think that it is easy to steal from us…we just don’t exist in this society” (MF2). When asked about how Whites viewed Latinos in Tuscaloosa, he referred to their inability to relate to the new immigrants to their community. To him, Whites see Latinos:

like aliens, people from another world, because we are completely different to them. They are very reserved, very conservative, and they think that we came here to destroy their city or that we came to kill and steal. They have very conservative ideas.

In his experience, one ethnic group in Tuscaloosa considers Latinos to be criminals, while the other ethnic group perpetrates crimes upon Latinos. Sofia also lamented that Whites thought very narrowly of Latinos—namely that:
all Mexicans come here undocumented and that we need help. The other day I was here out in front of my house cleaning my windows, and some lady pulled up and said that she would give me work and asked how much I earn. Can you believe it? And I said, ‘This is my house!’ But a lot of people have asked me ‘do you need work?’ and I say no, thank you (MP 9).

Sofia seemed insulted that others would see her as a maid who would work in a job that paid low wages under the table. She had earned a professional degree in Mexico, and wanted to work in the United States, but her limited English language skills prevented her from doing so. In addition, she seemed bothered that the woman who stopped in her car assumed that she was only in this upper class neighborhood as a laborer, and not as a legitimate resident.

Elena is a woman in her late 30s who has a large network of family in Tuscaloosa. She interacts with many of her siblings and their spouses on a regular basis, and participates in her church services weekly. Our interview was conducted in English, as she spoke it very well. She said that compared to Atlanta, Tuscaloosa was peaceful. She said that at first, Latinos were welcomed by Americans, but that recently she had noticed negative feelings from Americans and suggested that it was because the community had gotten too large. In passing she mentioned “problems” that resulted from this growth. Not understanding, I asked her to explain about these problems that Mexicans face. She said “Right now? They don’t face problems. They come and do the problems. That’s what I think.” I asked her to elaborate, and she made a list for me, saying:

Driving under the influence. I have seen a lot of cases like that. Drinking a lot and having a lot of troubles like domestic problems because of the alcohol. And they always, we always leave a lot of trash in the streets. I have seen a lot of Hispanic communities and [I say to myself] ‘really?’ I don’t like that. It’s trash everywhere, and I don’t like that. …They welcome us but if we come and do stuff like that, I mean, nobody is gonna like that (MP4).
Positive Experiences with Americans

In spite of these quotes which demonstrate that life in Tuscaloosa is difficult for some, mainly due to interactions with Americans, I feel the need to point out that the majority of the Mexicans in all phases of the research project were satisfied with their lives here and felt accepted into the community. In general, some expressed their happiness over living in a smaller, more conservative community, when compared to places like Mexico City. As one man said:

I chose this place because it is a very pretty place and very conservative. It has all of the characteristics that I like. There is sufficient water, lots of trees, and it is very clean. Not a lot of drug addiction or alcoholism. It is a small town in comparison where I lived with 25 million people. And here you have a bit of the city, and a bit of the country. And for me there is no better place or prettier place. I have known a lot of places, but this one I am just enchanted with (MP1).

A tienda worker also considered Tuscaloosa to be a safe place to live and work, because of the lack of attention paid to undocumented immigrants. She had first lived in Kansas City upon entering the United States, later moving to Gordo, Alabama, before coming to Tuscaloosa. She felt like she was part of the community because:

You are not attacked like in other cities where immigration is always after you. They do not even let you work [in these other places]. But here, yes, you can. Here they permit you to work, to drive, and the kids can go to school. In reality it is not like in other cities where you are just attacked a lot (MP5).

Sentiments like this might be hard to come by if the interviews were conducted today, given the recent immigration legislation that has been passed by the Alabama government.

Many Mexicans established close ties with Americans upon their arrival, and these people seemed to have shaped their understanding of the community and the degree to which it welcomes them. A male restaurant manager works closely with the American owners. He was
trusted with the daily operations of the restaurant, and was consulted when the American family considered selling the restaurant. He recalls:

The people that I know, the ones that I have worked with look at us [Mexicans] and hold us in high esteem. They take us by the hand. They have helped me to become better and become a better person and have good opportunities and they have treated me very well. The only thing I have done is take advantage of the opportunities for my well-being and that of my family. There is a person who, when I got to this city, was my English teacher. And through her is how I was able to learn English. …Because of her, the majority of my friends are American families (MP1).

Making contact with Americans does not always lead to time spent together on a personal level, however. A bartender and server at a Mexican restaurant said:

Many of the churches come to invite us, and that means that they [Americans] accept us. They say ‘come to my church!’ I have some clients at the bar who have invited me into their homes, they have asked me to come over. I cannot go, I don’t have time, but I see that they accept us. They say ‘come to house, we can have some wine.’ I have many business cards from these people. They do accept us (MF3).

This same participant went on to discuss how Americans are benefitting financially from the presence of Mexicans within Tuscaloosa. He said:

The majority think it is good that we are here, because the economy is lifted. …We are renting a lot of apartments, buying a lot of cars, and we are spending a lot of money here. We buy gas, and we buy a lot of beer. We always pay cash. There are many restaurants. Because Mexicans do not have Medicare or 401k plans, or vacations, a lot of Americans think that is good because it is cheap labor and the economy gets better because of that (MF3).

Another woman agreed that the identity of Mexicans as good workers contributed to their acceptance by Tuscaloosa community members, saying:

I think that they [Americans] think that we are good workers, that we are not all bad people like a lot people think we are. I think that the majority of people that I have had contact with think that we are good people. Yes [I feel accepted in the community]. Because wherever I go, I have been treated well. I do not get funny looks. They treat me like a person. The people here treat me well (MP11).
Participants seemed to feel more settled here as time passed. A woman said that she did not know how Americans viewed her and other Mexicans who were living there, but that “I feel like it is my city, my town. I have been here for 10 years and I like Tuscaloosa” (MP6).

**Diet and Lifestyle Changes**

Regardless of how integrated one feels, living in America was understood by some participants to have an effect on one’s lifestyle. Some felt more hurried and rushed and that these changes affected their food habits. Sofia says:

> Now I am more occupied doing more activities. After my English class, for example, so that I do not have to come all the back here [her home] – my English classes are downtown – I end up eating out at a restaurant. I try to eat a salad but sometimes there is no salad or the salad does not look very appetizing so I get a sandwich or something like that. I feel that since I am busier, I have less time to come here and properly cook until I get home in the afternoon to cook for the children (MP9).

Working at a popular Mexican restaurant, this man said that his schedule, his eating habits, and his body composition were affected. He said:

> we have to eat when everyone else eats because you cannot make your own hour. We have to go to the schedule of the customers, and we have stopped eating one whole meal [because of work]. We have eliminated one meal and we are still fat! (MF3)

Being busier often meant, paradoxically, being more inactive due to the prevalence of using cars for transportation. The public transportation in Tuscaloosa is scant, and many neighborhoods were constructed without sidewalks. I have observed Latinos walking short distances from the neighborhoods near the largest Catholic church to a main shopping district with tiendas on McFarland Boulevard. Occasionally I see Latinos making longer walks from the Wal-Mart in Northport along route 82 back to the Green Village trailer park. I was told that along this path, a homemade cross on the side of the road marks the spot where a Guatemalan was hit by a car and killed after walking back, groceries in hand.
The preferred and really only viable method of transportation across town is via automobile. Participants are aware of the differences in physical activity here versus Mexico. When asked about the differences between life in Mexico and life in Tuscaloosa, a female tienda worker said:

You walk less. You are always in the car. There are more possibilities to buy things. There is more of a routine [here]. Every day it is the same. In Mexico, no. You have your family. You go walking everywhere. Here it is work or school and then home.

Carolina, a 30-year old house cleaner who moved to Tuscaloosa after completing one year of business school in Mexico was upset about her weight gain since moving here. She attributed some of her weight gain to less physical activity, but still struggled to understand the change since she ate the same types of foods as when she lived in Mexico, and even ate less now. I asked her how her life had changed, as well as how her eating habits had changed and she said:

I have become very sedentary. Even though I work and have a lot of activities, I try to look for activities to maintain myself, but in reality, I do not have the same level of activity that I did in Mexico. Especially outdoor activities because I feel the heat is heavier. It is more suffocating than the heat in Mexico. …All the food is different here, vegetables, meat, fish, fruits. And compared to there, it is not fresh. Even though we consume what is fresh, it is not as fresh as in Mexico. The other difference that I have found is that there are more varieties of fruits and vegetables in Mexico than here. Another big difference is that in Mexico, we eat more and we do not get fat. Here we eat less and get fat.

When I asked her to explain why she thought this way, she compared her work and eating schedule in Mexico to the routine she has now in Tuscaloosa.

I do not know. For example, I remember I was about 18 years old and I worked in a factory. I would have a complete breakfast at home. Before I got to work, I would go in to work at 2:00 p.m., I would have already had something very light. At 5:00 p.m., I would eat a complete meal that included fruit, salad, a main dish with meat and rice and beans, a soup – that’s traditional in Mexico – and a fresh juice, including tortillas and salsas. It was a very complete meal for 5 o’clock. I would get home at 11:00 p.m. and I would have a light dinner. And I was very thin. Maybe in Mexico we do not use the car the same as here and we can walk a lot and ride the bus. And maybe that influences it. But it is still a lot of food when compared to here. Here, at 7:00 a.m. I prepare my coffee and I drink it in the car. At 11:00 a.m. I eat a sandwich. At 2:00 p.m. I will have a piece of fruit. At 5 we eat a complete meal together. I try to only eat 5 tortillas. And then I do
not eat anything else. And then compared in my mind, I see my body and I say… (participant sighs). I try to cook so that there is no grease or fat. I eat tortillas, rice, pasta, bread. I try to get what is the healthiest. Whole grain breads, things like that. Instead of sodas we drink these (points to aguas frescas).

These sentiments about eating the same or eating less but gaining weight were echoed by other participants, mostly women. However, some respondents knew that they were eating more and that there were more opportunities for eating in the United States compared to Mexico. One participant said, “There it is usually three meals a day and that is it. Here, no. You eat when you watch television, when you are laying down” (MP4). Food availability in the US versus Mexico was also cited as another reason that people eat more. One man said “I eat more every day. What happens is that in Mexico, we do not have a lot to eat. Here we have plenty, so here you eat more” (MP11). Another man noticed an increase in his appetite, and his gradual acceptance of American foods over time, saying:

An example is that before, I did not eat hamburgers. I bought them if I had to but I would not eat the whole thing. I did not really like the flavor but it would fill me up. And now, I can eat two hamburgers if I have room for them. And people eat too much over here. And then before, I used to eat until I was satisfied. I used to eat two or three pieces of meat. Little ones, maybe fried. Now, I can eat a whole chicken. I do not know why I eat so much. I think I am getting like that now. Like them [Americans]. (MP3)

**Introduction to and Thoughts about American Food**

Neighbors, friends, and employers were all discussed as showing some participants what types of foods that Americans ate. These foods are received favorably, for the most part, and include both home-cooked southern foods as well as American convenience foods. One woman and her husband had been invited to an American couple’s house to eat chicken casserole and okra. She had also tried (and liked) pumpkin pie and sweet potato pie (MP7). Another woman, who worked at McDonald’s, had had similar experiences with Americans in Tuscaloosa, and
spoke about typical southern food. I asked if she knew about the food of African Americans as well. She said:

I have a married couple who I am friends with who make this dish with pumpkin, and they make okra. And breaded liver—chicken liver. It’s really good! I like American food a lot….I have never eaten [African American] food. Even though they say that they eat almost identical to us. They like *menudo*, pigs feet, and the viscerals of beef. That is what they say. I don’t know. (MP8)

Food knowledge was exchanged among Mexicans and Americans as they sometimes cooked for one another. Speaking about some neighbors in her trailer park, another woman said:

We share and hang out and we learn to make some of their things or eat their food. And of course they are going to learn from us. My friend says, ‘Would you make me some tamales? Would you make me some enchiladas?’ And when they bring over some food it is always sandwiches or Doritos. Fast foods, but still good.

Carolina said that her employers introduced her to new foods, and that she was becoming familiar with restaurant chains around town:

Well, since I work as a housekeeper, they offer me food. I do not know what it is called, but it is southern food. It’s okay. In American restaurants I have tried the food there. I have been to Chili’s – it is like TexMex, but it is American-style; O’Charley’s, Ryan’s, Popeye’s. Even though it is fast food, it is still American-style.

Other American chains that participants were familiar with included McDonald’s, Taco Bell (where they served “Mexican Pizza”), Chik-Fil-A, Olive Garden, Shoney’s, and Hooters.

Mexican foods were perceived as being healthier than American foods. Of American food, Sofia said:

It is not very healthy. It is a lot of fast foods. For example, if you go to a restaurant, and you order meat, a steak or whatever it is, they put a lot of potatoes on the plate instead of a salad or something fresh. It is always potatoes, and lots of them! For example, for the kids, they ask for a hamburger and they put a lot of French fries on there. You have to ask for them to bring a salad or vegetables. If not, they will always give you French fries.
Potatoes were also mentioned by another man. He talked about American food, and the differences between him and his wife, saying:

Well, I like it. My wife doesn’t like it. With respects to me, I like it. They only thing is that it has a lot of stuff to make you fatter. It fattens you up quicker. Like potatoes, there are a lot of potatoes, and breads. Hamburgers, and stuff like that. It makes you big.

(MP11)

I asked him if his food habits had changed since coming to Tuscaloosa, and he did not think so, mainly due to the efforts of his wife. He said:

My wife still cooks the same things that we cooked and ate in Mexico. She dedicates herself to housework and she cooks the same things that we ate in Mexico. Sometimes when we go to a restaurant the type of food will change. But no, it has not changed a lot.

Other married men shared similar ideas about how their food habits had not changed, and some women expressed this as well. Outside of not being able to find certain ingredients, such as spices, women said they were able to make do and feed their families Mexican food.

The quotes above illustrate that married women and men might have different experiences when it comes to food choices, social integration, and social interaction with other Latinos and with Americans. The next section of the chapter aims to examine this thought further. The case studies below will hopefully add another dimension of ethnographic understanding to the lives of Mexican women and men in Tuscaloosa.

**Household Case Studies**

This section will examine four case studies to provide more of an in-depth look at how culture and social structure affect the lives and eating habits of Mexican immigrants in Alabama. I will share the details of the female and male adults from two separate households. Both households have a number of similarities, as well as some key differences that highlight the relationships between cultural knowledge, social integration, social network interaction, and health. I will present details about their households, their lives, and their social connections with
family, friends, and Americans. I will also report upon each person’s food consumption, as well as their body composition and Hb A1c levels. At the end of the chapter, I address possible directions for further study, and explore how embodiment as it is understood in biocultural medical anthropology may be applicable in these endeavors.

**Household 1: Esteban and Irma**

Esteban (age 41) and Irma (age 39) have been married for 16 years. They live in one of the sparsest trailer parks of all that I visited. My research assistant and I drove down a dirt road to find the trailer. There were some Blacks and Latinos outside on their porches or under the few trees in the neighborhood. Some trailers just had stairs, no porches. I did not see any White people. As we parked the car, I looked across the road, and a group of three Latinos sitting on chairs under a tree stopped their card game to watch us. One man was wearing a sombrero. I felt their eyes upon us and I looked up to smile, but they looked away quickly and I was not able to meet their gaze and greet them from afar.

We walked up to the porch, and Esteban answered and let us in. The interior of the mobile home was one of the nicest I visited. I was surprised at the discrepancy between the sparse and dusty neighborhood and how comfortable and accessorized the inside of the trailer was. It had every amenity inside: there were three newer-looking couches, an entertainment center with a flat screen television and a dvd player, and lamps and tables with books and bibles placed comfortably around the room. They had plastic calla lilies decorating the hallway. A large dining room table took up most of the kitchen area. The table was long enough to seat eight people comfortably. They had a country kitchen with a rooster theme. Irma was making a *guiso* (stew) when we arrived—chicken in green salsa. When we interviewed her husband, she started to sauté chiles in oil. There were many name-brand cereal boxes on the tops of the
cabinets. I saw bags of *Maseca* (dry corn flour for making tortilla dough) and bags of potatoes. Many family photos and papers from the school district decorated the refrigerator, and were held up by colorful magnets.

They have four children, two boys (15 and 5) and two girls (13 and 2). The daughter fed the baby cereal while Irma’s interview was being conducted, and the boys each had a friend in the living room at various points. Both sets of boys played on the laptop computer—one of the only computers I saw in Mexican homes. They had internet access. The children were completely unfazed that we were there—unlike other home visits where some children acted timidly towards us. I had to strain to hear any kind of accent in the children’s English.

Esteban and Irma apparently met in Ciudad Juarez, Chihuahua, according to their migration histories. Irma had been born in Durango, living there for 12 years before moving to Cd. Juarez. Esteban had lived in Juarez for 33 years. Both had taken some college classes in Mexico. Esteban said it was too expensive for him to attend classes for longer than a couple months. They have been in Tuscaloosa for 8 years now. Irma used to work for a dry cleaner, but she quit because of the young children in the home. Esteban had very recently lost his job—he was a construction welder. The company closed voluntarily because of the bad economy. When Esteban had a job, he estimated that their income was $36,000 a year. Now they make about $400 a week (or about $20,000 a year) from the food that Irma makes and sells to other Latinos in the area. Esteban said that this income was “just enough to pay the bills.” Esteban is also a pastor of a store-front Evangelical church in the area, but he does not get paid for this. Irma reported monthly food insecurity; Esteban said that they did not have enough money to get as much food as they wanted on a weekly basis. I think that it is possible that the recent job loss of Esteban accounts for the difference in their responses.
Both individuals have family and close friends in Tuscaloosa. Irma has 22 family members in Tuscaloosa, Esteban has 10. All four of Irma’s close friends are Mexican. Esteban reported 8 close friends with whom he is comfortable sharing problems and personal details about his life; four were Mexican and four were White. They both participate in community activities—in Esteban’s church, and volunteering at their children’s schools. Irma goes to English class, but Esteban relies on his children to teach him. Esteban said that he talks to at least 25 of the neighbors in the trailer park; Irma said she spoke with two neighbors regularly. Both husband and wife felt only somewhat integrated into the Tuscaloosa community at the present time. They had different desires for the future, however—Esteban somewhat desired to be more integrated in the future, while his wife was very interested in becoming more a part of the Tuscaloosa community in the future.

The social networks of Irma and Esteban were very different. Irma only knew one American, a white woman who worked at the gas company. They had known each other for two years. Irma only considered her an acquaintance (i.e., not a friend), and said that the strength of their tie was very weak. They saw each other monthly, and they have never shared a meal together. Overall, Irma said that she could talk to Blacks and Whites that she encountered while out running errands maybe for 10 minutes, after which time she would run out of English.

Both Esteban and Irma reported their English language ability to be poor, but Esteban had much more frequent contact with Americans according to his social network. He said that his relationships might change now that he had lost his job—that is, he reported his social network interactions as they had been while he was working. Esteban easily named five alters, all White men. He asked if I needed more people, because “I could keep going and going.” I assured him that five were enough. Three of the five men were bosses from his welding job.
They were also identified as friends. The other two men had different jobs—one drove an 18-wheeler and the other owned a local drilling company—and they were identified as friends only. Esteban knew these two men for seven years, and his (former) bosses for two years. He reported speaking with each of these men on a weekly basis. With the 7-year friends he ate monthly. With the welding contractors, however, Esteban ate weekly. Strength of ties with these men ranged from 2 to 4—neither very strong nor very weak.

Esteban’s work kept him more physically active than his wife. He said that when he was working, it was very heavy labor (such that he noticed his body temperature rise and his heart beat faster) for three to four hours. He worked moderately for four to five hours during a typical day, and spent another hour doing light work or walking. Now that he lost his job, he said he probably will not have the opportunity to have that exertion. Irma reported eight hours of light activity during a typical day.

Both Irma and Esteban had health insurance, and they had both been to a doctor to have a medical examination in the past year. Their body mass indices placed both of them into the Obese category. Irma’s BMI bordered on the cutoff between the categories of Obese I and Obese II. The body fat percentages of both husband and wife were beyond the normal range for men (15-20%) and women (20-30%). Esteban had 30% body fat, and Irma had 44%. When their A1c levels were checked, Irma’s was normal: 5.2%. However, Esteban’s percent A1c was 5.8, which is just above the cutoff for being prediabetic. While I was doing the finger stick, he said that many of his family members had diabetes. Irma rated her own health as very good, while Esteban said his health was good. He did not list any additional illnesses when asked. I noticed that Esteban had a fresh one-inch long scar on his forehead near his hairline. His left eye was unfocused and had a milky appearance.
The eating habits of the couple were remarkably similar. They each reported consuming many items more or less equally, with some exceptions. Esteban had eaten more pancakes, green beans, peas, sweet tea, juice, and pizza than his wife. Irma reported consuming more biscuits, sweets, sodas, and coffee than Esteban. Esteban talked at length about how his children ate both Mexican and American foods. He said he also liked it. He really liked hamburgers from Sonic, but only went there about once a month. He knew it was healthier to eat at home, but on the weekends he occasionally went to Sonic, or to Cap’n D’s, a fast food restaurant that specializes in seafood. He enjoyed their breaded and fried fish. In the town he grew up in there were no places to get hamburgers or pizza. Esteban admitted that his food habits had changed “a little bit.” He said that there were some ingredients that they were unable to find upon first moving to Tuscaloosa. Irma stated that her food habits had not changed upon moving to Tuscaloosa. She said that the major difference between the food here and the food in Mexico was the freshness. Her family grew many foods on the family ranch—and they ate what they grew or raised. I asked her what her family cultivated and got an impressive list in return: pomegranates, chiles, apples, corn, strawberries, watermelon, other melons, and mangos.

**Household 2: Lucia and Tomas**

Lucia (age 40) and Tomas (age 42) were similar to Irma and Esteban in some ways. Lucia and Tomas had also been married for 16 years, and also presumably came to the United States together—both emigrating from Oaxaca 16 years ago. They had lived in the US eight years longer than the other couple. Lucia and Tomas had three children, two boys (ages 15 and 9), and a daughter (age 12). I did not see or hear the children during their parents’ interviews.

The neighborhood of Lucia and Tomas was definitely middle class. They lived in a house in a neighborhood that was near a busy road on the eastern side of Tuscaloosa, but their
The street was tucked away from all of the traffic. I had to call to get directions while en route because online maps of Tuscaloosa that were consulted did not list their street name correctly. Lucia was waiting for us when we pulled into their wide paved driveway. They had the newspaper delivered, and I picked it up off of the yard and brought it to her on our way in. It was a single-story ranch-style house. They had flowers and potted plants by the mailbox and on their concrete slab porch by the front door. Other houses in the neighborhood were similar: ranch houses with landscaping, mailboxes that matched the color scheme of the house, attached garages, and some American or ornamental flags flying near the front doors. There was nothing about the house of Lucia and Tomas that was out of the ordinary, compared to the others.

Their house was larger on the inside than I thought it was going to be. I told Lucia that we would need a table to work at during the interview, and she said that the kitchen was probably the best place. Once we were in there, however, she remarked that the chairs in there might be uncomfortable for us. I assured her that the table was better for what we had to do, and thanked her for her concern and hospitality. Since the interview was taking place in the evening and the shades were drawn inside, I did not get to see much of what the living room looked like. I glimpsed an older plush couch and an older television (i.e., not a flat screen tv). There was wood paneling on the walls. Their kitchen was of a style and color palette typical of the late 1970s. The cabinets and countertops were older, and the wood finish on the cabinets reminded me of the paneling in the living room. However, the kitchen was quite large, probably 10 feet by 15 feet. We sat at the kitchen table in a nook that was built into one end of the kitchen. The kitchen was clean, and it smelled like someone had cooked food in oil in the past day or so. I noticed vitamin and prescription medication bottles in a basket on the top of the countertop, but there was no food in sight; perhaps the ample cabinet space allowed for it to all be put away.
Lucia was very kind and talkative with me. She had had three years of college in Oaxaca before moving to Tuscaloosa. Her husband was more reserved, but still eager to answer our questions. Tomas had a primary school education in Mexico—about six years. Like Esteban, Tomas had recently lost his job (for an unspecified reason). He had been a landscaper for a nursery in town; this work included hard labor like cutting down trees. Tomas said that he spent 10 hours doing heavy labor during a typical day when he was working, and about 35 minutes of light and moderate work on top of that. He estimated their current income to be between $10,000 and $19,000 per year. Lucia had a job that kept her very busy—she cleaned 10 American houses on a regular basis. She estimated their current income to be more than did Tomas—between $20,000 and $29,000 per year. She said she worked for eight hours a day, but that this work was usually light and not anything to raise her heart rate or her body temperature. She did, however, go speed-walking with her children twice a week for 30 minutes at a time—this was hard exercise for her. Lucia and Tomas differed substantially regarding their household food insecurity. Tomas said that he was experiencing daily food insecurity, while Lucia said she had never experienced not being able to get food in her life. Similar to Esteban, it is thought that Tomas’ recent job loss may have contributed to the discrepancies in their answers.

Lucia and Tomas are devout Catholics. I often saw them act as lecterns for the Spanish-language masses at their church. They sometimes carried icons made by other parishioners during the procession, and laid them in front of the altar so that they could be blessed. They also assisted the deacon and priest by distributing communion bread and wine to the parishioners. Lucia volunteers as a member of a health promotion group, run by Latina women. She goes to English classes twice a week; Tomas said that he had attended some classes in the past, but was not currently going. Tomas said his language skills were very poor, and Lucia said her skills
were poor. I was mildly surprised that she did not rate herself higher, as I have heard her speak
decent English to others on some occasions when I had seen her in public.

Lucia and Tomas have family nearby—she has 10 family members in Tuscaloosa, he
reported having three in the state of Alabama. Tomas said that the only close friend he had in
Tuscaloosa was his wife. Lucia, on the other hand, said that most of her 16 close friends were
White. These were presumably the Americans that she worked for—she said that she talked with
her White American friends for up to 8 hours during the course of a normal work day, and that
their main topic of conversation was their families and their activities and news. Overall, Lucia
said that because of church, her work, and her English classes, she probably knew around 100
Whites in Tuscaloosa. The estimate that Tomas gave was much more conservative: only 15
people. Both said that they knew only one or two Blacks—Lucia mentioned that a Black woman
worked at the clinic she went to. She said she did not have the opportunity to get to know
African Americans very much, and estimated her average conversation with Blacks to be two
minutes long. Lucia feels very integrated into the community at the present time, and her desire
for continued integration was very strong. Tomas felt somewhat integrated, and was only
somewhat interested in increased integration in the future.

The structure of Tomas and Lucia’s social networks were similar—both reported men
and women as American alters, and most were between 40 and 70 years old. It seems that they
listed the same people, in some cases. Both listed five alters. Most of the alters were considered
to be friends as well as bosses. There are differences with regard to tie strength and frequency of
interaction for Lucia and Tomas. Lucia felt much closer to the people that she considered to be
boss-friends than her husband. She scored the tie strength with four alters as either a 1 or a 2,
saving the neutral tie score for a person she said was a boss, but not a friend (only an
acquaintance). Tomas also said that four alters were boss-friends, but rated their relationship as neutral or lower (3 or 4 out of a 5 point scale). Tomas interacted with these alters less often than did Lucia—he had weekly contact with most of his network, and did not ever share meals with three out of the five (the other two alters ate with Tomas monthly). Lucia said that she talked weekly with the boss-friends, but monthly with the boss-acquaintance. She ate with one of her bosses twice weekly—the most reported by any Mexican participant—and monthly for the other friendly relationships. She never ate with the acquaintance.

Neither Lucia nor Tomas has health insurance. Lucia had been to a doctor in the past year, though. She said that her health was somewhat good—she reported neck pains which she attributed to stress. She takes ibuprofen when she is in pain. Tomas said that despite some problems with his vision, he had excellent health. Lucia is short, but trim compared to other women in the sample. Her BMI was 28 (in the overweight category), while her husband’s BMI was 31 (in the Obese category). Lucia had a percent body fat in the normal range for women—27%. Her husband’s similar body fat percentage of 28% put him beyond the normal range for men, however. Tomas had 5.1% A1c in his blood, but his wife was prediabetic, with an A1c percentage of 5.7.

In terms of their reported food consumption in the past two weeks, Lucia and Tomas ate many American foods that other Mexican participants tended to be unfamiliar with—foods such as blueberries, cherries, grits, and turnip greens. Tomas reported eating much more food than did his wife. Both said that living among Americans had changed their food habits. Tomas said that he eats the largest meal of the day later in the day here in the United States, and that he also ate more fast food now, compared to his habits in Mexico. Lucia cited changes in the freshness of the food that is available to her now. She used to drink milk straight from the cow, and said
that everything here is prepared and processed. Lucia said that she does not eat very much fast
food now, except for the occasional trip to Waffle House. Being able to eat an American
breakfast at any hour of the day is something that she enjoys. She also said that she learned to
cook American food from one lady for whom she works. Her children prepare their own lunches
before going to school, because they do not like the cafeteria food that is served.

**Discussion and Conclusion**

Examination of these two households illustrates how complex the lives of Mexican
immigrants in Alabama are. Many factors contribute to how a household operates, and
differences between husbands and wives in the workplace, in the home, and in the community
are key to understanding social integration, and social network interaction, as well as how one’s
self-perceived health status and biological health markers vary.

The patterns seen here support the hypotheses of this dissertation about social network
interaction and health. Both Lucia and Esteban had frequent contact with their American alters,
and they reported more weekly meals with their alters than did their respective spouses. The
patterns I have identified here deserve more attention in future research by anthropologists.

Upon comparing these households, it seems that a gendered analysis that takes into
account the roles that women and men have in traditional Mexican households is fitting.
Both husbands had recently lost their jobs, and their wives were the ones making the money to
pay the bills. The responses of each of these men indicated that they might be stressed about
their household’s wellbeing, especially in terms of food insecurity. For both men, desired future
integration into the community was less than that of their wives. Gender roles within households
are another topic that deserves further attention, especially in light of the answers that each
person gave regarding who was the head of their respective household. Both Irma and Esteban
independently identified Esteban as the head of household, while Lucia and Tomas independently said that they shared the responsibilities and decision making in their household. For the majority of the married couples in this sample, the husband was identified as the decision maker. Esteban was very well-connected to other Latinos, even after losing his job, due to his pastor duties at his church, whereas Tomas had less interaction with Americans, and cited his wife as his only close friend. Questions about the stresses of living in a household with a gender imbalance are raised after finding these patterns. How does Esteban’s connectedness to others—especially other men—affect how he sees himself as the head of household? Does Tomas’ reserved personality explain his lack of social ties to other Latinos? Is Tomas spared some of the stress of losing his job since his household is jointly run? How do the women, as breadwinners, understand their partners’ desire for future integration, given that they themselves both strongly desire to increase their ties to the Tuscaloosa community? Most importantly, how are these possible stressors affecting their health and wellbeing for all involved? These are important questions for medical anthropology, and ideas of embodiment can inform their investigation and interpretation.

The concept of embodiment is very useful for explaining these questions in anthropological research. Embodiment can be understood as how social and physical experiences are mapped onto the body in culturally patterned ways. That is, a body can then be thought of as a map to be investigated by the medical anthropologist, indicating where one’s being (in the physical sense) has been, as well as what it has experienced. Medical anthropologists such as Engel (1977) and Foss and Rothenburg (1987) proposed that to understand how culture affects human biology, it is necessary to overcome the tendency to view the individual as having complete agency over social and biological outcomes. They also
suggested that it is necessary to close the gap between the mind and the body, rejecting Cartesian dualism for a more holistic notion of disease etiology. Finally, looking at which individuals in a particular cultural context have the ability (in terms of social and material resources) to act appropriately and which do not will answer some questions about disease distribution.

The work of several researchers, using this model of the interaction between mind and body, goes beyond the theoretical to introduce appropriate methodologies for measuring the distribution of illness. These researchers also embed the individual in a cultural context, with deviations in optimal health being partly the result of pressures from society and deviations from cultural norms. Oths (1999) addresses bodies as being both material and meaningful in the study of *debilidad* in the Peruvian Andes, and emphasizes that embodied knowledge in individual bodies leads to stressors from the social and material environment being expressed in ways both individual (based on personal histories) and culturally patterned (based on adaptive processes of a society or community). Societal and political factors are also embodied in an external and internal fashion. Oths remarks upon how strained social interactions in an environment characterized by political inequality mark the body of the Andean peasant in terms of their posture, gait, appearance, and speech. She makes a convincing case that stressful social conditions can also make their mark upon the internal body through the experience of *debilidad*. That is, Andean bodies “know” when the gender balance is not equal in a household—when production levels of women and men decrease, and when reproductive efforts become stressful (in terms of number of pregnancies and number of offspring lost)—and this knowing is expressed as an illness.

Oths (1999) addresses the methodological concerns of conducting a study dealing with how culture is embodied, and proposes that the household be the appropriate unit of analysis.
Studying illness as it is expressed in a household context is particularly useful because of the parallel implication that just as the biological, psychological, social, and ecological interactions within a human body cannot be separated when considering disease etiology, neither can the familial interactions within a household be removed from the explanation of disease causation. Dos Santos et al. (2001) describe research in Brazil and how socioeconomic status becomes embodied in terms of differing body compositions. Brazil offers very different lifestyles for four main socioeconomic groups, with each of the four groups’ bodies being affected by workloads and their corresponding caloric needs, different models concerning the social value of food, and different ideas about gender and what constitutes a beautiful body. The analysis in the article, as well as in Dressler’s (2005) commentary on the cultural aspects of biocultural research, is adept at making the connections between culture and the individual, specifically in terms of how culture is embodied. Dressler states that the study of embodiment addresses “how experience gets written on the body…and to do so it must trace culture to the individual” (2005:24). Later in the same article, Dressler brings up the notion that stress that does not have a mental or emotional outlet will ultimately be expressed biologically. He goes on to say that “it may be that the conscious mind ‘knows’ one thing and the body ‘knows’ something else” (2003:22). I think this is an important statement for biocultural anthropologists, because one of our strengths is that we measure what the mind is communicating (and comprehending) in a cognitive sense, but we also measure what the body is communicating (and comprehending) biologically. Unpacking complex patterns, as Dressler and colleagues did, provides a window into understanding the interactions between bodies and minds as well as cultures and individuals, thus answering some of the most fundamental questions in the study of anthropology.
Embodiment as a concept relevant to disease causation is very useful to biocultural medical anthropologists. Researchers have been urging a biocultural synthesis in anthropological thought, realizing that ideas of embodiment are essential to understanding sickness and healing. In reviewing Duden, Goodman and Leatherman reference embodiment, saying that “histories are inscribed beneath the skin” (1998:6). The authors are calling to our attention the need to incorporate the effects of social life on biological processes. Methodology then becomes a concern as we do not wish to fall into the path of describing disease and illness in a dualistic and biologically reductionistic manner.

The human body is subject to influence from stress or support from the social, psychological, and material world. It is our task to disentangle the layers of meaning and how they shape body composition, obesity, diabetes, as well as other illnesses that are beyond the scope of traditional biomedical understanding, such as debilidad and el calor (see Jenkins and Valiente 1994). In short, culture and social structure become embodied, resulting in varied health outcomes for certain people. As medical anthropologists, we need to recognize the importance of just how complex and interactional the different parts of people’s lives are—people like Esteban, Irma, Tomas, and Lucia—if we are to make meaningful contributions to the discourse on the relationship between biology and culture.
CHAPTER 9
COMMUNITY PERCEPTIONS OF LATINOS AND MEXICANS: PHASE 1 RESULTS

Introduction

Preliminary, qualitative interviews were conducted with people who had varied contact with the Latino community in Tuscaloosa. These interviews served several purposes: to learn more about the American and Mexican communities, to establish stronger relationships with individuals who worked within the Tuscaloosa community, and to obtain more contacts within both the American and Mexican communities. Additionally, I hoped to learn about what American members of the Tuscaloosa community knew about the Mexicans who were living here. I also wanted to know if there were different perceptions of Mexican among people who were active in the Latino Community Group (LCG) compared to other Americans who also had contact with Mexicans, but who were not members of the LCG.

To achieve these goals, I interviewed ten individuals who lived and worked in or around Tuscaloosa. Six out of the ten participants were active members in the Latino Community Group; after attending their meetings and participating in their group for more than a year certain individuals active with the group were approached about participating in the study. The other four people in this phase of the research were community health care providers who were recruited via snowball sampling—referred to me from the first few interviews. It was desired to obtain interviews with both the Latino Community Group members, who were actively involved in finding and promoting services to Latinos, as well as with other individuals who do not
specifically choose to provide services to Latinos, but who have contact with them nonetheless at their workplaces.

**Background and Context—Latino Community Group**

Among the Americans in every stage of this research project there were varied amounts of contact with Latinos in Tuscaloosa. Most residents of Tuscaloosa most likely have very little, if any, contact with the Latino population who are living here. Mexican restaurants seem to be where people see them the most. Most people had to think about where they have seen them—at Wal-Mart, on construction sites, in Mexican restaurants. Besides the restaurants, where even limited communication happens, residents of Tuscaloosa are not choosing to come into contact with Latinos. However, educational institutions, churches, service organizations, health care, and some businesses are trying to reach out to Latinos. The largest organized effort is by the Latino Community Group (LCG).

The influence of the Latino Community Group in the Tuscaloosa area, and as part of this research project cannot be underestimated. They are, after all, meeting with the express purpose of putting more Latinos in contact with Americans. How much of their efforts are leading to Mexicans becoming exposed to local cultural models of food is something that this research tried to address. Many Latino Community Group members were interviewed during the course of this research, and participants were almost always asked about their contact and interactions with Mexicans after they explained their eating habits in depth. A few of the Mexican participants in the final phase interviews listed these same Latino Community Group members by first and last name in their social network analysis. My involvement with this group to date spans over five years, starting in the Fall of 2005.
Participant Characteristics

Eight women and two men were interviewed in this preliminary phase of the project (see Table 9.1). Overall, these ten participants were very well educated. One person had completed only some years of college, three had a Bachelor’s degree and five had a Master’s degree. One participant had a professional degree beyond that of a Master’s degree. Five out of the ten people were health care professionals, working in the field of public health, in clinics, and in hospital settings. The other half provided social services to the community in religious, educational, social work, and law enforcement contexts. Most participants (70%) were White, with the remaining three people identifying themselves as being Latino. The average age of Phase 1 participants was 52 (SD: 14.1), and participants earned an average of over $80,000 dollars a year (SD:17,500). Most participants were married (80%), and identified their religion as Christian (60%).
Table 9.1: Phase I Participant Demographics

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Interview Results—Latino Community Group

Six qualitative interviews were conducted with individuals who were actively involved with the Latino Community Group (LCG) of Tuscaloosa. All interviews took place at the participants’ workplaces, which was identified as the most convenient place for them.

Participants were asked to describe their connections with the Latino population in Tuscaloosa, through their work and through other means. Many interview questions addressed the Mexican population specifically—regarding the participants’ general knowledge of the group.
Participants were asked to describe the family and social life of Mexicans, their thoughts on the permanence of Mexicans’ settlement in Tuscaloosa, and what kinds of people Mexicans are interacting with while they are living here. They also answered questions about major social and health problems that they thought people encountered on a regular basis. Finally, questions were asked about what kind of food Mexicans ate regularly, and if Mexicans were learning about and/or consuming the food that one normally finds around Tuscaloosa. Participants were not able to answer all of the questions asked, due to limited knowledge about some aspects of Mexicans’ lives in Tuscaloosa.

Overall, these six individuals differed in their connections to and interactions with the Latino population in general, and the Mexican population specifically. In terms of frequency of contact, the LCG members interacted with Latinos within the Tuscaloosa community anywhere from two to three times per month to every working day, up to eight hours per day. All individuals spoke Spanish, and two people indicated that they were called upon outside of normal business hours to interpret or provide other assistance, and that some of their efforts went beyond their current job descriptions. None of them provided primary health care, although one person was employed as a public health professional.

**General Knowledge of Latinos’ and Mexicans’ Family and Social Life**

When the participants from the LCG were asked to speak about their general knowledge of Mexicans in Tuscaloosa, they reflected on their social and family characteristics, their living conditions, and issues regarding their settlement in Tuscaloosa. The LCG participants were aware that families and family life were important to Mexicans living here, but that there was a distinction between the characteristics and daily lives of entire families and those characteristics of groups of single people (mostly men) who were here with the intention of working. Families
were spoken of as being part of a “close-knit and strong network,” celebrating often with other families for adult and children’s birthdays and other parties. Families were seen as a resource to provide care and aid to other Mexicans—families step in to help those who did not have any relatives in Tuscaloosa. Parents were described as hard-working, making sacrifices “so that their children could succeed at the American dream.” Common-law marriages were cited as being common among Mexicans.

Single, working men were seen as being less connected to the rest of the community. They were viewed as being not as likely to participate in church activities as are families, but they do attend church services in groups, although not necessarily every week. *Fútbol*, or soccer, leagues that take place in the evenings at several community parks were seen as a common activity for single men in Tuscaloosa. One LCG participant noted that playing in these leagues was a healthy activity, but since it was only seasonal, during the winter months men were more likely to turn to alcohol, drugs, and risky sexual behavior (e.g., with prostitutes, homosexuality), all of which puts single men at risk for AIDS and, ultimately, loneliness.

**Perceptions of Mexicans’ Settlement and Interactions in Tuscaloosa**

According to some LCG interviews, men were more likely to come to Tuscaloosa first, with women and their families coming later to the area. To some of the LCG participants, the general reason that Latino immigrants were here was to work and send money back to their home countries in the form of remittances. Alabama’s proximity to Mexico was also cited as a reason why immigrants were coming here as opposed to other places, and some participants noted that communities in Alabama were perceived as being safer and presenting fewer threats and challenges to immigrants as compared to other places in the United States. When asked if Mexicans were here to stay and live permanently, the LCG participants were in general
agreement that the population was here to stay, but that individuals often expressed their hope of returning to Mexico to live. One participant said, “everyone says it’s just for a little while,” but that they end up staying longer, or permanently. However, some families come to Tuscaloosa with the purpose of establishing roots and providing a better life for their children. They attempt to buy property with houses or trailers, and one person noted that Mexicans sometimes agree to pay (either knowingly or unknowingly) exorbitant amounts of money for damaged trailers in less than desirable neighborhoods. This was cited as evidence of Mexicans’ desire to establish roots in Tuscaloosa.

Trailers are often rented, and one LCG participant described “clumps of men” living together, sometimes ten or more in one trailer. Sometimes the trailer or land owners keep track of how many people are sleeping under one roof (and charge accordingly), and sometimes the owners are not concerned and a flat rate is charged. Many trailer parks were identified—or their location described, in the case of unnamed trailer parks—by the LCG participants as places where Mexicans lived. More than one person warned me not to go to certain areas of town, and in one instance it was suggested that I obtain a police escort if I was to go there. While I never went door-to-door soliciting people’s participation (as I think they believed I might), I did conduct interviews in these locales, although always with an interpreter, and always with an invitation.

A specific question was asked about what kinds of Americans Mexicans were interacting with while living in Tuscaloosa. Some commented that Mexicans were not having much contact with Americans, but others said that they were likely to speak with bosses and coworkers, landlords, church staff, social workers, and other service providers. People were also thought to be interacting with Wal-Mart employees (especially those working at the money-order counter),
and other employees of restaurants and gas stations. The participants acknowledged that Mexicans were interacting with health care providers, but that they did so with great reluctance. Families with children were thought likely to encounter Americans through the school system, talking with teachers, social workers, bus drivers, and at their children’s extracurricular activities such as sports or dance practices.

**Perceptions of Major Social and Health Problems Facing Mexicans**

The Latino Community Group members saw their organizations and workplaces serving the Latino population in many ways. By attempting to provide equal access to services and opportunities that Americans are able to take advantage of, these six participants spoke about efforts to address problems within their own field, but were also aware of issues and problems outside of their area of practice/expertise. For example, people working within the church and educational system were aware of legal problems facing Latino immigrants, and those involved in helping to solve legal issues for immigrants spoke about other health and social problems facing this population. To be sure, their involvement with the Latino Community Group may have contributed to this knowledge, as oftentimes general issues (such as how to obtain an Employer ID number) as well as specific cases where Latinos needed aid (such as with families who wish to transport deceased loved ones’ remains back to Mexico) were discussed at length during the group meetings. Therefore, everyone in attendance at the meeting learned about Latinos and their perceived problems beyond that of their specialty. In addition, some of these participants have extensive ties (including familial) with the Latino community and have had diverse and many experiences helping Latinos find the resources they need to address these problems. Moreover, involvement with the LCG and the discussions during the group meetings
reinforced a message of tolerance and acceptance of Latino immigrants—a message that was imparted to LCG meeting newcomers.

