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Geographic Information System Analysis of Changing Demographic Patterns and Ethnic Restaurant Locations in Bowling Green, Kentucky, 1940-2005

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GEOGRAPHIC INFORMATION SYSTEM ANALYSIS OF CHANGING DEMOGRAPHIC PATTERNS AND ETHNIC RESTAURANT LOCATIONS IN BOWLING GREEN, KENTUCKY, 1940-2005

A Thesis
Presented to
The Faculty of the Department of Geography and Geology
Western Kentucky University
Bowling Green, Kentucky

In Partial Fulfillment
Of the Requirements for the Degree
Master of Geoscience

By
Shwu-Jing Jeng

May 2010
GEOGRAPHIC INFORMATION SYSTEM ANALYSIS OF CHANGING DEMOGRAPHIC PATTERNS AND ETHNIC RESTAURANT LOCATIONS IN BOWLING GREEN, KENTUCKY, 1940-2005

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Acknowledgments

I would like to express my greatest gratitude to Dr. Katie Algeo who led me into the fascinating world of GIS; her patient guidance and constant encouragement were instrumental to the completion of this thesis.

Special thanks should be given to Dr. David Keeling, Dr. Stuart Foster, and Dr. Margaret Gripshover for serving on my thesis committee and giving me their advice.

My appreciation is also extended to Kevin Cary, who provided me a chance to work for the Center for GIS at WKU and allow me gain much GIS experience and build stronger foundation of GIS knowledge and skills. I would like to thank Dr. Christopher Groves, who gave me the opportunity to work for Hoffman Environmental Research Institute at WKU and explorer to the international GIS projects. I am grateful to Dr. Jun Yan, Scott Dobler, Mark Graham, Rhonda Glennon and all of the faculty members and students in the Department of Geography and Geology for precious advice, countless support and friendships.

Last, but not least, I would like to appreciate Jason Cox, Benjamin Crace, and Wimmy Lin for your support to accomplish this thesis. I am grateful to ESRI ArcSDE coworkers for answering my GIS questions. I would like to share this day with my family members, for their love, patient and support during my life in the United States.
# Table of Contents

Purpose .......................................................................................................................... 3  
Research Question ....................................................................................................... 7  
Literature Review ....................................................................................................... 11  
Methodology ............................................................................................................... 24  
Historical Data of Ethnic Restaurants and Maps ................................................... 27  
Census Data ............................................................................................................... 57  
Authentication or Americanization of Ethnic Cuisines .......................................... 70  
Survey of Food Preferences ...................................................................................... 75  
Conclusion ............................................................................................................... 90  
Reference ............................................................................................................... 94  
Appendix ............................................................................................................... 99
List of Illustrations

1. Restaurant Numbers Kentucky Cities 1998 ................................................. 7
2. Demographic Pattern in Bowling Green, 1940-2005 ................................. 22
3. Restaurant Development with All Cuisines, 1940-2005 ............................ 27
4. Restaurants Per Thousand People, 1940-2005 ........................................... 28
5. Geocoding Process ................................................................................... 29
6. Matching Scores for Restaurant Location ................................................ 30
7. Historical Patterns of Urban Growth in Bowling Green .............................. 31
8. Restaurants in 1940s, Bowling Green ..................................................... 33
9. Restaurants in 1950s, Bowling Green ..................................................... 34
10. Restaurants in 1960s, Bowling Green .................................................... 35
11. Restaurants in 1970s, Bowling Green ..................................................... 37
12. Restaurants in 1980s, Bowling Green ..................................................... 39
13. Restaurants in 1990s, Bowling Green ..................................................... 41
14. Restaurants in 2005, Bowling Green ...................................................... 42
15. Ethnic Restaurant Development by Cuisine Type .................................... 44
16. Standard Distance in Miles for Six Decades .......................................... 45
17. Mean Center of Restaurants for Decades ................................................. 46
19. Mexican Restaurants and Hispanic Population Density .......................... 50
20. 2005 Restaurants Location on Zoning Districts ....................................... 52
21. City Globalization Development Timeline ............................................. 54
22. Globalization Phase Timeline ................................................................. 56
23 Ethnic Restaurants by Cuisine Type ............................................................... 62
24 Per Capita Income, Raw and Adjusted for Inflation...................................... 67
25 Number of Ethnic Restaurants .................................................................. 67
26 Percentage of Population that Completed High School ............................ 68
27 Mistake on Existing Cuisine ...................................................................... 77
28 Mistake on Nonexistent Cuisine ................................................................ 77
29 Restaurants Visited by Cuisine .................................................................. 79
30 Percentage Visiting and Familiarity by Cuisine Type ................................. 79
31 Restaurants Most Visited by Cuisine .......................................................... 80
32 Frequency of Visits to Favorite Foreign Cuisine ........................................ 81
33 Why Do You Go to Ethnic Restaurants? ..................................................... 82
34 Cuisine Preferences .................................................................................. 83
35 Respondents by Gender .............................................................................. 84
36 Respondents by Age Group ........................................................................ 84
37 Respondents by Race ................................................................................... 85
38 New Ethnic Cuisine You Would Like to See in Bowling Green.................. 87
39 Desired Cuisine ........................................................................................... 87
40 Do You Have Children? .............................................................................. 88
41 Do Children Influence Your Choice of Restaurants? ................................... 89
The geography of food has been a popular subject for researchers and scholars who have explored the representative foods of a given region in reference to the area’s cultural identity. Food plays an important role in the development of individual cultures and civilization. Food consumption and dining habits usually reflect individuals’ location, cultural and individual identity, accessibility to food and heritage. United States is a country often called a “melting pot society.” Immigrants in the United States comprise over eight percent of the population, and various ethnic groups have reshaped American society with their unique cultures and foodways.

Driven in part by globalization, food has been commercialized in an effort to increase profit and broaden the diversity of foods available for consumption. By studying ethnic restaurants and the food they offer, one can gain a basic understanding of other information related to ethnic groups. The purpose of this study is to analyze changes in ethnic restaurant numbers, types, and locations from 1940 to 2005, as well as changing demographic patterns in Bowling Green, Kentucky. I hypothesize that a relationship exists between the numbers, locations and diversity of ethnic restaurants and ethnic populations in Bowling Green. Globalization and the influx of ethnic groups will reshape the diversity of ethnic cuisines between 1940 to 2005. In addition, changes in Bowling
Green income, education level and ethnic structure are associated with increasing diversity of ethnic restaurants. Relationships between the locations of ethnic neighborhoods and ethnic restaurants are also examined.

The methods of investigation in this thesis include assembling a database of historic restaurant information and using GIS technology to map locations of ethnic restaurants and analyze spatial patterns and ethnic diversity of restaurant types. In order to investigate the association between ethnic structure, income and education level of Bowling Green’s population and the diversity of ethnic restaurant over time, data was collected from the decennial Census of Population and Housing. To research current consumer preferences, a survey was conducted to discover the most influential factors impacting residents’ choice of cuisines and the variation in restaurant preferences among age groups. Interviews with owners of ethnic restaurant shed light on locational choices.
Purpose

Food is essential. It is the main source of nutrition for the human body. Throughout history, culinary practices have played a critical role in the development of individual cultures and civilizations. Mintz and Du Bois (2002, 102) point out that “next to breathing, eating [food] is perhaps the most essential of all human activities, and one with which much of social life is entwined.” The importance of food has been celebrated in various forms of art including song, poetry, literature, and painting. Gradually, the purpose of food consumption evolved from an act of survival into an art form. For example, most people no longer consume food solely for its nutritional value. They view the interaction with food as pleasurable and sometimes as a source of relief from daily stress (Conner and Armitage 2002). As to the importance of food studies, Mintz and Du Bois (2002, 99) address their purpose for research as follows:

We contend that the study of food and eating is important both for its own sake since food is utterly essential to human existence (and often insufficiently available) and because the subfield has proved valuable for debating and advancing anthropological theory and research methods. Food studies have illuminated broad societal processes such as political-economic value-creation, symbolic value-creation, and the social construction of memory.