Problems specific to the Mexican community that were mentioned during the LCG interviews were of five types: 1) work, 2) domestic or family life, 3) education and the school system, and finally, 5) problems with American laws or contact with Americans. A specific question was also asked about the health problems of Mexicans in Tuscaloosa if participants had not already discussed this topic when answering the general question about what issues are most important to the Mexican population. Each of these problem categories (identified by me, not the participants) will be discussed briefly.

Work-related problems that were mentioned by the LCG members include losing one’s job, being injured while working, and not being able to pay one’s bills. Domestic/family-related problems included not being able to attend a funeral of a loved one in Mexico, issues with childcare, and problems with finding and keeping adequate housing. The educational status of Mexican immigrants in Tuscaloosa was mentioned by a few participants as well. One noted that the average education of Mexicans here was of a 6th grade level; but another person made a point to discuss that there are some people here who do have college degrees. The communication barrier due to lack of English skills by Spanish speakers and, conversely, the lack of Spanish language skills of Tuscaloosans, was also seen as an important problem for Mexicans. Regarding children attending school, it was noted that younger, elementary-aged children were most likely to fit in to the school system, but that older students were not having as good experiences in the schools.

Problems with the law and with American community members were mentioned frequently. These problems included traffic stops and car accidents, made worse by the fact that
the state of Alabama does not allow for driver’s license exams to be taken in Spanish. Consequently, many individuals are driving without licenses and insurance, even though their business is welcomed at local car dealerships, as evidenced by the increased incidence of Spanish advertising “se habla español” (we speak Spanish) by these businesses. One person explained to me the confusion felt by Latinos who are legally allowed to buy vehicles, but are not legally allowed to be licensed to drive them. Legal problems stemming from arrests due to alcohol consumption, including DUI, public intoxication, and open container violations were pertinent to one participant, who said that she often checked the online police records in the morning to see how many Latinos had been arrested the night before. She was worried that racial profiling or discrimination was to blame for the constant influx of Latinos to the city and county jails. A lack of transportation around town was also identified as a problem by the interview participants. Not having the appropriate visa or work documentation, whether it is a social security number or an employee ID number, and not being able to find where to obtain this documentation was seen as a problem for Mexicans, one that contributed to a general sense of fear that immigrants have upon their arrival here. Fear, specifically, of la migra or government or state immigration officials, was a factor in people’s reluctance to seek out services or complain about bad conditions at their worksite, according to the LCG members. One participant who is called upon to interpret for Latinos when they are stopped for traffic violations explained how individuals with English skills would sometimes act as if they did not understand police officers. It wasn’t until the interpreter arrived that the individual would acquiesce that they had understood the police officer all along, but was afraid of the consequences of acknowledging the reason for being pulled over, in fear that this would count as an admission of guilt, leading to jail time and/or immigration officials being contacted.
The participants spoke of a few general health problems for Mexicans before identifying specific health conditions that they were asked to name. Having to go to the hospital, obtaining prescriptions, and problems communicating with doctors were discussed, as well as problems that stem from not seeking out health services when one needed them. One participant stated that free health services were viewed by Mexicans as being of poor quality, and were therefore avoided. When asked to name specific health problems facing the Mexican community, the participants mentioned prenatal care and birth defects, being hurt on the job, and diabetes. Individuals also said that car accidents, the cost of health care, high blood pressure, obesity, arthritis, and depression were significant health problems for Mexicans.

Interview Results—Community Healthcare Providers

Four people were identified throughout the course of other interviews as Community Healthcare Providers (CHP) who had interactions with Spanish-speaking patients in two different clinical settings. As with the LCG interviews, the goal was to learn what these health care providers knew about Latinos in general and Mexicans in particular. These four individuals were not active in the Latino Community Group at the time of their interview, although at least two of the four were cognizant of the group’s existence, and one of those two was receiving bulk emails from the group’s organizer regarding meeting times and issues on the meeting agendas. Although the CHP were active in the provision of health care services to Latinos, they were not familiar with the mission of the Latino Community Group. Before these interviews were started, it was thought that perceptions of Mexicans as an ethnic group and as patients would possibly differ from the understandings held by the active Latino Community Group members.

Many of the same questions asked of the LCG were asked of the Community Healthcare Providers, and some differences did emerge after analyzing the qualitative data. A striking
difference was that the CHPs were more likely to use the terms “legal” and “illegal” when describing Latinos and Mexicans in Tuscaloosa—a practice frowned upon by some core members of the Latino Community Group. Also, none of these health care providers spoke fluent Spanish.

Community Healthcare Providers’ Knowledge of Latinos’ and Mexicans’ Lives and Problems

The CHP group was asked about their general knowledge of Latinos and Mexicans in Tuscaloosa, what their life was like, what kind of food they ate, whether they were here to settle down, and if they thought that Mexicans wanted to learn about Americans and American life. Each of these topics will be discussed. At the end of this chapter, some implications for the possible negative perspectives of the CHPs will be discussed.

Halfway through the interview (I also asked about the food habits of the Community Healthcare Providers to learn about their experiences with food, and if they ever imparted their knowledge to the Mexicans with whom they interacted) with the Community Healthcare Providers, I asked them to start thinking about what they knew about the Mexicans who were living in the Tuscaloosa area. After I asked about their knowledge of the Mexicans here, some individuals immediately started talking about other specific Latino ethnic groups or “Hispanics” in general. One participant, when he realized he had been using the term “Hispanics” instead of talking about Mexicans as I had asked, offered “I guess I think [of] Hispanics and Mexicans as very similar.” Overall, it was clear that these four people had more limited knowledge of Mexicans, when compared to the Latino Community Group participants, and in one case admitted to “very very little exposure” to Mexicans outside of annual checkup programs, reading the newspaper, and going to Mexican restaurants. Two individuals expressed more of an understanding of certain issues relating to Mexicans’ lives, such as their relatively poorer living
conditions, needing interpreters, and getting help from interpreters, ministries, and festivals.

However, the examples and stories told about interactions with Mexicans were noticeably less
detailed, indicating less breadth of knowledge about the lives of Mexicans. Knowledge of
Mexicans’ food habits was overall very sparse and were contingent upon what they had seen
prepared in Mexican restaurants—beans, rice, tamales, peppers, and cornmeal. One individual
had been to a party where the meal that was served included rolled up fried tacos, or taquitos.

When these participants talked about the characteristics of Mexicans, they used fewer
positive words in their descriptions. For example, while Mexicans were characterized as
“industrious,” “motivated to work hard to send money home,” “mostly Catholic,” and “family
oriented,” they were also described as “not lazy” and “illegal aliens.” These participants
categorized Mexicans more frequently based on the kinds of problems or problematic living
conditions that they faced. They were described as settling for less in their living conditions,
settling for even less than poorer African Americans in Tuscaloosa. Mexicans were seen as
having limited education, limited skills, and limited financial resources. The group was
perceived as being forced to live a low profile life, lying about their age in order to get work,
having problems because of the language barrier, and being disproportionately targeted for
crimes and abuses by the hands of Blacks and Whites in their neighborhoods. Three out of the
four participants referred to the problematic nature of Mexicans being “illegal” at least once
during the interviews.

Living in fear was something that these project participants recognized, mostly because
of their undocumented/illegal status while living in the United States. Therefore, as one
participant stated, they “run for their lives” when faced with conflict with Americans. These
participants agreed that most Mexicans were not here to join American society; they were
understood to be “mostly migratory” with only some choosing to settle down here. As one participant recounts, when trying to contact a former patient at her home after hours regarding a medical issue:

We went out that night to try to find out where she lived and we couldn’t find her. Well, we did find the address but she wouldn’t come to the door. We went with the police and they don’t open the door for the police! So the next day I went to some of the restaurants around here and I said I’m looking for this lady and I need her…and I wonder if you have any idea where I might could find her or get in touch with her to come find me. This guy sized me up and said “Let me see.” He went and made a call and [then said?] “someone can take you to where she lives.” He was screening me to see if I was ok and [if] it was alright to send me to her. It was an interesting thing, but they have a really good underground network, so if you want them and need them for something you can usually find them and having done a lot of street work before and just being really transparent and telling them what you need…that’s the other experience I’ve had with them.

Trust between patients and health care practitioners was considered to be a problem Mexicans faced for some of the participants, but it is unclear if the distrust Mexicans feel was related, in the participants’ own minds, to incidents such as the one above where uniformed officers of the law were brought to someone’s front door after dark.

Other health-related difficulties that Mexicans faced were getting medication, delaying seeking health care, and not coming to scheduled doctor’s appointments. Specific health conditions that were mentioned were obesity, high cholesterol, hypertension, diabetes, asthma and COPD, and sexual health problems such as sexually transmitted diseases. Women in particular had a harder time obtaining the necessary health care according to one participant. She was very aware of “macho” tendencies of husbands who had control over their wives’ bodies, and who at times decided that pelvic exams or breast exams would not be given. Communication with women (and their husbands) about their illnesses and their bodies was also problematic. A participant recounted a horrific story of a Mexican woman being unable to
communicate to the doctor that she was currently pregnant. She was scheduled for a dilation and curettage procedure, the performance of which gave her an abortion.

The two individuals who had the most regular contact with Mexicans in their clinical settings also happened to use the most negative terminology and stereotypes to describe Mexicans in general. Both of these individuals seemed to struggle with wanting to provide proper preventive health care, and were committed to that mission. However, they were perceptibly dismayed by this ethnic group being so difficult to treat. When I asked why Mexicans don’t come to their appointments on time (or at all), one person indicated that they just don’t care. She shrugged and said “my guess is it’s cultural.”

For one individual, the conversation quickly moved out of the realm of her experiences in the clinic to her moral judgments on Mexicans and especially couples and young parents who “live a lie” by being “illegal aliens,” making them unable to get married. Children resulting from these unions are destined to live lives worse morally and financially than their parents, according to her.

Discussion and Limitations

The small sample size for this part of the project prevents any kind of concrete statements about either group being made. Nevertheless, these interviews proved to be informative at such an early stage in my research. I learned of many more sources with whom I made contact during later phases of the study. Additionally, the positive and negative feelings towards Mexicans and Latinos as an ethnic group that I encountered during these first ten interviews were representative of attitudes that individuals in later research phases held. I believe that the negative stereotypes that emerged are part of what some Americans in Tuscaloosa feel. To be sure, there are people who hold worse opinions and who actively discriminate and harass Latinos. I do not believe any
of my participants did so, but their attitudes and judgments about Latinos’ “illegal” status, moral shortcomings, as well as their waiting until the last minute to seek health care may have something to do with Latinos’ and Mexicans’ reluctance to visit clinical settings—something that was verified by the Mexican participants in the last part of my research project. Whether or not negative stereotypes and attitudes are more reinforced in groups like the Community Healthcare Providers, as opposed to the general population can only be established through a careful research plan, one that was not part of this project. Getting health care is a culturally-mediated activity; there is a certain consensus regarding what should happen in a clinic or doctor’s office or hospital among nurses, doctors, pharmacists, and patients. Those employed in health care are very well-versed in the parts and procedures of a health care visit. Certain members of the general American population are going to be more or less competent in the cultural model for receiving health care. Immigrants are for the most part going to be even more marginal in their understanding of the process, so there is going to be more room for error and more reason for health care providers to note a disconnect. They may attribute this disconnect to Mexican “culture” (as one CHP did when she reasoned why Mexicans often come late or not at all to clinic appointments), to structural factors, or to stereotypes. It would stand to reason, therefore, that frequent contact with Spanish-speaking immigrants and migrants in a health care setting would possibly produce more negative feelings than the infrequent or non-existent contact that, I believe, characterizes a portion of the American community in Tuscaloosa, although the recent harsh immigration legislation points to a rather widespread disdain for their presence in the state of Alabama. It also stands to reason that being part of a community service group that aims to provide services to immigrants will predispose one to viewing Mexicans in a more positive light. That is, if you do not already have an open mind about Mexicans’ characteristics as a group
before coming to the Latino Community Group meetings, someone there will surely set you straight sooner or later about any misconceptions you might have or vocabulary (e.g., “illegal,” “aliens”) you might use. However, this analysis remains as a simple report of their responses as a small group obtained through convenience sampling, not as a characterization of all Community Healthcare Providers in Tuscaloosa.
CHAPTER 10

THE CULTURAL MODELS OF FOOD OF THREE ETHNIC GROUPS IN ALABAMA

Introduction

The culinary landscape of the southern United States has been affected by its geography, social, economic, political history, and by the beliefs and behaviors of various ethnic groups in the region over time. Latinos, as a diverse ethnic group, and Mexicans specifically, are a new addition to the area and are adding to the complexity of ethnic relations which historically were between Blacks and Whites only. It is therefore necessary to document the elements and structure of the cultural models of each group; this is the focus of this chapter.

A cultural domain analysis was undertaken in order to elicit the salient elements in the domain of food, the structure of which was tested with separate sample groups. Overall, 81 people (27 people from each of the three ethnic groups) participated in either freelisting or pile sorting and ranking interviews. All answered open-ended questions about food, eating, social networks, and ethnic relations, followed by demographic questions. This chapter will first present analysis of demographic data and the results from the freelisting group, and then demographic data and the results of the pile sorting and ranking activities. As appropriate, the results from the open-ended questions that all participants completed will be discussed as well.

Generating the Elements of the Cultural Model

The main goal of the Phase 2a interviews was to generate elements within the cultural domain of food that were important to the participants in the sample. Freelisting is the emic methodology that was used to accomplish this goal. For the freelisting task, 36 individuals (12
from each ethnic group) were asked to “tell me the foods that you eat and the foods that are eaten by the people you know.” The demographic data analysis of the 36 freelisters is presented first, as well as analysis of the terms that were generated, as a whole group and then by ethnic group. Some of these food terms were chosen for the unconstrained pile sort and ranking tasks; the selection process for these terms is then discussed, as they influence the remainder of the project goals and methods.

**Freelist Sample Characteristics**

Twelve people from each of the Black, White, and Mexican ethnic groups participated in freelisting interviews. For the American freelists, an effort was made to include both people who did and did not have direct contact with Latinos (and specifically Mexicans) in the Tuscaloosa area. Both Latino Community Group (LCG) members who have direct contact with Latinos and members of the general Tuscaloosa population who do not necessarily have contact with Latinos were interviewed. Of eight LCG members interviewed, 6 were White and 2 were Black. All had extensive contact with Latinos due to their jobs (social workers, ESL specialists, clinic workers, translators, church workers, and public health workers). Six Whites and ten Blacks composed the general population part of the sample. Of these 16 people, six had contact with Latinos (3 White and 3 Black) and ten did not have contact with Latinos (3 Whites and 7 Blacks). The individuals who had contact with Latinos did so because of volunteering, family ties, or their jobs (landscaping, health care provider). The Americans who did not have contact with Latinos were employed with the city of Tuscaloosa, or as graduate student interns, church workers, social workers, University officials, janitorial custodians, parking lot attendants, and line cooks. In summary, of the 24 American Blacks and Whites who completed freelists, 14 had regular contact
with Latinos (both LCG members and people from the general population) and 10 members of the general population reported no contact with Latinos.

Equal numbers of women and men completed the freelist interview (see Table 10.1 for all demographic characteristics). The mean number of years that the 36 participants had lived in Tuscaloosa was 18.4 (SD=16.9). There are significant differences in the medians of how many years Blacks, Whites, and Mexicans have lived in Tuscaloosa according to a Kruskal-Wallis test that was performed (H(2)=11.1, p=.004). Mexicans had lived in Tuscaloosa for the least amount of time. Respondents' average age was 39.4 (SD=12.1) and did not vary by ethnic group. Respondents' average household income was $48,000 (SD=$34,000) and did not vary according to ethnicity. Almost everyone interviewed was employed. Education levels among participants were varied—36.1% of the sample had 12 years of education or less, 25% had gone to college for any number of years, and 38.9% had attended graduate school at some point in the past. However, there was a distinct distribution if education level was examined by ethnic group. While most Blacks (66.7%) and Whites (91.7%) had an education past that of a 12th grade level, only 33.3% of Mexicans had done so, and none had attended any graduate school. These differences were found to be statistically significant (H(4)=15.073, p=.005). A majority (75%) of the respondents were married; Blacks were more likely to be single, divorced, or widowed (with 58.3% being married), and Mexicans were overwhelmingly married (91.7%). However, these differences were not statistically significant. Most participants (63.9%) reported their religion as Protestant, but this figure is clearly being driven by the 91.7% of Blacks and 75% of Whites who were Protestant. The majority (75%) of Mexicans were Catholic; these differences in religious orientation differed significantly by ethnic group (H (4) = 21.122, p < .001).
Table 10.1: Demographic characteristics of the freelist sample

<table>
<thead>
<tr>
<th>Variable</th>
<th>African American n=12</th>
<th>Euro American n=12</th>
<th>Mexican n=12</th>
<th>Total n=36</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education (%)**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 years or less</td>
<td>33.3</td>
<td>8.3</td>
<td>67.7</td>
<td>36.1</td>
</tr>
<tr>
<td>any college</td>
<td>25.0</td>
<td>16.6</td>
<td>33.3</td>
<td>25.0</td>
</tr>
<tr>
<td>any graduate school</td>
<td>41.7</td>
<td>75.0</td>
<td>0</td>
<td>38.9</td>
</tr>
<tr>
<td>Employed (%)</td>
<td>100</td>
<td>91.7</td>
<td>91.7</td>
<td>94.4</td>
</tr>
<tr>
<td>Marital Status (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>58.3</td>
<td>75.0</td>
<td>91.7</td>
<td>75.0</td>
</tr>
<tr>
<td>Single</td>
<td>16.7</td>
<td>8.3</td>
<td>8.3</td>
<td>11.1</td>
</tr>
<tr>
<td>Divorced/Widowed</td>
<td>25.0</td>
<td>16.7</td>
<td>0</td>
<td>13.9</td>
</tr>
<tr>
<td>Religion (%)***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catholic</td>
<td>0</td>
<td>8.3</td>
<td>75.0</td>
<td>27.8</td>
</tr>
<tr>
<td>Protestant</td>
<td>91.7</td>
<td>75.0</td>
<td>25.0</td>
<td>63.9</td>
</tr>
<tr>
<td>Non-practicing/Other</td>
<td>8.3</td>
<td>16.6</td>
<td>0</td>
<td>8.3</td>
</tr>
<tr>
<td>Years lived in Tuscaloosa**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mean (SD)</td>
<td>25.7 (20.3)</td>
<td>22.9 (15.1)</td>
<td>6.7 (5.9)</td>
<td>18.4 (16.9)</td>
</tr>
<tr>
<td>Range</td>
<td>0.5-65</td>
<td>5.5-55.8</td>
<td>0.8-20</td>
<td>0.5-65</td>
</tr>
<tr>
<td>Number of Freelisted Terms*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mean (SD)</td>
<td>29.2(^b) (9.5)</td>
<td>40.1(^a) (20.8)</td>
<td>21.7(^b) (11.0)</td>
<td>30.3 (16.1)</td>
</tr>
<tr>
<td>Range</td>
<td>14-51</td>
<td>21-93</td>
<td>8-48</td>
<td>8-93</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mean (SD)</td>
<td>39.2 (12.1)</td>
<td>40.3 (14.0)</td>
<td>38.7 (11.0)</td>
<td>39.4 (12.1)</td>
</tr>
<tr>
<td>Range</td>
<td>26-65</td>
<td>23-66</td>
<td>21-56</td>
<td>21-66</td>
</tr>
<tr>
<td>Household Income (in tens of thousands)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mean (SD)</td>
<td>4.4 (3.4)</td>
<td>6.2 (3.5)</td>
<td>3.9 (3.2)</td>
<td>4.8 (3.4)</td>
</tr>
<tr>
<td>Range</td>
<td>1-10</td>
<td>1-10</td>
<td>0.5-10</td>
<td>0.5-10</td>
</tr>
</tbody>
</table>

Notes: Means with different superscript letters are significantly different at \( p \leq 0.077 \). \(^a\)\( p = 0.015 \), \(^b\)\( p \leq 0.005 \), \(^**\)\( p < 0.001 \), based on Kruskal Wallis analysis of ranks on years lived in Tuscaloosa, ANOVA on number of freelisted terms, and Chi-squares on education and religion.

Freelist Results

The freelisting task usually lasted three to five (but sometimes up to fifteen) minutes in duration. The open-ended questions lasted from twenty minutes to an hour and twenty minutes long. A total of 279 terms were generated by everyone in this part of the project. The mean number of terms free listed by all participants was 30.3 (SD=16.1). The number of terms listed
was found to vary by ethnic group (F=4.8, p = .015) with Whites having more terms than both Blacks and Mexicans (post-hoc least significant difference p=.077 and p=.004, respectively). There was a concern that one individual’s responses were causing the difference between the Whites and the other two groups to be more pronounced than it was. That is, one White individual freelisted 93 food terms, a number which was 34 more foods than the next-largest list of 59 terms. But even with removing the person who provided 93 freelisted terms, there are still significant differences among the three ethnic groups (F=4.27, p = .023). However, the only post-hoc differences that remain at a significant level are between Whites and Mexicans (least significant difference p = .007). That is, in removing this individual, the mean number of terms for Blacks and Whites is more similar. The difference in mean number of terms generated for Blacks and Mexicans (least significant difference p = .111) approaches the significance level of .10 set forth at the outset of this project as an acceptable p-level. Overall, it seems that Whites produced significantly longer freelists than did Blacks and Mexicans.

I considered it possible that since I was familiar with more of the White participants before their interviews (through the Latino Community Group) that their level of comfort with me and my project may have influenced how many terms they generated during the freelisting part of the interview. Overall, I was acquainted with 5 Whites, 2 Blacks, and 1 Mexican before asking them to do an interview with me. A t-test was done to see if the people I knew beforehand produced longer freelists compared to the freelists of individuals I did not know, but the test was not supported.

During the open-ended questions, participants talked about many other foods than were mentioned during the freelisting task—on average, 59 additional foods were talked about during the open-ended questions that followed the freelist. The foods mentioned in this part of the
interview did help interpret the salience of the terms from the initial list, but the original list was what was analyzed as the data set in the Anthropac program. However, I did add a few terms of interest (described below).

The output from Anthropac orders the terms according to the average rank of the food term as it appeared on the freelists of the 36 participants. Anthropac counts how many times the term was mentioned by all of the participants, and each food term is also given a salience score. In general, the more frequently mentioned and the closer the food term appears to the top of the lists, the more salient it is. The fifty most-mentioned food terms from the master freelist of all 36 participants can be found in Table 10.2; these foods have been grouped according to categories used by the participants. Five or more people, or at least 14% of the sample, mentioned these terms.

<table>
<thead>
<tr>
<th>Table 10.2: The fifty most frequently listed food terms from the freelist task, by category, listed in decreasing frequency of mention.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Categories</strong></td>
</tr>
<tr>
<td>Vegetables n=17</td>
</tr>
<tr>
<td>Carbohydrates n=7</td>
</tr>
<tr>
<td>Meats n=7</td>
</tr>
<tr>
<td>Composite/Other n=5</td>
</tr>
<tr>
<td>Fruits n=4</td>
</tr>
<tr>
<td>Beverages n=5</td>
</tr>
<tr>
<td>Snacks n=3</td>
</tr>
<tr>
<td>Dairy n=2</td>
</tr>
</tbody>
</table>

**KEY:** An asterisk (*) indicates that the food was placed according to the folk categories of the participants.

Most of the categories in Table 10.2 are the ones that the participants used throughout the freelist interviews. These categories and their referents are slightly different from the USDA
food group categories, but were helpful in that they reflected how participants name and structure the elements of their cultural models. The category of composite/other foods was created by me after looking at the freelist output and noticing that foods like pizza and sandwiches were very salient to the participants, but they did not quite fit into the meat category or the carbohydrates category. Similarly, another category—snacks—was created due to the number of different kinds of foods that people talk about eating that participants considered treats, to be had during the day or at the end of a meal. Snacks were considered by the participants to consist of either salty or sweet food items. Fifty percent of the participants used some of these food group categories while freelist (mostly Blacks and Whites.)

Some food items were talked about as having the qualities of two categories. Beans were recognized by some as belonging with the meats due to their protein content, but most individuals generally considered them to be vegetables. Potatoes and sweet potatoes were considered to be similar to other carbohydrates, but “counted” as vegetables for most participants. Eggs were either discussed as being similar to meats, because of their protein content, or were talked about with dairy products—mostly because eggs are often located near the refrigerated dairy section in most grocery stores. In fact, a couple of participants freelist items in the order in which they were encountered during their trips to the grocery store. For the open-ended question of “make a sample grocery list for me,” a task that most participants seemed to enjoy, a similar method was sometimes employed—people mentally walked the aisles at the stores to make up their list. Other freelist were constructed chronologically; breakfast foods were followed by lunch foods and then by dinner foods. Many people freelist foods from the main daily meals; chicken, the most salient food item, was listed first by many participants and was listed by 89% of the sample as a whole.
As mentioned in the methods chapter, the general food terms describing whole categories of foods, such as meats, vegetables, fruits, and beverages, were not of particular interest during the data analysis. Therefore, while these general terms were left in the dataset imported into Anthropac, these terms were skipped over during analysis. However, in some cases it was easier to refer to freelisted foods in their more general forms. Participants used adjectives to refer to the preparation methods of their foods (fried chicken, mashed potatoes) or referred to specific cuts of meat (steak, ribs) in their freelists. Consequently, some of the terms were condensed to make analysis easier. As an example, an individual might list pork, ham, bacon, and/or sausage. All of these terms were considered to be a type of pork by the participants, so therefore the term pork, as it is the more general term, was used in the freelist analysis. However, these specific types of pork were coded so that frequency of them being mentioned was recorded, but not so that the term was counted twice. That is, these freelisted food terms were generalized in part to facilitate analysis, but none of the original terms were excluded from the analysis in Anthropac. In doing so, it was possible to see if participants talked about eating ham more than they did eating pork (they did not). Photos of these salient types of pork were used on the note cards in the next phase of the project so that participants could see the food in its many meaningful forms.

Similarly, upon looking at the freelist output, many people listed a variety of different desserts—cookies, cake, pudding, and pie—but one item did not stand out as being the most salient when all of the data were considered nor when the data were examined by ethnic group. While general terms like vegetable, fruit, and meat were not helpful in determining what people ate, it was decided that the many different dessert foods listed by the participants could be understood using the more general term of “desserts.” It was decided that this class of sweet foods was important, not the actual composition of the items themselves, so the individual
desserts mentioned were re-coded using the general dessert term. These sweet foods considered as a class of foods were the most important snack food item listed by the participants.

In addition to the general, categorical terms that were skipped and the synonyms that were condensed, some terms on this top 50 list were not considered in any further evaluation of freelisted foods—these foods were water, a variety of condiments, tomatoes, and lettuce. All of these items were very salient to the participants, regardless of ethnicity. However, as water offers no nutritional value and was assumed to be consumed by almost everyone, it was dropped from any further analysis. Condiments were also excluded. Tomatoes and lettuce are ubiquitous foods, with tomatoes being ingredients in condiments, and pasta sauces, while both tomatoes and lettuce are found in everything from salads to toppings on fast food sandwiches. It was thought that including these three terms in the next phase of the research project would offer little insight into the cultural models of the participants and the differences and similarities of the cultural models by ethnic group.

When examining these terms generated by all who participated, it is clear that many more vegetables were freelisted than any other type of food, including meat or carbohydrates. Even though this is a very rough starting point for an analysis, it is already possible to grasp in part what foods comprise the participants’ cultural models. What remained to be seen at this point in the analysis was if these terms change when each ethnic group is considered separately. For example, if there are differences in what the Mexican sample and the American sample (both Blacks and Whites) list, then these differences can be considered as evidence of separate cultural models. I was also interested in the variation between Blacks and Whites, and I was able to conclude that variation did exist especially with regard to fruits and vegetables. Therefore, these groups were considered separately, and separate interviews in the next phase of the research
project were carried out. Examining variation among the ethnic groups was an important step in the analysis of these data, as the methods for the final sample group of 50 Mexicans included asking them to evaluate foods that are of uncertain relevance to their own cultural model—that is, foods salient to Tuscaloosa Blacks and Whites. It is in this freelist phase of the project that these foods could be identified as being more salient to one ethnic group than another.

Results from each of the three groups’ freelists will be briefly discussed below. Analysis of the food terms will be discussed as they are related to the methods and analysis of the next phase of the research—the pile sorting and ranking tasks.

**African American Freelists**

The twelve Black individuals who were interviewed generated 140 food terms in the initial freelist activity. The average list consisted of 29 food items. Excluding the general terms and the ubiquitous terms described above, the fifty most salient terms are listed in Table 10.3 below, with the percent of the Black sample that used the term in the freelist activity indicated in the adjacent column.
Table 10.3: The 50 most frequently freelisted foods by African Americans.

<table>
<thead>
<tr>
<th>Food</th>
<th>%</th>
<th>Food</th>
<th>%</th>
<th>Food</th>
<th>%</th>
<th>Food</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>chicken</td>
<td>100</td>
<td>potatoes</td>
<td>50</td>
<td>cabbage</td>
<td>33</td>
<td>Soul Food meats</td>
<td>25</td>
</tr>
<tr>
<td>beef</td>
<td>92</td>
<td>Mexican food</td>
<td>42</td>
<td>soda</td>
<td>33</td>
<td>cheese</td>
<td>25</td>
</tr>
<tr>
<td>greens</td>
<td>67</td>
<td>eggs</td>
<td>33</td>
<td>cereal</td>
<td>33</td>
<td>cherries</td>
<td>17</td>
</tr>
<tr>
<td>pork</td>
<td>67</td>
<td>corn</td>
<td>33</td>
<td>desserts</td>
<td>33</td>
<td>bananas</td>
<td>17</td>
</tr>
<tr>
<td>beans</td>
<td>58</td>
<td>grits</td>
<td>33</td>
<td>broccoli</td>
<td>25</td>
<td>popcorn</td>
<td>17</td>
</tr>
<tr>
<td>salad</td>
<td>58</td>
<td>peas</td>
<td>33</td>
<td>squash</td>
<td>25</td>
<td>carrots</td>
<td>17</td>
</tr>
<tr>
<td>pasta</td>
<td>58</td>
<td>soup</td>
<td>33</td>
<td>pizza</td>
<td>25</td>
<td>apples</td>
<td>17</td>
</tr>
<tr>
<td>grapes</td>
<td>50</td>
<td>fish</td>
<td>33</td>
<td>nuts</td>
<td>25</td>
<td>oranges</td>
<td>17</td>
</tr>
<tr>
<td>juice</td>
<td>50</td>
<td>pancakes</td>
<td>33</td>
<td>sandwiches</td>
<td>25</td>
<td>soy products</td>
<td>17</td>
</tr>
<tr>
<td>rice</td>
<td>50</td>
<td>bread</td>
<td>33</td>
<td>mac and cheese</td>
<td>25</td>
<td>cornbread</td>
<td>17</td>
</tr>
</tbody>
</table>

The most salient items are foods that are commonly consumed during the evening meal: chicken, beef, pork, beans, greens, salad, and pasta. However, a number of foods that characterize a typical American breakfast are also represented: juice, eggs, grits (coarsely ground hominy corn porridge), and pancakes. Sausage and bacon were the pork variants that were the most salient to these individuals (ribs and ham were less important). Mexican food, obtained mostly in restaurants, but also sometimes cooked in the home with the help of boxed “kits” (like Old El Paso brand) was also featured prominently. Chinese food is eaten similarly; individuals usually ate Chinese food out at restaurant buffets, but occasionally cooked it at home with the help of frozen kits comprised of meat, vegetables, and a flavored teriyaki-like sauce.

Milk and alcohol are absent from the African American freelist; these two beverages were listed by both Whites and Mexicans (see below).

Regarding fruits and vegetables, there are four vegetables (i.e., not including legume beans and potatoes) of greens, salad, corn, and peas that appear in the twenty most salient foods. Greens are typically collard greens, or turnip or mustard greens, traditionally cooked with some kind of pork fat for an extended period of time in order to make sure that the greens are tender.

One fruit in particular, grapes, were part of the freelists of half of the African Americans I talked
to, but other fruits were less important and discussed less often. Cherries were much further down the list.

Three individuals talked about the meats that characterize Soul Food—gizzards, pork neck bones, turkey necks, chitlins (chitterlings, or pork intestines), hog maws (pork stomach), pork fat back, and liver. Two individuals discussed soy products as meat alternatives, namely “chicken” or “burger” patties or nuggets, made from soy protein.

**White Freelists**

The twelve White participants generated 190 food terms in the freelisting exercise. The average list was 40 food terms. The fifty most salient food terms are listed in Table 10.4 along with the percentage of the sample that talked about them.

<table>
<thead>
<tr>
<th>Food</th>
<th>%</th>
<th>Food</th>
<th>%</th>
<th>Food</th>
<th>%</th>
<th>Food</th>
<th>%</th>
<th>Food</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>chicken</td>
<td>92</td>
<td>fish</td>
<td>50</td>
<td>alcohol</td>
<td>42</td>
<td>sweet potatoes</td>
<td>33</td>
<td>greens</td>
<td>25</td>
</tr>
<tr>
<td>cereal</td>
<td>83</td>
<td>green beans</td>
<td>50</td>
<td>apples</td>
<td>42</td>
<td>juice</td>
<td>33</td>
<td>onions</td>
<td>25</td>
</tr>
<tr>
<td>salad</td>
<td>83</td>
<td>bread</td>
<td>42</td>
<td>blueberries</td>
<td>33</td>
<td>chips</td>
<td>33</td>
<td>peaches</td>
<td>25</td>
</tr>
<tr>
<td>beef</td>
<td>75</td>
<td>sandwiches</td>
<td>42</td>
<td>rice</td>
<td>33</td>
<td>pancakes</td>
<td>33</td>
<td>soup</td>
<td>25</td>
</tr>
<tr>
<td>potatoes</td>
<td>75</td>
<td>soda</td>
<td>42</td>
<td>pork</td>
<td>33</td>
<td>casserole</td>
<td>25</td>
<td>chili</td>
<td>25</td>
</tr>
<tr>
<td>eggs</td>
<td>67</td>
<td>carrots</td>
<td>42</td>
<td>biscuits</td>
<td>33</td>
<td>turkey</td>
<td>25</td>
<td>grapes</td>
<td>25</td>
</tr>
<tr>
<td>milk</td>
<td>67</td>
<td>peas</td>
<td>42</td>
<td>bananas</td>
<td>33</td>
<td>cheese</td>
<td>25</td>
<td>Mexican food</td>
<td>25</td>
</tr>
<tr>
<td>beans</td>
<td>58</td>
<td>corn</td>
<td>42</td>
<td>sweet tea</td>
<td>33</td>
<td>okra</td>
<td>25</td>
<td>grits</td>
<td>25</td>
</tr>
<tr>
<td>pasta</td>
<td>58</td>
<td>coffee</td>
<td>42</td>
<td>peanut butter</td>
<td>33</td>
<td>cauliflower</td>
<td>25</td>
<td>hot dogs</td>
<td>25</td>
</tr>
<tr>
<td>pizza</td>
<td>50</td>
<td>broccoli</td>
<td>42</td>
<td>Chinese food</td>
<td>33</td>
<td>desserts</td>
<td>25</td>
<td>Thai food</td>
<td>25</td>
</tr>
</tbody>
</table>

Fruits and vegetables were the most salient among the White group; six vegetables appear in the 20 most important foods and three fruits were mentioned by at least one third of the sample—the most of the three ethnic groups. There is some overlap in the vegetables of the Black and White groups with the items of salad, corn, and peas.

Some of the same breakfast foods were important to the White Americans; cold cereal and milk were the most salient. Biscuits, which are typically eaten in the morning but which can
be consumed at any meal, were listed by 4 people. Chinese food, which appears on the freelist of all three ethnic groups, was most important to the Whites, as was pizza. Thai food was important to three individuals, one of which had a family member who knew how to cook it at home. The other two individuals ate this food at one of the Thai restaurants in town. Mexican and Chinese food are consumed similarly to the manner in which African Americans consume it, as described above. Sweet tea is a staple beverage in the South. It is black tea with sugar, simple syrup, or other sweetener (sometimes flavored with mint) that has been added while the tea is warm, thus allowing for more sugar to be absorbed in the tea before being iced. Casserole and chili are other composite dishes that were salient to some Whites.

**Mexican Freelists**

The twelve Mexican participants generated 116 foods during the freelist activity. The average length of the freelist was 22 terms. The thirty-six most salient terms, listed by category, are in Table 10.5. Less than 50 foods are presented here due to the fact that the foods are rather idiosyncratic after the 36th term; since they were only discussed by one person they are by definition not shared.

<table>
<thead>
<tr>
<th>Food</th>
<th>%</th>
<th>Food</th>
<th>%</th>
<th>Food</th>
<th>%</th>
<th>Food</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>rice</td>
<td>75</td>
<td>pork</td>
<td>42</td>
<td>coffee</td>
<td>25</td>
<td>Chinese food</td>
<td>17</td>
</tr>
<tr>
<td>chicken</td>
<td>75</td>
<td>milk</td>
<td>42</td>
<td>onions</td>
<td>25</td>
<td>pears</td>
<td>17</td>
</tr>
<tr>
<td>beans</td>
<td>67</td>
<td>soda</td>
<td>42</td>
<td>bread</td>
<td>25</td>
<td>peaches</td>
<td>17</td>
</tr>
<tr>
<td>eggs</td>
<td>67</td>
<td>caldo</td>
<td>33</td>
<td>guisado</td>
<td>25</td>
<td>carrots</td>
<td>17</td>
</tr>
<tr>
<td>beef</td>
<td>58</td>
<td>tacos</td>
<td>33</td>
<td>alcohol</td>
<td>25</td>
<td>cheese</td>
<td>17</td>
</tr>
<tr>
<td>chiles</td>
<td>58</td>
<td>cereal</td>
<td>33</td>
<td>sandwiches</td>
<td>25</td>
<td>chocolate</td>
<td>17</td>
</tr>
<tr>
<td>potatoes</td>
<td>50</td>
<td>pasta</td>
<td>33</td>
<td>fajitas</td>
<td>17</td>
<td>cauliflower</td>
<td>17</td>
</tr>
<tr>
<td>sopa</td>
<td>50</td>
<td>shrimp</td>
<td>25</td>
<td>fast food</td>
<td>17</td>
<td>broccoli</td>
<td>17</td>
</tr>
<tr>
<td>tortillas</td>
<td>42</td>
<td>enchiladas</td>
<td>25</td>
<td>papayas</td>
<td>17</td>
<td>tea</td>
<td>17</td>
</tr>
</tbody>
</table>
Some individual foods and composite dishes that typify Mexican cuisine were discussed at length during the freelisting task. *Chiles* are chili peppers, one of the dominant flavor principles of Mexican cuisine. There are many varieties of chiles that are used for salsas, in meat dishes, and cooked whole. Many different varieties can be found fresh or dried in Tuscaloosa’s supermarkets, local groceries, and Latino tiendas. *Sopas* are soup-like dishes that can have a good amount of broth and have pasta or some kind of noodles (*fideos*) in it. *Sopas* can also be “dry” (*sopas secas*) based on the amount of liquid or broth left after cooking is complete. For example, *sopa de pollo* would be what Americans would typically think of as chicken soup—meat and vegetables with a pasta or a noodle being suspended in a bowl full of chicken broth. This wet *sopa* is in contrast to a dry *sopa* such as *sopa de arroz*. This dish made of rice and some vegetables, most often diced onions and perhaps some diced carrots or peas, cooked in a broth with some tomato sauce, spices, and salt for flavoring. The liquid is cooked until the rice is fluffy and dry; this is also considered to be a *sopa*. This dish of rice is often served as a side in Mexican restaurants. *Sopa de fideo* would be a pasta cooked in broth or water, perhaps with tomato sauce added. This dish could be considered as the Mexican equivalent of spaghetti and tomato sauce.

*Caldos* are broth-based dishes, often with chunks of meat (chicken breasts and thighs, for example, in *caldo de pollo*) and pieces of vegetables. *Caldos* can be made from chicken, beef, shrimp, vegetables, or a combination of ingredients. Rice is eaten on the side, and perhaps a green salad accompanies the dish as well.

*A guisado* (or *guiso*) is a stewed meat dish, such as chicken made with a green or red salsa, or a *mole* dish. *Guisados* are put into *tacos* and *burritos*, but not *enchiladas*; cheese or chicken and sometimes beef are the traditional *enchilada* fillings.
**Enchiladas** are made by dipping a corn *tortilla* in red or green salsa, frying it briefly until it is soft, filling it, and rolling it. **Tacos** are folded or rolled corn *tortillas* that have been filled with things like ground beef and potatoes, or shredded beef, or a *guisado*. **Burritos** are made with flour *tortillas*, and are filled with *guisado* or another type of filling, such as cooked potatoes or beans.

**Fajitas** are not typical Mexican food, as I was told repeatedly by participants. This food is “Tex-Mex,” a blend of American and Mexican food. Fajitas are meat and/or vegetables cooked and presented on an iron hot plate to be made into tacos with a variety of different condiments such as pico de gallo, sour cream, and guacamole.

Regarding fruits and vegetables, Mexicans listed the least number when compared to Blacks and Whites, and the one vegetable listed (chiles) functions more as a flavoring agent than as a side dish that provides fiber, although large chiles can be stuffed with meat or cheese and are eaten regularly in Mexican homes. Despite the lack of fruits and vegetables mentioned outright in the freellists, there are many composite dishes that are meaningful and salient to Mexican participants that often include vegetables. Sopas and caldos often contain large pieces of carrots, squash, and onions, and these dishes may be topped with shredded cabbage, radishes, and raw onions and chiles (with fresh lime squeezed on top). The stewed meat, or *guisado*, that acts as a filling for some tacos and burritos also often contains cooked onions and carrots. With this information, it is possible to hypothesize that vegetables are more a part of the Mexican cultural model than are indicated by the list above. However, the majority of Mexicans who freellisted did not talk about fruit; papayas, peaches, and pears were only discussed by two people.

Overall, when considering all of the foods discussed according to ethnicity, it is clear that there is some overlap in some of the most salient foods, but also that variation is present with
regards to what fruits and vegetables are considered important by the participants. There is some overlap especially with the Blacks and the Whites, and these similarities as well as general similarities needed to be taken into account when choosing what terms to include for the pile sorting and ranking tasks undertaken by the next sample group. In addition, there are a number of food items that seem to characterize each ethnic group, and these important terms that define an ethnicity’s cuisine should be considered as well. The next section discusses how the food items were chosen for the next phase of the research project.

Choosing the Terms for Phase 2b

The freelisted terms from each group were evaluated to select the most comprehensive list of foods so that each individual ethnic group could analyze their own group’s food terms in the next phase of the project. I focused on the most salient terms of each ethnic group, but also analyzed the entire freelist output, including some of the more interesting idiosyncratic terms. It was decided that 36 foods from each group were to be chosen for further analysis with the pile sort and ranking activities in the next phase of research. Of these 36 terms, 22 were meaningful to all three ethnic groups and were therefore designated as foods that were the central core of each ethnic group’s culinary repertoire. That is, certain core foods were salient enough to each of the three groups that they were chosen to be included for all pile sort and ranking activities in Phase II. This list included fruits and vegetables. Fourteen foods that characterized each ethnic group (with minimal overlap) were combined with the 22 core foods. These core and unique foods are identified below in Table 10.6.

Twelve of the 22 core foods are foods that are the cornerstones of meals in the United States, Mexico, and around the world: chicken, beef, pork, eggs, and beans which provide protein, cereal, pasta, bread, rice, and potatoes which provide energy in the form of
carbohydrates, and milk and cheese which are common dairy products. The other 10 of the 22 core foods are composite and/or convenience foods, as well as snacks and beverages: pizza, sandwiches, Chinese food, fast food, prepared/frozen meals, dessert, candy, chips, alcohol, and soda. Since fruits and vegetables varied by ethnic group, these were not included in the core list.

Some of the 22 core food items were added by me. I chose to include six foods that were discussed as being eaten on a regular basis during the open-ended questions, which took place after the freelist task. If these foods were not already in the freelist output from Anthropac, or if they were listed but were not one of the most salient items, they were then added to the pool by me to be pile sorted and ranked in Phase II. These added food items, highlighted in grey in Table X were candy, chips, dessert, fast food, Chinese food, and prepared or frozen meals. Prepared or frozen meals were defined by the participants as those meals to which you only add one or two ingredients in order to get a “complete meal.” These foods were often able to be heated in the microwave, and were considered to be a type of fast food, but a fast food that was prepared in the home. Examples would be frozen dinners, macaroni and cheese, ramen noodles, as well as dinners that necessitated cooking meat, such as is found in the Hamburger Helper brand of products. These added terms are decidedly less healthy than other foods talked about during the freelist task, mainly due to their high fat and sugar content. It became clear throughout the rest of the interviews that these foods were in fact being eaten with some regularity.
Table 10.6: The core foods and unique foods chosen for Phase 2.2.

<table>
<thead>
<tr>
<th>Core Foods</th>
<th>Black</th>
<th>White</th>
<th>Mexican</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chicken</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beef</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eggs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pork</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cereal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pasta</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bread</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rice</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potatoes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beans</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chips</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Candy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dessert</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soda</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cheese</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pizza</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sandwiches</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepared/frozen meals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soul food meat</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td></td>
<td>-fish</td>
<td>shrimp</td>
</tr>
<tr>
<td>Apples</td>
<td></td>
<td></td>
<td>menudo</td>
</tr>
<tr>
<td>Blueberries</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Papayas</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bananas</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pears</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biscuits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peaches</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cornbread</td>
<td>-corn</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tortillas</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salad</td>
<td>-salad</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chiles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greens</td>
<td>-greens</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carrots</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peas</td>
<td>-peas</td>
<td></td>
<td>cauliflower</td>
</tr>
<tr>
<td>Corn</td>
<td>-corn</td>
<td></td>
<td>+coffee</td>
</tr>
<tr>
<td>Juice</td>
<td>+coffee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexican food</td>
<td>sweet tea</td>
<td></td>
<td>caldos</td>
</tr>
<tr>
<td>-soup</td>
<td>-soup</td>
<td></td>
<td>tacos/enchiladas</td>
</tr>
</tbody>
</table>
| KEY: Foods that were added to test for certain hypotheses are highlighted in grey. A ‘-’ indicates a food common to Blacks and Whites, a ‘+’ indicates a shared items between Whites and Mexicans.

Combined with the 22 core foods were 14 unique foods chosen for each ethnic group. That is, certain foods, especially fruits and vegetables, stood out as being uniquely important and distinguishing the three ethnic groups. These differences, especially between the American sample and the Mexican sample, can be considered as evidence of separate cultural model elements. These differences were considered to be an important research finding, due to the emphasis of this project on fruit and vegetable consumption. There was some overlap among the salient food terms for the Black and White ethnic groups. Fish, salad, peas, greens, corn, and
soup were common items to the two American groups. Similarly, coffee was salient to both Mexicans and Whites, but not Blacks.

One or two terms of historical and ethnographic significance were added to each of the unique food lists. In the Black group, three people mentioned eating the meats typical of Soul Food that were enumerated in the above section. These foods, considered to be cast-off parts of animals were a necessity to the enslaved Africans before the civil war—and remained and became a necessity for both Blacks and Whites as the region was left to Reconstruct. However, the reason these food items were added to the Black final food list and not to the White final food list was that in recent years—African Americans have reclaimed these cast-off foods and have made eating them a source of ethnic pride. So called “Soul Food” restaurants and cookbooks have become popular and there are numerous establishments (some unmarked and hard to find) where one can purchase Soul Food in a restaurant setting in Tuscaloosa; the ethnographic literature and informal interviews in Tuscaloosa confirm the past and current popularity of Soul Food and the meats which typify it. Historical and ethnographic literature also confirms that Blacks and Whites in the American South, especially poorer households, relied upon pork, cornbread, and home grown greens when cooking a basic meal. Pork, greens, and grits (corn hominy) were salient for the Black participants, but far less so for the White group. I wanted to know how important these foods were to Phase II White participants; therefore greens and cornbread were added to their final list (pork having already been included in the core list). Finally, the term *menudo* (a caldo or broth soup made with beef tripe, pigs feet) was included in the Mexican list. The dish requires extensive preparation and is usually eaten on the weekends when there is more time to make it and enjoy it as a meal with other people. It is also known as a good hangover remedy, another reason why it is popular on the weekends. This
food was not mentioned by the Mexican group, but informal interviews with restaurant owners and females in charge of household cooking suggest that Mexicans in Tuscaloosa eat it occasionally. Menudo is a food characteristic of lower class origins, as it contains not meat but rather the cast-off parts of herd animals; as such it is similar to the meats that characterize Soul Food. While the Black participants expressed eating these animal products, the Mexican participants did not. Menudo was added to the final Mexican list in order to test for its relevance to other Mexican foods, as well as its relevance to possibly more desired American foods like pizza and fast food which might be replacing menudo as weekend fare. Tacos, enchiladas, and burritos—also sopa and caldo were chosen. Guisado was not chosen because it is often the filling for the tacos so I thought it might be redundant.

This section concludes the explanation of the foods most salient to each of the three ethnic groups. While there was some overlap in the common or core food terms, unique food items emerged. There are a distinct set of carbohydrate and fruit and vegetables that mark each group’s cultural model of food; these results are considered to be significant given the hypotheses of this project. In the next section, the results from the pile sort are discussed, and the models explained above will be discussed further.

**Phase II Step Two: Pile Sort Data Analysis Results**

Each ethnic groups’ 36 freelisted terms outlined in the previous section were used for the next step of the project: unconstrained pile sorting and ranking, which are methods to determine the structure of some elements within the cultural model and the relationships among those elements along a certain cultural domain, respectively. A separate sample group was interviewed using these methods. The demographic variables for each of the three ethnic groups
will be discussed first, and then the results of the unconstrained pile sorts and the ranking tasks will be presented.

**Demographic Characteristics**

Forty five people were interviewed for this part of the project \( n=15 \) from each of the three ethnic groups. I encountered the participants in a variety of different venues around Tuscaloosa. Thirteen people were found in businesses, either as owners/workers, or as patrons. Seven people signed up for the interview at one of the *Brazos Abiertos* (Open Arms) festivals; another two interviews came about indirectly from these festival sign-ups when male spouses were asked to participate instead of their wives to ensure that equal numbers of both genders participated. Eight people contacted me because they had seen a flyer advertising my project at businesses, churches, and/or other public location around town. Seven people were interviewed as the result of snowball sampling, and four were patrons of the largest public library. Two people were Latino Community Group members. The final two people came from a GED class and a Latino social event that I attended.

Eight women and seven men were interviewed from each ethnic group (see Table 10.7 for all demographics discussed below). The mean number of years that the 45 participants had lived in Tuscaloosa was 18.6 (SD=19.1). There are significant differences in the medians of how many years Blacks, Whites, and Mexicans have lived in Tuscaloosa according to a Kruskal-Wallis test that was performed \( H(2)=14.3, p=.001 \). As with the freelisting group, Mexicans had lived in Tuscaloosa for the least amount of time. Respondents' average age was 37.2 (SD=14.7) and varied by ethnic group \( F=5.4, p=.008 \), with Whites being older than Blacks \( t_{LSD} p=.06 \) and Mexicans \( t_{LSD} p=.002 \). Respondents' average household income was $30,000 (SD=$28,000) and did not vary according to ethnicity. Only 64% of the people in this phase
were employed, compared to 94% in the previous phase. Education levels varied for the 45 respondents, with almost half of them having 12 years of school or less. Forty percent had attended some years of college, and 11 percent of the sample had attended graduate school. These differences were not found to vary by ethnic group. Individuals in this sample had different marital statuses; about 38% were married, 36% were single, and 27% were previously married (either divorced or widowed). There was a significantly different distribution ($X^2(4)=10.9, p=.027$) when these categories were examined by ethnic group. While most Mexicans (67%) reported being married, only 26.7% of Blacks and 20% of Whites were married. About half of all Blacks (53.3%) were single, with 20% having been divorced or widowed. Almost half of all Whites (46.7%) were divorced or widowed, and about one-third were single. Twenty percent of Mexicans were single, and only 13.3% reported being divorced or widowed. As with the freelisting sample, Mexicans were mostly (60%) Catholic, while over 85% of both Blacks and Whites practiced Protestant Christianity. The religious backgrounds of the three ethnic groups were found to be independent of one another ($X^2(4)=22.5, p<.001$).
<table>
<thead>
<tr>
<th>Variable</th>
<th>African American</th>
<th>Euro American</th>
<th>Mexican</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=15</td>
<td>n=15</td>
<td>n=15</td>
<td>n=45</td>
</tr>
<tr>
<td>Sex (% female)</td>
<td>53.3</td>
<td>53.3</td>
<td>53.3</td>
<td>53.3</td>
</tr>
<tr>
<td>Education (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 years or less</td>
<td>60.0</td>
<td>33.3</td>
<td>53.3</td>
<td>48.9</td>
</tr>
<tr>
<td>any college</td>
<td>40.0</td>
<td>40.0</td>
<td>40.0</td>
<td>40.0</td>
</tr>
<tr>
<td>any graduate school</td>
<td>0</td>
<td>26.7</td>
<td>6.7</td>
<td>11.1</td>
</tr>
<tr>
<td>Employed (%)</td>
<td>66.7</td>
<td>60.0</td>
<td>66.7</td>
<td>64.4</td>
</tr>
<tr>
<td>Marital Status (%)*</td>
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<td></td>
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</tr>
<tr>
<td>Married/Domestic Partnership</td>
<td>26.7</td>
<td>20.0</td>
<td>66.7</td>
<td>37.7</td>
</tr>
<tr>
<td>Single</td>
<td>53.3</td>
<td>33.3</td>
<td>20.0</td>
<td>35.6</td>
</tr>
<tr>
<td>Divorced/Widowed</td>
<td>20.0</td>
<td>46.7</td>
<td>13.3</td>
<td>26.7</td>
</tr>
<tr>
<td>Religion (%)**</td>
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<td></td>
</tr>
<tr>
<td>Catholic</td>
<td>0</td>
<td>6.7</td>
<td>60.0</td>
<td>22.2</td>
</tr>
<tr>
<td>Christian</td>
<td>86.7</td>
<td>93.3</td>
<td>20.0</td>
<td>66.7</td>
</tr>
<tr>
<td>Non-practicing/Other</td>
<td>13.4</td>
<td>0</td>
<td>20.0</td>
<td>11.1</td>
</tr>
<tr>
<td>Years lived in Tuscaloosa ***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mean (SD)</td>
<td>15.7 (10.4)</td>
<td>33.7 (24.7)</td>
<td>6.4 (4.6)</td>
<td>8.6 (19.1)</td>
</tr>
<tr>
<td>Range</td>
<td>0.4-33</td>
<td>0.2-73</td>
<td>0.3-15</td>
<td>0.2-73</td>
</tr>
<tr>
<td>Age **</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mean (SD)</td>
<td>29.7a (8.5)</td>
<td>45.7b (19.7)</td>
<td>36.3c (8.9)</td>
<td>37.2 (14.7)</td>
</tr>
<tr>
<td>Range</td>
<td>18-46</td>
<td>18-74</td>
<td>24-59</td>
<td>18-74</td>
</tr>
<tr>
<td>Household Income (in tens of thousands)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mean (SD)</td>
<td>3.3 (2.7)</td>
<td>3.3 (3.2)</td>
<td>2.4 (2.5)</td>
<td>3.0 (2.8)</td>
</tr>
<tr>
<td>Range</td>
<td>0.5-8</td>
<td>0.5-10</td>
<td>0.5-10</td>
<td>0.5-10</td>
</tr>
</tbody>
</table>

Notes: Means with different superscript letters are significantly different at p ≤ .06. *p ≤ .027, **p = .008, ***p ≤ .001, based on Kruskal Wallis analysis of ranks on years lived in Tuscaloosa and Number of piles created, ANOVA on Age, and Chi-squares on Marital status and Religion.

African American Unconstrained Pile Sort Results

All three groups were asked to take the set of 36 cards with food names and photos on them, and sort them into piles in whatever manner seemed right to them. The 36 food terms consisted of the 22 core foods common to each group, and the 14 foods specific to only their own ethnic group. That is, those 14 unique cards that the people sorted were determined to be salient based on the analysis conducted from the freelisting activity; Blacks were only presented with Black foods and core food, for example. Later, each participant was given the same set of
cards and asked to rank them along four different dimensions: health, cost, convenience, and
desire. That is, everyone rank ordered all their cards from most to least healthy, most to least
costly, etc. The remainder of this chapter is concerned only with the unconstrained pile sort.
These pile sort data were entered into Anthropac, and analyzed using non-metric
multidimensional scaling (MDS) and cluster analysis.

The African American foods have been plotted on the MDS graph such that the most
similar items, according to the participants, are closer together. Stress for this graph was 0.12, at
an acceptable level below the cut point of 0.34 for a two-dimensional scaling with 36 items in the
matrix (Sturrock and Rocha 2000). The MDS graph portrays eight clusters (see Figure 10.1),
which are representative of how the participants in this group discussed food. The categories
chosen to label these groups are: 1) meats (Soul Food meats, pork, chicken, beef, and fish, 2)
vegetables (corn, peas, beans, salad, cabbage, and greens), 3) fruits (grapes and cherries), 4)
carbohydrates usually consumed during lunches or dinners (pasta, rice, and potatoes), 5)
carbohydrates usually consumed during breakfasts (bread, grits, cereal, and pancakes—although
flatbread is consumed at lunch or dinner), 6) other breakfast and dairy foods (eggs, cheese, milk,
juice), 7) composite foods (foods with more than one type of ingredient—sandwiches, Mexican
food, fast food, pizza, and Chinese food), and 8) snack foods (desserts, chips, and candy).

Some foods were not included in the clusters; prepared/frozen meals hovered
appropriately between the dinner carbohydrates and the composite foods. Similarly, soup was
not included in any of the vegetable, dinner carbohydrates, nor composite foods, but was
understood and talked about as being composed or like all of these categories. Soda was near the
categories talked about as being “unhealthy”—the composite foods and the snack foods—but
was drawn back towards the beverages in the breakfast food cluster (milk and juice). The same
can be said for the alcohol term, but this beverage was placed by the MDS analysis as being the farthest away from any other food item. The placement of this term (and all others) is representative of how the participants discussed both their piles and food in general.

![Multidimensional scaling and clusters representing food terms from the African American cultural model of food.](image)

**Figure 10.1:** Multidimensional scaling and clusters representing food terms from the African American cultural model of food.

**White Unconstrained Pile Sort Results**

The White MDS graph portrays nine clusters in Figure 10.2, which are representative of how the participants in this group discussed food. These categories are: 1) beverages (coffee, soda, alcohol, and sweet tea), 2) breads (biscuits, cornbread, and bread), 3) carbohydrates (pasta,
potatoes, and rice), 4) dairy (milk, cheese, and eggs), 5) vegetables (salad, greens, green beans, peas, beans, and corn), 6) fruits (bananas, apples, and blueberries), 7) meat (beef, pork, fish, and chicken), 8) snacks (candy and desserts), and 9) unhealthy foods (fast food, and pizza).

As with the African American MDS graph, some foods were not included in the clusters. Chips, Chinese food, prepared/frozen meals, and sandwiches were all placed around the snack, carbohydrate, and meat clusters. Soup appears around these previously mentioned foods but closer to and between the meat and the vegetable groups. Cereal appears near the bread category, as well as very close to the milk food term. Again, the distances and the clusters drawn are representative of how the White American ethnic group understood and spoke about food and eating. Stress was 0.17 for this graph.
Figure 10.2: Multidimensional scaling and clusters representing food terms from the White cultural model of food.

Mexican Unconstrained Pile Sort Results

The Mexican MDS graph shows that there are 6 clusters total (see Figure 10.3). Stress for this MDS graph was 0.16. All of the food terms were included in a group. These groups were somewhat different from those of the Americans, who for the most part grouped foods according to their USDA food pyramid category. There were some exceptions, most notably the relevance of breakfast foods to the African American group. Some of the Mexican participants used the 36 cards during the pile sort activity to make “menus.” That is, to the best of their
ability given what food items were available to them, they created meals or grouped foods according to which foods would be served or cooked together.

Figure 10.3: Multidimensional scaling and clusters representing food terms from the Mexican cultural model of food.

Some people did sort the cards according to food groups, but the percentage of those who did not undoubtedly affected the MDS and cluster analysis. To be clear, participants from all three groups sorted the cards differently at times, but the Mexican sample was the most varied in how they sorted their note cards. Personal preference and the perceived healthfulness of foods, in addition to creating meals or menus, were criteria used by all participants, but most often by Mexicans.
The groups, as they are conceived of by the Mexican participants, are: 1) vegetables and fruits (peaches, pears, cauliflower, papayas, and carrots), 2) foods that go together to make typical Mexican meals (potatoes, onions, eggs, shrimp, sopa—soup dishes, beef, chicken, rice, beans, chiles, menudo—tripe stew, tortillas, caldo—broth dishes, cheese, tacos/enchiladas, and pork), 3) cereal and milk (breakfast foods for Americans, but consumed by Mexicans for the light evening meal at times), 4) carbohydrates (bread and pasta), 5) unhealthy foods (chips, desserts, Chinese food, prepared/frozen meals, sandwiches, pizza, candy, and fast food), and 6) beverages (alcohol, soda, and coffee).

Conclusion

The elaboration of the elements of the cultural models of each of the ethnic groups is an important step in cultural domain analysis. The variation in the foods that were most salient to the three groups is significant, although the substantial overlap of the 22 core foods cannot be ignored. These 22 foods, while common to all in the sample, may be prepared differently, using unique ingredients as flavor principles that serve to mark certain foods as being historically meaningful to one ethnic group over another.

Participants’ understandings of these foods are reflected in the visual depictions of the MDS graph, and the similarities of certain foods are underscored even more with the addition of cluster analysis. These understandings may be based on common knowledge of food groups, as was found with the American group. However, variation in the sorting of the Mexican participants led to a definition of similarity meaning “consumed or prepared together” and not necessarily “of the same substance or type” as with the Americans.

In the next chapter, variation within each ethnic group is explored. Each person rank ordered the foods they were presented with using four salient dimensions: health, cost,
convenience, and the desirability of foods. Analysis of the distinctions made by the respondents will indicate if a cultural model exists, how strongly shared these models are, and what influences this variation. Additionally, in the case where knowledge is shared to the point of there being a cultural model, these dimensions of meaning can by plotted onto the MDS graph, providing another layer of meaning with which to interpret the participants’ knowledge about food.
CHAPTER 11

VARIATION WITHIN THE CULTURAL MODELS OF BLACKS, WHITES, AND MEXICANS

Introduction

In the previous chapter, the elements and structure of the participants’ proposed cultural models of food have been elaborated. The next step is to determine if and how knowledge is shared for the members of each ethnic group. The method to accomplish this was having each person rank order their set of 36 foods along four dimensions: health, cost, convenience, and the desirability of foods. Consensus analysis was then performed in Anthropac on these ranked data, indicating what the eigenvalues for every factor were, and what the eigenvalue ratio was—a ratio of 3:1 of the first to the second factor is necessary to conclude that there is one cultural model. A competence score was calculated for every person; this score marks one’s level of cultural expertise relative to the other respondents. Finally, a weighted answer key provides the information about how each food was ranked, given what the respondents decided during the ranking task. If consensus can be determined, then Property Fitting (PROFIT) analysis may be conducted and, if significant, will result in a regression line being drawn onto the MDS graphs presented in the previous chapter.

For the dimension of the healthfulness of foods, participants were asked to rank all of the 36 foods from most healthy to least healthy. Consensus analysis, performed in Anthropac, indicated that a strong cultural model was present for all three ethnic groups. Each group will be discussed in turn.
African Americans’ Healthy Food Knowledge

The fifteen African Americans who ranked the 36 foods (22 core foods and 14 unique foods) produced a respondent reliability of 0.97. The eigenvalue of factor 1 is 10.8, which accounts for 90.3% of the variability. The eigenvalue of factor two is 0.68 and explains another 5.7% of the variability. A third factor of 0.47 explains the last 4%. The ratio of factor one to factor two was 15.9, much higher than the accepted level of 3.0 needed to determine the presence of a cultural model (Table 11.1). Therefore, it can be stated that there is shared knowledge among the participants in this sample regarding which foods are healthy and which are unhealthy.

Competence levels were calculated for each individual, and these scores reflect each person’s level of expertise within this particular model relative to others in the group. Mean competence was high—0.85 (standard deviation= 0.07). This high average competence indicates a close correspondence between individual rankings of the 36 foods and the consensus rankings of the foods by the group as a whole. Individual competence scores ranged from 0.70 to 0.96.
Table 11.1: Summary of consensus analysis statistics and PROFIT analysis results.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Ethnic Group</th>
<th>Eigenvalue</th>
<th>Mean Compt</th>
<th>Range</th>
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**KEY:** Items shaded grey either cannot be considered as shared cultural models for which PROFIT analysis cannot be calculated, or were not statistically significant (PROFIT analysis column only).

Figure 11.1 shows factor 1 (one’s competence score) and factor 2 as x,y coordinates for each individual. It is clear that most individuals are grouped together, with only a few individuals who answered differently when ranking the foods from most healthy to least healthy. Generally, knowledge of the healthfulness of foods is widespread among this sample.
Figure 11.1: Scatterplot depicting African American participants in the dimension of health.

White Americans’ Healthy Food Knowledge

The White participants in this phase of the research project also ranked 36 foods using the healthfulness of the foods as the criteria. The data on the healthfulness of the foods show that there was strong agreement. The first factor had an eigenvalue of 9.9, explaining 87.7% of the variability in the participants’ responses. The second and third factors of 0.8 and 0.6, respectively, explained the remaining 12.3% of variability. The eigenvalue ratio of factor one to factor two was 12.4, again indicating that participants were using a shared cultural model when ranking the foods.
Figure 11.2: Scatterplot depicting White participants in the dimension of health.

Mean competence was 0.81 (SD=0.12). The competence of individuals ranged from 0.48 to 0.93, but the individual with a competence score of 0.48 seemed to be removed from the group somewhat, as shown in Figure 11.2. Overall, these data show that these participants were using a single, shared cultural model of the healthfulness of foods when they were asked to rank order the 36 food from most to least healthy.

Mexicans’ Healthy Food Knowledge

The Mexican sample in this phase of the research ranked their set of 36 foods. In the dimension of health, the participants shared knowledge of which foods were healthy and which
foods were unhealthy. The first factor had an eigenvalue of 11.1, explaining 91.3% of the variability in the participants’ responses. The second and third factors of 0.6 and 0.5, respectively, explained the remaining 8.7% of variability. The eigenvalue ratio of the first factor to the second factor was 18.4, indicating that there is a strong cultural model present. Average competence was .86 (SD=.05), with a high of 0.93 and a low of 0.73. It is clear that the Mexican participants used a single cultural model of health when ranking the 36 foods, as is seen in the clustering of the participants as plotted in Figure 11.3.

Figure 11.3: Scatterplot depicting Mexican participants in the dimension of health.
Cultural Answer Keys for the Dimension of Health

Each of the three ethnic groups had strong shared models for health when they ranked the cards. The weighted answer keys for all three groups are presented in Table 11.2, and while the keys cannot be directly compared due to the inclusion of the 14 unique foods for each group, some general comparisons can be made. It is clear that fruits and vegetables rank among the foods that are known to be the healthiest. Eight of the top ten healthy foods in the White group were fruits or vegetables—the most number in any of the answer keys. The answer key from the Black group listed six fruits and vegetables, while the Mexican group key listed only four. It seems that Black and White Americans consistently ranked fruits and vegetables as being healthier than other types of food when compared to the Mexicans, who ranked more non-vegetarian food as being most healthy. However, two foods ranked in the ten most healthy foods for Mexicans—sopas (soup dishes) and caldos (broth dishes)—do often contain a substantial amount of fresh vegetables such as onions, carrots, and squash. Specifically looking at the 22 core foods and how they were ranked by the participants in the three ethnic groups, many similarities can be seen. Beans, milk, eggs, chicken, rice, and cereal were all the healthiest of the core foods regardless of one’s ethnic group. More animal proteins and carbohydrates appear in the middle of each of the three keys, and composite, prepared, and snack foods rank among the least healthy. The three groups designate almost all of the same foods as among the least healthy: Chinese food, pork, prepared/frozen foods, pizza, desserts, chips, fast food, soda, alcohol, and candy. Chiles were ranked as being one of the unhealthiest foods by Mexicans; many participants cited spicy food as being something that all people could not tolerate. It was discussed by a few people that digestive problems resulting from eating chiles could affect one’s overall health negatively.
For Americans, the healthiest foods consist of green vegetables, fruits, milk, and fish. Fish, a common item between Blacks and Whites, was the most highly ranked animal protein. Eggs and juice were also considered to be very healthy for African Americans. Milk appears on all of the lists, and at the number one spot for Mexicans. Chicken was the highest rated animal protein for Mexicans in this sample, ranked slightly lower for the two American groups. The Mexican key differs from the Americans’ in the inclusion of two composite foods (sopa and caldo) as being some of the healthiest. Mexicans often make these dishes in the home, whereas the correlate of soup in American culinary culture is found in many varieties in canned form,
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Table 11.2: Cultural keys in the dimension of health, by ethnic group.
containing less fresh ingredients and up to 40% of one’s Recommended Daily Allowance (RDA) of sodium in one half cup serving of condensed soup. As soup is understood by Americans, it is understandable that it appears lower down (ranked 15 and 14 by Whites and Blacks, respectively) on the list of foods.

Health, healthy foods, and unhealthy foods were important discussion topics during these interviews. For some African-American participants, the healthfulness of the foods was in part determined by the preparation method of the food in question. Specifically, frying foods was discussed as a way to make healthy food, like fish, unhealthy. Baking foods was seen as a healthy alternative to frying. Some participants discussed the fat, sugar, and calorie content of foods as things they often think about. Six people talked about “junk food” as a category that they knew was unhealthy, but ate anyway. As one participant stated, (BP5) “health is the number one concern. But it’s not always the case.” Two (BP13, BP15) of the fifteen people in this sample stated that they ate more fast food now than when they were younger, and one person (BP11) stated that they ate these junk foods growing up (pizza, chips, and candy) and that aside from Sunday meals at his mom’s house where he might consume legumes like black-eyed peas, pinto beans, or baked beans, he did not ever eat any vegetables or fruits.

Preparation methods (baking vs. frying) and junk food were also important topics to White participants during these interviews. However, Whites talked more about nutritional balance, specific nutrients, and nutrition knowledge than did Blacks or Mexicans during these interviews. One person (WP2) said that she tried to balance fruits, vegetables, and meat every day, this concept of balance was very important to another participant (WP9) who said she was lactose intolerant and “toxin intolerant” (referring to allergies from mold and preservatives) and attempted to balance fats, carbohydrates, and protein while also paying attention to vitamins and
the pH balance of the foods she was eating. These participants discussed nutrition knowledge and public health advice about food, eating, and grocery shopping. This advice that participants thought about included shopping the perimeter of the grocery store (where less processed foods tend to be shelved), reading nutrition labels, not buying anything with ingredients that one cannot easily pronounce, eating organic and local food when possible, and paying attention to the food pyramid. High-fat and high-cholesterol foods were recognized as something to be avoided, while low-fat, high fiber, low sugar foods and foods with antioxidants were known to be healthier. Low-fat milk and olive oil were two foods that were mentioned by participants when discussing the relationship between food choices and health.

Mexican participants often talked about health, especially in reference to junk food (comida chatarra) which they also discussed as a category of foods one should try to avoid. One Mexican male talked about how he thinks about food, saying, (MP1) “Well, for me it’s what’s going to be more nutritious for my body. I avoid fast foods. I try to have some sort of control.” Five people specifically talked about this class of junk foods, which include most of those ten least healthy foods from the Mexican cultural key.

The nutritional properties of foods are recognized by some participants, specifically, protein, iron, calcium, and vitamin C. Knowledge of the food pyramid is important to this female participant, who says (MP5) what is important to her is “What I’m going to get from [the foods], like the proteins. What it says on the pyramid. How much I get from each serving. That’s what I use most [when thinking about food].” She also recognized that there are differences in her diet in Mexico and here in the United States, saying (MP5) “I think I ate more healthy foods in Mexico than here. I eat less in Mexico than here.” I asked her to explain and she talked about her mothers’ influence: “I ate healthier foods because of my mother. She would never allow us to
have any chips, sodas, I didn’t get to eat sodas until I make my own decisions. But it was when I was 23. But that’s why it was healthy. And NO candies! NO candies at all. So that was very healthy food. We never ate outside the house. Always inside. Until 23 [years of age]. So we always were inside the house eating. It was very healthy.”

Food and mealtimes were discussed as being social events, especially for families. Other participants talked about how family members and children in the household were influencing what one should eat. When asked about what was most important when thinking about food and eating, a mother stated (MP6) that she tries to make food “the healthiest that I can... What is rico (good/delicious). Especially because of the child.” She is concerned with the fat content of her food, especially since she has been gaining weight even though feeling like she has been eating less.

Food in the United States was considered to be less healthy than food in Mexico, mainly due to the freshness of the food in Mexico. Other participants have expressed fears of food producers in the United States injecting the cuts of meat, fruits, and vegetables with syringes, in order to make them appealing or to make them grow larger (in the case of produce items). One Mexican woman perceived these actions as a direct threat to her health, and she said that she didn’t trust food bought in American grocery stores. A Mexican man said something similar, (MP11) “the problem is the meat here is frozen. In Mexico, it’s fresh meat. That’s how you notice the difference in food. The tortillas here are not the same as the ones in Mexico. The ones in Mexico are the kind that you eat one day. You can’t keep them leftover for very long because they go bad. Here they’ll keep for a month. They have chemicals and I don’t know what they put in them to preserve them.”
In conclusion, health was a very salient topic to the participants in all three ethnic groups during these interviews. All three groups demonstrated knowledge about the healthfulness of foods and about what foods were considered to be bad for one’s health. The next sections of this chapter will present data on the dimensions of cost, convenience, and the desirability of foods, but none of these dimensions were as salient to the participants as health.

African Americans’ Food Knowledge: Cost

For the dimension of the cost of foods, the same set of African-American participants were asked to rank the foods from most expensive to least expensive. Consensus analysis indicated that agreement was high enough to consider the participants to have one shared cultural model of the cost of foods. Respondent reliability was high, at 0.93. Factor one had an eigenvalue of 7.5, and explained 81.1% of the variability in the participants’ responses. Factor two (with an eigenvalue of 1.2) and factor three (with an eigenvalue of 0.6) explained the remainder of the variation. The eigenvalue ratio of the first to the second factor was 6.3—greater than the 3.0 threshold necessary to consider the participants as having one shared model in this dimension of meaning. Competence levels in this model were lower than the health model; the mean competence was 0.69 (standard deviation 0.16), with a range from 0.37 to 0.91. Overall, there is agreement on which foods are considered to be expensive, and which foods are less expensive. Figure 11.4 shows a main cluster of participants, with some variation evident.
Figure 11.4: Scatterplot depicting African American participants in the dimension of cost.

White Americans’ Food Knowledge: Cost

White participants were also in agreement about the cost of foods. Respondent reliability was 0.93. The first, second, and third eigenvalues were 7.6, 1.1, and 0.7, respectively. These three eigenvalues explained different amounts of variability: 80.7%, 11.6%, and 7.7%, respectively. The eigenvalue ratio of factor one to factor two was 6.9 is evidence that these participants were drawing upon a similar cultural model of cost when completing the ranking task. Competence ranged from a low of 0.29 to 0.89, but despite this spread, the mean competence was relatively high, at 0.70 (SD=0.16). As with the results on health, there were
some individuals who did not cluster with the main group of participants, as seen in Figure 11.5. Despite this variation, the participants agreed about which foods were expensive and which were less expensive.

Figure 11.5: Scatterplot depicting White participants in the dimension of cost.

**Mexicans’ Food Knowledge: Cost**

When the dimension of cost was analyzed using consensus analysis, it became clear that Mexican participants also agreed upon which foods were expensive and which were cheap. Respondent reliability was calculated at 0.92. The first, second, and third eigenvalues were 6.7, 1.3, and 1.1, which explained 73.6%, 13.9%, and 12.4% of the variation, respectively. The ratio
of factor one to factor two was above the 3.0 threshold at 5.3 to 1. Mean competence of these 15 individuals was 0.66 (SD=0.11), with competence ranging from .38 to .89 (see Figure 11.6).

![Figure 11.6: Scatterplot depicting Mexican participants in the dimension of cost.](image)

**Cultural Answer Keys for the Dimension of Cost**

Because it was determined that the participants in each of the three groups are likely to be using a cultural model of cost, the cultural answer keys can be analyzed as a rank-ordered, weighted list of the 36 foods from most expensive to least expensive. These lists for all three groups are presented in Table 11.3, and some general trends can be seen. Meats, especially beef, pork, and seafood (fish for the Blacks and Whites and shrimp for the Mexicans) are the foods...
that are considered to be the most expensive. Chicken and the meat of Soul Food (for Blacks) are also understood to be costly. Chicken is ranked as less expensive for Mexicans. Other expensive foods common among the three ethnic groups are alcohol and composite foods like pizza, fast food, and Chinese food. Mexicans ranked the composite dishes of caldo, tacos/enchiladas, and menudo as being expensive. Papayas is the 7th most expensive food for the Mexican group; no other ethnic group rated a fruit as high as Mexicans did. Cherries was ranked 16th for the Black cost key, and blueberries as 17th for the White cost key. The fruits and vegetables chosen for this part of the project generally appear in the middle to bottom of the cost rankings. Grains and carbohydrate foods appear in the middle of the cultural answer keys. The snack foods of desserts, candy, and chips provide some notable differences when comparing Whites to Blacks and Mexicans. For the White rankings, desserts, candy, and chips are ranked as being much more expensive than they are to Blacks and Mexicans. When considering the generally agreed-upon unhealthy foods of alcohol, pizza, fast food, prepared/frozen meals, desserts, coffee, soda, candy, and chips it is clear that Whites ranked them as being more costly when compared to the Black cost key and the Mexican cost key. In short, Whites in this sample considered the least healthy foods—agreed upon by all three groups for the most part—to be the most costly.
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Table 11.3: Cultural keys in the dimension of cost, by ethnic group.
The cost of foods was discussed more during these interviews with Blacks and Mexicans than with Whites. Women were generally the only participants to speak on the importance of cost during the interviews as well. One White woman (WP3) stated simply, “Fast food is cheaper,” and another White participant (WP11), also female, when asked about what was most important when thinking about food and eating combined the desirability of foods with cost by saying that “the taste and affordability of the foods” are what matters to her. A Black participant (BP10) used the same two dimensions to speak of foods, saying that junk foods are the foods that she loves, but that these are the foods she cannot afford. Similarly, another woman (BP2) said that the cost of fruit prevents it from being in her regular diet. The most important thing to think about with regard to food and eating was “the balance between cost and quality” (BP6) for one single mother, and for another (BP4), “cost is paramount.”

A female tienda owner (MP2) discussed the cost of meat and other cheaper ingredients that she ate when she was a child growing up in Mexico. She said that her family ate “beans, chicken – [because] that’s cheaper than regular meat. Rice and potatoes. We ate a lot of potatoes. And [corn] tortillas. Tortillas are all the time.” When asked about how her food habits had changed, she said, “I think it’s the same. Except here you eat more meat than in Mexico but in Mexico it’s too expensive. And here there’s always meat. Everything’s meat. …. And we were a very large and poor family and so it was better to eat rice, beans and potatoes than to eat meat.” Vegetables and fruits especially were understood to be very expensive foods. One participant (MP6), a 30-year old woman who at the time was cleaning houses for money, was asked about what kind of fruits she ate on a regular basis. She was very interested in these foods that she knew to be healthy, but was immediately discussed her concern about the cost of some of her favorites. She chooses to buy “any [fruits] that I can find that are not too expensive. Sometimes I
find pineapples but I don’t buy them because they’re too expensive. Plums, bananas, apples, apricots, cucumber – I don’t know if that’s a fruit, but we eat it a lot. Mangos, [we eat, but] not daily, but every now and then, because it’s a bit expensive. Pineapple, it’s been a while since we have had it, but we try to. Watermelon, papayas. When I find papayas I buy them, whatever the cost! Cherries, they’re a little expensive but we usually get them at least once in season.”

Another Mexican participant (MP10), female, included fast food and meats in addition to fruits and vegetables as foods that were more expensive in the United States when compared to Mexico. She said, “In reality the fruits, the vegetables, the meats, when compared to Mexico, are very expensive here. Fast food is very cheap. That’s why the majority of people eat it. Pizzas and hamburgers, all of that is really cheap.”

Overall, the dimension of what foods cost was an important topic for the participants. Moreover, the ranking tasks indicated that a shared cultural model was present. There are some general trends in the rankings of the foods from most to least expensive that are shared by the 45 participants, but major differences regarding how some of the unhealthy foods are ranked. In the next section, the dimension of meaning of the convenience of foods is explored.

**African Americans’ Food Knowledge: Convenience**

For the dimension of the convenience of foods, participants ranked the 36 foods from most to least convenient. The respondent reliability for the African American sample was 0.91. Consensus analysis again indicated a shared model, with an eigenvalue ratio of the first to the second factor of 3.0, right at the threshold for determining cultural consensus. The eigenvalues themselves were 6.8 for factor 1 (explaining 68% of the variation in responses), 2.3 for factor 2 (explaining 22.7% of the response variability), and 0.9 for factor 3 (which explained the remaining 9.3% of respondent variation). The competence values were varied, ranging from
0.06 to 0.90, resulting in a lower mean competence of 0.63 (standard deviation 0.25) when compared to other dimensions for which consensus was determined. In sum, it can be said that there is more intracultural variability in the model of the convenience of foods for African Americans when compared to the previous two dimensions of meaning, health and cost. The variability in participant responses can be viewed graphically in Figure 11.7.

When examining Figure 11.7, some comments can be made on the three groupings of participants. The smallest group in the top left-hand corner is comprised of three unemployed individuals who did not finish high school and who made less than $10,000 in the past year (one woman was receiving public assistance for herself and her two school-aged daughters). These individuals ranked meats as being more convenient, and it was clear that these foods were being eaten by these participants, but prepared by someone else—either a family member or by the food service industry.

The middle group consisted of four women and one man, with varying levels of education (9th grade to college). They also individually had very low incomes. Three of these five individuals lived in larger, extended family households where the responsibilities of preparing food may have been more shared. One woman in this group got her food mainly from the Angel Program, a low-cost food assistance program run by a local church. The food that she received was mostly canned or packaged food, and easily prepared. The last individual was a divorced mother of two who was in graduate school.

The larger, more clustered group in the bottom right-hand corner is the core group that seems to be driving the consensus and influencing the cultural answer key, as their individual answers most approximate each other and what is found in the key. This group is comprised of
five older family men, all employed, and two women with college educations, also employed. These individuals are more established in their lives and have a higher yearly household income. Despite these differences in rankings on the convenience of foods, these fifteen individuals can be considered to have shared cultural knowledge regarding which foods are easy to prepare and eat and which foods are the least convenient to prepare and eat.

Figure 11.7: Scatterplot depicting African American participants in the dimension of convenience.

White Americans’ Food Knowledge: Convenience

White Americans completed the same ranking tasks on the convenience of their set of 36 foods. Respondent reliability was calculated as 0.87, and consensus was strong when the
rankings on convenience were analyzed in Anthropac, with an eigenvalue ratio of the first to second factor being 9.0. The actual eigenvalues for factor one, two, and three were 7.7, 0.86, and 0.67, respectively. The first factor explained most (83.4%) of the variation in the participants’ responses, with the other two factors explaining the remaining 9.3% and 7.3%, respectively. Competence ranged from -0.58 to 0.93, with three individuals having competence levels at 0.10 and below—clearly represented away from the large group in Figure 11.8.

Figure 11.8: Scatterplot depicting White participants in the dimension of convenience.

Average competence for the group was 0.57 (SD=0.43). Participant 7 and participant 12 both were less educated people in the workforce who relied on prepared foods and restaurant foods.
for the majority of their diet, and participant 14 was an older man who got his daily meals at a nearby soup kitchen. All three were of very low yearly income and quite a bit lower social class when compared to everyone else in this sample. Overall, these participants agree on which foods are convenient, and which foods are considered to be inconvenient, and these participants used this shared knowledge when completing the ranking task.

**Mexicans’ Food Knowledge: Convenience**

Mexicans also ranked the foods from most convenient to prepare and eat to least convenient to prepare and eat. Respondent reliability for this group was 0.88. More intracultural diversity was present when the data on the convenience of foods were analyzed when compared to the dimensions of health and cost. The model, although present, was not as strong as the two above, with a ratio of factor one to factor two being calculated as 3.3. The eigenvalues for factors one, two, and three were 6.6, 2.0, and 0.8, respectively. Factor one explained 70.7% of the participants’ responses, and factor two accounted for 21.1%. The final factor accounted for the final 8.2% of variation in responses. Mean competence was 0.57 (SD=0.33). Competence ranged from -0.35 to 0.88, so it is clear that there exists some disagreement about which foods are convenient to eat and which are inconvenient. Four individuals have been pulled away from the main cluster of participants in Figure 11.9, and these individuals have some commonalities that separate them from the others. Participants 1, 2, and 11 work either as tienda owners or in local Mexican restaurants, so they have access to many kinds of raw and prepared foods throughout their working days. Participant 14 was living in a small apartment with several other working men, and had been working in Tuscaloosa for 8 years. His diet consisted of fast food, other restaurant foods, and small meals made in the efficiency kitchen of his apartment. These situations are different from the rest of the participants who are clustered in the lower right-hand
corner of Figure 11.9. This main cluster consisted mostly of people in established family households with school-aged children, and one recent arrival to the United States. Overall though, this diversity in competence does not preclude the existence of a shared cultural model.

Figure 11.9: Scatterplot depicting Mexican participants in the dimension of convenience.

Cultural Answer Keys in the Dimension of Convenience

As each individual group was determined to have a cultural model of the convenience of foods, the three cultural keys showing the weighted responses of the participants may be analyzed (see Table 11.4). In general, it is easy to see some commonalities among the three
convenience answer keys. Fruits are considered to be very convenient, more so than vegetables which are found in the bottom half of the keys. That is, vegetables are considered to be inconvenient foods to prepare and eat, while fruit is one of the easiest kinds of food to eat. Snack foods like chips and candy as well as beverages are considered to be among the most convenient foods for all three ethnic groups. Cheese, bread, and composite foods like fast food, pizza, and Chinese food also fall in similar places when looking at each groups’ rankings. Foods that are conventionally cooked appear at the end of the list, indicating that they are less convenient due to the preparation that is required before eating them. These foods include pasta, rice, and most vegetables. Among these foods there is one notable difference in the keys of the African American and White participants—the cooked carbohydrates and the cooked vegetables occupy opposite places in the keys of these two groups. Specifically, African Americans consider rice and potatoes to be more convenient than vegetables, while these same vegetables are more convenient to Whites than rice and pasta, according to their cultural key. Meats and meat-based dishes are ranked as the least convenient or easy to prepare and eat. For the Mexican group, the preparation required to make composite dishes such as sopa, caldo, menudo, and tacos/enchiladas is reflected in the rankings as well.

When discussing the convenience of foods, both Black and White participants commented that microwavable foods and other “complete” meals were simpler to consume than food that one prepared from individual, raw ingredients. One White respondent (WP3) simply stated that “fast food is easy!” Other notable comments from Americans include the recognition that convenience foods are eaten at certain points in time in one’s life, such as when one attends college.
Mexican participants’ comments on the convenience of foods referenced time restraints because of long working hours. Speaking of the different herbs used for flavoring traditional foods in Mexico (epazote and hierba buena), one participant said, “And here we have to eat faster.” When I asked why this was, he (a restaurant worker) said, “Me? Because my type of work. And I don’t have an opportunity to eat or make food at home.” He eats the food that is available at the restaurant, since he is there all of the time working. In addition to some of the items found on the menu, he makes other items not available to the mostly American clientele that patronizes the restaurant. These items include huevos (eggs), guisados de res o pollo (beef or chicken stews), caldos de res o camaron (broth dishes made from beef or shrimp,) carnicas de puerco (stewed or roasted pork), and tortas (sandwiches). While some of these foods are more time-intensive to make, the convenience of having the ingredients and kitchen at his disposal means that sometimes he is able to make them before the restaurant opens. So he is both restricted by working long hours at the restaurant, but he is also able to utilize the ingredients and kitchen facilities of the restaurant when making his food. Another notable comment from a Mexican participant (MP5) discussed how the accessibility of packaged and frozen foods in the United States made food preparation easier. When asked what the major differences between food in Mexico and food in the United States, she said that the food in the United States was easier to prepare. I asked her to describe what she meant by that and she stated that having more money meant more possibilities to buy different types of foods, like frozen vegetables, which she identified as being “better” because they were “faster” and one did not have to worry about cleaning them before cooking.
<table>
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<th>MexicanConvenience Rank</th>
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<td>36 pork 33</td>
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Table 11.4: Cultural keys in the dimension of convenience, by ethnic group.
African Americans’ Food Knowledge: Desirability

The final dimension of meaning that was examined using ranking tasks was the desirability of foods. During the ranking task, every participant in each ethnic group was instructed to think about not only their own likes and dislikes, but also about the likes and dislikes of other people in their ethnic group. African American participants were the only ethnic group to have a shared model in the dimension of the desirability of foods for all 15 participants. Respondent reliability was 0.83. The eigenvalue ratio of factor one to factor two was 3.2, above the 3.0 mark for determining the existence of a shared cultural model. The eigenvalues for factors one, two, and three were 5.5, 1.7, and 1.2, respectively. These factors explained different amounts of variation in the sample’s responses; 65.3% was explained by the first factor, 20.5% was explained by the second factor, and the remaining 14.2% was accounted for by the third factor. Mean competence was rather low compared to the other dimensions of meaning, at 0.48 (SD=0.37). Not surprisingly, competence values for individuals ranged widely, from -0.34 to 0.88. Nevertheless, it is possible to conclude that these participants draw upon the same shared knowledge when making decisions about the desirability of certain foods despite the existence of intracultural variability. Figure 11.10 shows how the 15 participants in this phase of the project are graphed using factor one and factor two as the x and y coordinates. Two participants, numbers 2 and 10, both ranked the unhealthy snacks and composite foods as being the least desirable, which is the opposite of what is found on the cultural keys. These two individuals put some meats, grains, and vegetables and fruits towards the top of their rankings, indicating perhaps that their personal preferences took precedence when ranking the 36 foods.
Figure 11.10: Scatterplot depicting African American participants in the dimension of desirability.

White Americans’ Food Knowledge: Desirability

The dimension of desirability was evaluated using the same methods among the White participants. Consensus was not found among these 15 participants—the ratio of the first to the second factor was 1.6—less than the 3.0 necessary to consider the existence of a shared cultural model. Respondent reliability was 0.59, which is very low compared to those from other, more strongly shared dimensions of meaning, well below the 0.90 threshold suggested by Romney et al. (1986). Looking at Figure 11.11, it seems that there is a great deal of variation, based on how spread out the fifteen participants are on the graph. There seem to be at least two groups in
Figure 11.11, and upon examination of the three participants in the bottom left corner, participants 4, 6, and 9, it seems that their personal preferences guided their rankings of the 36 foods, even though all respondents were instructed to think about what foods that individuals in their ethnic group were likely to prefer. Participant 9, for example, had very specific dietary practices that resulted from specific allergies and illnesses, and she believed strongly that foods like alcohol and fast food were toxic to human bodies. Her beliefs seemed to have influenced her rankings, with her ranking all of the fruits and vegetables as the foods that were the most desired.
Figure 11.11: Scatterplot depicting White participants in the dimension of desirability.

The responses of the twelve people plotted across the top of Figure 11.11 were analyzed using consensus analysis in Anthropac, and consensus was also not present for these people. The eigenvalue ratio of the first to the second factor was 1.9 to 1—again, less than the 3.0 to 1 ratio needed to support the One Culture assumption of consensus modeling. However, noticing two apparent clusters separated by a space between participant 15 and participant 1, I decided to examine the six individuals who are clustered together near the right-hand side (participants 1, 3, 5, 10, 11, and 13) as one group and the six people in the top left corner (participants 2, 7, 8, 12, 14, and 15) as a second group. With this separation made, consensus was found for both groups.
The use of a smaller number of respondents for consensus analysis is supported by Romney, Weller, and Batchelder (1986), who state that six informants with a competency level of 0.60 have an 90% probability of answering the ranking questions correctly with a .90 confidence level.

The six individuals in the first group produced a respondent reliability of 0.88. The eigenvalue ratio of factor 1 to factor 2 was 8.5 to 1, indicating that significant agreement was found among the rankings of these individuals. The first, second, and third factors were 3.3, 0.4, and 0.2, respectively. The first factor explained 85.2% of the variation in the participants’ responses. The last two factors explained the remaining 14.8%. The competence scores of each person were very similar, ranging from 0.69 to 0.84. The mean competence of 0.74 had a standard deviation of 0.05.

The second group had a less strong model, but the model was present nonetheless. The respondent reliability for these six individuals was 0.73, and the eigenvalue ratio of factor 1 to factor 2 was 3.9 to 1, surpassing the 3.0 to 1 minimum ratio. There existed only two factors, with values of 2.22 and 0.57. The first factor explained almost 80% of the participants’ varied responses, with the second factor accounting for the remaining 20%. Competence varied in this group, with a low of 0.25 and a high of 0.84. The average competence was 0.56, with a standard deviation of 0.24. Despite this variation, these six people can be said to have been using the same cultural model of the desirability of foods when they ranked the 36 food items.

At the end of this section, I will discuss the cultural keys of each of these two groups, noting relevant differences and similarities in their rankings. Until that discussion, I will conclude by saying that it seems that there are two competing models for the desirability of foods for the White participants. The major difference between White desirability group 1 and White
desirability group 2 was that group 2 had two health care professionals. Other than that, the two sub-samples are indistinguishable.

Mexicans’ Food Knowledge: Desirability

When the data from the desirability rankings from the Mexican participants were analyzed, it was revealed that the level of agreement among them was not enough to conclude that a single model was present. The ratio of factor one to factor two was 2.5 to 1, below the 3 to 1 ratio needed. Even though individuals were instructed to think about people in general, rather than their own likes and dislikes, it is possible that they used information about their own preferences when completing the ranking task. The participants would therefore not be drawing upon cultural knowledge when making distinctions, but rather idiosyncratic knowledge of their own experiences. Figure 11.12 shows three individuals who do not cluster with the rest of the group, and it is believed that these people used their own preferences when ranking the cards. With participants 2, 5, and 9, their distance from the main cluster on the graph indicates they rank meats lower, beverages higher, and unhealthy composite foods and snack foods higher than the other 12 participants in this sample. For participants 2 and 5, these foods mentioned above were favored over more traditional Mexican foods like tortillas, caldo, sopa, and tacos/enchiladas, which were ranked lower on their lists.

When these three people were excluded from the consensus analysis in Anthropac, the One Culture assumption was supported with an eigenvalue ratio of 4.9 to 1. Respondent reliability for these 12 individuals was 0.89, and mean competence was 0.64 (SD = 0.12). The first factor, with a value of 5.1, accounted for 73.1% of the variation in the rankings. The second factor (1.0) explained 14.9%, and the third factor (0.8) explained the final 12%. Overall, while there was some variability in the rankings of these 12 people, their responses were considered to
be coming from significant sharing of cultural knowledge about the desirability of foods, especially when compared to the three individuals away from the main cluster of participants in Figure 11.12. The four cultural keys (one African-American, two White, and one Mexican) will be discussed in the next section, in order to examine how each of these groups think about the foods that people within their own ethnic group like and dislike to eat.

Figure 11.12: Scatterplot depicting Mexican participants in the dimension of desirability.

Cultural Answer Keys for the Dimension of Desirability

The cultural keys are presented in Table 11.5. These keys are from the consensus analysis of four different groups: fifteen African-Americans, two sets of six White Americans, and twelve Mexicans. The most variability in responses was found within this dimension of
meaning, and some participants may have been ranking the cards based on their own preferences, even though they were directed to think about the preferences of people in general. Each key will be discussed briefly in turn, and then the keys will be compared, to the extent that this is possible given that each group’s list of foods were somewhat unique from one another.

When looking at the rank order of the foods in the African-American key, the composite foods that were ranked as being the most unhealthy, somewhat costly, and somewhat convenient were considered to be the most desirable. These foods include fast food, pizza, chips, candy, soda, and desserts. Blacks were also in agreement that meats (except for fish and the meats commonly used in Soul Food) and other composite foods like Mexican food and Chinese food were some of the most desired foods. Except for salad, all green vegetables and beans were the least desired foods, along with corn, soup, and carbohydrate grains like rice and grits.

The first group of White Americans had a cultural key similar to that of the Black Americans. Many of the same composite foods that Whites ranked as being unhealthy, costly, and convenient (pizza, Chinese food, fast food, soda, and desserts) were ranked as being the most desired foods for themselves and other White people in Tuscaloosa. Meats (except for fish) and beverages (soda, sweet tea, coffee, milk, and alcohol) were ranked relatively high on the list. Fruits were ranked relatively low on the list, and the green vegetables (except salad) fell in the final four spots of the list, being the least desired foods. As with the African-American group, soup and rice were among the least desired foods.

The second group of White Americans had a different take on what foods other Whites in Tuscaloosa preferred to eat. Those unhealthy, costly, and convenient foods were ranked as being among the least desired foods—fast food, desserts, candy, Chinese food, prepared/frozen meals, soda, pizza, alcohol and chips. Meats were still ranked as being desired, and took the top spots
on the list—including fish. Vegetables such as salad and potatoes (considered to be a vegetable by many of the American respondents) were ranked in the top ten most desired foods, and green vegetables like green beans, and peas were ranked much higher than with the first group of Whites. Soup was ranked at number eleven on the list, in contrast to the first group. These highly ranked foods are much healthier than those ranked by the first group, but they also echo the structure of a complete Southern evening meal, especially when biscuits and bread (in the top ten) are considered as well. Comparing the cultural keys of the two White groups seems to suggest that there are two competing cultural models of the desirability of foods, and that these models have to do with either desiring tasty but unhealthy foods or desiring foods that make up traditional Southern meals.

The twelve Mexicans who were included in the consensus analysis consider many of the foods that were ranked as being somewhat healthy, somewhat costly, and very inconvenient to make as being the most desired. Recalling the results from the unconstrained pile sort, the large grouping of foods on that graph echoes the list of most desired foods: tortillas, meat (including shrimp), rice, milk, beans, eggs, menudo, onions, chiles, and composite foods like caldo, tacos/ enchiladas, and sopa. These foods that were pile sorted together were often described as “foods that go together to make meals,” and it appears that these are also the most desired foods. Cereal and milk, while not appearing in this unconstrained pile sort group, were also ranked as being highly desired.

The least desired foods were those foods that were known to be very unhealthy, somewhat costly, and somewhat convenient: the composite foods of pizza, Chinese food, fast food, prepared/frozen food, snack foods like desserts, chips, and candy, and the unhealthy beverages alcohol and coffee. Fruits and vegetables were ranked in the middle of the list, with
the less traditional vegetables of carrots and cauliflower ranking below the onions and chiles that are commonly used to flavor many dishes in Mexican cuisine.

Overall, there seems to be two patterns when considering Blacks’, Whites’, and Mexicans’ rankings on the desirability of the 36 foods that each of them were presented with. That is, even though there were unique foods among the foods that were ranked, some similarities can be seen. Participants in the African-American group and in the first White group ranked those unhealthy convenience foods like fast food, pizza, Chinese food, and snack foods like chips, candy, and dessert as being the most desired by members of their own ethnic group. In contrast, Whites from the second group ranked a set of foods as being most desired that, when combined, would comprise a traditional Southern meal of meat, salad, potatoes, and bread or biscuits. This group ranked vegetables that would accompany a Southern meal (green beans, beans, corn, peas, and greens) much higher than the first group of Whites, who ranked these vegetables as being among the least desired foods. Although the components of a traditional meal for Mexicans are different from those of Southern Americans, Mexicans also follow the same pattern as Whites in group two. The ranking of salty and sweet “convenience” foods at the very end of the list and the relatively high ranking of vegetables that would commonly accompany a meat-based dish (meats were generally ranked very high by all four groups) are two markers that signal that traditional meal patterns learned early in life may be influencing the knowledge of what foods are preferred by people similar to oneself.
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Table 11.5: Cultural keys in the dimension of desirability, by ethnic group.
Tastes and personal preferences were important to some participants, based on their comments during these interviews. Many Mexican participants sorted the cards during the unconstrained pile sort based on the foods one likes and dislikes. Foods that were liked were eaten often, and foods that were disliked were eaten with less regularity. One African-American woman, a mother of two, expressed that the foods she chooses to serve are impacted by what her daughters like to eat. Another younger, White man described himself as a picky eater with a gag reflex that was easily triggered by foods that he did not like. He said (WP4) that the most important thing when deciding what to eat was “what tastes good to me, what I like.” His preferences included meat, high-carbohydrate foods like bread, rice, biscuits, and cornbread, fast food, soda, alcohol, and snack foods. He declared that he never ate any vegetables, and ate fruits only once or twice per week.

Some individuals referenced other dimensions of meaning while talking about preferences and the desirability of foods. Three participants in particular discussed balancing desire and health. One woman (BP5) said that “health is number one, but, meal to meal, what I feel like [eating]” is also important to her, and another woman (WP2) referred to an inner dialogue that one often has, saying, “you don’t want [to eat] junk food, but you like sweet foods,[emphasis mine]” making them hard to resist. When asked about what was most important in determining what to eat, a Mexican man (MP11) said what he wanted was “that it is nutritious, and that everybody likes it. That’s it.” Another Mexican man (MP3) said that food needed to satisfy many requirements, namely, “that the food be nutritious, economical, and taste good.”

It is clear that while tastes and preferences might vary among the participants in this sample, the idea of food tasting good and being desirable is a somewhat important factor for people when they decide what kind of food they want to eat. There were many other dimensions
of meaning that participants discussed during these interviews, including one’s everyday diet, control over food, and eating foods that are calorie- and nutrient-dense, that is, foods that fill you up and satisfy hunger. With these four dimensions of meaning, health, cost, convenience, and the desirability of foods, consensus was found within each ethnic group. With the dimension of desirability, there was more variation in responses, and in the White ethnic group, two sets of cultural beliefs were uncovered. In the final section of this chapter, this information from the rankings in these four dimensions will be applied to the unconstrained pile sort graphs, in the form of Property Fitting (PROFIT) analysis. This analysis allows us to see how these dimensions of meaning map onto the salient groups of foods that participants created during the pile sort. That is, PROFIT analysis seeks to answer the question of which dimensions of meaning were people using to group the foods presented to them on the notecards, before these dimensions of meaning were introduced by me to the participants during the ranking tasks.

**PROFIT Analysis Results: African Americans**

For the African-American sample, PROFIT analysis was conducted using the cultural key output from the consensus analysis of each of the four dimensions of meaning. The rankings on the convenience of foods was found to be the strongest attribute that was driving the pile sorts of the 36 food terms (multiple r=.81, p=.001). The rankings on the healthfulness and the desirability of foods also were significant when the participants were sorting the note cards. In fact, the PROFIT regression lines for health (multiple r=.49, p=.01) and desirability (multiple r=.48, p=.02) are drawn almost in direct opposition to each other, indicating that the foods participants know to be the most healthy are the foods that are known to be the least desirable (see Figure 11.13). The position of the convenience PROFIT regression line can lead to some general conclusions as well—specifically, the most convenient foods are commonly considered
to be the least healthy. For example, desserts, chips, candy and Chinese food are known to be some of the least healthy foods, but are also generally agreed upon as being the most desired and the most convenient. The PROFIT analysis for the cost of the 36 foods was not plotted since it was not statistically significant (see Table 11.1—at the beginning of this chapter).

![Figure 11.13: MDS graph with PROFIT analysis for African Americans](image)

**PROFIT Analysis Results: White Americans**

For the three dimensions where consensus was achieved among the White participants—health, cost, and convenience—PROFIT analysis was conducted. Health and cost PROFIT regression lines are drawn onto Figure 11.14, as these were the only dimensions that were found to be significant. Health was particularly important to the White participants, with a multiple $r$ of
.92 (p=.001), indicating that the groupings made in the initial pile sort are correlated with the consensus analysis rankings on the perceived healthfulness of the foods. Cost was also significant (multiple r=.61, p=.004), so it is apparent that the participants are cognizant of the expense of certain foods relative to others. The placement of the two regression lines loosely create some quadrants where one can examine the relatively healthy and expensive foods (some fruits, and some meats like fish and chicken), the unhealthy and expensive foods (fast food, pizza, candy, desserts, sweet tea), inexpensive and unhealthy foods (chips, biscuits, cornbread), and the relatively inexpensive and healthy foods (fruits and vegetables). PROFIT analysis on convenience was not considered strong enough of an association to include on the MDS graph (see Table 11.1).
PROFIT Analysis Results: Mexicans

The presence of a single shared cultural model in the dimensions of health, cost, and convenience among the Mexican participants meant that these data could be used for PROFIT analysis. Health (multiple $r=.89$, $p=.001$) and convenience (multiple $r=.59$, $p=.004$) regression lines are drawn onto Figure 11.15, the MDS graph for the Mexican participants, as these are the only results which proved to be significantly related to the unconstrained pile sort data coordinates.
Figure 11.15: MDS graph with PROFIT analysis for Mexicans

As with the White MDS graph, the placement of the two regression lines allow us to examine the clusters of foods in terms of to what degree they are considered to be healthy and convenient. Healthy and convenient foods would be cereal and some fruits. Unhealthy, convenient foods, according to the graph, would be foods like fast food, candy, pizza, and Chinese food. Unhealthy, inconvenient foods are those such as alcohol, coffee, and pork. Finally, healthy, inconvenient foods are most of the foods that are considered to be part of a Mexican meal: caldo (broth dishes), chicken, shrimp, and sopa (soup dishes). Again, overall the conclusions drawn
here, especially those regarding the Mexican meal foods to be healthy but difficult to prepare, fit with the qualitative data collected during these and other interviews.

Conclusion

This chapter explored four dimensions of meaning—health, cost, convenience, and the desirability of foods—among Blacks, Whites, and Mexicans in Tuscaloosa. Consensus analysis was performed on ranked food data along these dimensions and the participants were found to share a substantial amount of cultural knowledge about the healthfulness of foods. Understandings about cost and convenience were also shared by participants. The dimension of desirability was particularly relevant to African Americans and a subset of Mexicans. With the White participants, however, two competing cultural models were found to exist. One model seemed to favor foods that are consumed as part of a traditional southern diet, while the other model showed a preference for salty, sugary, high-calorie, high-fat convenience foods. Mexicans’ preferences, as they were expressed in the cultural model, were similar to the first group of Whites, while Blacks’ preferences mirrored the second group of Whites. PROFIT analysis showed that, to varying degrees, these dimensions of meaning were important to the respondents as they completed the unconstrained pile sort.

This chapter, and the chapter before it where the structure of the elements of the cultural models was explored, are steps necessary to achieving the main goals of this project as a whole. Eliciting the cultural models of these three ethnic groups, with the inclusion of unique foods that were salient to their ethnic group, has provided a snapshot of how Americans and Mexicans in Tuscaloosa are conceptualizing food and eating. In the next phase of the research project, 50 Mexicans will perform these same cognitive tasks, but with the unique foods from each of the three ethnic groups. That is, the markers of African American and White American food will be
presented to Mexicans, along with their own unique Mexican foods, with the goal of examining how they interpret foods that may be of uncertain relevance to them. Social network interaction with Americans and social integration into the Tuscaloosa community are the variables that will be used to explain variation in knowledge and variation in dietary habits that immigrants may have developed while living in the United States, and in Alabama. In the next chapter, the demographic characteristics of this main sample of 50 Mexicans will be examined.
CHAPTER 12

PHASE 3 SAMPLE CHARACTERISTICS

This chapter will examine the characteristics of the main sample of 50 people, starting with classic demographic variables, then discussing the participants’ birthplaces and migration history. Household characteristics and family proximity will also be explored. Finally, the health characteristics of the sample will be discussed. Throughout the chapter, attention will be paid to the differences between Mexican women and men with regard to these variables. Demographic variables are summaries in Table 12.1, migration history variables in Table 12.2, household characteristics in Table 12.3, relations within the household and household structure in Table 12.4, and family proximity variables in Table 12.5. Health-related variables are presented in Table 12.6, and the anthropometry measurements and Hemoglobin A1c (Hb A1c) are summarized in Table 12.7. Additional information about body composition and Hb A1c is presented in Tables 12.8 and 12.9. Later chapters will cover the social networks and social integration of the participants in this sample. A separate chapter will describe food-related variables, self-reported food frequencies, and cultural consonance in the domain of food.

Demographic Variables

Equal numbers of women and men were recruited for this phase of the project, and 50 people were interviewed in total. Both women and men were on average about 35 years old (SD 2.2); the age range was from 19 to 72 years. The respondents had varied levels of education, with most (54%) having less than 12 years of formal schooling. (see Table 12.1 for demographic statistics discussed in this section).
Table 12.1: Demographic characteristics of the Phase 3 sample

<table>
<thead>
<tr>
<th>Variable</th>
<th>Women n=25</th>
<th>Men n=25</th>
<th>Total n=50</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Education (%)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 years or less</td>
<td>5 (20)</td>
<td>8 (32)</td>
<td>13 (26)</td>
</tr>
<tr>
<td>7-11 years</td>
<td>7 (28)</td>
<td>7 (28)</td>
<td>14 (28)</td>
</tr>
<tr>
<td>12 years or more</td>
<td>13 (52)</td>
<td>10 (40)</td>
<td>23 (46)</td>
</tr>
<tr>
<td><strong>Employed (%)</strong>*</td>
<td>11 (44)</td>
<td>20 (80)</td>
<td>31 (62)</td>
</tr>
<tr>
<td><strong>Marital Status (%)</strong>**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married/Domestic Partnership</td>
<td>25 (100)</td>
<td>16 (64)</td>
<td>41 (82)</td>
</tr>
<tr>
<td>Single</td>
<td>--</td>
<td>6 (24)</td>
<td>6 (12)</td>
</tr>
<tr>
<td>Divorced</td>
<td>--</td>
<td>3 (12)</td>
<td>3 (6)</td>
</tr>
<tr>
<td><strong>Religion (%)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catholic</td>
<td>15 (60)</td>
<td>15 (60)</td>
<td>30 (60)</td>
</tr>
<tr>
<td>Protestant</td>
<td>9 (36)</td>
<td>8 (32)</td>
<td>17 (34)</td>
</tr>
<tr>
<td>Non-practicing/Other</td>
<td>1 (4)</td>
<td>2 (8)</td>
<td>3 (6)</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mean (SD)</td>
<td>34.5 (7.3)</td>
<td>35.7 (11.4)</td>
<td>35.1 (9.5)</td>
</tr>
<tr>
<td>Range</td>
<td>19-52</td>
<td>19-72</td>
<td>19-72</td>
</tr>
<tr>
<td><strong>Income (in tens of thousands)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mean (SD)</td>
<td>2.4 (2.6)</td>
<td>2.3 (1.7)</td>
<td>2.3 (2.2)</td>
</tr>
<tr>
<td>Range</td>
<td>0.4-10</td>
<td>0.4-8</td>
<td>0.4-10</td>
</tr>
</tbody>
</table>

Notes: * p=.009, **p=.004.

More women had 12 years of education or more, and more men had 6 years or less, but these differences were not found to vary significantly by gender. The highest level of education attained was a Master’s degree, while in contrast one woman reported that she had never attended any school in Mexico. Throughout the project, some people who I interviewed exhibited signs of functional illiteracy, being able to recognize some or most of the food terms on the notecards, for example, but not being able to follow the text on the informed consent document which was read to them. The woman with zero years of education did have a friend accompany her during the interview; this individual did follow along with the informed consent document as it was being read (but did not, in my opinion, influence the woman’s responses during the interview). I also encountered other people who, when they were presented with
information about this study or from the community service provider group, stated that they were unable to read.

Mexican women and men who were interviewed lived in households that earned an average of $23,000 per year, but those numbers varied from earning less than $5,000 per year to earning $100,000 per year (see Figure 12.1). Over 60% of the sample was currently employed at the time of the interview. Eighty percent of men were currently holding a job, while only 44% of women were—these differences were found to be significant ($X^2(1)=6.9, p=.009$). Of the eleven women who had stable employment, five cleaned houses and one worked cleaning hotel rooms. One woman worked cutting string at a local factory that makes commercial and consumer fabrics. Two women had customer service jobs, one at an office and another as a tienda attendant. The final three women lived in relatively high-income households, and were employed as a restaurant owner/worker, as an accountant, and as a University of Alabama professional.
Twenty of the 25 men interviewed were currently holding jobs. Their occupations were varied. Four men performed service in restaurants as cooks, busboys, and servers’ aides. Three men worked in landscaping (one specializing in tree maintenance), and one was employed in construction. Other labor included working as an electrician, as a cabinet maker, and three men worked as handymen or assistants to maintenance men. Factory work was also performed by some men, in a recycling plant, making paper, or as machine operators in the wire factory (2 men). One man was responsible for “emptying” the bowels of the chickens at the poultry plant. The last two men were a pastor of a church and a software systems analyst.

With the exception of these last two, these men’s jobs often meant hard labor, and long working hours with few or no breaks. One of the machine operators had a second job at an automobile dealership, a schedule which afforded him very few hours to sleep. A typical work day for him is to sleep from 6 a.m. until 8 a.m., and then work at the auto dealership from 8:30
a.m. to 3:30 p.m. He comes home to sleep until 6:30 p.m., and then he is up having dinner with his wife and taking care of his infant daughter until he has to work at the wire company from 9 p.m. until 6 a.m. In total, he feels lucky if he gets five hours of non-contiguous sleep in a day, but he said that he is “accustomed to it. I feel normal if I get three hours of sleep, but if I get one hour I am uncertain how I will feel.” While he was the only one holding two jobs with such an extreme schedule, some men expressed that they worked long hours with very little breaks, and that a lack of break time often impacted their ability to eat a meal while they were working their eight to ten (or more) hour shifts. One man said that he had been sick with the flu recently, but continued to show up for work. He was afraid to ask for any breaks during the workday, because he knew he was at a disadvantage because he was “an illegal.” Of the five men who were unemployed, four had lost their construction jobs in the 15 days prior to the interview, some of whom were brought in from another state to work on various parts of the new residence halls for students being built on campus. The final unemployed man had worked on a landscaping crew, but was recently let go for reasons unspecified.

Work affected the availability of individuals, especially men, to meet with me for interviews. Many interviews were scheduled and then cancelled because work schedules took priority. Oftentimes, my assistant and I would arrive for the interview to be told by a housemate that the prospective participant had been taken to a neighboring state for a short- or long-term job, or the person had taken advantage of someone else traveling to a job site to see if work would be available for them, too. Missing interviews due to work schedules and the unpredictability of being called to work or seeking work were definitely exacerbated by the ongoing economic crisis. The same can be said for having recently lost one’s job. Work arenas are one of the main avenues by which Mexicans meet and interact with other people, including
Americans. So to be unemployed in Tuscaloosa might mean being removed or isolated from daily social interaction if one did not have a set of friends or family living in Tuscaloosa—a situation that was relevant for the four men who had worked on constructing the new residence halls. The job was over, and their ties to that company (and sometimes their company-sponsored housing) were cut.

Because all of the women in this sample were married, they lived with spouses and other family members, including children. Being unemployed was often the result of needing to provide day-long, full-time childcare, which they performed in their homes. The hours when their spouses were away could be rather isolating for some of these women. Some women took on intermittent jobs preparing large amounts of food for other Latino families; tamales and posole and other labor-intensive traditional Mexican dishes were prepared as needed for weddings, funerals, quinceañeras, birthdays, and other gatherings like Mexican Independence Day in September.

Other women whose husbands were working as managers and team leaders at some of the larger manufacturing plants were prohibited from working due to their visa status. Some of these women were well-educated, but unable to use their university degrees. Unemployment in this case freed these women up to use some of their disposable income (due to the relatively high-paying jobs of their husbands) for more frequent travel to Mexico and other locations to visit family and friends or to take a vacation for pleasure. Time not spent working also allowed these women to attend ESL classes, volunteer in community organizations or churches. In short, these women had very robust social networks with other Latinos, and especially with other Latinas, with whom they interacted frequently—going to lunches or chatting and messaging on the Facebook social networking website.
The reported marital status of women and men did vary significantly ($X^2(2)=11.0, p=.004$), with all 25 women being married or in a long-term domestic partnership, yet with only 64% of men being married (see Figure 12.2). Two men indicated to me that they were “single in the United States, but married in Mexico.” This response seemed to indicate that they had wives and families in Mexico, but were acting as if they were single while living in the United States. Indeed, one man reported himself as married, but also spoke of his American girlfriend that he met at work. He said, “Everyone knows that we are together.” Presumably, “everyone” does not include his wife who was still living in Mexico!

![Figure 12.2: Marital status, by gender](image)

Finally, women and men had similar religious beliefs, although there was variation when considering the group as a whole; 60% of the sample were Catholic, 34% Protestant, and 6% were of another religious tradition, or were not practicing at the time of the interview. Overall, these demographic characteristics of the 50 people in Phase 3 are similar to Mexicans interviewed in Phase 2.
Participant Birthplace, Migration, and Settlement History

For most of the participants, both they and their parents were born in Mexico. One man’s father was born in Texas, and one woman was born in and had lived all of her life in the United States. She was the only participant to have been born in the United States. Most of the sample was from the state of Veracruz, and most men were from Veracruz as well. Women came from different locations, most often from the Distrito Federal (Federal District—where Mexico City is located), Durango, and Veracruz.

<table>
<thead>
<tr>
<th>Table 12.2: Birthplace and Migration Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women</td>
</tr>
<tr>
<td>Parents born in Mexico (%)</td>
</tr>
<tr>
<td>Born in Mexico (%)</td>
</tr>
<tr>
<td>Mexican state birthplace (%)</td>
</tr>
<tr>
<td>n/a</td>
</tr>
<tr>
<td>Chihuahua</td>
</tr>
<tr>
<td>Coahuila</td>
</tr>
<tr>
<td>Distrito Federal</td>
</tr>
<tr>
<td>Durango</td>
</tr>
<tr>
<td>Guerrero</td>
</tr>
<tr>
<td>Hidalgo</td>
</tr>
<tr>
<td>Jalisco</td>
</tr>
<tr>
<td>Estado de México</td>
</tr>
<tr>
<td>Michoacán</td>
</tr>
<tr>
<td>Oaxaca</td>
</tr>
<tr>
<td>Puebla</td>
</tr>
<tr>
<td>Querétaro</td>
</tr>
<tr>
<td>Tamaulipas</td>
</tr>
<tr>
<td>Veracruz</td>
</tr>
<tr>
<td>Years lived in Mexico</td>
</tr>
<tr>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Years lived in US</td>
</tr>
<tr>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Years lived in Tuscaloosa</td>
</tr>
<tr>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Knew people in Tuscaloosa before arriving (%)</td>
</tr>
<tr>
<td>Mean (SD)</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
The states of origin of the participants are a mix of border states, traditional sending states from central and west-central Mexico, and newer sending states such as Veracruz and Oaxaca. On average, both women and men had lived in Mexico for about 25 years, not necessarily all at once as some people moved from Mexico to the United States and back before moving to Alabama. The average time spent in the United States was almost 9 years, and respondents had been living in Tuscaloosa for 6.3 years, although the time varied widely—from three months to eighteen years here (see Figure 12.3).

Most people did not come to Tuscaloosa without knowing someone here before they came. Sixty percent of the sample knew an average of about four people before moving. Neither the ethnicities of these acquaintances nor the ties to these people were discussed during the interview, but I would posit that these people were a mix of family, friends, and coworkers,
mostly Mexican, but with some being American work associates. Men knew more people than did women, but these differences were not significant.

Collecting a brief migration history of each participant yielded information about their origins and movements throughout their lives. Thirteen individuals (26%) had migrated within Mexico before moving to the United States. Six people had had varying degrees of transnational migration; that is, moving from Mexico to the United States at least twice. Thirty-eight percent of the sample (19 individuals) had lived in other places in the United States before coming to Tuscaloosa. Some had lived in just one US state, while others had moved to as many as five different locations before coming to Alabama. The last state of residence before moving to Alabama was counted for each participant—four people each came from Georgia and Texas, three from Louisiana, two each from California and Arizona, and one each from Missouri, Kansas, Illinois, and Mississippi. Other places in the United States in which participants lived include New York, New Jersey, Oklahoma, and Colorado.

Most participants, however, came to Tuscaloosa directly from Mexico. Thirty-one individuals (62% of the sample) had not lived anywhere except Mexico before migrating to Alabama. The last state of residence in Mexico before coming to Alabama was recorded for each participant—these may differ from their birthplace state as internal migration throughout their life may have occurred. Veracruz and Chihuahua were the states that most participants called home before coming to the United States, and Alabama, for the first time. Seven people migrated from each of these locations. Four came from Michoacán, three each from Oaxaca and the D. F., two each from Durango and the state of Mexico, and one each from the states of Puebla, Queretaro, and Tamaulipas. Internal migration, transnationalism, and coming directly
from Mexico as opposed to living in other US locations before coming to Tuscaloosa did not vary by gender.

**Household Characteristics**

Mean household size for women was 5.7 people, larger than it was for men—which was only 4.4 people (see Table 12.3). Almost all women had children present within their households—with an average of 3 children living with them (mean = 2.5 (SD = 1.6)).

<table>
<thead>
<tr>
<th>Table 12.3: Household characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Women</strong></td>
</tr>
<tr>
<td><strong>Household size</strong></td>
</tr>
<tr>
<td>Mean (SD)*</td>
</tr>
<tr>
<td><strong>Children in household (%)</strong></td>
</tr>
<tr>
<td>Mean (SD)*</td>
</tr>
</tbody>
</table>

The households of men did not have children present as often—56% of men were living with children at the time of the interview. Of these households with children, the average number of children was one. Women had significantly more people living in their households (z = -1.84, p = .07) as well as significantly more children in their households (z = -3.21, p = .001). Given the lack of variability in the marital status of women (all women reported as being married/in a domestic partnership and living with their spouses), these differences are to be expected.

People with various relationships lived with the participants interviewed, and these resulted in a number of different household structures, as shown in Table 12.4. Spouses or domestic partners were reported as living in 74% of the participants’ households. One’s own children were present in 60% of the cases, and one boarder was living with a family that included children not related to him. Other relations belonging to the generation below the participant include nieces and nephews, and sons-in-law. Some brothers and sisters, as well as friends and cousins in these households were under 19 years of age and thus classified as children for the
purposes of this study, although some were in the work force at the time. Parents and one mother-in-law were reported in two respondents’ households. Four participants had boarders living with them, and ten people identified friends living in their household.

Given the number of spouses and children in respondents’ households, it not surprising that nuclear families (two parents with children) were the most prominent household structure, with 42% of respondents living in a married or domestic partnership household with children. In addition, 20% of the participants’ households consisted of a nuclear family with the addition of either extended family members who were permanent or non-permanent residents, or boarders who were classified as friends. Four households were comprised of extended family members who were all unmarried. Couples without children were identified in four households, and two sets of couples lived without children but with friends.

Groups of unrelated men who identify each other as friends (and sometimes coworkers) were the second most common living arrangement, with 7 households (14% of the sample) living in this arrangement. These households sometimes had three to seven people sharing rent and bills, and often bunking in very cramped one- or two-bedroom apartments or trailers. Living in groups was advantageous in case jobs were lost, with other roommates absorbing the cost of living while new employment was sought; this was the case in two of the seven all-male households.
<table>
<thead>
<tr>
<th>Relation to Participant</th>
<th>n (%)</th>
<th>Household Type</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spouse/Domestic Partner</td>
<td>37 (74)</td>
<td>Lives Alone</td>
<td>1 (2)</td>
</tr>
<tr>
<td>Child/ren</td>
<td>30 (60)</td>
<td>Group of unrelated males</td>
<td>7 (14)</td>
</tr>
<tr>
<td>Child/ren (of no relation)</td>
<td>1 (2)</td>
<td>Unmarried extended family members</td>
<td>4 (8)</td>
</tr>
<tr>
<td>Niece/Nephew</td>
<td>4 (8)</td>
<td>Single Parent household</td>
<td>1 (2)</td>
</tr>
<tr>
<td>Father</td>
<td>1 (2)</td>
<td>Nuclear family (Married with children)</td>
<td>21 (42)</td>
</tr>
<tr>
<td>Mother</td>
<td>1 (2)</td>
<td>Nuclear family with extended family</td>
<td>5 (10)</td>
</tr>
<tr>
<td>Mother-in-law</td>
<td>1 (2)</td>
<td>Nuclear family with Boarder(s)</td>
<td>5 (10)</td>
</tr>
<tr>
<td>Sister</td>
<td>4 (8)</td>
<td>Married couple without children</td>
<td>4 (8)</td>
</tr>
<tr>
<td>Brother</td>
<td>3 (6)</td>
<td>Married couple living with friends</td>
<td>2 (4)</td>
</tr>
<tr>
<td>Brother-in-law</td>
<td>4 (8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cousin</td>
<td>1 (2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friends</td>
<td>10 (20)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boarder</td>
<td>4 (8)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Proximity of Family to the Participants**

The number of family members present in a number of different locales was recorded during the interview. I asked participants to tell me how many family members (outside of those in their current domicile) they had in their neighborhood, in the Tuscaloosa/Northport area, in the state of Alabama, in the Southern part of the country (including Texas, Louisiana, Mississippi, Tennessee, Georgia, Florida, and North and South Carolina), and in other parts of the United States. Most (98%) Mexican women and men had some family members living somewhere in the United States, and the mean number of family members in the US was 24.4 (SD = 38.5). There was a rather large range of family members present in the United States—from no family (outside of one’s household) to an estimated 225 family members. Close relationships were not always implied with these family ties, especially with those people who reported having very
large families. But even in reporting smaller numbers of family members, participants did not necessarily know or interact with these people. One male said that he had 15 family members in the South, and 15 in other locations—an aunt and cousins in New York, Colorado, and Texas, but he did not know the husbands and wives of his cousins. Family locations were not collected from all participants, but those that were discussed were the states of California, Oklahoma, Texas, New Mexico, Georgia, Wisconsin, and New Jersey. Family was known to reside in major metropolitan areas such as New York City, Chicago, Los Angeles, Las Vegas, Denver, and Dallas, all cities that have large Latino populations.

Presence of family members occurs in decreasing frequency when the geographical area shrinks, from the United States at-large (98%) down to the neighborhood in which the participant lived (see Table 12.5). Eighty-six percent had family living in the southern US, and 64% had on average one family member living in the state of Alabama. Surprisingly, 52% of respondents said they had family living in the Tuscaloosa/Northport metro area, and on average these people reported that about 5 family members lived in this area. Eighteen percent of the sample reported that family lived in their actual neighborhood, and an average of one family member lived in this vicinity of their household. Some family members in these locations were from one’s nuclear family, other were more distant relatives.
### Table 12.5: Family Proximity Characteristics

<table>
<thead>
<tr>
<th>Has family present in: (%)</th>
<th>Women</th>
<th>Men</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Neighborhood</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean number of family members (SD)</td>
<td>1.5 (4.2)</td>
<td>0.6 (1.4)</td>
<td>1.0 (3.1)</td>
</tr>
<tr>
<td>Tuscaloosa/Northport</td>
<td>13 (52)</td>
<td>13 (52)</td>
<td>26 (52)</td>
</tr>
<tr>
<td>Mean number of family members (SD)</td>
<td>5.4 (8.6)</td>
<td>4.5 (8.6)</td>
<td>4.9 (8.5)</td>
</tr>
<tr>
<td>Alabama</td>
<td>16 (64)</td>
<td>16 (64)</td>
<td>32 (64)</td>
</tr>
<tr>
<td>Mean number of family members (SD)</td>
<td>7.0 (9.2)</td>
<td>5.1 (8.7)</td>
<td>6.0 (8.9)</td>
</tr>
<tr>
<td>Southern US States</td>
<td>21 (84)</td>
<td>22 (88)</td>
<td>43 (86)</td>
</tr>
<tr>
<td>Mean number of family members (SD)</td>
<td>18.6 (27.1)</td>
<td>8.8 (12.1)</td>
<td>13.5 (21.3)</td>
</tr>
<tr>
<td>Other parts of US</td>
<td>25 (100)</td>
<td>24 (96)</td>
<td>49 (98)</td>
</tr>
<tr>
<td>Mean number of family members (SD)</td>
<td>30.6 (45.3)</td>
<td>18.2 (30.0)</td>
<td>24.4 (38.5)</td>
</tr>
</tbody>
</table>

It is likely that these family members, and variable proximity to them, had an impact on these participants’ lives while they were living and working in Alabama. It is assumed that the closer one lives to family, the more contact one would have with those people; however, these questions about social support and frequency of interaction with family were not asked during these interviews. The focus of this project was on social interaction with Americans, and how these interactions may be influencing cultural knowledge about food, eating behaviors, and health outcomes. It is recognized that family interactions, family meals, and cultural knowledge passed through family and friends are also influencing what Mexicans are thinking about food and what food they may be eating. However, a detailed examination of the effects of family was beyond the scope of this project; nevertheless, family proximity and questions about friends’ and family’s interactions with Americans (discussed in the next chapter) were meant to address this issue in some way.

**Health Characteristics**

Each participant answered questions about their general health before doing the anthropometry measurements and the finger stick. Just over half of the women and men (n=27, or 54%) reported being in very good overall health. About 20 percent reported being in good
health, 22 percent in poor health, and three people (6%) said their current health was very poor.

Of these three individuals, a man reported having a very poor health condition, but reported no
ailments to me when I asked. The other two individuals were women, the first of whom suffered
from migraines and depression, while the second reported menstrual problems.

<table>
<thead>
<tr>
<th>Table 12.6: Health Characteristics of Phase III Participants</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Reported health status (%)</th>
<th>Women</th>
<th>Men</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very good</td>
<td>11 (44)</td>
<td>15 (60)</td>
<td>26 (52)</td>
</tr>
<tr>
<td>Good</td>
<td>4 (16)</td>
<td>6 (24)</td>
<td>10 (20)</td>
</tr>
<tr>
<td>Poor</td>
<td>8 (32)</td>
<td>3 (12)</td>
<td>11 (22)</td>
</tr>
<tr>
<td>Very Poor</td>
<td>2 (8)</td>
<td>1 (4)</td>
<td>3 (6)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reported health status (%)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Very good/Good</td>
<td>15 (60)</td>
<td>21 (84)</td>
<td>36 (72)</td>
</tr>
<tr>
<td>Poor/Very poor</td>
<td>10 (40)</td>
<td>4 (16)</td>
<td>14 (28)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Diabetic (%)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>4 (16)</td>
<td>--</td>
<td>4 (8)</td>
</tr>
<tr>
<td>No</td>
<td>21 (84)</td>
<td>24 (96)</td>
<td>45 (90)</td>
</tr>
<tr>
<td>Doesn’t know</td>
<td>--</td>
<td>1 (4)</td>
<td>1 (2)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>High blood pressure (%)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>3 (12)</td>
<td>2 (8)</td>
<td>5 (10)</td>
</tr>
<tr>
<td>No</td>
<td>20 (80)</td>
<td>21 (84)</td>
<td>41 (82)</td>
</tr>
<tr>
<td>Doesn’t know</td>
<td>2 (8)</td>
<td>2 (8)</td>
<td>4 (8)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Heart condition (%)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>1 (4)</td>
<td>--</td>
<td>1 (2)</td>
</tr>
<tr>
<td>No</td>
<td>24 (96)</td>
<td>25 (100)</td>
<td>49 (98)</td>
</tr>
<tr>
<td>Doesn’t know</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other health problem present (%)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Any health problem present</td>
<td>13 (52)</td>
<td>9 (36)</td>
<td>22 (44)</td>
</tr>
<tr>
<td>Currently taking medication (%)</td>
<td>11 (44)</td>
<td>5 (20)</td>
<td>16 (32)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Has health insurance (%)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>6 (24)</td>
<td>4 (16)</td>
<td>10 (20)</td>
</tr>
<tr>
<td>No</td>
<td>26 (64)</td>
<td>8 (32)</td>
<td>34 (66)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Medical exam in the last year (%)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Light exercise per day (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean hours (SD)</td>
<td>3.5 (3.5)</td>
<td>3.5 (3.1)</td>
<td>3.5 (3.3)</td>
</tr>
</tbody>
</table>

| Heavy exercise per day (%)        |      |     |       |
| Mean hours (SD)                   | 0.2 (0.7) | 4.3 (4.5) | 2.2 (3.8) |
When this variable was collapsed into two categories (very good/good and poor/very poor) there were significant differences for the reports of women and men. Women reported poor and very poor health more often than did men ($X^2(1) = 3.57, p = .06$).

Overall, women suffered from more ailments and diseases than did men. I asked whether people suffered from particular diseases, namely diabetes, high blood pressure, and heart disease, before asking participants to tell me about their other ailments. Four women said that they knew that they had diabetes (one with gestational diabetes, having recently given birth to a baby girl), and one woman said that she had a heart condition. Women reported having diabetes significantly more than did men ($X^2(2) = 5.2, p = .07$); no men reported having diabetes. High blood pressure was found among both women and men, with three women and two men reporting the condition. Four people indicated that they did not know whether they suffered from high blood pressure or not. There were no significant differences by gender for high blood pressure and heart disease.

When asked to elaborate on other health conditions that participants were aware of, 15 people (30%) reported another health problem. More women (36%) than men (24%) listed another health concern, but this variation was not significant. These health conditions were diverse, as they affected people’s circulatory, musculoskeletal, respiratory, mental/emotional, digestive, reproductive, and immune systems. People reported pain, surgery, and infections, as well as problems with vision, menstruation, and pregnancy. No one reported obesity as a health problem, nor dental issues, which are common problems for immigrants who may not have insurance or access to funds to pay for dental checkups and procedures. Over the course of these questions, thirteen women and nine men in total reported having some kind of health problem; no differences were found between these two groups.
Thirty-two percent of individuals were currently taking medications for their ailments. Over-the-counter medications ranged from analgesics taken regularly or occasionally for pain to antihistamines (Zyrtec brand). Prescription medications included insulin and anti-diabetics (metformin, glipizide, or glyburide), thyroid hormone replacement (levothyroxine sodium), unspecified anti-inflammatory drugs for arthritis, anti-spasmodics (dicyclomine for gastritis and salmeterol for asthma), corticosteroids (fluticasone—inhaled for asthma, and as a nasal spray for allergies), antibiotics (penicillin), an unspecified antiviral for treatment of influenza, and an unspecified medication for blood pressure. Vitamins and calcium were reported by two people. Data on specific medications are missing for five cases. Women reported taking significantly more medications than did men ($X^2(1) = 5.94, p = .02$), likely influenced by the four women with diabetes, who were all taking multiple medications for multiple ailments.

Only ten people in this sample of 50 individuals currently had health insurance (6 women and 4 men). Less than half of women and men had sought medical attention in the past year. There were significant differences between health-care seeking behavior of women and men however, with 16 women having gone to a health professional to seek care in the previous 12 months compared to only 8 men ($X^2(1)=5.13, p = .02$).

Reporting an ailment during the interview was significantly associated with having been to a medical professional in the past year ($X^2 (1) = 6.41, p = .01$). This finding may not be representative of the Mexican population as a whole, given that some of my sample participants came from the Brazos Abiertos festival, where HIV, glucose, blood pressure, bone density, hearing, and vision tests are performed for free by health professionals. Of those 22 people with any health problem, 17 (77.3%) did not have health insurance, making free testing a potentially valuable opportunity. Seven out of nine (77.8%) who were taking prescription drugs did not
have insurance, indicating that these drugs were most likely paid for out-of-pocket. None of the four diabetic women had health insurance. It is possible to get prescription drugs without seeing a medical professional in Tuscaloosa, however; antivirals and antibiotics are sometimes sold illegally at local tiendas, presumably being brought from farmacias in Mexico. Four tiendas in Tuscaloosa were raided recently by law enforcement, resulting in one person from each location being arrested on charges of possession of a controlled substance with intent to distribute. These tiendas may have been the source for some drugs that are sold by prescription-only in the United States. The cases for these four people are still pending in the court system.

Physical activity was measured in the form of minutes one performs either light, moderate, or heavy exercise during a typical working day. Women and men did not differ very much on the amount of light and moderate exercise conducted. Distinct differences in activity level can be seen in the amount of heavy, strenuous activities that are done by women and men. Sixty percent of men (n=15) reported being engaged in, on average, 4.3 hours of very heavy labor during a normal working day. Only 28% of women reported doing this same type of taxing physical activity, and for a much smaller duration of time—on average only 12 minutes per day. These differences were significant; men reported significantly more hours of heavy exercise during the course of a normal working day than did women (z = -3.13, p = .002). Given the type of work performed by men (described at the beginning of this chapter), it is not surprising that these differences by gender emerged from these data. Very few people talked about engaging in cardiovascular exercise like jogging during free time during the interviews. This question was not explicitly asked, however; based on people’s responses during the interviews these activities are assumed to be coming from work-related activities for the most part.
Anthropometric Measurements and Hb A1c Results

The body measurements of women and men varied in this sample. Height, weight, and waist and hip circumference were translated into measures of Body Mass Index (BMI), Waist-to-hip (W/H) ratio, and Waist-to-height (W/Ht) ratio. Percent body fat and Hemoglobin A1c (Hb A1c) were also recorded for each person; all of these measures of central tendency are presented in Table 12.7.

<table>
<thead>
<tr>
<th>Table 12.7: Anthropometric data and Hb A1c</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Women</strong></td>
</tr>
<tr>
<td>Height (cm)</td>
</tr>
<tr>
<td>Weight (kg)</td>
</tr>
<tr>
<td>BMI</td>
</tr>
<tr>
<td>% body fat***</td>
</tr>
<tr>
<td>Waist circumference (cm)</td>
</tr>
<tr>
<td>Hip circumference (cm)</td>
</tr>
<tr>
<td>WH ratio (Waist-to-hip)***</td>
</tr>
<tr>
<td>WHt ratio (Waist-to-height)</td>
</tr>
<tr>
<td>Hb A1c (%)</td>
</tr>
</tbody>
</table>

Despite the controversies surrounding the utility of BMI in predicting the risk of cardiometabolic disorders, it is still a widely used measure that is relatively well-understood by people with no medical training. With the standard calculation of weight in kilograms divided by height in meters squared, BMI is a relative measure of weight that takes height into consideration, as tall people tend to weigh more, and vice versa. The mean BMI for the sample as a whole was 31.3; a BMI at or over 30 puts one into the obese category. BMI ranged from 19.2 to 54.3, and did not vary significantly by gender.

Percent body fat was measured using bioelectric impedance, and was found to be at an average of almost 34% for the entire sample, ranging from 10.8% to 58.1%. Women and men differed significantly with respect to their total body fat percent (t = 5.66, p < .001). These differences are not surprising, given the sexual dimorphism in body composition between post-
pubescent women and men. Overall, sex, reproductive status, age, and ethnicity are recognized as factors that contribute to variation in body composition (Wells 2007, Lassek and Gaulin 2006, Ford et al. 2003, Nelson et al. 2008).

BMI and percent body fat are often associated (Frisancho, 2008:6), and the association in this sample was found to be statistically significant with a strong positive correlation ($r_s = .70, p < .001$). The WHO (2011b:13) recognizes waist circumference as a measure of body composition that is a better correlate to abdominal adiposity than BMI. The mean WC for this sample was 93.1 (SD = 14.6); differences in this anthropometric measure did not vary by gender.

One’s waist-to-hip ratio is another indicator of the amount and distribution of adipose tissue on the body. The ratio takes into consideration if one is “apple” or “pear” shaped; a WH ratio of 1.0 or more indicates that one’s waist (where subcutaneous and visceral fat are stored) is equal to or larger than one’s hips, respectively. The average WH ratio for this sample was 0.85. Waist-to-hip ratio did vary significantly for women and men ($z = -4.00, p < .001$), with women having a smaller WH ratio than men. Larger hips and differential fat distribution in reproductive-aged women translate into smaller mean WH ratios at a population level. Waist-to-height is a lesser-used measure that is also correlated with diabetes risk (Huxley et al. 2010). In this sample, WHt ratios averaged at 0.59, with a standard deviation of 0.09. The WHt ratio did not vary by gender.

The medical community’s interest in evaluating different measures of body composition was rejuvenated partly in response to research published in the 1980s on BMI and WH ratio (WHO 2011b). Larsson et al. (1984) presented findings that, for men, WH ratio but not BMI was associated with CVD incidents (heart attack and stroke) and death. Waist-to-hip ratio was also found to be an indicator for women’s CVD risk, but along with BMI (Lapidus et al., 1984).
Connections of these measures to diabetes were investigated as well after these findings were published.

The WHO has stated that there is no clear evidence of which measure of body composition is the best for predicting disease risk and mortality; much research has been published on the usefulness of these measures and the establishment of cut-off points in different populations in some prospective, but mostly cross-sectional, studies. Criticisms of BMI include that the measure does not take into account the amount of muscle versus fat tissue that an individual is carrying on their body, nor the distribution of fat on the body. Overall, waist circumference is a better measure of abdominal adiposity than BMI (WHO 2011b:13); waist-to-hip ratio is not considered to be a better measure than waist circumference alone (NIH, 2000). Adipose tissue around one’s midsection (an “apple” shaped body type) places one at higher risk for cardiovascular and metabolic diseases, whereas fat deposits on the hips and thighs (a “pear” body shape) is not associated as strongly with these same diseases. However, with regard to the utility of BMI and WC, no definite answer has emerged as both of these measures (along with WH ratio, and WHt ratio) predict the risk of type 2 diabetes similarly (Huxley et al. 2007, Huxley et al., 2008, Nyamdorj et al., 2008, Qiao and Nyamdorj 2010). Recent conclusions by Huxley et al. (2010) suggest that measures of central adipose tissue (WC, WH ratio, and WHt ratio) are better for explaining the risk of diabetes than BMI, but that all measures (including BMI) have been used successfully in various studies to predict hypertension and lipid imbalances. As more research is reviewed, more conflicting correlations emerge; the WHO (2011b) reported that BMI seems to be less well-correlated with CVD than it is to diabetes.

Individuals with a BMI ranging from 18.5 to 24.9 are considered to be “normal,” while overweight individuals are identified at a BMI value of 25 and obesity being described as having
a BMI of 30 or greater. A BMI of $\geq 30.0$ poses an increased risk for metabolic disorders (WHO 2000). Obesity is further broken down into three categories (see Table X.x), with the most severe, Obese III, corresponding to a BMI of 40 or greater. A normal range of percent body fat for males is between 15% and 25%, and between 20% and 30% for females (Frisancho 2008:316).

Various cut-off points have been suggested for different populations around the world for the measures of central adiposity. Findings from research with Mexicans in Mexico recommend a WC of 90cm for men and 85cm for women (Berber et al. 2001). This same study also provided WH ratio suggestions similar to those recommended by the WHO (1999) of $>0.90$ for men and $>0.85$ for women. The WHO recognizes that “substantially increased” health risks have been observed at a WC $>102$cm and $>88$cm for men and women, respectively (WHO 2000). More recent research on WC and diabetes in Mexico has revised the cut-offs, formulating ranges instead—93-98cm for men and 94-99cm for women (Sanchez-Castillo et al., 2003). Public health knowledge promoted about waist-to-height is to keep one’s waist circumference less than half one’s height—therefore those with a WHt ratio of 0.50 or greater are considered to be centrally obese (Ashwell and Hsieh 2005). The cut-off points discussed above were used to create categories for the data from my sample, and these categories are presented in Table 12.8.
Table 12.8: Body composition categories

<table>
<thead>
<tr>
<th>BMI Categories</th>
<th>Women</th>
<th>Men</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal (18.5—24.9)</td>
<td>4 (16)</td>
<td>4 (16%)</td>
<td>8 (16)</td>
</tr>
<tr>
<td>Overweight, pre-obese (25—29.9)</td>
<td>6 (24)</td>
<td>9 (36)</td>
<td>15 (30)</td>
</tr>
<tr>
<td>Obese (&gt;=30)</td>
<td>15 (60)</td>
<td>12 (48)</td>
<td>27 (54)</td>
</tr>
<tr>
<td>Obese I (30-34.9)</td>
<td>9 (36)</td>
<td>7 (28)</td>
<td>16 (32)</td>
</tr>
<tr>
<td>Obese II (35-39.9)</td>
<td>3 (12)</td>
<td>4 (16)</td>
<td>7 (14)</td>
</tr>
<tr>
<td>Obese III (&gt;=40)</td>
<td>3 (12)</td>
<td>1 (4)</td>
<td>4 (8)</td>
</tr>
<tr>
<td>Percent body fat</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>normal</td>
<td>4 (16)</td>
<td>11 (44)</td>
<td>15 (30)</td>
</tr>
<tr>
<td>at risk</td>
<td>21 (84)</td>
<td>14 (56)</td>
<td>35 (70)</td>
</tr>
<tr>
<td>Waist circumference (cm)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>normal</td>
<td>8 (32)</td>
<td>11 (44)</td>
<td>19 (38)</td>
</tr>
<tr>
<td>at risk</td>
<td>17 (68)</td>
<td>14 (56)</td>
<td>31 (62)</td>
</tr>
<tr>
<td>WH ratio (Waist-to-hip)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>normal</td>
<td>18 (72)</td>
<td>15 (60)</td>
<td>33 (66)</td>
</tr>
<tr>
<td>at risk</td>
<td>7 (28)</td>
<td>6 (40)</td>
<td>17 (34)</td>
</tr>
<tr>
<td>WHt ratio (Waist-to-height)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>normal</td>
<td>3 (12)</td>
<td>2 (8)</td>
<td>5 (10)</td>
</tr>
<tr>
<td>at risk/centrally obese</td>
<td>22 (88)</td>
<td>23 (92)</td>
<td>45 (90)</td>
</tr>
</tbody>
</table>

The mean BMI of 31.3 kg/m2 places the sample into the obese category, as defined by the CDC (2010). Only eight people had a BMI that placed them in the “normal” category.

Eighty-four percent of the sample was either overweight or obese, with over half being obese. Those individuals considered to be obese were distributed among the three classes of obesity, with most being in class I (BMI between 30.0 and 34.9 kg/m2). Most women had body fat percentages over 30%, which may put them at higher risk for cardiometabolic disorders. Using the cut-off of 25%, normal and high body fat percentages were more equally distributed among men, with 56% of the sample being classified as being at risk. However, bioelectric impedance is influenced by dehydration due to physical activity, sweating, or consumption of alcohol (Frisancho, 2008:26). It is unknown how these factors contributed to the variation in each
individual’s body fat percentage, but this measure can still be useful in examining the body composition of the participants in this sample.

Using the waist circumference thresholds discussed above for women and men, a majority (62%) of the participants can be considered to be at risk for diabetes and cardiovascular disease. When waist circumference was mediated by hip circumference, 66% of the sample was considered to be in the normal range. Just over one-third of the sample had a WH ratio that placed them in the “at risk” category. Waist-to-height was the least forgiving measure for this sample; 90% of the participants were considered to be centrally obese. More research needs to be done regarding the appropriate cut-off points for Mexican populations (as some participants were rather short, a characteristic of the population); research on the cut-off points for children have been done in Mexico, but not for adults, and the thresholds for establishing central obesity for children were higher than 0.50.

Depending on which measure is used, between 34% and 90% of this sample could be interpreted as being at risk for cardiometabolic problems in the future. Such wide variation in these indices and thresholds points to the need for further research to clarify the relationships between body composition and health risks. There may be some advantages to combining waist circumference with body mass index in order to provide a more nuanced measure of health risk relative to normal weight, overweight, and obesity.

The mean percent of A1c was 5.9 (SD=1.3), with a range of 4.7% to 11.1%. Differences did not vary by gender in this sample; frequency distributions by gender can be seen in Figure X.x. Using the diagnostic criteria recommended by the WHO and the ADA (described in Chapter X), this group can be considered to be, on average, at high risk for developing diabetes mellitus. Sato et al. (2009) and other prospective studies have confirmed the utility of A1c in
diagnosing diabetes, as well as indicated that those with an A1c of 5.5—6.0% have incidence rates of 12 to 25 percent after five years’ time (ADA 2010b). While my intention was not to diagnose diabetes or pre-diabetes, the new guidelines on using A1c allow more insight into the health characteristics of this sample. The cut points for non-diabetics, those who may be pre-diabetic, and those who meet or surpass the threshold for diabetes are presented in Table 12.9.

<table>
<thead>
<tr>
<th>Table 12.9: Categories of Hb A1c</th>
<th>Women</th>
<th>Men</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hb A1c</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>normal &lt;=5.6%</td>
<td>12 (48)</td>
<td>17 (68)</td>
<td>29 (58)</td>
</tr>
<tr>
<td>high risk  5.7%--6.4%</td>
<td>9 (36)</td>
<td>6 (24)</td>
<td>15 (30)</td>
</tr>
<tr>
<td>diabetic  &gt;=6.5%</td>
<td>4 (16)</td>
<td>2 (8)</td>
<td>6 (12)</td>
</tr>
</tbody>
</table>

About 60% of the sample had A1c levels that were in the normal range. Twenty-one of the fifty participants (42%) were either high-risk or diabetic, according to their percent Hb A1c. There were four individuals whose levels were over nine percent, which is an indication that diabetes is present and uncontrolled. Three of these individuals openly acknowledged being treated for diabetes. The fourth individual said that he did not have diabetes, but that his doctor had given him drugs so that he would not get diabetes. It is unknown if this medication was being taken as directed. Removal of these four individuals (n=46) presents a mean of 5.6 (SD=0.4), with the upper limit of the range now being 6.8. Chi-square tests uncovered no significant differences between women and men.

Conclusion

This chapter described the characteristics of the sample of 50 Mexicans who participated in the final phase of data collection. Some significant differences were found to exist between women and men regarding sociodemographic variables, household variables, and health variables. The next chapter examines the variation in cultural knowledge among these same participants.
CHAPTER 13
MEXICAN IMMIGRANTS’ SOCIAL INTEGRATION AND SOCIAL NETWORK INTERACTION WITH AMERICANS

Social networks with and social interactions with Americans are two main explanatory factors that are hypothesized to affect Mexicans’ food knowledge, eating habits, and health. It is also recognized that other factors related to social and community integration may also play an important part in Mexican immigrants’ lives in Tuscaloosa. Being able to speak English, consuming different types of media, as well as participating in different community activities such as going to church, attending different types of instructional training, volunteering, and simply talking with neighbors and friends are all variables which affect how integrated individuals feel into the Tuscaloosa community, and may affect how strong of a desire people feel to remain in Tuscaloosa and become part of the community in the future. The degree to which Mexican immigrants in this sample are integrated into the community is the focus of this chapter. Later chapters will explore the relationships between the variables presented here and competence in and consonance with cultural models of food.

Self-Reported Language Ability

Most respondents deemed themselves as being more competent in speaking Spanish than in English. Only one person reported their Spanish-speaking ability as being less than very good or good, even though he was a native Spanish speaker as far as I could tell. Self-reported English-speaking ability was varied, with one person reporting very good ability. This woman

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was the only US-born participant in this study. Ten people (20%) reported “good” English speaking skills, and 14 (28%) said that their skills were “poor.” Exactly half of the respondents evaluated their English speaking ability as “very poor.” Table 13.1 and Figure 13.1 show the results from this question for women, men, and for the entire sample. No significant differences were found between women and men regarding their speaking ability in either language.

<table>
<thead>
<tr>
<th>Table 13.1: Language ability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Spanish-speaking ability (%)</strong></td>
</tr>
<tr>
<td>Very good</td>
</tr>
<tr>
<td>Good</td>
</tr>
<tr>
<td>Poor</td>
</tr>
<tr>
<td>Very poor</td>
</tr>
<tr>
<td><strong>English-speaking ability (%)</strong></td>
</tr>
<tr>
<td>Very good</td>
</tr>
<tr>
<td>Good</td>
</tr>
<tr>
<td>Poor</td>
</tr>
<tr>
<td>Very poor</td>
</tr>
</tbody>
</table>

**Figure 13.1: Language ability in Spanish and English.**
Media Consumption

A number of general questions about media consumption in both Spanish and English were inquired about during the interview (Table X.x and Figures X.x and X.x). Participants were asked to estimate the amount of time spent during a normal day watching television, reading (magazines, newspapers), and using the internet. It was thought that media consumption would be an avenue through which people might access information about food and eating, as well as a method for staying connected to friends and family. Unfortunately, collecting specifics about which programs people viewed, or if the media content they sought out contained information about food and eating was beyond the scope of this project.

There was variation in the number of people who estimated that they used each medium during a normal day. Overall, more people reported watching television and fewer people reported reading. Using the internet was reported by the least number of people. The data on media consumption are presented in Table 13.2.

<table>
<thead>
<tr>
<th>Table 13.2: Media consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>TV—Spanish (%)</td>
</tr>
<tr>
<td>Mean hours (SD)</td>
</tr>
<tr>
<td>TV—English (%)</td>
</tr>
<tr>
<td>Mean hours (SD)</td>
</tr>
<tr>
<td>Read—Spanish (%)*</td>
</tr>
<tr>
<td>Mean hours (SD)*</td>
</tr>
<tr>
<td>Read—English (%)</td>
</tr>
<tr>
<td>Mean hours (SD)</td>
</tr>
<tr>
<td>Internet—Spanish (%)</td>
</tr>
<tr>
<td>Mean hours (SD)</td>
</tr>
<tr>
<td>Internet—English (%)</td>
</tr>
<tr>
<td>Mean hours (SD)</td>
</tr>
</tbody>
</table>

Most participants reported engaging in watching television in Spanish, with 42 people (84%) estimating that they watch an average of two hours of television per day. Most also
watched television in English, with 37 individuals (74%) watching an estimated average of one hour per day. Differences between women and men were not found to be significant.

Thirty people (60%) each reported reading newspapers or magazines in both Spanish and English. Men reported reading Spanish language print media more than women did \( (X^2 (1) = 3.00, p = .08) \), and they read for longer durations than did women \( (z = -1.85, p = .06) \). The English language media reading habits of women and men were very similar, with approximately 60% of the sample reading for an average of 12 to 18 minutes for men and women, respectively.

Internet usage was reported the least; approximately 30% of the sample reported using the internet to view web pages in either Spanish or English. Average time spent on the internet was 18 minutes for Spanish, and 24 minutes for English web pages. There were no significant differences between Mexican women and men for internet use.

**Perceived Current and Desired Future Integration into the Tuscaloosa Community**

Women and men were asked to rate their current perceived and desired future integration into the Tuscaloosa community on a four-point scale. Most women and men said that they felt very integrated into Tuscaloosa, with over one-third feeling that they had substantial roots here. Another 30 percent reported feeling somewhat integrated. The remaining 36 percent were split between feeling unintegrated and very unintegrated into the community. The reasons for feeling unintegrated will be explored in the chapter that describes the daily lived experiences of Mexican immigrants.

There was much less variation in the responses to the question of the desire to belong to Tuscaloosa in the future. A full 70 percent of the participants were very interested in a continued and/or increased feeling of belonging within the community. Nine people, or 18 percent had a desire for integration, but on a lesser scale than the majority of the sample. Six respondents were
uninterested in creating and strengthening ties within the community. No significant differences were found between women and men regarding their current and future aspirations for becoming part of the Tuscaloosa community. Data from these questions, and the distribution of the responses, can be found in Table 13.3 and Figure 13.2.

<table>
<thead>
<tr>
<th>Table 13.3: Self-reported current and desired future community integration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Feels part of Tuscaloosa now (%)</strong></td>
</tr>
<tr>
<td>Very much</td>
</tr>
<tr>
<td>Very little</td>
</tr>
<tr>
<td>Somewhat</td>
</tr>
<tr>
<td>A little</td>
</tr>
<tr>
<td>Very little</td>
</tr>
<tr>
<td><strong>Wants to belong to Tusc. in the future (%)</strong></td>
</tr>
<tr>
<td>Very much</td>
</tr>
<tr>
<td>Somewhat</td>
</tr>
<tr>
<td>A little</td>
</tr>
<tr>
<td>Very little</td>
</tr>
</tbody>
</table>

Figure 13.2: Current and future integration into the Tuscaloosa community.
Involvement in the Community

Most of the sample was active in some way in the community (see Table 13.4). A variety of community activities was inquired about; church attendance (78%) and talking with neighbors (70%) were reported more than volunteering activities (48%) in church, in school, or in other venues.

<table>
<thead>
<tr>
<th>Table 13.4: Community activities</th>
<th>Women</th>
<th>Men</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attends church (%)</td>
<td>84</td>
<td>72</td>
<td>78.0</td>
</tr>
<tr>
<td>Attends classes (training/language) (%)</td>
<td>40</td>
<td>28</td>
<td>34.0</td>
</tr>
<tr>
<td>Volunteers in community (at church/schools) (%)</td>
<td>64</td>
<td>32</td>
<td>48.0</td>
</tr>
<tr>
<td>Talks with neighbors (%)</td>
<td>78</td>
<td>68</td>
<td>70.0</td>
</tr>
<tr>
<td>Mean number of neighbors (SD)</td>
<td>2.6 (2.9)</td>
<td>3.6 (5.9)</td>
<td>3.1 (4.7)</td>
</tr>
<tr>
<td>Has close friends in Tuscaloosa (%)</td>
<td>88</td>
<td>92</td>
<td>90</td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>6.0 (6.8)</td>
<td>5.1 (5.4)</td>
<td>5.5 (6.1)</td>
</tr>
</tbody>
</table>

Going to any kind of class such as an ESL class or a training course to acquire a job skill was reported the least (34%) among Mexican participants. Women were found to have volunteered more than did men ($X^2 (1) = 5.13, p = .02$). These community activities were thought to be those that may bring immigrants into contact with Americans, but specific information about the ethnicity of neighbors with whom one speaks was not collected for all participants, so no concrete conclusions can be drawn about these activities and social network interaction with Whites and Blacks.

Having close friends may contribute to a feeling of integration into the community.

Ninety percent of the sample reported having close friends with whom personal information was
shared on a regular basis. Individuals reported having close relationships like this with an average of six people. Most (86%) of these close friends were Mexican, although there were some Whites (34%) and Blacks (8%) who were reported.

**Social Network Characteristics**

The formal egocentric social network elicitation was the second largest part of the Phase 3 interviews, after the pile sorting and rating tasks (described in the next chapter). In total, data on 201 American alters were collected; characteristics of the respondents’ networks are summarized in Table 13.5, 13.6, and 13.7. Regarding the size of individuals’ networks of Americans, it must be noted that this network data collection had a limit of five people, or alters. It is therefore impossible to calculate how many Americans are in any person’s network. Having said this, 17 participants were unable to name 5 Americans whom they knew and 4 people were unable to name even one person. Average network size was 4.0 people (SD=1.7). It is plausible that there was a tendency for people to agree to participate in this project if they had had social interaction with Americans in the past such that they were included in their social network. That is, it would not be surprising if people without any social contact with anyone in the American community were more likely to refuse to participate in the project, as the Co-PI is a White American. It is also possible that participants stopped before naming five American alters because of boredom or fatigue during the interview.

Most of the alters named were male—59% (see Table 13.5). The average age of alters named was 43.6 years (SD=12.8), with a range of 17 years to 73 years. Participants were unable to report the ages of about 7% of all of the alters named. A majority (87%) of the Americans listed were identified as White. This is considered to be an important finding for this research project. Preliminary data collection indicated that Mexicans in Tuscaloosa were not interacting...
with Blacks as much as they were with Whites, and the social network data seem to support this idea. However, information on the cultural models of Blacks was collected in the earlier phases of this research in case a substantial number of Mexicans were found to have been forming relationships with African Americans. Later multivariate data analysis will focus on the cultural knowledge of Whites (see chapter 15).

| Table 13.5: General characteristics of 201 alters, by gender |
|-----------------|------|------|------|
|                  | Women | Men  | Total |
| Participant able to name 5 alters (%) | 60   | 72   | 66   |
| Average size (SD) | 3.9 (1.7) | 4.2 (1.6) | 4.0 (1.7) |
| Unable to name any alters (%) | 8    | 8    | 8    |
| Male (%) | 35   | 82   | 59   |
| Average age (SD) | 45.0 (13.0) | 41.2 (12.7) | 43.0 (12.8) |
| not known (%) | 10   | 5    | 7    |
| Ethnicity: Average % (SD) | | | |
| White alters | 82   | 90   | 87 (0.12) |
| Black alters | 10   | 9    | 9 (0.16) |
| Latino alters | 7    | 1    | 4 (.14) |

Ten percent of the alters named were known through school or church settings (see Table 13.6). Respondents were encouraged to identify if they had multiplex (multiple) social ties to the alters in their network. Fifty two percent of the alters listed were identified as having more than one type of relationship with the participant. One of the most prominent ties to Americans were those achieved through the workplace—44% of alters named were known through interactions on the job, either with coworkers or bosses. Alters were identified as friends often—even with the label of “acquaintance” being an option to choose. Seventy-five percent of alters were considered to be friends (the measurement of multiplex ties means that the percentages will add up to over 100%).

Regarding education levels, participants were unable to name the education level of 39% of the 201 alters named in the social network section of the interview. Thirty percent of alters
were identified as having a Bachelor’s degree, while 19% were said to have finished high school. The religious affiliation was unknown for 34% of the Americans listed, but the majority of the people (49%) were Protestant, while 11% were Catholic. Six percent of the alters in the networks were identified as having no religion, or to have been non-practicing. Sixty-nine percent of alters were married, 19% were single, and 8% were widowed or divorced. Marital status was a well-known attribute; participants did not know the marital status of only 8 of the 201 Americans (4%). The average number of children of the alters in the network was 1.5 (SD=.080). Eighty-six percent of all of the alters lived in Tuscaloosa/Tuscaloosa county. Residents of other Alabama cities comprised 9% of the network alters, and 4% of alters named lived in other US cities outside of the state of Alabama.
Table 13.6: Relationship characteristics of 201 alters, by gender

<table>
<thead>
<tr>
<th>Relationship to ego (over 100% from multiplexity)</th>
<th>Women</th>
<th>Men</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friend</td>
<td>71</td>
<td>79</td>
<td>75 (.34)</td>
</tr>
<tr>
<td>Family/Spouse</td>
<td>1</td>
<td>2</td>
<td>1 (.05)</td>
</tr>
<tr>
<td>Neighbor</td>
<td>2</td>
<td>3</td>
<td>2 (.08)</td>
</tr>
<tr>
<td>Acquaintance</td>
<td>16</td>
<td>8</td>
<td>12 (.30)</td>
</tr>
<tr>
<td>Coworker</td>
<td>9</td>
<td>34</td>
<td>22 (.32)</td>
</tr>
<tr>
<td>Boss</td>
<td>23</td>
<td>24</td>
<td>23 (.28)</td>
</tr>
<tr>
<td>Compadre</td>
<td>2</td>
<td>--</td>
<td>1 (.04)</td>
</tr>
<tr>
<td>Teacher</td>
<td>9</td>
<td>--</td>
<td>4 (.18)</td>
</tr>
<tr>
<td>Church worker</td>
<td>5</td>
<td>7</td>
<td>6 (.13)</td>
</tr>
<tr>
<td>Other</td>
<td>8</td>
<td>1</td>
<td>4 (.19)</td>
</tr>
<tr>
<td>Alters who have multiplex relationships with ego (%)</td>
<td>47</td>
<td>57</td>
<td>52</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education of alters (%)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>4</td>
<td>2</td>
<td>3 (.08)</td>
</tr>
<tr>
<td>High School</td>
<td>12</td>
<td>25</td>
<td>19 (.25)</td>
</tr>
<tr>
<td>More than High School</td>
<td>48</td>
<td>30</td>
<td>39 (.35)</td>
</tr>
<tr>
<td>not known</td>
<td>35</td>
<td>43</td>
<td>39 (.43)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Religion (%)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Catholic</td>
<td>14</td>
<td>9</td>
<td>11 (.18)</td>
</tr>
<tr>
<td>Protestant</td>
<td>57</td>
<td>41</td>
<td>49 (.38)</td>
</tr>
<tr>
<td>Other/Non-practicing</td>
<td>3</td>
<td>9</td>
<td>6 (.13)</td>
</tr>
<tr>
<td>not known</td>
<td>26</td>
<td>41</td>
<td>34 (.39)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Residence</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuscaloosa County</td>
<td>83</td>
<td>88</td>
<td>86 (.29)</td>
</tr>
<tr>
<td>Alabama</td>
<td>9</td>
<td>9</td>
<td>9 (.23)</td>
</tr>
<tr>
<td>Out-of-state</td>
<td>5</td>
<td>3</td>
<td>4 (.19)</td>
</tr>
<tr>
<td>not known</td>
<td>2</td>
<td>--</td>
<td>1 (.15)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Marital Status</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Married/domestic partnership</td>
<td>73</td>
<td>65</td>
<td>69 (.32)</td>
</tr>
<tr>
<td>Single</td>
<td>13</td>
<td>24</td>
<td>19 (.28)</td>
</tr>
<tr>
<td>Divorced/Widowed</td>
<td>10</td>
<td>6</td>
<td>8 (.12)</td>
</tr>
<tr>
<td>not known</td>
<td>3</td>
<td>5</td>
<td>4 (.22)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Children in household (SD)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>not known (%)</td>
<td>1.8 (.78)</td>
<td>1.2 (.76)</td>
<td>1.5 (.08)</td>
</tr>
</tbody>
</table>

In Table 13.7, one can see that alters were known for an average of 4.3 years (SD=3.6).

Alters were known a minimum of 3 months to 18.2 years. Regarding frequency of interaction,

26% of alters talk daily with the project participants, 40% talk on a weekly basis, and 25% talk
on a monthly basis. Seven percent talk with the Mexican participants on a yearly basis, or less often.

Participants were also asked how often they ate food with the alters in their network. Most participants are eating with the Americans who they know (59%). Actual frequency of food sharing is varied, however, with 9% of meals being shared daily, 12% weekly, 15% monthly, and 21% yearly or less than yearly. Frequency of meal sharing among Americans and Mexicans will be a variable that will be explored more thoroughly as the data analysis continues.

Finally, the strength of the tie to each alter was measured on a scale from 1 (very strong) to 5 (very weak). The average strength of tie among all of the American alters named was 2.7 (SD=1.0).

| Table 13.7: Social interaction characteristics of 201 alters, by gender |
|--------------------------|----------|---------|
|                          | Women    | Men     | Total   |
| Duration of relationship in years (SD) | 4.6 (3.2) | 4.0 (4.0) | 4.3 (3.6) |
| Frequency of contact                          |          |         |         |
| Daily                                    | 9        | 42      | 24 (.34) |
| Weekly                                   | 55       | 28      | 41 (.39) |
| Monthly                                  | 27       | 23      | 25 (.32) |
| Yearly                                   | 6        | 7       | 7 (.15)  |
| Less than yearly                         | 2        | --      | 1 (.04)  |
| Frequency of meal-sharing (Yes)           |          |         |         |
| Daily                                    | 58       | 59      | 58      |
| Daily                                    | 0        | 17      | 9 (.22)  |
| Weekly                                   | 20       | 6       | 13 (.27) |
| Monthly                                  | 13       | 17      | 15 (.23) |
| Yearly                                   | 22       | 18      | 20 (.28) |
| Less than Yearly                         | 3        | --      | 2 (.07)  |
| Never                                    | 42       | 41      | 42 (.39) |
| Strength of relationship (SD)             |          |         |         |
| Very strong                              | 2.7 (1.2) | 2.6 (0.8) | 2.7 (1.0) |
| Strong                                   | 31       | 18      | 24 (.28) |
| Neutral—neither strong nor weak           | 22       | 33      | 27 (.26) |
| Weak                                     | 16       | 32      | 24 (.28) |
| Very weak                                | 15       | 12      | 13 (.22) |
| Very weak                                | 15       | 6       | 10 (.29) |
It is expected that the wealth of data collected regarding respondents’ social networks and measures of social integration into the community will help explain variation in cultural competence, cultural consonance, and health status. The results for these statistical tests will be described in chapter 14.
CHAPTER 14

CULTURAL MODELS OF MEXICAN IMMIGRANTS IN ALABAMA

This chapter follows the same outline as chapters 10 and 11, where the cultural models of the three ethnic groups were elaborated. The main sample of 50 Mexicans completed similar cognitive tasks as those presented to the Phase 2.2 participants (Blacks, Whites, and Mexicans), however, the list of foods was distinctly different from that of the earlier research phase. The fifty Mexicans in the final sample were presented with a blended list of 32 foods, consisting of items salient to Mexicans (as established in Phase 2 of the project) and foods salient to Black and White Americans. That is, all of the 22 “core” foods (see Table 14.1) were omitted from this phase of the project, leaving the “unique” foods from each ethnic group to be sorted and rated by the Phase 3 sample. The goal of this part of the project was to examine how Mexicans think about foods that may or may not be relevant to the Mexican cultural model of food. These markers of American food may be thought about and consumed differently by Mexicans in Tuscaloosa, and this variation may be correlated with differences in social network interaction with Americans and social integration into the community—relationships to be tested in later chapters.

First, I will briefly discuss which food terms were presented to the Mexican participants. Then, the results from the unconstrained pile sort will be presented. Consensus analysis was performed on ratings that the participants made along the same four dimensions of meaning in the previous phase—health, cost, convenience, and the desirability of foods. That is, both the
structure of the cultural model and the intracultural variation will be explored. For those
dimensions where sufficient consensus exists, PROFIT analysis will be applied to the
multidimensional scaling graph, in order to examine how the dimensions of meaning can be
mapped onto the food term groupings. Similarities and differences between the results from this
sample will be compared to the results from the 15 Mexicans, discussed in chapters 10 and 11.

**Phase 3 Food Terms**

Thirty-two foods in total were chosen to be part of this research phase. All of the
Mexican unique foods were included, so that the participants would to some degree be presented
with foods that were most likely relevant to them. The inclusion of the Black and White foods
requires a quick note, given that some of the food terms from these two ethnic groups were
omitted, and some were found to overlap due to the shared culinary history of these two groups.
The foods common to both Blacks and Whites were most of their vegetables, and fish. Coffee,
salient to both Whites and Mexicans was also kept in the final list. All of the 32 unique marker
foods from each ethnic group that were used in Phase 3 are presented in Table 14.1.

Some food terms unique to the Black and White groups were omitted. “Soul Food meat,”
that is, the term referring to animal products such as offal, organs, and pigs’ feet, was not
included because it was surmised that most Mexican participants would not know the term “Soul
Food.” Incidentally, the menudo (tripe or offal stew) term in Phase 2 was kept for the Mexican
group because of its similarity to the historically and ethnographically relevant meats
characteristic of Soul Food. Therefore, due to the fact that menudo was still included for this
final phase (as were all foods unique to the Mexican group), it was unnecessary to keep this
second term. That is, it was thought that the presence of the menudo term would be enough to
gauge how Mexicans cognitively structure these kinds of animal products within their cultural
model. “Soup” was the American term equivalent to the Spanish caldo and/or sopa (depending on preparation), and was therefore repetitive, as was the term “Mexican food,” which was covered more than adequately with the continued inclusion of the Mexican composite foods of caldo, sopa, menudo, and tacos/enchiladas.

Overall, six foods salient to the Black sample, five foods common to both Blacks and Whites, seven foods salient to only the White sample, one beverage common to Whites and Mexicans, and 13 of the Mexicans’ foods identified as salient in Phase 2 were selected for this phase of the project. The final list of 32 terms consisted of 18 American foods, 13 Mexican foods, and one beverage common to both Whites and Mexicans.

| Table 14.1: Foods chosen for analysis in the final phase by a sample of 50 Mexicans. |
|-----------------------------------|-----------------|-----------------|-----------------|-----------------|
|                                    | **Black**       | **Shared**      | **White**       | **Shared**      |
| **Vegetables**                     | cabbage         | salad           | green beans     | cauliflower     |
|                                   |                 | peas            |                 | carrots         |
|                                   |                 | turnip greens   |                 | onions          |
|                                   |                 | corn            |                 | chiles          |
| **Fruits**                         | cherries        | apples          | blueberries     | pears           |
|                                   | grapes          |                 |                 | papayas         |
|                                   |                 |                 |                 | peaches         |
| **Meats**                          |                 | fish            |                 | shrimp          |
|                                    |                 |                 |                 |                 |
| **Composite**                      |                 |                 | caldo           |                 |
|                                   |                 |                 | sopa            |                 |
|                                   |                 |                 | menudo          |                 |
|                                   |                 |                 | tacos/enchiladas|                 |
| **Carbohydrates**                  | grits           | cornbread       |                 | tortillas       |
|                                   | pancakes        | biscuits        |                 |                 |
| **Beverages**                      | juice           | sweet tea       | coffee          |                 |

**Unconstrained Pile Sort**

These 32 terms were the items used for the unconstrained pile sort, the data for which were used to create a non-metric multidimensional scaling graph (see Figure 14.1). Distance between the data points corresponds to the similarity of the food terms, measured by participants’ groupings during the pile sort activity. According to Sturrock and Rocha (2000), a 32 object matrix scaled in two dimensions with a stress value of 0.33 can be expected to have a
1% chance of being the result of a random arrangement. The stress value produced from this
MDS graph was well below this cut point at 0.14. Hierarchical cluster analysis revealed 7
clusters, which, based on participant responses, can be named as: 1) beverages (coffee, sweet
tea, and juice), 2) breads (pancakes, biscuits, and cornbread), 3) tortillas and food made with
tortillas (tortillas and tacos/enchiladas), 4) broth-based Mexican foods (caldo—broth dishes,
sopa—soup dishes, and menudo—tripe stew), 5) meats/seafood (fish and shrimp), 6) vegetables
(carrots, corn, cabbage, onions, green beans, peas, cauliflower, salad, and turnip greens), and 7)
fruits (pears, apples, peaches, papayas, bananas, cherries, grapes, and blueberries).

Figure 14.1: Multidimensional scaling and clusters representing food terms used during
the unconstrained pile sort activity of the 50 Mexican participants in Phase 3.
Notably, grits and chiles were not included in any clusters after the analysis was done. Grits was one American food, along with turnip greens, cornbread, and blueberries that the Mexican sample was relatively unfamiliar with. This unfamiliarity was anticipated, therefore, these foods were described briefly before the pile sort activity began, and participants were encouraged to ask questions if they did not understand directions or recognize a particular food. Often, even after participants were instructed as to what grits, turnip greens, and blueberries were, questions were asked again about their characteristics. The grits note card was often left as its own group. Similarly, the chiles term is not included in a cluster; participants usually sorted it either with the vegetables, or with the Mexican composite foods. The data point of chiles on the MDS graph is placed appropriately between these two groups based on these observations.

The clusters on this MDS graph are somewhat different from those made on the MDS graph from the Mexicans in Phase 2.2. While the 32 foods are different from the 36 foods presented to the previous sample—over half of the food items here are fruits and vegetables—the manner in which the foods were sorted seems to be slightly different, especially when considering the cluster analysis results. In this MDS graph, foods such as sopa, caldo, menudo, tortillas, tacos/enchiladas, onions, and chiles, are on the same side of the MDS graph, but were not clustered in the same group as with the Phase 2 MDS graph of Mexicans. Fruits and vegetables are also clearly separated in this graph, but were mixed in the Phase 2.2 graph, and more of a “food group” structure seems to have been imposed while sorting the cards. That is, there is not a conglomeration of “foods that are commonly eaten together,” as was the case in the Phase 2.2 MDS graph. The inclusion of foods of uncertain relevance to the participants may have precluded them using this dimension of meaning that the 15 participants in Phase 2.2 used,
requiring them to instead rely on other food knowledge, namely the food pyramid categories and the properties of these foods while sorting the cards.

Upon examination of the comments that participants made while and after sorting the cards, the food pyramid groups (fruits, vegetables, grains, meats, etc.) emerged as the dominant theme, having been talked about by 31 of the 50 participants, or 62% of this sample. Therefore, it is no surprise that the MDS graph reflects the respondents’ understandings of the food pyramid and its various categories. However, many other dimensions of meaning were used by when I asked each person to talk about why they grouped the cards the way that they did during this exercise, as well as during their efforts to name each pile. Different dimensions of meaning were identified as they were in the freelisting part of the project, that is, salient themes were identified, coded, and the frequency of their mention was tallied. The results of these efforts are summarized in Table 14.2. Some of the topics seemed similar enough to combine under one heading; for example, identification of a pile or an individual food as being either healthy or unhealthy was counted towards the health dimension of meaning.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Dimension discussed</th>
<th>n</th>
<th>percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Food pyramid groups</td>
<td>31</td>
<td>62</td>
</tr>
<tr>
<td>2</td>
<td>Frequency of consumption</td>
<td>22</td>
<td>44</td>
</tr>
<tr>
<td>3</td>
<td>Meal or menu construction/Foods cooked/eaten together</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>3</td>
<td>Properties/Composition/Classes of foods</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>5</td>
<td>Inexperience and Experience with/Knowledge of foods</td>
<td>16</td>
<td>32</td>
</tr>
<tr>
<td>6</td>
<td>Liked and Disliked foods</td>
<td>11</td>
<td>22</td>
</tr>
<tr>
<td>7</td>
<td>Healthy and Unhealthy foods</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>7</td>
<td>Time of day foods consumed</td>
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</tr>
<tr>
<td>9</td>
<td>Typical Mexican foods</td>
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<tr>
<td>10</td>
<td>Effect foods have upon oneself</td>
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<td>Preparation methods/Convenience</td>
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<td>Effect of work on eating foods</td>
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<td>2</td>
</tr>
<tr>
<td>12</td>
<td>Foods eaten during pregnancy</td>
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<td>2</td>
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The frequency of one’s consumption of these 32 foods was often a topic during the review of the piles created. People talked about habitual, everyday consumption, and some individuals grouped the foods simply into “eaten” and “not eaten” categories, or into different groups based on how often they eat them (daily or weekly, or always, sometimes, and never).

One of the most interesting lines of discussion during the pile sort activity was when women and men grouped the foods into meals, or indicated how the foods are consumed together, in effect creating menus with the foods they were presented with. For example, a 42 year-old father of three who had recently been laid off from his landscaping job made sample meals for me with many of the cards. These meals included a breakfast (a sopa, cornbread, coffee, and pears), and four examples of a mid-day comidas, or lunches (first, shrimp with carrots and turnip greens; second, fish with biscuits, grits, tortillas, and sweet tea; third, caldo, menudo, and onions; and finally, tacos/enchiladas with chiles). These comidas described by him were rather substantial meals that conform to the Mexican tradition of holding the largest meal of the day in the afternoon. Evening meals that he created for me included a dinner of pancakes, juice, and papayas, apples, and bananas, and a night snack of peaches, cherries, blueberries, and grapes. The rest of the vegetables were grouped together and were called “botanas,” or appetizers. Foods were also classed by the participants as being parts of meals (appetizers, side items, snacks, desserts), or as something that was eaten alone, without need for accompaniment (fruits). Overall, this was the third most common way to talk about foods for the participants, and it corresponds to the Phase 2 MDS graph of Mexicans, where the largest cluster was described as “foods that are eaten together.” So while the majority of participants used food pyramid categories, this important dimension was still evident based on the responses of some members of the group.
The properties of foods and/or their composition was discussed just as often as foods being consumed together. The composition of foods in certain piles was understood as being “de harina” (made from wheat flour) or “de maíz,” (made from corn), for example. Other properties that were commented upon include binary oppositions such as wet/dry, raw/cooked, and liquid/solid foods. Foods were also described as being simple, or of one ingredient only, and complex or composite, or containing more than one ingredient (sopas and caldos, for example, were understood to be composite and complex dishes). Fresh and natural foods were in contrast to those foods one finds in a can, although it is possible that this distinction may have been introduced to the participants by the use of whole and canned foods photos on the notecards used for pile sorting. As discussed in the methods chapter, these photos were deemed necessary due to the likelihood of interviewing people with limited literacy skills. Eight people talked about canned foods versus fresh foods, even though all participants were instructed to consider all forms of foods, and even though all canned food photos were also accompanied by photos of their fresh counterparts.

As some of the foods presented during the pile sort activity were not from the cultural model of Mexican food elaborated in the previous research phase, it is not surprising that participants spoke of their familiarity and unfamiliarity of certain foods. This discourse, along with the sorting of foods into their own groups, was classed in the dimension of meaning dealing with people’s experiences with different foods. Foods identified by some as being unknown or unfamiliar to the participants were cornbread, pancakes, biscuits, grits, turnip greens, and blueberries. These are some of the unique marker foods from the Black and White cultural models. Foods that were sorted singly into their own pile were grits, coffee, sweet tea, juice, and chiles. When asked to name these piles, participants often said that these foods were unlike any
other food, and could not be placed in any other pile. Other references to experiences people had with food include foods eaten by their families, foods eaten in the home, foods encountered and bought in the grocery store, and how foods are arranged in one’s kitchen. Again, the photos of the foods may have influenced the sorting process—it is possible that additional foods may have been sorted into this “unfamiliar” group, but photos of turnip greens and blueberries, for example, may have alerted the participants to their food pyramid group (vegetables and fruits), allowing them to sort them thusly.

Items grouped during the pile sort were often liked and disliked by the women and men, and the health properties of the foods were also widely discussed. Specifically, unhealthy foods were considered to be so due to the amount of fat and grease in those foods, and healthy foods had vitamins, minerals, and antioxidants in them. The time of day foods were eaten, such as in the morning at breakfast, or during the mid-day comida, was also remarked upon. Typical Mexican foods were lumped together and identified, as were foods that might have a particular effect upon one if eaten. For example, foods that fill you up include platos fuertes, or main courses, such as menudo, sopa, caldo, tacos/enchiladas, and tortillas. These foods, along with breads, were said to engordarse, or to fatten one up if consumed too regularly. Bananas and papayas were said to have a soporific effect if eaten before bedtime. The preparation methods of foods were also identified during this activity, and the convenience of preparation as well as the cost of fish and shrimp were said to be prohibitive for some people. Finally, other factors that were said to influence eating particular foods included long working hours, and being pregnant.

Some participants talked only about one dimension, sorting all of the cards into groups indicating how often they are consumed, for example. Most participants talked about two or more dimensions of meaning while discussing their pile sort; some used six or seven of the
themes in Table 14.2 to describe their piles. One participant, (M26) a 39-year old married mother of four children who worked in an office, described one pile that she created—cornbread, pancakes, tortillas, tacos/enchiladas, and biscuits—using three dimensions of meaning. Of these foods, she said, “these are foods that fatten you up. I eat very little of them, not that I don’t like them!” She expressed that eating these foods made her gain weight, indicated her preference for them, and her frequency of consumption, all in one breath. During the rest of her pile sort discussion and naming, she also talked about the food pyramid groups (vegetables and fruits) and portions of each that one should eat in a day’s time, as well as what she knew about the healthfulness of some of the foods (antioxidant-rich cherries, blueberries, and grapes, and phosphorus found in fish and shrimp). Finally, she mentioned beverages as having a lot of sugar in them, in effect discussing the properties of this class of foods.

Another participant used seven dimensions when discussing his pile sort. A 28-year old male working in a chicken factory talked about food groups, foods that are commonly consumed together, the healthfulness of foods, ease of preparation, the time of day certain foods are eaten, the composition of foods, and the effect that foods have upon oneself. It was clear that these two participants have particularly multifaceted ways of thinking about food.

Consensus and PROFIT Analysis Results

After the unconstrained pile sort, the 50 participants used these same 32 foods for rating activities. While ranking was used in Phase 2, the length of the Phase 3 interview precluded this extra step in the data collection. That is, in Phase 2 the respondents separated the foods into three groups—e.g., most/somewhat/least healthy—before rank ordering them from most to least healthy. However, in this phase of the project, participants were asked to rate each food on a three-point scale: most healthy, somewhat healthy, or least healthy. These ratings were done for
all four dimensions of meaning—health, cost, convenience, and desirability. Consensus analysis was completed in Anthropac to test for the existence of a single, shared cultural model. If a model was found, then PROFIT analysis was an appropriate next step—the regression lines of which can be found on the MDS graph (see Figure 14.6). If a single model was not found, the diversity of responses were analyzed in order to find patterns of intracultural diversity.

**Consensus Analysis in the Dimension of Health**

Cultural consensus analysis indicated that, in the dimension of health, there was a shared cultural model that participants were using when they were asked to rate the cards. Respondent reliability for the 50 participants was 0.98. Factor 1 had a value of 28.6, explaining 82.5% of the variability in the participants’ responses when they rated the 32 foods on a three-point scale. Factor 2 and factor 3 had values of 4.0 and 2.1, explaining 11.5% and 6.1% of the variation, respectively. The ratio of factor one to factor two was 7.2, and average competence for the group was 0.73 (SD=0.18). Competence ranged from a low of 0.03 to 0.93, although only two people had competence scores below 0.50 (see Table 14.3).

<table>
<thead>
<tr>
<th>Table 14.3: Consensus analysis statistics for Phase 3 respondents</th>
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<td><strong>Dimension</strong></td>
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<td>COST</td>
</tr>
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<td>Group 1 (n=7)</td>
</tr>
<tr>
<td>Group 2 (n=40)</td>
</tr>
<tr>
<td>CONVENIENCE</td>
</tr>
<tr>
<td>DESIRABILITY</td>
</tr>
<tr>
<td>Group 1 (n=31)</td>
</tr>
<tr>
<td>Group 2 (n=16)</td>
</tr>
</tbody>
</table>

Overall, participants agreed upon which foods were healthy, and which foods were unhealthy, despite the fact that they were presented with some American foods which might not necessarily
be relevant to their experience or their cultural knowledge. The factor 1 and 2 values were used as x,y coordinates; each participant is plotted on the graph in Figure X.x.

Figure 14.2: Scatterplot depicting Phase 3 participants in the dimension of health.
Consensus Analysis in the Dimension of Cost

Respondent reliability for this dimension of meaning was also high as was found in the dimension of health, 0.94. However the factor values and the ratio of factor 1 to factor 2 indicate that there is not a high degree of shared knowledge among these participants with regard to the cost of the 32 foods presented to them. Consensus analysis resulted in a ratio of the first to the second factor of 2.5, which is below the accepted threshold of 3.0. Therefore, it must be recognized that there existed no single, shared cultural model that the 50 participants were using when they were rating the foods. That is, enough intracultural variation was present in the ratings such that individuals cannot be said to be in agreement about what foods are expensive and what foods are cheap. Each participant is plotted in Figure 14.3 below. Competence scores were much more varied than in the dimension of health, ranging from -0.28 to 0.88. Mean competence was calculated to be 0.49 (SD=0.27).
Consensus was found in the dimension of cost when the Phase 2 Mexican sample was presented with a list of foods salient to their own ethnic group, so it is possible that the inclusion of American foods is what caused this intracultural variation. That is, it may be that there could be disagreement about what American foods are costly and what American foods are not. It is also possible that this disagreement is structured, like agreement is structured in those dimensions where a single model is found. Further analysis on this disagreement included
separating different groups for testing with consensus analysis, and comparing the cultural keys to search for differences in knowledge about the cost of these 32 foods.

The first noticeable grouping is found in the lower left quadrant of Figure 14.3. These three individuals were excluded from the other group. It appears that their answers were quite different from the other 47 participants in this sample. Nothing ostensibly connects these three individuals; they include a woman living with her husband and family in public housing, a woman with severe food insecurity living in a household where the only income was from her 18 year-old son’s McDonald’s fast food job, and a male living with other working men in a mobile home park. Analysis of their responses indicates a rather large degree of idiosyncrasy, and they were therefore not included in any further analyses.

Towards the top of Figure 14.3, seven individuals are somewhat separated from the large cluster that moves toward the right lower quadrant of the graph. These seven individuals (1, 19, 21, 14, 31, 39, and 44) were found to have an eigenvalue ratio of 9.6 to 1, indicating that there is substantial shared knowledge among them. Respondent reliability was 0.87, just below the 0.90 threshold. Factor 1 (3.54) accounted for 91% of the variability in these seven respondents’ ratings, and factor 2 (0.37) explained the rest. Competence ranged from 0.85 to 0.55, with a mean of 0.70 (SD = 0.10). These seven individuals share a significant amount of knowledge about the cost of the 32 foods.

The second group consists of the remaining 40 individuals, who also share knowledge about what foods are known to be more and less expensive. Respondent reliability was 0.96. Factor 1 (15.2) explained almost 72% of the variation, and factors 2 and 3 (both with values of 3.0) accounted for the remainder. The ratio of factor 1 to factor 2 was 5.1 to 1, indicative of shared knowledge in this dimension. Mean competence was 0.59 (SD = 0.19), with a range of
0.90 to 0.24. These 40 people share knowledge about the cost of foods. The cultural keys exhibited key differences; they will be described below.

**Consensus Analysis in the Dimension of Convenience**

Within the dimension of convenience, consensus analysis resulted in evidence for a single cultural model. With respondent reliability of 0.95, the ratio of the first factor to the second factor was found to be 5.3, and average competence was 0.51 (SD=0.43). Factor 1 (with a value of 22.3) explained 77.1% of the variance, while the second and third factors (4.2 and 2.4) explained 14.5% and 8.4%, respectively. Competence ranged from a low of -0.74 to a high of 0.91. Despite this variation, a single model was found, and most participants did not have very low competence scores. Participants agreed upon which foods were convenient to consume and which foods were inconvenient to consume, even when presented with foods that they might not necessarily be familiar with. The fifty respondents are plotted in Figure 14.4.
Consensus Analysis in the Dimension of Desirability

Consensus analysis demonstrated that a single shared cultural model in the dimension of desirability does not exist for these 50 respondents. The ratio of factor one to factor two was very low—1.7, well below the necessary ratio of 3.0. The highest competence score was 0.80, but most competence scores ranged widely. The lowest competence score was -0.33. Mean competence was only calculated to be 0.45 (SD=0.25). Respondent reliability was 0.92. Based on these results, it seems that participants were not using the same cultural knowledge when they
were asked to rate the 32 foods. The lack of consensus is not surprising as substantial agreement in the dimension of desirability was not found for the entire set of participants in Phase 2 who were asked to rank foods salient to their own ethnic group. As with the dimension of cost, it is possible that the inclusion of American foods, and participants’ assumed differential experience with and knowledge of these American foods, could have affected these results. Further analysis among these 50 participants was necessary in order to determine if any patterns to the intracultural variation exist. Participants are plotted in Figure 14.5.

Figure 14.5: Scatterplot depicting Phase 3 participants in the dimension of desirability.
As with Figure 14.3, which plotted the participants based on their knowledge of the cost of foods, there seems to be three participants who do not cluster with the rest of the group: participants 12, 7, and 24. These three women come from very different households, economic backgrounds, ages, and education levels. Their answers were not similar to each other, nor were they similar to the other participants. Based on these characteristics and their idiosyncratic responses, these women were excluded from further analysis in this domain of desirability. It is possible that they used personal criteria to rate the foods during this task, in spite of being asked to think beyond their own personal preferences to include what Mexicans in Tuscaloosa think about the desirability of foods.

Focusing on the remaining 47 individuals, two apparent groupings were selected for further analysis. The first noticeable grouping is found in the upper right quadrant of Figure 14.5, which contains 31 people. These individuals, when analyzed separately, were found to have an eigenvalue ratio of 4.4 to 1, indicating that there is substantial shared knowledge among them. Respondent reliability was 0.93. Factor 1 (10.1) accounted for 69.6% of the variability in these 31 respondents’ ratings, and factors 2 and 3 (2.30 and 2.13) explained 15.8% and 14.6%, respectively. Competence ranged from 0.11 to 0.87, with a mean of 0.55 (SD = 0.17). These 31 individuals share an adequate amount of knowledge about the desirability of the 32 foods that they were presented with during this cognitive task.

The second group consists of the remaining 16 individuals on the lower right of Figure 14.5, who also share knowledge about what foods are known to be more and less desirable. Respondent reliability was 0.92. Factor 1 (7.23) explained 72% of the variation, and factors 2 and 3 (1.99 and 0.78) accounted for 19.8% and the final 7.8%, respectively. The ratio of factor 1 to factor 2 was 3.7 to 1, indicative of shared knowledge in this dimension. Mean competence
was 0.65 (SD = 0.18), with a range of 0.20 to 0.82. These 16 people share knowledge about the desirability of foods, and their shared knowledge is different from the knowledge shared by the individuals in group 1. The cultural keys of the two groups exhibited key differences in how foods are thought about with regards to what people desire to eat; they will be described in the next section.

Cultural Answer Keys

Each of the separate consensus analyses run on the 32 food terms resulted in a separate weighted cultural answer key which is representative of the cultural knowledge shared by the participants in the group (or subgroup, in the case of cost and desirability). This section will examine the cultural keys in the four dimensions of meaning, and compare differences in the cultural keys in the instances where the 50 participants were broken into smaller groups whose responses were tested for systematic shared cultural knowledge using consensus analysis. The cultural keys from the three ethnic groups in Phase 2.2 will be used as a guide for comparison, but direct comparisons will not be possible since the two phases used different food terms in the cognitive tasks which themselves were distinct (the earlier phase used rankings and this phase used ratings). All of the cultural keys for this phase are displayed in Table 14.4. The numeric ratings were generated from consensus analysis in Anthropac, and were rounded to achieve the values 1 (most healthy), 2 (somewhat healthy), and 3 (least healthy), for example.
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<tr>
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<th>Rating</th>
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<th>COST group2 n=40</th>
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Table 14.4: Cultural keys in the dimension of health, cost, convenience, and desirability.
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<td>SHRIMP</td>
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<td>MENUDO</td>
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<tr>
<td>TURNIPGREEN*</td>
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</table>

Table 14.4, continued.
Health Cultural Key

In the dimension of health, some clear patterns are visible when examining the cultural answer key. First, the number of foods that were rated as most healthy was larger than the number of somewhat and the least healthy foods. Recall that the structure of these 32 foods were not as balanced as that of the 36 foods in Phase 2 which had relatively equal numbers of meats, vegetables, fruits, carbohydrates, composite foods, and snacks. In this phase, 18 of the 32 foods were fruits and vegetables. These foods, along with fish and shrimp, were the foods that were classed as being the most healthy. Notably, the unfamiliar foods of turnip greens and blueberries were also included. The photos may have influenced participants’ decisions when rating these two cards, urging them to be in the same category as foods having similar morphological qualities. That is, the cultural knowledge of “fruits and vegetables are the healthiest foods” may have compensated for unfamiliarity with the specific health properties of or experiences with turnip greens and/or blueberries.

Foods that participants rated as being somewhat healthy were the composite foods that mark Mexican cuisine: caldo, sopa, menudo, and tacos/enchiladas, as well as tortillas and chiles, other foods characteristic of Mexican food. Grits and cornbread are carbohydrate staples from southern American food. Juice was also rated as somewhat healthy. The least healthy foods were foods made from refined wheat flour: pancakes and biscuits. The caffeinated beverages that are often served sweetened were also rated as being the least healthy.

The structure of this cultural key is similar to that of the key from the 15 Mexican participants who ranked foods from most to least healthy in Phase 2.2. The only difference is that in Phase 2.2 both sopa and caldo were ranked as being healthier than some fruits and vegetables (such as pears, onions, and peaches). Other than this difference, the order of the
foods is similar, with all of the fruits and vegetables (except chiles) and shrimp being rated as most healthy, carbohydrate foods were in the middle, and with more processed/refined foods and potentially sugar-laden beverages being rated as least healthy. Mexicans in Phase 3 more or less rated the foods characteristic of the Blacks and Whites similarly to how they were ranked by these ethnic groups in Phase 2.2. The only exception is juice, which was ranked by Blacks as being one of the top ten healthiest foods, whereas Mexicans rated it as being in the second, or “somewhat healthy” group.

Health knowledge is widely distributed among Mexicans, and competence in this dimension is substantial. The inclusion of foods that mark the cultural models of both Whites and Blacks in the South was a method that required the Phase 3 participants to use their cultural model of healthy food to make distinctions on as set of foods that may have been unfamiliar to them. With only a few exceptions (noted above), the participants rated all of the foods, regardless of which ethnic group they characterized, similarly to how they were ranked in earlier research phases.

Cost Cultural Keys

The dimension of cost was contested among the 50 people in Phase 3. The ratings of two groups were analyzed separately and consensus was reached—this resulted in two separate cultural keys. Both cultural keys place shrimp and fish as being some of the most expensive foods. Key differences between the two keys include the ratings on composite (Mexican foods), Southern staples, and fruits and vegetables.

Specifically, Group 1 (n = 7) distinguished themselves by consistently rating fruits and vegetables as being more expensive than did Group 2 (n = 40), who overwhelmingly placed these at the bottom of the cultural key. At the same time, Group 1 rated the Mexican composite
foods as being somewhat expensive, while most of these dishes (caldo, tacos/enchiladas, and
menudo) were among the most expensive for Group 2. Notably, Group 1 rated many of the non-
fruit and –vegetable foods that characterize Southern American cuisine (sweet tea, pancakes,
cornbread, grits, and biscuits) as being the least expensive, while Group 2 rated these foods as
somewhat expensive. Certain items were rated by both groups as being somewhat expensive
(tortillas, sopa, apples, salad, peaches, pears, and chiles), but even with these similarities, within
this rating bracket Group 1 and Group 2 still exhibit the differences which characterize their
cultural keys as a whole: of these shared foods, Group 1 rated tortillas and sopa as cheaper and
the fruits and vegetables as more expensive, and vice versa. All in all, only 9 food items of the
32 total were rated similarly by the two sub-groups in the dimension of cost.

When drawing comparisons between the ratings of the Phase 3 Mexicans and the
rankings completed on the cost of foods in Phase 2.2, similar patterns appear. Group 1 (n = 7)
rated Mexican composite foods as less expensive than the earlier Mexican sample. This same
group rated fruits, vegetables, and juice as being more expensive, and rated coffee and sweet tea
as being less expensive than the rankings from Blacks and Whites in Phase 2.2 suggest. Group 2
(n = 40) rated grits, pancakes, cornbread, and biscuits as being more expensive, and rated turnip
greens as being less expensive than the cultural keys from the American sample of Blacks and
Whites.

There are clear differences in how a sub-group of Mexicans perceive food cost relative to
the majority of the sample. Upon examining the classic sociodemographic variables of Group 1
and Group 2, there were no significant differences regarding the age, sex, education, income,
employment status, religion, nor marital status between these two groups. No differences were
found by household characteristics, migration history, nor years lived in Tuscaloosa. It may be
that Group 1, which exhibited variation in cultural knowledge regarding how expensive certain classes of foods are, has more or less familiarity with these foods or with the Americans who consistently consume these foods. These relationships will be explored further in future chapters.

**Convenience Cultural Key**

Convenience was an uncontested domain for these 50 participants. Different food classes are easily visible in this set of weighted answers presented in the cultural key for the convenience of the 32 foods presented to the respondents. Fruits and juice are considered to be the most convenient to consume, followed by a mix of different vegetables and beverages. The somewhat convenient group consisted of some vegetables, and all of the grain/carbohydrate foods—tortillas, grits, pancakes, cornbread, and biscuits. The least convenient group was reserved for foods that often take substantial preparation time to cook before one can eat them—the two meats, and all of the composite dishes which characterize Mexican food (sopa, tacos/enchiladas, menudo, and caldo).

Certain similarities were found between the keys of Phase 2.2 and Phase 3. Cold beverages and fruit are at the top of the keys, indicating that they are the easiest food items to consume. Onions and carrots were the most convenient of all of the vegetables. Finally, both samples considered meats and traditional Mexican dishes to be the most inconvenient to consume. Only a few differences are noted. The Mexicans in the earlier phase ranked coffee above some fruits and all vegetables, but Phase 3 Mexicans rated coffee in the midst of vegetables that usually require cooking time prior to consumption. Likewise, tortillas were ranked above all vegetables in the previous sample, but in Phase 3 tortillas were rated as being more inconvenient than all of the vegetables. Phase 2.2 participants considered cauliflower to be
one of the most inconvenient foods, and was ranked just above meat and composite Mexican foods. However, the 50 Mexicans lumped cauliflower with the other vegetables, rating it as being more convenient than all of the carbohydrate foods, something that was not found among respondents in Phase 2.2.

Many similarities can be observed when comparing the knowledge of Blacks and Whites, as presented in the cultural keys from consensus analysis. Both Black and White participants considered fruits and cold beverages to be among the most convenient foods, while meat was the least convenient. Blacks generally considered vegetables that are cooked to be less convenient than many other types of food—but this is a difference that distinguishes their ethnic group more than it does the Mexicans in Phase 3.

As with the unconstrained pilesort, there seems to be a use/reliance on categories of foods (food groups) when participants rated along the dimension of convenience. That is, among the Phase 2.2 participants, classes of foods were not grouped together so clearly in the rankings. Perhaps these groupings by food pyramid category are due to the unequal numbers of food classes represented in the 32 foods chosen for this part of the project, or perhaps this effect is due to another reason. Nevertheless, there is considerable shared knowledge among these participants regarding the degree to which these 32 foods are considered to be convenient, and these patterns are evident in the cultural keys.

**Desirability Cultural Keys**

In looking at the two sets of cultural keys for the dimension of desirability, it is clear that the participants, regardless of whether they were in group 1 or group 2 (described above) felt strongly about the desirability of traditional Mexican dishes, tortillas, and chiles. Shrimp and fish, as well as bananas and grapes were also agreed upon by both sub-groups to be among the
most desired foods. Somewhat desired foods that the two sub-groups rated similarly were
cherries, peas, blueberries, cornbread, biscuits, and sweet tea. Grits were understood to be one of
the least desired (if not the only undesired) food by both sub-groups. These 17 food items were
given the same rating by both sets of participants, while the remaining 15 foods received distinct
ratings by sub-group. These food items are pancakes, beverages (juice and coffee), fruits (pears,
peaches, apples, and papayas), and many vegetables (salad, green beans, onions, corn,
cauliflower, cabbage, turnip greens, and carrots). These items with disputed ratings originate
from all three of the ethnic groups’ unique foods from Phase 2.

Key differences between the two sub-groups center on how fruits and especially
vegetables were rated. Group 1 (n = 31) rated most of the fruits and vegetables as being among
the most desired foods. Somewhat desired foods include all of the beverages, the carbohydrate
foods of the Black and White models, and five other fruits and vegetables. Grits were singled
out as a solitary example of the least desired food. Members of Group 2 (n = 16) feel similarly
about grits being disliked, but included most of the vegetables in the least desired category.
Fruits and vegetables overall did not fare as well in these ratings by Group 2, including
cauliflower, a vegetable salient to the Mexican group overall. This indicates a true dislike of
fruits and vegetables, and not just putting unfamiliar items into the least desired category
(although this may have had some effect). Rather, these individuals stated cultural preferences
for pancakes, coffee, and juice, with all of the other carbohydrate items being rated higher than
Group 1.

Upon further investigation via comparison with the cultural keys from Phase 2, a pattern
emerges. As was stated in the earlier chapter that elaborated upon these cultural keys, African
American rankings on the desirability of foods mirrored rankings by a sub-group of Whites, the
defining characteristic of which was their low rankings of fruits and vegetables. A preference for composite foods and carbohydrates also characterizes these cultural keys, and it appears that this second assemblage of Mexican participants exhibited similar cultural beliefs while rating these 32 foods.

The second sub-group of Whites and 12 Mexican individuals seemed to share separate ideas about what foods were preferred, characteristics which the first set of Mexicans from Phase 3 also display in their cultural key. For these people, fruits and vegetables are rated as being more desired, with foods known to be the least healthy appearing at the bottom of the desirability keys.

These distinctions made regarding the desirability of fruits and vegetables is important, given the role that these foods play in maintaining one’s health and preventing chronic diseases such as obesity, diabetes, and cardiovascular problems. Examining Desirability groupings (Group 1 being “pro-fruit and vegetable”, Group 2 being “pro-carbohydrate”) using the major socio-demographic variables found no significant differences. However, significant differences were found between Group 1 and Group 2 regarding direct migration from Mexico. More members of Group 1 migrated directly from Mexico to Tuscaloosa than those in Group 2 whose members were characterized by living in other places before moving to Tuscaloosa ($X^2$ (df=1) =4.24, p = .04). Group 1 has also lived in Tuscaloosa for more years than those in Group 2 ($z = -1.67$, p = .10). These results suggest that members in Group 1 perhaps had migrated to join a preexisting social network or to fulfill a particular job opening, and have remained in Tuscaloosa for these same proposed reasons. The relationships between these slightly different sets of cultural knowledge and variables regarding social integration and social networks with Americans will be explored in upcoming chapters, as well as the possible correlation of these
ideas about the desirability of fruits and vegetables to self-reported eating behaviors. That is, do the individuals who rate fruits and vegetables as being desirable eat more of these foods? Competence in this dimension will be correlated with consonance in this dimension, as well as the dimension of healthy eating. These steps will answer questions about if people are eating the foods that they consider to be the most preferred or desired, and if, in light of their ratings on fruits and vegetables, if they are eating foods that are considered to be healthy.

The next section considers how the consensus analysis results from the uncontested dimensions of health and convenience can be used for PROFIT analysis in order to explain more about the structure of the foods in these cultural models, as they were plotted graphically using non-metric multidimensional scaling.

**PROFIT Analysis Results**

PROFIT analysis revealed that health was an attribute that was strongly driving the pile sorts of the 50 participants (multiple r = .89, p = .001). The PROFIT analysis regression line can be seen on Figure 14.6, and it is clear that the fruits and vegetables were considered to be some of the healthiest foods. Indeed, the “cultural key” from consensus analysis includes all fruits and vegetables and fish and shrimp as the most healthy foods (the least healthy were pancakes, biscuits, coffee, and sweet tea, with the remainder of the foods being known to be somewhat healthy).

PROFIT analysis again was significant when the cultural key from the convenience consensus analysis was used as the dependent variable in the regression analysis that used the data points as independent variables. Convenience was found to be an attribute that was strongly driving how the participants completed the unconstrained pile sort (multiple r = .92, p = .001). This regression line is visible on Figure 4; it is clear that fruits, and to some extent vegetables and
beverages are considered to be more convenient while foods that require more extensive preparation are understood to be inconvenient. These findings are more or less consistent with the cultural keys as they were described in the above sections.

**Figure 14.6: MDS with PROFIT analysis for Phase 3 participants.**

**Conclusion**

This chapter elaborated upon the results from an unconstrained pile sort and rating tasks along four dimensions of meaning. The food items used for these cognitive tasks were derived from previous research phases and consisted of a selection of foods salient to Mexicans as well as those salient to African Americans and White Americans. The inclusion of these foods that
may be of uncertain relevance to the cultural models of Mexicans in Tuscaloosa produced variable results in each of the four dimensions of meaning. Health and convenience were dimensions in which substantial consensus was evident for the participants. However, two separate models were discovered within the dimensions of cost and desirability, and fundamental differences in cultural knowledge about various types of foods became evident upon examining the cultural keys that resulted from the consensus analysis.
CHAPTER 15
SOCIAL TIES, CULTURAL KNOWLEDGE, FOOD HABITS, AND HEALTH

Introduction

This chapter begins by presenting a focused roadmap for the data analysis that addresses the hypotheses of this project. Cultural competence in American food and cultural consonance in American food will be discussed, so that individual Mexicans’ knowledge of food and reported eating behaviors can be examined in relation to social network interaction with Americans, the main independent variable in this project. The main research questions of this project are addressed in this chapter, namely the effect of intercultural communication with one’s social network alters on knowledge of American food, the consumption of American food, and health outcomes like diabetes risk.

Narrowing the Focus: White Desirability Model 1 and Health Outcomes

As was argued in the chapter on the social integration and social networks, it seems clear that Whites are the cultural reference group in question for this sample. This project made a point to include Blacks so that their cultural models could be explored with the same attention to detail as with the White cultural models. However, the low rates of reported social interaction made evident by very few Blacks being included in the formal social network analysis and the comments made by the participants regarding their lack of interaction with Blacks—and even outright avoidance of Blacks—as well as unfamiliarity with their foodways suggest that to keep including them in the analyses may run the risk of belaboring their presence in Mexicans’ lives, when these relationships do not exist to the same degree that they do with Whites. However, I
realize that using Whites only in my analyses from this point on implies a certain
unidimensionality to the complex and multifaceted processes of social integration and culture
change for Mexicans in Tuscaloosa; this is not the intent of this decision and it is recognized as a
limitation of this current data analysis and interpretation. It is simply beyond the scope of this
dissertation to explore the relationships between Blacks and Mexicans further, so that I may
focus on the majority of the relationships that Mexicans have while they are living here. The
decision to exclude Blacks does not mean that I stopped comparing them to Whites and
Mexicans; only that reporting these findings will be limited in this dissertation from this point
on. That is, preliminary analysis was done on both consonance in belief and consonance in
eating habits for Blacks, but major comparisons were not found to bear significantly upon the
hypotheses for this project, and in large part are not reported in this chapter. These results
reported below do support the focus on Whites as the primary reference group for Mexicans. It
is expected that more thorough analysis and exploration of the race relations between Blacks and
Mexicans will be completed in the future.

In addition, the topical focus has narrowed as well. Phase 3 Mexicans (n = 50) were
asked to rate, using a scale of one through three and along four dimensions of meaning, a total of
32 foods that were a conglomeration of foods from each of the three ethnic groups. In my
analysis of these four dimensions of meaning in the previous chapters, it appears that the models
of health and desirability are the most useful for examining the hypotheses of this dissertation
regarding social interaction with Americans and possible adoption of American food behaviors
and beliefs that may significantly affect health status. Therefore, cost and convenience, while
important to the sample to varying degrees, will be explored in future data analysis and
publications and will receive no further consideration except in preliminary analysis reporting, as noted below.

Taking this focus even further, with regard to the evidence that suggests that Whites were using two models of desirability, attention will be paid to the “fast food” model of desirability (White desirability model 1). The key features of this model are the preferences for high-calorie, high-fat, high-sugar foods and beverages, and a very low ranking of fruits and especially vegetables. Incidentally, the responses of Blacks seem to be similar to those Whites who demonstrated competence in the “fast food” model of desirability. My research hypotheses center around knowledge of this W1 model of desirability, especially since Mexicans (and a subset of Whites) responded in a manner that suggests that a “meal” model was used during the cognitive tasks, one that includes more of a preference for fruits and vegetables, and no preference for unhealthy fast foods. That is, it was expected that increased social network interaction with Americans—mostly Whites—may influence cultural knowledge about the desirability of foods, causing a shift away from the meal model and toward the fast food model, ultimately affecting health. It is also possible that social network interaction may reinforce the meal model, something which may also emerge from the analysis in terms of lack of individual alignment to the fast food model. However, given the logic of my hypotheses, the fast food model of White desirability group 1 was chosen as the reference point from which to test these ideas.

**Measures of Cultural Competence and Consonance**

After testing for evidence of shared cultural knowledge, a major goal of this project, it was then pertinent to examine individuals’ knowledge in relation to the American cultural models that have been elicited. Then, cultural consonance scores were created for each
individual, measuring to what degree individuals’ behaviors approximate those identified as being the most central to the cultural model in question. These next sections of the chapter will first explore cultural competence in the White model of food, answering questions about how Mexicans’ conceptions about foods match not only their cultural model, but also the cultural models of Whites. Secondly, this chapter will describe the self-reported eating habits of Mexicans, and the degree to which these eating habits approximate the different cultural models of White desirability. Both the ratings tasks and the 14-day food frequency information are the data used for these analyses.

This rating method used in Phase 3 was modeled after Chavez et al. (2001), who tested Latinas’ use of medical screening procedures as they were related to social structural factors (such as education level, employment status, income, English language ability, and having medical insurance) and cultural factors (correlations with Latinas’, Anglo women’s, and physicians’ separate cultural models of cancer risk factors). These Latina women were asked to rank cervical cancer risk factors that were comprised of factors that were relevant to their cultural model, as well as those from the cultural models of Anglo women and physicians from the same community. Beliefs about the causes of cervical cancer varied, and seeking out screening for cervical cancer by Latina women was explained in part by which cultural model the Latina women adhered to the most. Latinas consonant with the Latina model of cervical cancer etiology were not significantly impacted by cultural factors in their past health care seeking behavior, instead being impacted by the structural factors listed above. However, Pap tests were predicted by individual Latina women’s beliefs that conformed to either Anglo women’s or physicians’ models, even after accounting for the same structural factors. In short, Chavez et al. (2001) found that both culture and social structural factors influence health
behaviors, but that these relationships are complex and need to be elucidated using carefully planned ethnography that includes specific structured interview tasks related to measuring cultural knowledge, belief, and behavior. This research project was constructed with these same relationships in mind.

**Converting the Cultural Keys from Phase 2.2**

One of the major goals of this research project was to examine how Mexicans are conceptualizing American foods as they are exposed to them through a variety of different means. The rating tasks undertaken by the participants in Phase 3 were designed to measure to what extent Mexicans’ knowledge about American food are in line with what Americans themselves think. This measure of cultural competence in the dimensions of health and desirability in the fast food model were calculated by converting the cultural answer key displaying the ranked food items from Phase 2 into ratings, so that they could be compared to the ratings from Phase 3. I acknowledge that the best comparison would have come from two sets of rankings or two sets of ratings. Rankings were planned for both Phase 2 and 3, but time constraints during the survey interview of Phase 3 prevented moving from ratings to a full ranking of the foods within the three categories created. That is, while people in Phase 2.2 used the notecards to make three categories and then seamlessly start rank ordering each one, Phase 3 Mexicans were only asked to rate the foods into three categories.

Observation and some notes taken during the Phase 2.2 rankings clearly indicated that the groups of foods that participants rank ordered did not often contain a balanced number of items, therefore dividing the ranking keys into three equal groups would not represent the structure of people’s cultural knowledge. To make the keys comparable, a method was devised that kept the
proportions of the foods within each rating category similar to the proportions created by the Mexicans in Phase 3.

This method using the proportions of terms from the Phase 3 rating keys involved removing the “core” foods (those common to each of the three ethnic groups) from the cultural key. Using the model of White health as an example, all of the foods except those pertinent only to Whites were removed from the key, leaving 1) salad, 2) greens, 3) apples, 4) fish, 5) blueberries, 6) bananas, 7) green beans, 8) peas, 9) corn, 10) biscuits, 11) cornbread, 12) coffee, and 13) sweet tea (in descending order from healthiest to least healthy). The “shared” foods similar to Blacks and Whites are included in this list. These shared foods were salient to both Whites and Blacks, and their inclusion was justified by this fact as well as for methodological reasons pertaining to maximizing the number of foods in the converted cultural keys. To apply the proportions all foods except for the above list were similarly removed from the Mexican key—these were not the core foods (since they were not part of Phase 3), but the unique Black foods and all of the Mexican foods.

The proportion of these 13 White foods that were rated by Mexicans in Phase 3 as being healthiest (given a rating of ‘1’) was applied to the White key, such that the first nine foods on the list were given a rating of one. The tenth White food was given a rating of ‘2,’ and therefore biscuits are rated as somewhat healthy in this converted key. In the Mexican Phase 3 key, three foods were given a rating of ‘3,’ so the final three foods of cornbread, coffee, and sweet tea were marked as least healthy. In this manner, the foods salient to the White models of health and desirability were categorized into three rated groups.
Validating the Proportions Method

Using these proportions set forth by the Mexicans seemed to be the least biased way to do this conversion. Before calculating the White converted ratings, I tested the proportions method on the Mexican rankings (converting the unique Mexican foods to ratings). That is, for both the Phase 2 and Phase 3 cultural keys for health, I deleted all but the Mexican foods, maintaining their order. With seven foods being rated as ‘1’, six as ‘2’ and one food as ‘3’, there was a good match-up, with ten of the foods getting assigned to the same rating as in Phase 3—a 71 percent match. When I did this for all four dimensions of meaning, the match-up ranged from 71 percent to 86 percent, highest in the dimension of desirability. So this process was my litmus test for using this same proportions-method to make ratings categories for the other two ethnic groups.

When the same method was applied to the other White cultural keys (Blacks were also included for preliminary analysis), a substantial number mirrored the results used for the Mexican-Mexican test group. That is, this method was applied to all keys in all four dimensions of meaning, even though from this point on the analysis will focus on health and desirability only. In one case, White rankings on cost, the foods for each of the three rating categories matched 100 percent. However, the multiple models of desirability were much messier, as is to be expected due to evidence that suggested that there are separate cultural models, as described in earlier chapters. In this dimension, the food item match ranged from 45 to 63 percent. Excluding the dimension of desirability, overall there was much more concordance with the White models (92-100%) than with the Black models (64-82%). This preliminary analysis of the lesser degree of matching with the Black models was more evidence that Whites may be the primary reference group for Mexicans in Tuscaloosa. The food frequency analysis in the next section also reveals very low consumption of certain characteristic foods from the Black model;
overall this information reinforces the qualitative comments I received regarding not knowing what I was referring to when I asked them to tell me their impressions of African-American food.

In addition to the Mexican-Mexican proportions test, there was another way in which I checked these categorizations—by using notes taken during the Phase 2 interviews. There were five instances where ratings were recorded while the participants ranked the cards. In these five cases when the proportions from the Mexican ratings were applied, the individuals’ answers matched with the new cultural key between 55 and 82 percent of the time. Overall, I feel that the notes I made during the interviews also support using the proportions method that was devised, as the percent matches were similar to those from the Mexican-Mexican litmus test.

The Converted Keys

The converted cultural keys can be found in Tables 15.1 and 15.2. For the dimension of health, the keys for Whites as well as the litmus test for Mexicans are presented. When the Mexican proportions were used on the White rankings in the health dimension, the results mirror other explorations of the dimension of health for all three ethnic groups. Overall, fruits and vegetables are considered to be healthy, and carbohydrates and beverages are the least healthy. Clearly health is a dimension of meaning with little intracultural variability, and the proportions method highlights these beliefs.
Table 15.1: Health Dimension Ratings Converted from Rankings

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<th>Mexican proportions used on Mexican rankings</th>
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<td>1  greens</td>
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<tr>
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</tr>
<tr>
<td>1  blueberries</td>
<td>1   sopa</td>
</tr>
<tr>
<td>1  bananas</td>
<td>1   caldo</td>
</tr>
<tr>
<td>1  green beans</td>
<td>1   pears</td>
</tr>
<tr>
<td>1  peas</td>
<td>2   onions</td>
</tr>
<tr>
<td>1  corn</td>
<td>2   peaches</td>
</tr>
<tr>
<td>2  biscuits</td>
<td>2   tortillas</td>
</tr>
<tr>
<td>3  cornbread</td>
<td>2   menudo</td>
</tr>
<tr>
<td>3  coffee</td>
<td>2   tacos/enchiladas</td>
</tr>
<tr>
<td>3  sweet tea</td>
<td>3   chiles</td>
</tr>
<tr>
<td>--</td>
<td>3   coffee</td>
</tr>
</tbody>
</table>

In the case of the White fast food model of desirability keys, since two models emerged within this one dimension of meaning for Mexicans in Phase 3, two keys of ratings were created. That is, it was recognized that the individuals in the pro-fruits and vegetables model may have different beliefs about the desirability of White foods when compared to the pro-carbohydrate group. The proportions of the pro-veggie and the pro-carb Mexican groups were applied separately to the key of the fast food model of Whites. These cultural key conversions are presented in Table 15.2.
### Table 15.2: White Fast Food Model of Desirability Converted Key, by Phase 3 Desirability Group

<table>
<thead>
<tr>
<th>Pro-fruit and vegetable group proportions used on fast food model of desirability</th>
<th>Pro-carbohydrate group proportions used on fast food model of desirability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 sweet tea</td>
<td>1 sweet tea</td>
</tr>
<tr>
<td>1 coffee</td>
<td>1 coffee</td>
</tr>
<tr>
<td>1 biscuits</td>
<td>1 biscuits</td>
</tr>
<tr>
<td>1 salad</td>
<td>2 salad</td>
</tr>
<tr>
<td>1 bananas</td>
<td>2 bananas</td>
</tr>
<tr>
<td>1 cornbread</td>
<td>2 cornbread</td>
</tr>
<tr>
<td>2 apples</td>
<td>2 apples</td>
</tr>
<tr>
<td>2 corn</td>
<td>2 corn</td>
</tr>
<tr>
<td>2 fish</td>
<td>2 fish</td>
</tr>
<tr>
<td>2 blueberries</td>
<td>2 blueberries</td>
</tr>
<tr>
<td>2 peas</td>
<td>2 peas</td>
</tr>
<tr>
<td>2 greens</td>
<td>2 greens</td>
</tr>
<tr>
<td>2 green beans</td>
<td>3 green beans</td>
</tr>
</tbody>
</table>

The proportions applied to the fast food model of White desirability mirror the cultural knowledge that each group of Mexicans possesses—the pro-fruit and vegetable group do view some White fruits and vegetables as being most preferred, while the pro-carbohydrate group does not. Using the same method, none of the foods were considered to be least preferred (only grits—a Black food—was given this rating). Similarly, a number of vegetables occupied this least preferred category for the pro-carb group, with green beans being the White food falling into this key category. Recall also that the pro-carb group rated cauliflower as least desirable, and as this is a food that is salient to Mexicans, it follows that it may not be merely the unfamiliarity with certain foods (like greens or grits) that is causing them to be rated as least desirable, although this certainly may be a factor in their placement. Overall it is possible to see some of the same patterns from the Phase 3 Mexican cultural keys on desirability, even with the use of this very small number of diagnostic foods salient to a sub-set of the White sample.
Creating Individual Distance Scores that Reflect Cultural Competence

Having converted the cultural keys, I then turned my attention to creating distance scores for each individual that measure their deviation from the cultural models of Whites using the converted ratings described in the previous section. Distance from—and conversely, competence in—the fast food model that some Whites hold was an important variable in this research project. That is, since the key indicated that blueberries were collectively understood by Whites as being somewhat desired (having a rating of ‘2’) and a Phase 3 Mexican individual rated this food as least desired (rating of ‘3’), then that individual received a score of one, indicating their distance from the cultural key of desirability. These distance scores were calculated for each of the 13 White foods. Absolute values of the differences were summed to create a distance from the White model of health score, for example, with the higher values meaning that the person had knowledge that was less similar to the knowledge that Whites have about White food. Lower scores in this case indicate higher competence in the White model of food. Descriptive statistics for all of the distance scores created can be viewed in Tables 15.3—15.5.

| Table 15.3: Distance score descriptive statistics for the dimension of White health |
|-----------------|-------|-------|----------------|---------|----------|
| n               | 50    | 3.6   | 2.4           | 3.0     | 1-26     | 1-10     |

Distance from the White model of health was minimal, with an average distance score of 3.6. That is, individual Mexicans were on average about four points away from a perfect match with the cultural key. The composition of the White food list may have something to do with the small distance—as outlined in earlier chapters, most of the diagnostic foods that distinguish the
cultural models are produce items. Overall, it seems that everyone knows that these items are healthy and that foods like biscuits or sweet tea can contain unhealthy things like fat and salt.

The mean distance from the fast food model of desirability for Whites varied depending on if the Mexican individual was in the pro-fruit and vegetable group or the pro-carbohydrate group. Mean distances corresponded to the preferences of each group, with the first group having a larger mean distance from the fast food model, on average being about 10 points away from a perfect match with the cultural key. The second group’s preference of carbohydrates is reflected in a mean distance of approximately 8 points away from the fast food model key.

<table>
<thead>
<tr>
<th>Fast food model of desirability</th>
<th>n</th>
<th>Mean distance</th>
<th>SD</th>
<th>Median distance</th>
<th>Possible Range</th>
<th>Actual Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexican Group1—Pro-fruit and vegetable model</td>
<td>31</td>
<td>10.3</td>
<td>2.5</td>
<td>10.0</td>
<td>1-26</td>
<td>6-15</td>
</tr>
<tr>
<td>Mexican Group2—Pro-carbohydrate model</td>
<td>16</td>
<td>7.7</td>
<td>1.8</td>
<td>7.5</td>
<td>1-26</td>
<td>5-11</td>
</tr>
</tbody>
</table>

The point of creating these distance scores was to examine variability in the cultural knowledge that Mexicans have about White foods. The distance scores from the fast food model were considered for all participants in Phase 3, regardless of whether they fall into the pro-veg group or the pro-carb group.

<table>
<thead>
<tr>
<th>Fast food model of desirability</th>
<th>n</th>
<th>Mean distance</th>
<th>SD</th>
<th>Median distance</th>
<th>Possible Range</th>
<th>Actual Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>47</td>
<td>9.4</td>
<td>2.6</td>
<td>9.0</td>
<td>1-26</td>
<td>5-15</td>
</tr>
</tbody>
</table>

For the total sample, the mean distance from the fast food model of the desirability of White foods was 9.4. It was hypothesized that the more one exhibits that they have cultural knowledge of this White model that is characterized by White fruits and vegetables being undesired, the higher one’s diabetes risk would be. Those individuals who fell at the median distance or below were those people who exhibited a substantial amount of competence in the fast food model of
Whites (coded as 1). Similarly, those with distance scores of 10 or above were considered to be more distant from the model, having the least competence in the W1 model of desirability (coded as 0). Creating these dichotomous competence scores in the White 1 model of desirability also allowed for ease of interpretation during data analysis, since predictions were made regarding whether or not one exhibits more or less competence.

**Food Frequency Data**

Food frequency data in the form of a self-report yielded information regarding how many days in the past two weeks that each food was consumed. The foods used in the food frequency questions were 55 in number; all of the core foods as well as the unique markers from the Black, White, and Mexican cultural models were included. All of the foods are listed in Table 15.6, in decreasing frequency of consumption. In Table 15.6, foods from the Mexican model are green, those common to White and Mexican are blue. Foods from the Black model are pink, those from the White model are yellow, and those common to the Black and White models are orange. The 22 core foods common to all three ethnic groups are unhighlighted.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>tortilla</td>
<td>12.22</td>
<td>sopa</td>
<td>5.90</td>
<td>peaches</td>
<td>3.42</td>
<td>pizza</td>
<td>1.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>onions</td>
<td>10.44</td>
<td>pasta</td>
<td>5.70</td>
<td>pork</td>
<td>3.38</td>
<td>pancakes</td>
<td>1.66</td>
<td></td>
<td></td>
</tr>
<tr>
<td>chiles</td>
<td>9.28</td>
<td>apples</td>
<td>5.42</td>
<td>green beans</td>
<td>3.24</td>
<td>greens</td>
<td>1.40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>milk</td>
<td>9.06</td>
<td>coffee</td>
<td>5.30</td>
<td>sweet tea</td>
<td>3.08</td>
<td>prep/frozen</td>
<td>1.38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beans</td>
<td>8.72</td>
<td>potatoes</td>
<td>5.14</td>
<td>fast food</td>
<td>2.96</td>
<td>menudo</td>
<td>1.22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>bananas</td>
<td>7.72</td>
<td>carrots</td>
<td>4.92</td>
<td>peas</td>
<td>2.88</td>
<td>blueberries</td>
<td>1.08</td>
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</tr>
<tr>
<td>cereal</td>
<td>7.44</td>
<td>beef</td>
<td>4.76</td>
<td>cabbage</td>
<td>2.70</td>
<td>cornbread</td>
<td>1.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>bread</td>
<td>7.40</td>
<td>grapes</td>
<td>4.52</td>
<td>candy</td>
<td>2.70</td>
<td>other meats</td>
<td>0.86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>cheese</td>
<td>7.40</td>
<td>corn</td>
<td>4.48</td>
<td>fish</td>
<td>2.46</td>
<td>cherries</td>
<td>0.84</td>
<td></td>
<td></td>
</tr>
<tr>
<td>juice</td>
<td>7.28</td>
<td>chips</td>
<td>4.26</td>
<td>papayas</td>
<td>2.46</td>
<td>grits</td>
<td>0.58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>eggs</td>
<td>6.98</td>
<td>sandwich</td>
<td>3.94</td>
<td>pears</td>
<td>2.34</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>rice</td>
<td>6.90</td>
<td>taco/ench.</td>
<td>3.94</td>
<td>cauliflower</td>
<td>2.18</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>salad</td>
<td>6.68</td>
<td>caldo</td>
<td>3.90</td>
<td>biscuits</td>
<td>2.14</td>
<td>Mexican</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>soda</td>
<td>6.56</td>
<td>shrimp</td>
<td>3.68</td>
<td>Chinese food</td>
<td>2.12</td>
<td>White</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>chicken</td>
<td>6.06</td>
<td>dessert</td>
<td>3.62</td>
<td>alcohol</td>
<td>1.98</td>
<td>Black</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**KEY**

Mex/Whi | Blk/Whi | Core | Mexican | White | Black

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As noted earlier, the food term Mexican food was covered by the inclusion of the caldo, sopa, menudo, and tacos/enchiladas terms, and was therefore not included. Soup was covered by the inclusion of sopa. One food term was added—otras carnes, or “other meats.” This food term was defined to each of the participants as “those foods that do not come from the muscle or meat of an animal, including such things as neck bones, spinal bones, tongues, and organs like liver and tripe.” During the development of the Phase 3 interview schedule, it was decided that the Soul Food meat term warranted being tested; the “other meats” term was developed (after pretesting the term and the definition) for this reason.

With the highlighted cells in Table 15.6, it seems that some patterns exist. Keeping in mind that the mean frequencies reflect the measurement values of zero to fourteen (indicating how many days in the past two weeks), the top six foods in Table 15.6 are being eaten with some regularity. Tortillas, onions, chiles, milk, beans, and bananas are being eaten at least every other day, if not more frequently. Tortillas, the staple and quintessential Mexican food, are being reported as being consumed almost every day. Onions and chiles are traditional flavor principles of Mexican cuisine, and they are being consumed with almost the same frequency.

Foods that are not being consumed with any regularity are greens, prepared/frozen meals, menudo, blueberries, cornbread, Soul Food meat (“other meats”), cherries, and grits. Most of these foods are from the African American model. As discussed previously, Mexicans in this sample were generally unfamiliar with grits, blueberries, and greens, so this lack of knowledge of these foods could explain their low consumption. Menudo and other meats/Soul Food meats also received low scores. Menudo and what often comprises it (tripe, pigs feet) are seen as inconvenient to prepare in the home, and these types of meats in general and prepared dishes like this were known to be expensive. These could be possible reasons for the low consumption.
However, these “cast-off” foods were sometimes regarded with an expression of disgust when mentioned during the interview. Menudo is a more traditional dish of Mexico, but some individuals expressed that the meats used to make menudo were of very low desirability. Menudo was also recognized as a weekend food, and it has a particular reputation for curing hangovers. Further analysis will explore if age or other factors like rural origins in Mexico might contribute to a report of having actually eaten these foods in the previous two weeks’ time. That is, it is possible that may be a generation gap in the appreciation of these foods which have been part of the peasant diet in Mexico throughout history, or that an urban food model does not include a fondness for menudo.

Finally, it is worth noting the frequencies for the fruits and vegetables in Table 15.6 above. Clearly, they are being consumed with regularity, but there is not any one fruit or vegetable that is being eaten more than every other day. There are many types of produce on this list, so it is possible that individuals are combining different varieties during their daily meals. Keeping in mind the USDA recommendations for 5-7 servings of fruits and vegetables per day, it was necessary to ask other questions about produce consumption in the Phase 3 interview.

**Fruit and Vegetable Consumption**

Before the food frequency task, Mexicans were asked specifically about their consumption of fruits and vegetables. I asked about eating behaviors during a typical day, and started with a question about how many times fruits were eaten during a normal day. Then I asked how many days in a week that fruits were consumed. These figures were multiplied and then divided by seven to arrive at the mean number of fruits eaten during a normal day. The same questions were repeated for vegetables.
This rough measure provided some telling results (see Figure 15.7), especially considering that a diet low in fruits and vegetables contributes to the risk for health problems including obesity, diabetes, and cardiovascular disease. The mean number of times fruit was eaten per day by the participants was 1.3 (SD=0.81), ranging from 0.1 times to 3.0 times per day. Vegetable consumption had a similar range, from 0.0 to 3.0 times per day, with a mean of 1.0 (SD=0.72). Therefore, participants in this sample are only consuming produce 2.3 times per day on average.

| Table 15.7: Mean self-reported fruit and vegetable consumption, in times per day |
|---------------------------------|--------|--------|--------|
|                                  | Women  | Men    | Total  |
| Fruit consumed (#times per day)  |        |        |        |
| Mean (SD)                        | 1.6 (0.8) | 0.9 (0.7) | 1.3 (0.8) |
| Vegetables consumed (times per day) |        |        |        |
| Mean (SD)                        | 1.1 (0.8) | 1.0 (0.7) | 1.0 (0.7) |
| Total produce consumed (times per day) |        |        |        |
| Mean (SD)                        | 2.6 (1.4) | 1.9 (1.3) | 2.3 (1.4) |

With the assumption that one serving is being eaten each time, it is more than likely that individuals are not eating 5-7 servings of produce per day, however, the measure used did not incorporate serving sizes; this must be considered as a limitation in this study. Despite the limitations of these measures, this low daily consumption was considered to be an important finding for this project.

Consumption of American Foods: Cultural Consonance Analysis

The food frequency data were collected with the express purpose to explore how behavior (eating habits) is related to cultural knowledge. Starting with the freelisting phase, participants were asked to identify foods that were salient to their own ethnic group, and these foods were recorded. Differences are evident among the elements of each groups’ foods, as has been previously discussed. Certain foods elicited from Blacks and Whites were not elicited from Mexicans, and were therefore considered to be “American” foods, and not necessarily part of the
cognitive structure of the Mexicans sampled for this project. The low frequency of mention of these American foods can be considered as important research findings, as much as the lack of Mexican foods like tortilla and papayas among the Black and White freelists can be considered important.

One of the goals of this project was to determine if variation in American food consumption can be explained in part by social network interaction with Americans in Tuscaloosa. Researchers have argued against the existence of an American cuisine, but have provided ample evidence for the evolution and maintenance of a Mexican cuisine. That is, the foods the Americans mention as being important to their daily diets may not be part of a formal national cuisine. These foods are foods that are unfamiliar at least (possibly blueberries, grits, and greens?) and perhaps even unimportant (possibly cherries, cornbread, and pancakes?) to the Mexicans interviewed in Tuscaloosa. They are therefore worthy of study, since it is clear that these foods are being consumed, at least by some individuals. Therefore, a cultural consonance analysis on the consumption of Black and White foods was the next step in the data analysis for this project.

For the consonance analysis the 19 foods that were not salient to the Mexican model were investigated. Coffee, although salient to Whites, was also part of the Mexican model and was left out—this measure intended to assess to what degree Mexicans are eating foods that are not part of their own model. The raw data from the food frequency measures ranged from 0-14, indicating how many days in the past two weeks the foods were consumed. These raw data were simply converted to a score of ‘1’ if that food was reported as being eaten. The scores were added up into a measure of cultural consonance in American food. This powerful measure
enables researchers to link the cultural to the individual, by relating group knowledge about food to eating behaviors.

Descriptive statistics for cultural consonance in American food are presented in Table 15.8. For the consonance analysis, 19 foods were identified as being part of the Black and White models, or at least not part of the Mexican model. These foods were: fish, Soul Food meats, apples, blueberries, bananas, grapes, cherries, biscuits, cornbread, grits, pancakes, salad, green beans, peas, corn, greens, cabbage, sweet tea, and juice. For each of these foods, individual consonance scores were calculated. The consonance scores could range from 0 to 19. The actual range was from 2 to 19. The mean consonance in American food consumption was 10.1 (SD=3.9), and the scores were fairly normally distributed.

<table>
<thead>
<tr>
<th>Table 15.8: Cultural consonance in American food</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean number of days consumed</td>
</tr>
<tr>
<td>--------------------------------</td>
</tr>
<tr>
<td>10.1</td>
</tr>
</tbody>
</table>

Spearman’s correlation coefficients were calculated between American food consonance and a number of different variables. Consonance in American food did not differ by gender, income, education, years in Tuscaloosa, employment, nor marital status. Consonance did have a positive correlation with age ($r_s = .31, p = .02$). The variable that measured perceived current social integration into the Tuscaloosa community was not associated with American food consumption, but other variables that likely contribute to a feeling of increased integration were. These variables were number of children in the household ($r_s = .21, p = .07$), having family in Alabama ($r_s = .22, p = .03$), talking with any number of neighbors ($r_s = .43, p = .001$), volunteering within the community ($r_s = .31, p = .01$), having close friends in Tuscaloosa of any ethnicity ($r_s = .33, p = .01$), and reporting one’s English language ability as other than “very poor” ($r_s = -.21, p = .07$). Consonance was then correlated with the social network variables that addressed the frequency of interaction, frequency of meal sharing, and tie strength to Americans.
Overall, frequency of interaction (daily vs. weekly, etc.) was not associated with eating American foods. However, a positive association was found with the proportion of alters with whom meals are shared ($r_s = .30, p = .02$), and with the proportion of alters with whom meals are shared on a monthly or more frequent basis ($r_s = .30, p = .02$). Finally, tie strength was negatively correlated with consonance in American food ($r_s = .35, p = .009$).

These results are considered to be major findings of this project. Integration into the community via relationships with family, friends, neighbors, and Americans are associated with an increased consumption of foods that may have been unfamiliar in the past. Meal-sharing with Americans seems like it may be an important activity through which new foods are introduced to Mexican immigrants, and the frequency with which meals are shared may reinforce food knowledge and specific food behaviors. Finally, it is worth noting that the ties with Americans are neutral overall with a mean of 2.7 (SD = 1.0) on a scale of 1 to 5. In this sample, weaker ties are associated with an increased consumption of these potentially unfamiliar foods. This finding provides support to Granovetter’s theory of the strength of weak ties, which stipulates that weak ties are often the conduit for new and varied knowledge and opportunities, an explanation that is fitting to the hypotheses of this project.

**Logistic Regression Analysis**

Finally, it was hypothesized that increased competence in American cultural models of food and increased social network interaction with Americans would negatively affect immigrant health, specifically diabetes risk. Competence in the White 1 model of food was investigated with regard to the frequency of meal sharing with the alters in one’s network and the predictive power that these variables have upon the categorical variable of Hb A1c.
This outcome variable was dichotomized as A1cCAT normal (coded as 0) and A1cCAT prediabetic/diabetic (coded as 1). Having an A1c level at 5.7% or above placed one into the prediabetic/diabetic category. A correlation matrix was constructed to examine the relationships among the variables to be used in the logistic regression analysis (as seen in Table 15.9).

<table>
<thead>
<tr>
<th></th>
<th>A1cCat</th>
<th>Age</th>
<th>ModExercise</th>
<th>SNAeatWeek</th>
<th>CCdesrW1</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1cCat</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Age</td>
<td>.23*</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ModExercise</td>
<td>-.29**</td>
<td>-.37***</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SNAeatWeek</td>
<td>.39***</td>
<td>.07</td>
<td>-.22*</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>CCdesrW1</td>
<td>.31**</td>
<td>-.12</td>
<td>.00</td>
<td>.13</td>
<td>1.00</td>
</tr>
</tbody>
</table>

A1cCAT: pre-diabetic/diabetic (1), normal A1c (0)
Age: Self-reported age, in years
ModExercise: Self-reported moderate exercise, in hours per day
SNAeatWeek: At least one alter with whom ego eats weekly (1), No alters with weekly meal frequency (0)
CCdesrW1: Higher competence in the W1 model of desirability (1), Lower competence in the W1 model of desirability (0)
p<.10*
p<.05**
p<.01***

Using these variables, a logistic regression was used to construct a model of diabetes risk. The dependent variable of A1c category was coded as 1 for having a percentage A1c at 5.7 or above, and as 0 for having a normal A1c percent (5.6 or below). SNAeatWeek was a dichotomous variable which was coded 1 for having at least one American alter with which one shares meals on a weekly basis, and 0 for having no alters with which one eats on a weekly basis. High competence (a score of 10 or above) in the White 1 model was coded as 1, while less competence (a score of 9 or less) was coded as 0. Age and moderate exercise were the control variables for this model. These first two covariates were entered into the first block, frequency
of meal consumption into Block 2, and finally cultural competence in the White 1 model of desirability into Block 3 (see Table 15.10).

<table>
<thead>
<tr>
<th>Variable entered</th>
<th>p</th>
<th>Odds Ratio</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.18</td>
<td>1.06</td>
<td>0.97-1.17</td>
</tr>
<tr>
<td>ModExercise</td>
<td>.42</td>
<td>.92</td>
<td>0.75-1.13</td>
</tr>
<tr>
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<td>.03</td>
<td>8.16</td>
<td>1.24-53.78</td>
</tr>
<tr>
<td>CCdesrW1</td>
<td>.04</td>
<td>4.99</td>
<td>1.11-22.45</td>
</tr>
</tbody>
</table>

The odds of being in the predicted category of prediabetic/diabetic versus the reference category of normal are increased by a factor of 8.16 by having at least one alter with whom one eats on a weekly basis rather than having no alters with whom to share weekly meals.

Additionally, the odds of being prediabetic/diabetic versus normal A1c are increased by a factor of 4.99 by having more competence in the model of White 1 desirability, that is, by exhibiting knowledge that fruits and vegetables are the least desired foods, and preferring carbohydrate foods instead.

This logistic regression model paints a picture of Mexican immigrant life where the frequency of meal sharing with Americans and knowledge of how a certain sub-set of American thinks about the desirability of fruits and vegetables compared to other foods puts one at an increased risk of diabetes. Breaking bread with—and knowing that bread is preferred by—one’s American compañeros or companions may increase one’s feeling of integration into the community, but repeated exposure to an unhealthy model of food may come at a high cost to one’s future health and happiness.
CHAPTER 16
DISCUSSION AND CONCLUSION

This project set out with a number of research aims. First, I wanted to gain a better understanding of the food environment and the cultural models of food among three ethnic groups in Tuscaloosa. The cultural domain analysis of Blacks, Whites, and Mexicans allowed me to address my first hypothesis: that there would be evidence that participants were drawing upon distinct sets of cultural knowledge based upon distinctions in their responses during the cognitive tasks. Second, I wanted to address the relationships between social network interaction between Whites and Mexican immigrants and how immigrants think about and consume foods that may be beyond their frame of reference, given the evidence for the distinct cultural models that were outlined in the first two research phases. A survey that included a formal personal social network analysis was necessary to address the hypothesis that increased interaction with Whites would affect food knowledge and behaviors of Mexicans. Finally, I was interested in how the above processes affect health, specifically diabetes and diabetes risk. It was hypothesized that increased interaction with Whites would be a predictor for diabetes and diabetes risk, measured via percent hemoglobin A1c—also collected during the survey phase.

Hypothesis 1 Results

While there were similarities among the responses of Blacks, Whites, and Mexicans in terms of many of the same foods being salient to all three groups, there were some distinctions, especially with regard to fruits, vegetables, and certain grain-based carbohydrate foods like pancakes (for Blacks), biscuits (for Whites), and tortillas (for Mexicans). The salience of these
unique elements is evidence that supports the first hypothesis. Intracultural variation was present in the participants’ responses, but despite this variation, a substantial degree of cultural sharing was evident after the data were subjected to cultural consensus analysis. Health was the strongest dimension of meaning for all three ethnic groups, and there was some contention within the dimension of desirability.

Within this dimension of desirability, analysis of the data of Whites resulted in evidence that supported the idea that participants were using two different cultural models when ranking the foods. The first model of White desirability was one in which unhealthy foods were preferred, and fruits and especially vegetables were understood to be the least desired foods. Black Americans as a whole shared similar ideas about desirability. The second group of Whites shared a model in which the foods that comprise a meal were preferred. Fruits and vegetables were understood to be more desirable than unhealthy convenience foods, which were the least desired. Mexicans demonstrated similar responses about desirability; even though the elements of the meals were different, the preference for meals and fruits and vegetables was still visible in the cultural answer keys. Similarly, Mexicans understood fruits and vegetables to be more desired than the least unhealthy foods like pizza, fast food, and chips.

**Hypothesis 2 Results**

Phase 3 survey participants were presented with a group of foods which were salient to the Mexican model as well as a group of foods that were of uncertain relevance since they were from the Black and White models. Analysis of the food frequency data resulted in the creation of individual consonance scores that represented the degree to which Mexicans are eating these unfamiliar foods. Variation in consonance in American food was evident, and a number of variables that likely contribute to a feeling of social integration were correlated with consonance,
although data from a question about current perceived social integration were not itself correlated with the consonance measure. Most importantly, two social network variables were correlated with consonance in the American model. Tie strength to one’s alters was negatively correlated with consonance, indicating that weak relationships with Americans are associated with an increased consumption of foods that are not a salient part of the Mexican cultural model of food. Finally, sharing meals with alters on a weekly basis was associated with eating these possibly unfamiliar foods, but frequency of talking with alters was not. These results suggest that food knowledge may be being passed along during meals with Americans, and that the frequency of those meals may reinforce cultural information about food on a regular basis.

**Hypothesis 3 Results**

Phase 3 participants evaluated these unfamiliar foods relative to food items salient to Mexicans. The inclusion of these unfamiliar terms resulted in the emergence of two patterns of responses about desirability that reflect the contention found among the White participants. That is, there was knowledge about the preference of fruits and vegetables versus other types of food. While these data from the cultural consensus analysis are instructive, a major goal of this project was to link competence with alternate (American) models of food to social network interaction with American alters. Overall, Mexicans reported interacting with Americans with varying frequency; weekly interactions were most common. Most social network alters were Whites. Therefore, extracting the key features of the White model tells a more specific story about possible opportunities for cultural learning that was relevant to the goals of this research project.

Percent Hb A1c was correlated with competence with the first and second models of White desirability. There is no relationship between percent Hb A1c and competence in the White 2 model—a model that mirrors the Mexican model of desirability as outlined in Phase 2.2.
However, when Mexicans demonstrate knowledge similar to White desirability group 1—preferring all other foods over fruits and vegetables—percent Hb A1c increases to a level above normal. Support for the third hypothesis was found when weekly meal sharing with American alters was examined in relation to being at risk for diabetes and diabetes complications later in life. Controlling for age and moderate exercise, having an A1c percent above normal was predicted both by competence in the W1 model of desirability and by having at least one alter with whom meals are shared on a weekly basis.

Discussion

The major independent variable and explanatory factor proposed by this research—social network interaction—was conceptualized as providing both opportunities and constraints for the exchange of cultural knowledge. Most immigrants reported interaction with White alters, and the main analyses focused on White models. Qualitative data indicate that interactions with Blacks are limited and might even be actively avoided. It is hoped that future research will be able to address race relations within Tuscaloosa more thoroughly than were addressed in this dissertation.

A focused analysis on interactions with Whites revealed variability in the frequency of conversations and meal sharing. Overall, ties with these alters were weak. Weak ties are afforded a significant strength within social networks, according to the theory proposed by Granovetter (1973). In this theory, weak ties are instrumental in providing a wealth of new knowledge to ego, as each alter is understood to be coming from his or her own network within which strong ties have the effect of concentrating and reinforcing cultural knowledge and beliefs. Americans’ weak ties with Mexicans become the vehicle by which new information is shared. Results from this research support Granovetter’s work that strong ties result in networks that tend
to be rather insular, while weak ties have the potential for creating intracultural variation through
the dissemination of new knowledge about food to Mexican immigrants in Tuscaloosa.

Networks are important to Latinos who are living in the United States, as shown by
Torres (2009), who elicited a model of intercultural competence in part as a response to problems
stemming from the use of etic models of acculturation and culture change that have been
proposed by researchers in the past. These acculturation studies have used generation (Viruell-
Fuentes 2007), length of residence in the US (Kaplan et al. 2004), language ability or difficulty
(Hadley, et al. 2007), and a combination of time and language (Patil et al. 2009) as the variables
that are operationalized to measure acculturation. Some do not define acculturation at all
(Dennett and Connell 1988). Anthropologists (Hunt et al. 2004, Waldram 2009) and others
(Berry 2009, Lopez-Class et al. 2011) have recently criticized and attempted to reformulate the
concept of acculturation. This study does not directly measure acculturation or culture change,
as it is cross-sectional and not prospective. This is not seen as a limitation of the study per se,
but rather as a guide for interpreting the results presented here and for formulating future
research questions. Torres (2009) notes that the shortcomings of acculturation studies include an
emphasis on identifying changing cultural traits among immigrants at the expense of an
explanation of the pathways of culture change. This research attempted to address this gap by
proposing that cultural knowledge is shared through the constraints and opportunities presented
by interaction with Americans. The network analysis provided a snapshot of intercultural
relationships in Tuscaloosa among Mexicans and (mostly) Whites. A prospective study would
be an ideal route for identifying not only how the content of cultural models of Mexicans
changes and how behavior changes, but also how interpersonal relationships between Mexicans
and Whites change over time.
It is often assumed in acculturation studies that if Mexicans’ knowledge and behavior shift towards those of Whites, then the result will be bad health, but it seems to be more complicated than that in this case. There is evidence for competing cultural models of food desirability in Tuscaloosa. These models provide specific information on what foods are liked and disliked. Chavez et al. (2001) argue that “beliefs matter.” I would argue a similar point—having knowledge of the dominant ethnic group matters. In the case of Mexicans in Tuscaloosa, demonstrating that one knows that fruits and vegetables are some of the least desired foods is a significant part of what matters when attempting to determine the risk of diabetes, a disease for which immigrants may be unable to seek adequate care due to structural barriers in US society.

Torres (2009) uses cultural consensus analysis to examine the beliefs of a diverse group of Latinos concerning what skills are necessary in order to succeed in different cultural contexts. Consensus analysis revealed eight related dimensions of success, which include the formation and maintenance of social ties. These eight dimensions, in decreasing order of participant agreement of importance are: ambition, relationship building, perseverance (tie), hard work (tie), maintaining traditional Latino culture (tie), networks, communication, and community activities. The dimensions of relationship building and networking included creating social ties with other Latinos as well as with people of different ethnicities. Torres states that his participants equated social ties with both the prospect of learning new things and obtaining support in times of need. While this research did not address social support, it did conceptualize social ties and the social environment at large as influencing cultural knowledge, behavior, and health for Mexican immigrants.

Torres (2009) uses Ward (2001) to posit that Latinos need to acquire a specific skill set in order to function appropriately in intercultural contexts. Using cultural consensus analysis to
determine competence in alternate models allows anthropologists (and others) to turn Mintz’s statement that “people are becoming sociologically more alike, but it is really not clear that they are becoming culturally more alike” (2002:27) into an empirical research question. It is unknown if becoming culturally more alike the W1 group is one way of acquiring a specific skill set in order to function appropriately when the occasion arises to share a meal with an American. It was thought that perhaps there is an association between acquiring W1 knowledge and competence in models of health. Indeed, this correlation was found when analyzing these two variables—competence in the W1 model of desirability is positively associated with distance from the Mexican model of health ($r_s = .24, p = .05$). That is, more competence in the W1 model of desirability is correlated with less knowledge in Mexican health. Comparing this finding to the research of Oths et al. (2003) and Newkirk et al. (2005) raises more questions that might be warranted by future research. Understanding this correlation might be assisted by examining the process in Brazil where over a period of ten years, the dominant dimension of meaning shifted from the prestige value of foods to the health qualities of foods. Among Mexican immigrants in Alabama, the process may be shifting away from the dimension of health. It would be worthwhile to study how ideas of prestige play out here—is acquiring W1 knowledge the first step in acting out perceived upper-class behaviors? Neither consumption of American food nor consumption of fruits and vegetables were associated with competence in the W1 model, however. Examining how knowledge affects behavior in the domain of food and eating is an important research topic for the future.

Applying Wallerstein’s (1976) work to this topic allows one to shift focus away from ideas of health or desirability or prestige as possible motivations for culture change and towards the macro-social issue of disparities of power for immigrants in US society. White knowledge
holds power as Whites themselves hold power in dyadic relationships with Mexican immigrants. Participants in this project were establishing relationships (and even friendships) with people in the US, but these people were bosses and coworkers, teachers and church workers—people with authority. Some participants in this project reported discrimination, not speaking up in the face of discrimination, working long hours, being unable to take breaks while working, and being afraid to take a sick day. Undocumented immigrants are ineligible for driver’s licenses, health insurance, and bank accounts. Immigrants feel variably integrated into Tuscaloosa at the present time, but overwhelmingly they desire to create more roots in the future, despite the mixed response from their “imagined community” (Anderson 1983). Immigrants are working to end the liminal phase (Turner 1974) in their rite of passage (van Gennep 1960) into US society, and that work may include taking opportunities to learn more about those people whom they have regular contact with. The political-economic landscape affects all of these processes.

However, the negotiation of food and health beliefs and behaviors is multifaceted and change is not unidimensional. Mintz (2002) would argue that Mexicans come armed with knowledge of a coherent cuisine that was developed over centuries of time, and which survived even after major cultural changes due to colonial rule. But the effects of knowing that bread is preferred over fruits and vegetables, and breaking bread with Americans are clear—while competence in local cultural models that immigrants are exposed to may offer an increased feeling of integration with community members, reducing perceptions of discrimination from being an outsider in the community, reproduction of these models in one’s own life may significantly increase the risk of diabetes.
Limitations

There are many limitations to consider when interpreting the data presented here. I don’t know enough about the background of these people—class status influences both ability and willingness to emigrate—upper-class individuals are able to stay and make a living in Mexico, while those middle and lower-class individuals may see opportunity for economic progress by emigrating. Stern et al. (1999) researched Mexicans, genetic admixture, social class, and diabetes among Mexicans in Mexico and in the United States. They found that lower-class individuals were more similar genetically to Native Americans than higher-class people. Those of the lower class also had higher rates of diabetes than those of the higher class. One’s socioeconomic class background also influences food habits. Pelto et al. (1987) did work on class and diet preferences in Mexico. Middle class individuals preferred and were able to consume the high-status and unhealthy foods like coke, candy, and fast food, and had the highest rates of diabetes in comparison to lower class people, who were prevented from consuming the prestige foods, and higher class people, who have the means to transcend these prestige foods. Similar research results were found with Brazilian women and men and body composition (dos Santos et al 2001). There simply was not enough variation in socioeconomic class in order to examine these important factors of class background, food preferences, and diabetes risk in this project.

In addition to the limitations mentioned above, other factors need to be considered when interpreting this work. Sample sizes, while adequate for the determination of cultural consensus analysis, were small. A more thorough investigation into the dimension of desirability and what drives these two competing models that were identified among the residents of Tuscaloosa is warranted. As Mexican immigrants tend to be a “hidden” community, random sampling was not
possible; convenience sampling was used throughout the project. Every effort was made to include equal numbers of women and men, and age and income differences were also taken into consideration while recruiting participants. Overall, these results are exploratory, and apply only to immigrants from Mexico. Second-generation Mexicans and Latinos from other countries of origin may have different experiences with integration, social interaction, as well as conceptions of food, health, and desirability. My observations of Columbians in Tuscaloosa, of which there are a substantial number, indicate higher socioeconomic status, fewer manual labor jobs, and more diverse business ownership than Mexican immigrants. These are all factors which may be significantly associated with cultural models of food and other health-related parameters.

It was beyond the scope of this dissertation to examine the many other pathways through which knowledge about food is obtained, such as through media consumption—these ideas will be explored further in future analyses. In addition, accessibility of healthy foods, food insecurity, and the relationships between work schedules and the use of convenience foods were not explored in this dissertation. These are all important connections that were made during data analysis, but which could not be explored herein. Despite these limitations, this project contributes to a biocultural understanding of the relationships between culture and health, with special attention paid to the social structure as it is enacted through intercultural communication and the symbolic activity of sharing meals.

Finally, it must be recognized that the socio-political landscape in Alabama has changed after the 2011 tornado and the current anti-immigration legislation. It is likely that social networks in Tuscaloosa are undergoing rapid change at the moment, and that the results would be very different if this study was being conducted today. Latinos have begun to leave town, mainly due to lack of affordable housing options and fear of reprisal from law enforcement. This
reaction is happening despite efforts from the Latino Community Group to rally resources for the immigrant community, and despite messages from Tuscaloosa’s government and law enforcement officials that they are not in support of the anti-immigration legislation (Beyerle 2011). It is suspected among Latino Community Group members that families will leave Alabama and settle in other states, taking their businesses and their religious congregations with them. In their place, however, will come an influx of younger and single Latino men, who will be tasked with rebuilding the community devastated by the tornado. If this scenario does happen, then health care providers and social service workers may be back at “square one,” dealing with a social environment similar to the one twenty years ago when Latinos were a very new addition to the city and county. These service providers express fears that with the disappearance of the networks that resulted from cohesive religious congregations and the presence of community leaders with extended families in Tuscaloosa—networks which reach out to single Latino workers—dealing with problems resulting from accidents on the job, drunk driving, STD and HIV infections, among others, will be beyond their capabilities.

Conclusion

This research demonstrated that knowledge and behavior are cultural forces that influence the individual daily diet and, on a broader level, the health trajectory of an underrepresented population in the United States. This research measured meaningful local knowledge in order to detect intracultural diversity within and between Mexican immigrants and local community members in Alabama. A cognitive theory of culture and cultural consensus analysis was used to account for the variation in knowledge in the two groups, and competence in the W1 model of desirability was found to be a predictor of diabetes risk. In addition, cultural consonance analysis measured to what extent individual beliefs and behaviors match the
collectively shared cultural models of community members. Cultural consonance has emerged as a fundamental tool for those researchers looking to bridge the gap between studies of thought and knowledge and studies of behavior and belief (Dressler et al. 2005b). The aim of this research was to contribute to a cognitive theory of culture in a context relevant to biocultural medical anthropology.

Diet-related health problems of diabetes and obesity are reaching epidemic rates in the United States and worldwide, in part due to a diet low in fruits and vegetables. Mexican immigrants are interacting with community members and are sharing meals with them in varying degrees. Meal sharing on a regular basis predicts diabetes and diabetes risk, as does demonstrating knowledge similar to the cultural beliefs of some Whites. Social network interaction and specifically, having food sharing be part of the content of one’s social network, is an important vehicle for acquiring these learning opportunities.

It is hoped that this project will help health and social science researchers understand the social and cultural factors that affect patterns of eating that contribute to chronic disease incidence in immigrant populations. The ultimate goal of this research was the theoretical advancement of the study of food and foodways and the processes of immigration and culture change.
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APPENDIX A: IRB APPROVAL

April 29, 2008

Kathryn Otbs, Ph.D.
Department of Anthropology
College of Arts & Sciences

Re: IRB # 07-OR-144-R1 “Cultural Models of Food and Social Networks among Mexican Immigrants in the Southeast United States”

Dear Dr. Otbs:

The University of Alabama Institutional Review Board has granted your renewal application approval.

Your renewal application has been given expedited approval according to 45 CFR part 46. Approval has been given under expedited review category 7 as outlined below:

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

Should you need to submit any further correspondence regarding this proposal, please include the assigned IRB application number. Please use reproductions of the IRB approved informed consent form to obtain consent from your participants.

Good luck with your research.

Sincerely,

Carpanifato T. Myles, MSM, CIIM
Director of Research Compliance & Research Compliance Officer
Office of Research Compliance
The University of Alabama

112 Rose Administration Building
Box 828/04
Tuscaloosa, Alabama 35487-0104
(205) 348-9132
Fax (205) 348-8882
APPENDIX B: FREELISTING INTERVIEW SCHEDULES FOR AMERICANS AND MEXICANS

Phase II: Freelisting Interview with Tuscaloosa Community Members
- Introduction
- Read/sign informed consent

Part One: Freelisting
- Please list for me what foods you eat and what foods are eaten by the people you know. I am going to write them down as you tell me, and just let me know when you are all done.

Part Two: Open-ended questions

1. Tell me a little bit about your upbringing. Where were you born and where did you grow up and go to school?

2. When you were growing up, what kind of food did you eat on a daily basis?

3. What kind of fruits did you eat when you were growing up?

4. What kind of vegetables did you eat when you were growing up?

5. I would like to hear about your daily activities. Please describe a typical workday for you—Monday through Friday or Saturday. Start from the time you wake up until the time you go to sleep.

6. Please describe a typical weekend day for you—that is, a Saturday or a Sunday. Start from when you wake up until when you go to sleep.

7. I’d like you to describe what food you eat during a typical workday, starting from the time you wake up until the time when you go to sleep. (What about beverages? What about alcohol?)

8. What kind of food do you eat during a typical weekend day, starting from the time you wake up until the time when you go to sleep? (What about beverages? What about alcohol?)

9. How have your eating habits changed over the course of your life?

10. How have you changed your diet recently?

11. Where do you usually learn about food and get new information about food?
12. Is this type of information interesting or important to you?

13. What kind of food do you think is advertised the most?

14. Do you think advertising affects what people eat? Why or why not?

15. Where are all of the places that you usually get your food?

16. Do you grow any of your own food, or get food from someone else who grows it?

17. Over the course of a week, what groceries do you buy? Make up a sample grocery list for me, please. (What about beverages? What about alcohol?)

18. What food items always seem to be on your grocery list?

19. Think of the times when you’ve made a special trip to the store to get just one or two things you desperately needed. What are those food items that you don’t like to run out of?

20. How often do you eat fruit? How many times a day? How many days in a week?

21. What kind of fruit do you eat?

22. How do you usually prepare it?

23. How often do you eat vegetables? How many times a day? How many days in a week?

24. What kind of vegetables do you eat?

25. How do you usually prepare them?

26. On a scale of 1 to 5, with one being very easy and 5 being very difficult, how easy or difficult is it to get fruit into your diet?

\[
\begin{array}{ccccc}
1 & 2 & 3 & 4 & 5 \\
\text{very easy} & & & & \text{very difficult}
\end{array}
\]

27. In your opinion, what kinds of things make it easy to get fruit into your diet? (That is, what helps you eat fruit?)

28. What kinds of things make it difficult to get fruit into your diet? (What kinds of things are keeping you from eating fruit?)

29. On a scale of 1 to 5, with one being very easy and 5 being very difficult, how easy or difficult is it to get vegetables into your diet?

\[
\begin{array}{ccccc}
1 & 2 & 3 & 4 & 5 \\
\text{very easy} & & & & \text{very difficult}
\end{array}
\]
30. What about vegetables: What kinds of things make it easy to get vegetables in your daily diet? (What helps you or makes it easier to eat vegetables?)

31. What kinds of things make it difficult to get vegetables in your daily diet? (What kinds of things are holding you back from eating vegetables?)

32. What food would you like to be able to get in Tuscaloosa?

33. What food would you like to grow?

34. What do you think about how much fruits and vegetables cost?

**Part Three: Knowledge of Mexicans in Tuscaloosa**

- Ok, we are finished with the first part of the interview. In the second part, I am going to ask you questions about what you know about Mexicans living here in the Tuscaloosa area.

35. In general, what do you know about the Mexican people who are living in Tuscaloosa? (Jobs, where they are living, what kind of life they have?)

36. Have you seen any Mexicans in Tuscaloosa? If yes, where do you usually see them? What are they doing?

37. Do you know about the food that Mexicans in Tuscaloosa eat?

38. Do you think that the Mexican people living here are learning about American food? If yes, what are they learning?

39. Do you think that the Mexican people here are eating American foods? If yes, what foods are they eating?

40. Where are Mexicans getting or purchasing their food?

41. Do you think that Americans (in Tuscaloosa) and Mexicans are eating very different foods?

42. Do you think that the Mexican people in Tuscaloosa are here to settle down?

43. How do you think that Tuscaloosa will change if more Mexican families do settle down here?

44. Do you think that Americans want to learn more about the Mexican families here?

45. Do you think that the Mexican people want to learn more about American life?
Part Four: General Questions

1. Sex: Female _____ Male _____

2. What is your date of birth? ________________

3. How long have you lived in Tuscaloosa/Tuscaloosa County? _________________________

4. What is the highest grade you completed in school? ________________________________

5. What is your occupation’s title? ________________________________________________

6. What are your job duties? _____________________________________________________

7. Can you estimate how much your household income is in a year’s time (not counting unrelated roommates)?
   a. Less than 10,000 per year
   b. 10,000 to 19,999 per year
   c. 20,000 to 29,999 per year
   d. 30,000 to 39,999 per year
   e. 40,000 to 49,999 per year
   f. 50,000 to 59,999 per year
   g. 60,000 to 69,999 per year
   h. 70,000 to 79,999 per year
   i. 80,000 to 89,999 per year
   j. 90,000 to 99,999 per year
   k. 100,000 or more per year

8. What do you consider your race or ethnicity to be? ________________________________

9. I’d like to know your marital status. Are you:
   ___Married for _____years
   ___Common law/Civil union for ____years
   ___Single
   ___Separated
   ___Divorced
   ___Widowed
   ___Other
   ________________________________________________________________

10. What is your religion? _____________________________________________________
11. Who lives in your household?

1. ______________________     _____ years  Female/Male  ________________
2. ______________________     _____ years  Female/Male  ________________
3. ______________________     _____ years  Female/Male  ________________
4. ______________________     _____ years  Female/Male  ________________
5. ______________________     _____ years  Female/Male  ________________
6. ______________________     _____ years  Female/Male  ________________
7. ______________________     _____ years  Female/Male  ________________
8. ______________________     _____ years  Female/Male  ________________
9. ______________________     _____ years  Female/Male  ________________

- Thank you!
- Do you have any questions for me?

Fase II: Entrevista inicial con mexicanos en Tuscaloosa
Phase II: Preliminary interview with Mexicans in Tuscaloosa

*****************************************************************************
Parte Uno: La lista de sus alimentos

- Por favor, cuénteme que alimentos consume usted, y cuáles son los alimentos que consumen las personas que usted conoce. (Puede ser tan general o específico como quiere, y puede hablar sobre ambos comidas e ingredientes en aquellas comidas.) Escribiré todo que me diga. Y cuando terminé, déjeme saber.

Parte Dos: Las preguntas de su vida, sus hábitos de alimentación

- Ahora, vamos a platicar un poquito sobre su vida, y lo que Ud. comía en el pasado y lo que come ahora.

1. Por favor, cuénteme un poco sobre su vida.

____________________________________________________________________________________________
____________________________________________________________________________________________
____________________________________________________________________________________________
____________________________________________________________________________________________

2. Por ejemplo, ¿Dónde nació Usted?
3. ¿Y esta ciudad es una ciudad... **grande** / **mediana** / **pequeña** / es un pueblo / es en el campo

4. ¿Por cuánto tiempo vivió allí? ........................................................... _años _meses

5. **Después de esta ciudad, donde vivió?** Cuéntame todos los lugares que Ud. ha vivido y por cuánto tiempo? [La ciudad / el estado] se llama...? En cual país?

6. **¿Cuál es el tamaño**—grande, mediano, pequeño/ es un pueblo, o es en el campo?

7. **¿Cuánto tiempo había vivido allí?**

<table>
<thead>
<tr>
<th>Ciudad</th>
<th>Estado</th>
<th>País</th>
<th>Tamaño</th>
<th>Tiempo allí</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>grande/med./peq./pueblo/campo</strong></td>
<td>_años _meses</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>grande/med./peq./pueblo/campo</strong></td>
<td>_años _meses</td>
</tr>
<tr>
<td></td>
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<td><strong>grande/med./peq./pueblo/campo</strong></td>
<td>_años _meses</td>
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<td><strong>grande/med./peq./pueblo/campo</strong></td>
<td>_años _meses</td>
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<td><strong>grande/med./peq./pueblo/campo</strong></td>
<td>_años _meses</td>
</tr>
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<td></td>
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<td><strong>grande/med./peq./pueblo/campo</strong></td>
<td>_años _meses</td>
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<td><strong>grande/med./peq./pueblo/campo</strong></td>
<td>_años _meses</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>grande/med./peq./pueblo/campo</strong></td>
<td>_años _meses</td>
</tr>
</tbody>
</table>

(Hasta Tuscaloosa)

8. **¿OK, por cuánto tiempo ha vivido en Tuscaloosa?** ........................................... _años _meses

9. **¿Cuándo Ud. era niño(a), que tipo de comida consumía durante un día normal?**

_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

10. *****¿Cuándo Ud. estaba en (ciudad específica) ____________, que tipo de comida consumía?**

_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

11. *****¿Cuándo Ud. estaba en (ciudad específica) ____________, que tipo de comida consumía?**

_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

***Si la persona había vivido en México:
12. ¿Generalmente, que están los diferencias entre comiendo y la comida de México y comiendo y la comida aquí en Tuscaloosa?

_____________________________________________________________________________________________
_____________________________________________________________________________________________

13. ¿Cuándo estaba viviendo (en México u otro lugar) a qué hora consumía usualmente su desayuno/comida/cena?

14. ¿Fue su desayuno/comida/cena usualmente estaba pesado/mediano/ o ligero?

<table>
<thead>
<tr>
<th>-En México/ otro lugar</th>
<th>La Hora</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Desayuno</td>
<td>11. am/pm</td>
<td>12. pesado/mediano/ligero-liviano</td>
</tr>
<tr>
<td>Comida</td>
<td>13. am/pm</td>
<td>14. pesada/mediana/ligera-liviana</td>
</tr>
<tr>
<td>Cena</td>
<td>15. am/pm</td>
<td>16. pesada/mediana/ligera-liviana</td>
</tr>
</tbody>
</table>

¿Ahora en los estados unido a qué hora consume su desayuno/comida/cena? ¿Y su desayuno esta pesado, mediano, o ligero/liviano?

<table>
<thead>
<tr>
<th>En EEUU / Tuscaloosa</th>
<th>La Hora</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Desayuno</td>
<td>17. am/pm</td>
<td>18. pesado/mediano/ligero-liviano</td>
</tr>
<tr>
<td>Comida</td>
<td>19. am/pm</td>
<td>20. pesada/mediana/ligera-liviana</td>
</tr>
<tr>
<td>Cena</td>
<td>21. am/pm</td>
<td>22. pesada/mediana/ligera-liviana</td>
</tr>
</tbody>
</table>

15. ¿Cómo han cambiado sus hábitos de alimentación durante el curso de su vida?
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

16. Quisiera que me describa sus actividades y qué es lo que come durante un día normal de trabajo. Empiece desde cuando se despierta hasta cuando se acuesta.
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

17. ¿Y durante los fines de semana o durante un día de descanso? Sus actividades y su comida normal? Empiece desde cuando se despierta hasta cuando se acuesta.
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

18. ***¿Qué tipo de alimento piensa es el más anunciado o promocionado? ¿Cuales anuncios ve en el televisor o en otros lugares?
19. ***¿Piensa que los anuncios de alimentos afectan la dieta de las personas? **Sí / ____** No
20. ***¿Por qué sí o por qué no?

21. Por favor, hábleme de todos los lugares donde adquiere su comida.

22. ¿Cual tienda o mercado frecuenta más? _______________________________________________________________________

23. ¿Cómo llega?...caminará / manejará / alguien la llevará / viaje ...en autobús / ...en taxi

24. ¿Cuánto tiempo pasa para llegar allí?...................................................... ____ horas ____ min

25. ¿Cultiva algún alimento u obtiene algún alimento que es cultivado por otra persona? **Sí / No**

Si sí, indique cual:   obtiene   /  cultiva   / ambos

26. ¿Durante el curso de una semana, qué mandados compra? Haga una lista con algunos ejemplos para mí, por favor.

_____________________________________________________________________________________________

_____________________________________________________________________________________________

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_____________________________________________________________________________________________

_____________________________________________________________________________________________

27. ¿Hay alguna comida que le gustaría obtener o cultivar en Tuscaloosa que no puede ahora?..........................................................Sí / No

_____________________________________________________________________________________________

28. ¿Con qué frecuencia come frutas?  ¿Cuántas veces al día?  ¿Cuántos días por semana?
29. ***¿Qué tipo de frutas come?
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

30. ¿Con qué frecuencia come verduras? ¿Cuántas veces al día? ¿Cuántos días por semana?
__________veces/día __________días/semana / _________veces(semana/mes)
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

31. ***¿Qué tipo de verduras come?
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

32. Use una escala de 1 a 5, donde uno equivale a “muy fácil” y cinco equivale a “muy difícil”
¿Qué tan fácil o difícil es incluir frutas en su dieta?

muy fácil 1 2 3 4 5 muy difícil

¿Por que (el numero)?________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

33. Use la misma escala: ¿Qué tan fácil o difícil es incluir verduras en su dieta?

1 2 3 4 5

¿Por que?___________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

34. (Si hay una diferencia) ¿Por qué la diferencia?
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

35. ¿Qué le parece el precio de mandados en general?
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

36. ¿Qué le parece el precio de frutas y verduras?
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
La próxima parte de la entrevista es sobre su vida en Tuscaloosa y de lo que Ud. piensa de esta comunidad.

37. ¿Cómo ha cambiado su vida desde que vive en Tuscaloosa?

38. Ahora quiero preguntarle sobre las personas o los tipos de personas con quienes Ud. habla durante un día normal—de lunes a viernes. Empiece desde cuando se despierta hasta cuando se acuesta—¿Con quién habla durante un día normal entre semana? Haga una lista para mí, por favor.

39. ¿Y durante los fines de semana (sábado y domingo) o durante los días de descanso? ¿Es diferente? Empiece desde cuando se despierta --¿Con quién habla durante un día normal del fin de semana?

40. ¿Con cuántos angloamericanos habla durante un día normal? ........................................#______
41. ¿Con cuántos afroamericanos o morenos habla durante un día normal? ......................#______
42. ¿Tiene amigos quien son anglos o angloamericanos?....... Sí/ No ¿Cuántos?....................#______
43. ¿Tiene amigos quién son morenos o afroamericanos?...... Sí/ No ¿Cuántos?...............#______
44. ¿Normalmente, en dónde encuentra más angloamericanos? ¿Cuáles son los lugares que frecuenta donde hay angloamericanos?

45. ¿Qué cree Ud. que piensan los angloamericanos acerca de los mexicanos que viven y trabajan en Tuscaloosa?
46. ¿Y en dónde encuentra Ud. más afroamericanos/morenos? ¿Cuáles son los lugares que frecuenta donde hay afroamericanos/morenos?

_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

47. ¿Qué cree Ud. que piensan los afroamericanos / morenos acerca de los mexicanos que viven y trabajan en Tuscaloosa?

_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

48. ¿Cree Ud. que es aceptado por la comunidad de Tuscaloosa? ¿Por qué sí o por qué no?

_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

49. ¿Qué piensa sobre la comida de los angloamericanos?

_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

50. ¿Qué piensa sobre la comida de los afroamericanos / morenos?

_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

51. ¿Piensa que estar viviendo en la misma comunidad con anglo y afroamericanos ha cambiado sus hábitos de alimentación?

_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

*********************************************************************************************

La parte final
- La parte final de nuestra entrevista tiene algunas preguntas generales acerca de Ud. Estas preguntas no usarán para identificarse; solo usarán para ayudarme con mi análisis.

52. Femenino ___________ Masculino ___________
53. ¿Cuántos años tiene? …………………………………………………………. # __________

54. ¿Cuántos años de educación tiene? ……………… nivel/diploma/ años
Explanación: ______________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

55. Tiene empleo (afuera de la casa)? …………………………………………………………………………………… Si / No

56. ¿Cuál es su ocupación (una descripción)? ________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

57. ¿Cuál es su ingreso anual familiar? (No incluya las personas de su casa que no sean parientes.) [(Cuanto hace el año?)]
   a. Menos de $5,000
   b. $5,000 a $9,999
   c. $10,000 a $19,999
   d. $20,000 a $29,999
   e. $30,000 a $39,999
   f. $40,000 a $49,999
   g. $50,000 a $59,999
   h. $60,000 a $69,999
   i. $70,000 a $79,999
   j. $80,000 a $89,999
   k. $90,000 a $99,999
   l. $100,000 o más

58. ¿Cuál es su grupo étnico? __________ Hispánico / otro:

59. ¿Cuál es su estado civil?
   a. Casado(a); cuántos años ______
   b. Unión libre; cuántos años ______
   c. Soltero(a)
   d. Separado(a)
   e. Divorciado(a)
   f. Viudo(a)
   g. Otro
_____________________________________________________________________________________________

60. ¿Cuál es su religión?
   a. Budista
   b. Católica
   c. Hindú
   d. Judía
   e. Musulmán
   f. Protestante
g. Otro
h. No tengo religión.

61. Me gustaría saber quiénes son las personas que viven con Ud.

62. ¿Quién es el jefe o la cabeza de su casa? [Marque el nombre.]

<table>
<thead>
<tr>
<th>Persona</th>
<th>Sexo</th>
<th>Edad</th>
<th>Trabajo</th>
<th>Ocupación</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F / M</td>
<td>sí / no</td>
<td></td>
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<tr>
<td></td>
<td>F / M</td>
<td>sí / no</td>
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<td>F / M</td>
<td>sí / no</td>
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<td>F / M</td>
<td>sí / no</td>
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<td>F / M</td>
<td>sí / no</td>
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</tbody>
</table>
APPENDIX C: PHASE 2.2 INTERVIEW SCHEDULES FOR AMERICANS AND MEXICANS

Phase II₂: Pile Sorting Interview with Tuscaloosa Community Members
Part 1: Pile sort
• Let’s go over your piles and read them aloud so I can record what you did.

Tell me a little bit about why you sorted the cards like this. [What do you mean by that?]
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
If you had to name each pile, what would you name them?
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
What helped you decide to sort the cards like this?
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
Are there any other reasons you could use to sort the cards? What other ways could you sort them?
______________________________________________________________________________
What kinds of things are important to you when you think about food and eating?
### Part two: Ranking tasks

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthy</td>
<td>Expensive</td>
</tr>
<tr>
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<td></td>
<td></td>
</tr>
<tr>
<td>Unhealthy</td>
<td>Inexpensive/Cheap</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>CONVENIENCE</td>
<td>DESIRE</td>
</tr>
<tr>
<td>-------------</td>
<td>--------</td>
</tr>
<tr>
<td>Convenient to prepare</td>
<td>Like/Desire</td>
</tr>
<tr>
<td>Inconvenient to prepare</td>
<td>Disliked/Udnessired</td>
</tr>
</tbody>
</table>
Part 3: Food frequency task

<table>
<thead>
<tr>
<th>Food</th>
<th>Food</th>
<th>Food</th>
</tr>
</thead>
<tbody>
<tr>
<td>chicken</td>
<td>rice</td>
<td>chips</td>
</tr>
<tr>
<td>beef</td>
<td>biscuits</td>
<td>candy/chocolate</td>
</tr>
<tr>
<td>eggs</td>
<td>cornbread</td>
<td>desserts</td>
</tr>
<tr>
<td>fish</td>
<td>grits</td>
<td>soda</td>
</tr>
<tr>
<td>pork</td>
<td>pancakes</td>
<td>coffee</td>
</tr>
<tr>
<td>Soul Food meats</td>
<td>tortillas</td>
<td>alcohol</td>
</tr>
<tr>
<td>shrimp</td>
<td>salad</td>
<td>sweet tea</td>
</tr>
<tr>
<td>apples</td>
<td>potatoes</td>
<td>juice</td>
</tr>
<tr>
<td>blueberries</td>
<td>beans</td>
<td>milk</td>
</tr>
<tr>
<td>bananas</td>
<td>green beans</td>
<td>cheese</td>
</tr>
<tr>
<td>grapes</td>
<td>peas</td>
<td>pizza</td>
</tr>
<tr>
<td>cherries</td>
<td>corn</td>
<td>sandwiches</td>
</tr>
<tr>
<td>papayas</td>
<td>greens</td>
<td>Chinese food</td>
</tr>
<tr>
<td>pears</td>
<td>cabbage</td>
<td>fast food</td>
</tr>
<tr>
<td>peaches</td>
<td>chili peppers</td>
<td>prepared/frozen meals</td>
</tr>
<tr>
<td>cereal</td>
<td>onions</td>
<td>soup</td>
</tr>
<tr>
<td>pasta</td>
<td>carrots</td>
<td>Mexican food</td>
</tr>
<tr>
<td>bread</td>
<td>cauliflower</td>
<td>Mexican stews</td>
</tr>
</tbody>
</table>

Part Four: Questions about your life and your food habits

- Now we are going to talk a little bit about your life history, what you ate in the past, and what you eat now.

46. When you were a child, what kind of food did you eat on a daily basis?
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________

47. Tell me a little bit about your life. Where were you born and where have you lived in your life?
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________

48. How long have you lived in Tuscaloosa? ................................__________ years ________ months

49. How have your eating habits changed over the course of your life?
_____________________________________________________________________________________

436
50. How often do you eat fruit? How many times a day? How many days in a week?

_________times/day ~ _______days/ week //////////////____times/week OR _____times/month

51. What kind of fruit do you eat?


52. How often do you eat vegetables? How many times a day? How many days in a week?

_________times/day ~ _______days/ week //////////////____times/week OR _____times/month

53. What kind of vegetables do you eat?


******************************************************************************

Part Three: Knowledge of Mexicans in Tuscaloosa

- I am interviewing different ethnic groups in Tuscaloosa about their food, and one thing I want to know about is what they know about each other. So now I am going to ask you questions about what you know about Mexicans living here in the Tuscaloosa area.

54. In general, what do you think about what (Blacks/Whites) in Tuscaloosa eat?


55. Do you know about the Mexican people who are living in Tuscaloosa? (Jobs, where they are living, what kind of life they have?)


56. Have you seen any Mexicans in Tuscaloosa? If yes, where do you usually see them? What are they doing?


57. Do you know about the food that Mexicans in Tuscaloosa eat?

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58. Do you think that the Mexican people living here are learning about American food? If yes, what are they learning?

_____________________________________________________________________________________
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_____________________________________________________________________________________

59. Do you think that the Mexican people here are eating American foods? If yes, what foods are they eating?

_____________________________________________________________________________________
_____________________________________________________________________________________
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_____________________________________________________________________________________

60. Do you think that Americans (in Tuscaloosa) and Mexicans are eating very different foods?

_____________________________________________________________________________________
_____________________________________________________________________________________
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61. Do you think that the Mexican people in Tuscaloosa are here to settle down?

_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
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_____________________________________________________________________________________
_____________________________________________________________________________________

62. How do you think that Tuscaloosa will change if more Mexican families do settle down here?

_____________________________________________________________________________________
_____________________________________________________________________________________
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63. Do you think that Americans want to learn more about the Mexican families here?

_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________

438
64. Do you think that the Mexican people want to learn more about American life?

_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
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*******************************************************************************
Part Five: General Questions

• The final part of our interview deals with some general questions about you. These questions are not going to be used to identify you; they are only to help with my analysis.

11. Sex: Female _____ Male _____

12. How old are you? __________________

13. What is the highest grade you completed in school? ________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

14. What is your occupation’s title?_________________________________________________

15. What are your job duties?______________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

16. Can you estimate how much your household income is in a year’s time (not counting unrelated roommates)?

   l. Less than 10,000 per year
   m. 10,000 to 19,999 per year
   n. 20,000 to 29,999 per year
   o. 30,000 to 39,999 per year
   p. 40,000 to 49,999 per year
   q. 50,000 to 59,999 per year
   r. 60,000 to 69,999 per year
   s. 70,000 to 79,999 per year
   t. 80,000 to 89,999 per year
   u. 90,000 to 99,999 per year
   v. 100,000 or more per year
17. What do you consider your race or ethnicity to be? __________________________________________

18. I’d like to know your marital status. Are you:
   ___ Married for _____ years
   ___ Common law/Civil union for ____ years
   ___ Single
   ___ Separated
   ___ Divorced
   ___ Widowed
   ___ Other____________________________________________________________

19. What is your religion?
   a. Buddhist
   b. Catholic
   c. Hindu
   d. Judaism
   e. Muslim
   f. Protestant
   g. Other ________________________________________________
   h. No religion/non-practicing

14. Who is the head of the household?

<table>
<thead>
<tr>
<th>Person/Relation</th>
<th>Sex</th>
<th>Age</th>
<th>Work</th>
<th>Occupation/Job Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F/M</td>
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<td>yes/</td>
<td></td>
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<tr>
<td></td>
<td>F/M</td>
<td></td>
<td>yes/</td>
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<td>F/M</td>
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<td>yes/</td>
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<td>F/M</td>
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<td>yes/</td>
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<td>F/M</td>
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<td>yes/</td>
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<td>F/M</td>
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<td>yes/</td>
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<td>F/M</td>
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<td>yes/</td>
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</tbody>
</table>

Fase II: Entrevista de pile sort con mexicanos en Tuscaloosa

Parte Uno: Las cartas

1. Repasemos sus grupos y liémoslos en voz alta para yo poder registrar lo que usted hizo.
   Let’s go over your piles and read them aloud so I can record what you did.
Cuénteme un poco sobre los motivos que usted uso para clasificar las tarjetas en esta manera. [¿Qué quiere decir esto?]

¿Si tuviera que dar nombre a cada grupo, cual nombres les daría?

¿Qué le ayudo llegar a la decisión de ordenar las tarjetas en esta manera?

¿Qué cosas son importantes para usted cuando piensa de la comida y de comer?
<table>
<thead>
<tr>
<th>SALUD</th>
<th>CUESTA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saludable</td>
<td>Cara</td>
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<td>No Saludable</td>
<td>Barata</td>
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<td>INCONVENIENTE</td>
<td>DESEO</td>
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</tr>
<tr>
<td>Conveniente</td>
<td>Deseada</td>
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<tr>
<td>Inconveniente</td>
<td>No Deseada</td>
</tr>
<tr>
<td>pollo</td>
<td>arroz</td>
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<td>-----------</td>
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<tr>
<td>res</td>
<td>*biscuits/panecillos</td>
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<tr>
<td>huevos</td>
<td>pan de maiz o cbread</td>
</tr>
<tr>
<td>pescado</td>
<td>*grits</td>
</tr>
<tr>
<td>puerco</td>
<td>panqueques</td>
</tr>
<tr>
<td>*otras carnes</td>
<td>tortillas</td>
</tr>
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<td>camarones</td>
<td>ensalada</td>
</tr>
<tr>
<td>manzanas</td>
<td>papas</td>
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<td>frijoles</td>
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<td>ejotes/ judías verdes</td>
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<td>uvas</td>
<td>chicharos</td>
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<td>cerezas</td>
<td>elotes</td>
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<tr>
<td>papayas</td>
<td>*verduras de nabos o</td>
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<td>peras</td>
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<td>duraznos</td>
<td>chiles</td>
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<td>cebollas</td>
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<td>pasta</td>
<td>zanahorias</td>
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<td>pan</td>
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**Parte Dos: Las preguntas de su vida, sus hábitos de alimentación**

- Ahora, vamos a platicar un poquito sobre su vida, y lo que Ud. comía en el pasado y lo que come ahora.

63. ¿Cuándo Ud. era niño(a), que tipo de comida consumía durante un día normal?
____________________________________________________________________________________________
____________________________________________________________________________________________
____________________________________________________________________________________________
____________________________________________________________________________________________
____________________________________________________________________________________________

64. Por favor, cuénteme un poco sobre su vida.
____________________________________________________________________________________________
____________________________________________________________________________________________
____________________________________________________________________________________________
____________________________________________________________________________________________
____________________________________________________________________________________________

65. Por ejemplo, ¿Dónde nació Usted? __________________________________________ ciudad  estado  país

66. ¿Y esta ciudad es una ciudad… **grande** / **mediana** / **pequeña** / **es un pueblo** / **es en el campo**

67. ¿Por cuánto tiempo vivió allí? ................................................................. ___años ___meses
68. ¿**Después de esta ciudad, donde vivió?** Cuénteme todos los lugares que Ud. ha vivido y por cuánto tiempo? [La ciudad / el estado] se llama…? En cual país?

69. ¿**Cuál es el tamaño**—grande, mediano, pequeño/ es un pueblo, o es en el campo?

70. ¿**Cuánto tiempo había vivido allí?**

<table>
<thead>
<tr>
<th>Ciudad</th>
<th>Estado</th>
<th>País</th>
<th>Tamaño</th>
<th>Tiempo allí</th>
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</thead>
<tbody>
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(Hasta Tuscaloosa)

71. ¿**OK, por cuánto tiempo ha vivido en Tuscaloosa?** ……………………...____años ___meses

***Si la persona había vivido en México:***

72. ¿**Generalmente, que son las diferencias entre comiendo y la comida de México y comiendo y la comida aquí en Tuscaloosa?**

_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

73. ¿**Cómo han cambiado sus hábitos de alimentación durante el curso de su vida?**

_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

74. ¿**Con qué frecuencia come frutas? ¿Cuántas veces al día? ¿Cuántos días por semana?**

__________veces/día  __________días/semana / _________veces(semana/mes)

75. ***¿Qué tipo de frutas come?***

_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

76. ¿**Con qué frecuencia come verduras? ¿Cuántas veces al día? ¿Cuántos días por semana?**

__________veces/día  __________días/semana / _________veces(semana/mes)

77. ***¿Qué tipo de verduras come?***

_____________________________________________________________________________________________
• La próxima parte de la entrevista es sobre su vida en Tuscaloosa y de lo que Ud. piensa de esta comunidad.

78. ¿Cómo ha cambiado su vida desde que vive en Tuscaloosa?
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

79. Ahora quiero preguntarle sobre las personas o los tipos de personas con quienes Ud. habla durante un día normal—de lunes a viernes. Empiece desde cuando se despierta hasta cuando se acuesta—¿Con quién habla durante un día normal entre semana? Haga una lista para mí, por favor.
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

80. ¿Con cuántos angloamericanos habla durante un día normal?.................................#
81. ¿Con cuántos afroamericanos o morenos habla durante un día normal?.........................#
82. ¿Tiene amigos quien son anglos o angloamericanos?....... Sí / No ¿Cuántos?...............#
83. ¿Tiene amigos quien son morenos o afroamericanos?....... Sí / No ¿Cuántos?...............#

84. ¿Qué cree Ud. que piensan los angloamericanos acerca de los mexicanos que viven y trabajan en Tuscaloosa?
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

85. ¿Qué cree Ud. que piensan los afroamericanos / morenos acerca de los mexicanos que viven y trabajan en Tuscaloosa?
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

86. ¿Cree Ud. que es aceptado por la comunidad de Tuscaloosa? ¿Por qué sí o por qué no?
_____________________________________________________________________________________________
_____________________________________________________________________________________________

87. ¿Qué piensa sobre la comida de los angloamericanos?
88. ¿Qué piensa sobre la comida de los afroamericanos / morenos?

_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

89. ¿Piensa que estar viviendo en la misma comunidad con anglo y afroamericanos ha cambiado sus hábitos de alimentación?

_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

La parte final

- La parte final de nuestra entrevista tiene algunas preguntas generales acerca de Ud. Estas preguntas no se usarán para identificarse; solo se usarán para ayudarme con mi análisis.

90. Femenino __________ Masculino __________

91. ¿Cuántos años tiene? ..........................................................#___________

92. ¿Cuántos años de educación tiene? ........................................... nivel/ diploma/ _____ años
   Explanacion:___________________________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

93. Tiene empleo (afuera de la casa)? .......................................................... Si / No

94. ¿Cuál es su ocupación (una descripción)? ____________________________________________________________________
_____________________________________________________________________________________________
_____________________________________________________________________________________________

95. ¿Cuál es su ingreso anual familiar? (No incluya las personas de su casa que no sean parientes.) [[Cuanto hace el año?]]
   a. Menos de $5,000
   b. $5,000 a $9,999
   c. $10,000 a $19,999
   d. $20,000 a $29,999
   e. $30,000 a $39,999
   f. $40,000 a $49,999
   g. $50,000 a $59,999
   h. $60,000 a $69,999
   i. $70,000 a $79,999
   j. $80,000 a $89,999
   k. $90,000 a $99,999
   l. $100,000 o más

96. ¿Cuál es su grupo étnico o su raza? __________ Hispano / otro:
97. ¿Cuál es su estado civil?
   Casado(a); cuántos años _____
   Unión libre; cuántos años _____
   Soltero(a)
   Separado(a)
   Divorciado(a)
   Viudo(a)
   Otro ____________________________________________

98. ¿Cuál es su religión?
   Budista
   Católica
   Hindú
   Judía
   Musulmán
   Protestante
   Otro ____________________________
   No tengo religión.

99. Me gustaría saber quiénes son las personas que viven con Ud.

100. ¿Quién es el jefe o la cabeza de su casa? [Marque el nombre.]

<table>
<thead>
<tr>
<th>Persona</th>
<th>Sexo</th>
<th>Edad</th>
<th>Trabajo</th>
<th>Ocupación</th>
</tr>
</thead>
<tbody>
<tr>
<td>F / M</td>
<td>sí / no</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F / M</td>
<td>sí / no</td>
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<td>sí / no</td>
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<td>F / M</td>
<td>sí / no</td>
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<tr>
<td>F / M</td>
<td>sí / no</td>
<td></td>
<td></td>
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<tr>
<td>F / M</td>
<td>sí / no</td>
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<td>F / M</td>
<td>sí / no</td>
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<td>F / M</td>
<td>sí / no</td>
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</tr>
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<td>F / M</td>
<td>sí / no</td>
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<td>F / M</td>
<td>sí / no</td>
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<tr>
<td>F / M</td>
<td>sí / no</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

______________________________________________________________________________
______________________________________________________________________________

448
APPENDIX D: PHASE 3 INTERVIEW SCHEDULE

MIII#/Card# _______/ID#_______/Sound file#:_________
Fecha: _____________/Hora: _________/Lugar: _______________________/Duración: _________
************************************************************************************
• Repasemos sus grupos y liémoslos en voz alta para yo poder registrar lo que usted hizo.

____________________________
COUNT:________ GROUPS#________

Cuénteme un poco sobre los motivos que usted usó para clasificar las tarjetas en esta manera.
[¿Qué quiere decir esto?]                                                                
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

¿Si tuviera que dar nombre a cada grupo, cual nombre le daría a cada grupo?
<table>
<thead>
<tr>
<th>Alimento</th>
<th>Frutas</th>
<th>Verduras</th>
</tr>
</thead>
<tbody>
<tr>
<td>pollo</td>
<td>arroz</td>
<td>papitas</td>
</tr>
<tr>
<td>res</td>
<td>*bisquets/panecillos</td>
<td>dulces/chocolate</td>
</tr>
<tr>
<td>huevos</td>
<td>pan de maíz o chbread</td>
<td>postres</td>
</tr>
<tr>
<td>pescado</td>
<td>*grits</td>
<td>refrescos</td>
</tr>
<tr>
<td>puerco</td>
<td>panqueques</td>
<td>café</td>
</tr>
<tr>
<td>*otras carnes</td>
<td>tortillas</td>
<td>alcohol</td>
</tr>
<tr>
<td>camarones</td>
<td>ensalada</td>
<td>té dulce</td>
</tr>
<tr>
<td>manzanas</td>
<td>papas</td>
<td>café</td>
</tr>
<tr>
<td>arándanos</td>
<td>frijoles</td>
<td>leche</td>
</tr>
<tr>
<td>bananas</td>
<td>ejotes/ judías verdes</td>
<td>queso</td>
</tr>
<tr>
<td>uvas</td>
<td>chicharos</td>
<td>pizza</td>
</tr>
<tr>
<td>cerezas</td>
<td>elotes</td>
<td>sándwiches</td>
</tr>
<tr>
<td>papayas</td>
<td>*verduras de nabos o</td>
<td>comida china</td>
</tr>
<tr>
<td>peras</td>
<td>col</td>
<td>comida rápida</td>
</tr>
<tr>
<td>duraznos</td>
<td>chiles</td>
<td>*preparadas/congeladas</td>
</tr>
<tr>
<td>cereal</td>
<td>cebollas</td>
<td>sopa</td>
</tr>
<tr>
<td>pasta</td>
<td>zanahorias</td>
<td>caldo</td>
</tr>
<tr>
<td>pan</td>
<td>coliflor</td>
<td>tacos/enchiladas</td>
</tr>
<tr>
<td></td>
<td></td>
<td>menudo</td>
</tr>
</tbody>
</table>

1. ¿De los siguientes: salud, costo, conveniencia, y deseo, cuál de estos cuatro es el más importante para usted cuando determina lo que quiere comer? ¿Cuál es el próximo más importante?
   - Salud____/costo____/conveniencia____/deseo____
   - 1 Más importante  2 Un poco importante  3 No muy importante  4 No importante

2. ¿Con qué frecuencia come frutas? ¿Cuántas veces al día? ¿Cuántos días por semana?
   \[ \text{veces/día} \times \text{días/semana} = \text{veces/semana} \]

3. ¿Qué tipo de frutas come?

4. ¿Con qué frecuencia come verduras? ¿Cuántas veces al día? ¿Cuántos días por semana?
   \[ \text{veces/día} \times \text{días/semana} = \text{veces/semana} \]

5. ¿Qué tipo de verduras come?
• En las siguientes preguntas, use una escala de uno a cuatro—
uno significa mucho y cuatro significa muy poco.

| 6. ¿Qué accesible son las frutas para usted consumir durante el curso de un día normal? Accesible quiere decir que las frutas son físicamente disponibles para usted consumir. | 1 2 3 4 |
|---|---|---|---|
| 7. ¿Qué accesible son las verduras para usted consumir durante un día normal? | 1 2 3 4 |
| 8. ¿Usando la misma escala, qué influencia tiene el precio de las frutas en su decisión de comprar frutas? | 1 2 3 4 |
| 9. ¿Qué influencia tiene el precio de las verduras en su decisión de comprar verduras? | 1 2 3 4 |
| 10. ¿Qué influencia tiene la calidad de las frutas en su decisión de comprar frutas? | 1 2 3 4 |
| 11. ¿Qué influencia tiene la calidad de las verduras en su decisión de comprar verduras? | 1 2 3 4 |

12. ¿Dónde queda el sitio más cercano de su casa donde se vende comida? Este sitio puede ser un mercado, una tiendita, una carnicería, o un puesto de verduras o frutas.

13. ¿Cuál tienda o mercado frecuenta más? ¿En cuál vecindario? __________________________ ________

• En estas siguientes preguntas, dígame con qué frecuencia usted participa en la actividad indicada usando esta escala:

<table>
<thead>
<tr>
<th>14. ¿Con qué frecuencia va de compras en _<strong>lugar 1</strong>?</th>
<th>Diario</th>
<th>Semanal</th>
<th>Mensual</th>
<th>Anual</th>
<th>Menos de</th>
<th>Nunca en su vida</th>
</tr>
</thead>
<tbody>
<tr>
<td>15. ¿Con qué frecuencia va de compras en _<strong>lugar 2</strong>?</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

16. A veces nos encontramos en situaciones donde no tenemos suficiente dinero o tiempo para obtener todas nuestras necesidades. ¿Con qué frecuencia se encuentra no capaz de comprar toda la comida que usted necesita? | 1 2 3 4 5 6 |

17. ¿Con qué frecuencia se encuentra no capaz de comer cuando usted desea, a la hora que usted desea, durante un día normal? | 1 2 3 4 5 6 |

18. ¿Con qué frecuencia cocina o consume comida Americana? | 1 2 3 4 5 6 |

19. ¿Con qué frecuencia cocina o consume comida Mexicana? | 1 2 3 4 5 6 |
SOCIODEMOGRAPHIC QUESTIONS  Ahora le voy a hacer unas preguntas generales sobre su vida.
20. Femenino __________ Masculino __________
21. ¿Cuántos años tiene? .............................................................. #____________
22. ¿Cuántos años de educación tiene? 0.
   1. Primaria-6  6. Algunos años de colegio
   2. Secundaria 7-8  7. AS
   3. Algunos años de Preparatoria 9-12  8. BA/BS: Hasta el fin de colegio
   4. GED  9. Certificaciones después de colegio
   5. Hasta el fin de Preparatoria 12  10. Graduado o grado más alto de colegio
Explanacion: ____________________________________________________________________________
_____________________________________________________________________________________
23. ¿Tiene empleo (fuera de la casa)?................................................................................... Sí / No
24. ¿Cuál es su ocupación? Por favor digame cual es el tipo de trabajo, no el lugar donde trabaja. ________________________________________________________________________
25. ¿Cuál es su ingreso anual familiar? ¿Cuál es el total de los ingresos de su hogar? (No incluye las personas de su casa que no sean familia.)
   a. Escogió no responder
   b. Menos de $5,000 _________________________(semana/mes/año)
   c. $5,000 a $9,999
   d. $10,000 a $19,999
   e. $20,000 a $29,999
   f. $30,000 a $39,999
   g. $40,000 a $49,999
   h. $50,000 a $59,999
   i. $60,000 a $69,999
   j. $70,000 a $79,999
   k. $80,000 a $89,999
   l. $90,000 a $99,999
   m. $100,000 o más

26. ¿Cuál es su grupo étnico o su raza?  Hispano / otro: ____________________
27. ¿Cuál es su religión?
28. ¿Cuál es su estado civil?
   Casado(a); cuántos años están juntos _______     Divorciado(a)
   Unión libre; cuántos años están juntos _______     Viudo(a)
   Soltero(a)     Otro _________________________
   Separado(a)
**FAMILY QUESTIONS**

29. ¿Cuántas personas viven en su casa?_____
   #niños en casa____

30. Tengo algunas preguntas sobre todas las personas en su casa. ¿Quién vive en su casa? ¿Cuántos años tiene/Tiene trabajo?

<table>
<thead>
<tr>
<th>Persona / Relación</th>
<th>Sexo</th>
<th>Edad</th>
<th>Trabajo</th>
<th>Ocupación/¿Qué hace en su trabajo?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>F / M</td>
<td>sí / no</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>F / M</td>
<td>sí / no</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>F / M</td>
<td>sí / no</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>F / M</td>
<td>sí / no</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>F / M</td>
<td>sí / no</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>F / M</td>
<td>sí / no</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>F / M</td>
<td>sí / no</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>F / M</td>
<td>sí / no</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>F / M</td>
<td>sí / no</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>F / M</td>
<td>sí / no</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


32. ¿Asisten a la escuela los niños en su casa?..................Sí / No / young / grad

33. Sí sí: ¿Consumen el almuerzo que les dan en la escuela?(a veces o nunca?)...Sí / No /A Veces / n/a

34. ¿Prefieren consumir el almuerzo de la escuela o de la casa sus niños?............Escuela / Casa / n/a / DK

35. ¿Le han pedido a usted que compre comidas específicas los niños en su casa?..................Sí / No / n/a

36. Sí sí: ¿Por cuáles comidas le piden?_____________________________________________

<table>
<thead>
<tr>
<th></th>
<th>Diario</th>
<th>Semanal</th>
<th>Mensual</th>
<th>Anual</th>
<th>Menos de anual</th>
<th>Nunca en su</th>
</tr>
</thead>
<tbody>
<tr>
<td>37.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>38.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
• ¿Tiene familia…

<table>
<thead>
<tr>
<th>Pregunta</th>
<th>Sí/No</th>
<th>¿Cuántos son? #________</th>
</tr>
</thead>
<tbody>
<tr>
<td>39. …en su barrio/ vecindario?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40. …en otras partes de Tuscaloosa o Northport?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>41. …en otras partes del estado de Alabama?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>42. …en otras partes del sur de los Estados Unidos?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>43. …en otras partes de los Estados Unidos?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*****************************************************************************

LIFE HISTORY QUESTIONS

44. ¿Dónde nacieron sus padres?........ madre: Mexico / EEUU / dk ....... padre: Mexico / EEUU / dk
45. ¿Dónde nació Usted?
46. ¿Por cuánto tiempo vivió allí?
47. ¿Después de este lugar, dónde vivió? Cuénteme de todos los lugares donde Ud. ha vivido y por cuánto tiempo. El estado se llama…? ¿Cuánto tiempo había vivido allí?

48. ¿OK, por cuánto tiempo ha vivido en Tuscaloosa? ___años ___meses

******************************************************************************************

SOCIAL NETWORK/INTERACTION/INCORPORATION QUESTIONS

• Usando una escala de uno a cuatro—uno significa mucho y cuatro significa muy poco...

<table>
<thead>
<tr>
<th>Pregunta</th>
<th>1 Mucho</th>
<th>2</th>
<th>3</th>
<th>4 Muy poco</th>
</tr>
</thead>
<tbody>
<tr>
<td>49. ¿Se siente usted que es parte de la comunidad de Tuscaloosa ahora?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>50. ¿Qué fuerte es su deseo de pertenecer más a la comunidad de Tuscaloosa en el futuro?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

51. ¿Asiste Ud. a una iglesia, templo, o participa en otras actividades religiosas?..............Sí/No
52. ¿Asiste Ud. a alguna clase—por ejemplo, clases de escuela secundaria o universidad, entrenamiento técnico, o educación para adultos como clases de..............................................Sí/No
53. ¿Con cuántos de sus vecinos visita Ud. o habla por lo menos una vez cada dos semanas?........................................................................................................................#____
54. ¿Participa Ud. en servicio voluntario? Por ejemplo, en la iglesia, en clases de los niños, u otro grupo de la comunidad..........................................................Sí/No

*****SNA Instrucciones*****

55. ¿Cuántas personas conocía usted en Tuscaloosa antes de mudarse aquí? Americanos o Latinos…….#____
56. ¿Cuántos mejores amigos tiene usted en Tuscaloosa? *Estas son personas de confianza que le ayudan tomar decisiones y personas con cuales usted comparte detalles personales* ...........#_____

57. ¿Cuántos de sus mejores amigos (de los ##) son mexicanos?..........................todos o #______

58. ¿Cuántos de sus mejores amigos son Anglos o blancos?..............................todos o #______

59. ¿Cuántos de sus mejores amigos son morenos o Afroamericanos?..................todos o #______

60. ¿Cuántos de sus amigos Mexicanos conocen y pasan el tiempo con americanos?.......#______

61. ¿Cuántas personas en su familia conocen y pasan el tiempo con americanos?........#______

62. ¿Cuántos angloamericanos conoce Usted en total? ..............................................#______

63. ¿Cuántos minutos tardaría su conversación mas larga con algún anglo durante un día normal?___m/h

64. ¿Cuántos afroamericanos o morenos conoce Usted en total? .........................#______

65. ¿Cuántos minutos tardaría su conversación mas larga con algún moreno? ..............___m/h
<table>
<thead>
<tr>
<th>Nombre1</th>
<th>Nombre2</th>
<th>Nombre3</th>
<th>Nombre4</th>
<th>Nombre5</th>
</tr>
</thead>
<tbody>
<tr>
<td>¿Es (nombre) hombre o mujer? (1=Mujer, 2=Hombre)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1m / 2h</td>
<td>1m / 2h</td>
<td>1m / 2h</td>
<td>1m / 2h</td>
<td>1m / 2h</td>
</tr>
<tr>
<td>¿Cuántos años tiene (nombre)?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1m / 2h</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>¿Cuál es la raza/etnicidad de (nombre)?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1M 2Blan</td>
<td>3Otro: 1M 2B/3Otro:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Algunas personas pueden ser conectadas de manera que (nombre) está conectado conectada con usted.

| 1. Amigo(a) | 1. Amigo(a) | 1. Amigo(a) | 1. Amigo(a) | 1. Amigo(a) |
| 3. Esposo(a)/novio/a | 3. Esposo(a)/novio/a | 3. Esposo(a)/novio/a | 3. Esposo(a)/novio/a | 3. Esposo(a)/novio/a |
| 4. Vecino(a) | 4. Vecino(a) | 4. Vecino(a) | 4. Vecino(a) | 4. Vecino(a) |
| 5. Conocido(a) | 5. Conocido(a) | 5. Conocido(a) | 5. Conocido(a) | 5. Conocido(a) |
| 9. Maestro(a) | 9. Maestro(a) | 9. Maestro(a) | 9. Maestro(a) | 9. Maestro(a) |

¿Cuál es su mejor estimación aproximada del nivel de educación de (nombre)?

¿Cuál es la ocupación de (nombre)?

¿Tiene (nombre) un ingreso anual más grande que el suyo, el mismo que el suyo, o menos del suyo?

¿Cuál es la religión de (nombre)?

¿Dónde vive (nombre)?

¿Cuál es el estado civil de (nombre)?

¿Cuántos niños tiene (nombre)?

¿Cuántos de ellos asisten la escuela?

¿Por cuánto tiempo ha conocido a (nombre)?

¿Con qué frecuencia habla con (nombre)?

¿Con qué frecuencia come con (nombre)?

¿Usando una escala de 1 a 5, donde el 1 significa una relación muy fuerte y el 5 una relación muy débil, qué fuerte o débil es su relación con (nombre)?
• ¿Se conocen entre ellos mismos estas cinco personas? ¿Quiénes?
Dirá que (nombre) y (nombre) son:
1. Muy Amigos
2. Amigos
3. Conocidos
4. Familiares y muy amigos
5. Familiares pero no muy amigos
6. No se conocen
7. Yo no se

<table>
<thead>
<tr>
<th>Nombres</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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Health questions Ahora, me gustaría saber sobre su salud.
66. ¿Cómo es su salud en general?.................................Bueno  1  2  3  4  Pobre

67. ¿Es usted diabético/a?.................................................................Sí / No / No sé

68. ¿Tiene presión arterial alta?............................................................Sí / No / No sé

69. ¿Tiene una enfermedad o condición delicada en su corazón?..................Sí / No / No sé

70. ¿Tiene un marcapasos u otro aparato electrónico?.................................Sí / No / No sé

71. ¿Tiene una alergia a látex o otra alergia? .......................................Sí / No / No sé
   Si sí:________________________________________________________________

72. ¿Tiene otro problema o enfermedad? ..................................................Sí / No / No sé
   Si sí:________________________________________________________________

73. ¿Tome usted algún medicamento(s)?..................................................Sí / No / No sé
   Si sí:________________________________________________________________

74. ¿Tiene seguro de enfermedad/seguro de médico?....................................Sí / No / No sé

75. ¿Ha tenido un examen médico en el último año?.....................................Sí / No / No sé
- Tengo tres preguntas sobre sus actividades físicas-sobre actividades livianos, moderados, y fuertes.

76. ¿Durante el curso de un día normal, cuántos minutos se pasa haciendo actividades livianos (caminando, tareas domésticas)?..............................................................#____

77. ¿Durante el curso de un día normal, cuántos minutos se pasa haciendo actividad moderada (jogging/trotando/footing, jumping jacks/brincos de mariposa, ejercicios aeróbicos)?...........#____

78. ¿Durante el curso de un día normal, cuántos minutos se pasa haciendo actividad fuerte (corriendo, o labores manuales como jardinería pesada o construcción)?..............................#____

<table>
<thead>
<tr>
<th>Medidas básicas y piquéte</th>
<th>***CARD ID #</th>
<th># Tests left:</th>
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<tbody>
<tr>
<td>Altura</td>
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<td>HbA1c</td>
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MEDIA/ADVERTISING/LANGUAGE QUESTIONS. Usando una escala de uno a cuatro…uno significa muy bien y cuatro significa muy poco…

79. ¿Qué bien habla el español? Muy bien 1 2 3 4 Muy poco
80. ¿Qué bien habla el inglés? Muy bien 1 2 3 4 Muy poco

- Para estas próximas preguntas, piense de sus hábitos en todos los días—ambos días de trabajo y días de descanso.

81. ¿Cuánto tiempo por día ve la televisión en español?...............................______ min/horas
82. ¿Cuánto tiempo por día ve la televisión en inglés?.................................______ min/horas
83. ¿Cuánto tiempo por día lee el periódico o revistas en español?................______ min/ horas
84. ¿Cuánto tiempo por día lee el periódico o revistas en inglés?...............______ min/ horas
85. ¿Cuánto tiempo por día visita páginas de internet en español?.................______ min/ horas
86. ¿Cuánto tiempo por día visita páginas de internet en inglés?....................______ min/ horas

OPEN ENDED QUESTIONS
- ¿Generalmente, está consumiendo las mismas comidas que consumía cuando era niño o consume comidas diferentes ahora?

- ¿Generalmente, está consumiendo las mismas comidas que consumía cuando vivía en México o está consumiendo comidas diferentes ahora?

- ¿Cómo han cambiado sus hábitos de alimentación durante el curso de su vida?

- ¿Piensa que vivir en la misma comunidad con anglo y afroamericanos ha cambiado sus hábitos de alimentación?
APPENDIX E: REPRINT PERMISSION

Sarah Szurek <szure001@crimson.ua.edu> Thu, Jul 21, 2011 at 9:51 AM
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Sarah Szurek

Sincerely,
Sarah Szurek
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Ph.D. Candidate
Department of Anthropology
University of Alabama
Box 870210
Tuscaloosa, AL 35487-0210

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