Although food consumption can be an essential human activity, it can also be a complicated social and psychological interaction. Social psychologists argue that individuals judge others depending on the food they eat, and people often choose foods to express something about themselves (Conner and Armitage 2002). Thus, food is also a part of cultural and individual identity. Furthermore, one could argue that food possesses the power to communicate. Brillat-Savarin (1948, 33), commonly considered the first gastronome, states: “Tell me what you eat, and I will tell you what you are.” He agrees
that food can reflect an individual’s identity. His statement illustrates the relationship
between food and social communication, an area of focus for social psychologists.

Food consumption usually takes place at home or in restaurants. Restaurants, the
most common alternatives to the home for dining, are an invention of the eighteenth
century (Pillsbury 1998). Studies of restaurant dining indicate a person’s food choices
and method of consumption can be determined by analyzing individual preferences and
cultural interactions, as well as the spatial location of the restaurant itself. Harry Balzer,
a vice president for the NPD Group (a national market research firm), is an expert in the
food industry and has been examining eating patterns in the United States for twenty
years. Balzer (2004) reported that in 2004 the typical person dined at restaurants 83
times and on average purchased about 200 meals, including both dine-in and takeout.
Dining out or eating in restaurants is a popular activity across the span of society,
regardless of race, ethnic identity, or geographic location. A person’s choice of
restaurant is based on personal cuisine preferences, but also reflects localized food
industries, regional foodways, and multicultural orientation.

Restaurants in America present a diverse selection of cuisines from different
ethnic groups. Ethnic restaurants have had a major impact on American society.
According to Civitello (2004), 26 million people, including Italians, Jews, Poles,
Hungarians, Greeks, Lithuanians, Czechs, Romanians, Russians, and others, migrated to
the United States between 1870 and 1920, bringing with them the customs of their
homelands and contributing a wide variety of cuisines to this melting pot society.
Zelinsky (1994) mentions that North America’s ethnic restaurants have had a positive
impact by enlarging society’s knowledge of, and heightening interest in, the geography of foodways and the transnationalization of culture. His thesis is encapsulated thus:

My contention is that the proprietor of an overtly ethnic restaurant provides, and its patrons expect to receive, not simply a nourishing meal but, to a varying degree, an exotic experience, an effortless voyage into some distant enchantments (Zelinsky 1994, 462).

The geography of food has been a popular subject for researchers who have explored the representative foods of a given region in reference to the area’s cultural identity. Building this relationship has resulted in a growing interest in the historical, social, and cultural meanings of food among scholars. Most scholars agree that our eating habits and food preferences represent a local and cultural identity. By studying eating habits and food choices, individuals can determine a person’s regional and ethnic identity. We truly are what we eat, as well as “where we eat” (Belasco 1993, 15). Marani (1991, 209) also elaborates the “where we eat” idea as follows:

Where you ate in America had gone from signifying privilege and affluence to manifesting a more sinister form of social convention. The social conscience stirred at America’s lunch counters by the Civil Rights Movement was soon to evolve into even more primal concerns about the healthfulness of America’s eating habits, so that what you ate and where you ate it told a lot about what you were.

According to Shortridge (2003), food choices can directly reflect our location, accessibility to food and heritage. By studying ethnic restaurants and the food they offer, one can gain a basic understanding of other information related to ethnic groups. In addition, the growing number of ethnic restaurants in small cities like Bowling Green, Kentucky, reflects globalization. Globalization is the “expansion of global linkages, organization of social life on a global scale, and growth of global consciousness, hence consolidation of world society” (Emory 2004, 1). Driven in part by globalization
processes, food has been commercialized in an effort to increase profit and broaden the
diversity of foods available for consumption. This commercialization heats the melting
pot of ethnic cuisine, a phenomenon experienced on a local, national, and even global
scale.
Research Question

Bowling Green is located in Warren County, Kentucky, and in 2000 had a total population of 49,296 (Bowling Green, 2004). The official racial makeup of the city is 80.8 percent White, 12.7 percent African American, 4.1 percent Hispanic or Latino, 1.9 percent Asian, 0.2 percent Native American, and 0.1 percent Pacific Islander (Bowling Green, 2004). The city contains a variety of ethnic groups, which makes it appropriate for a case study on the cultural geography of foodways. With 3.34 restaurants per thousand residents, Bowling Green has one of the higher concentrations of restaurants among Kentucky cities (Figure 1). Only Florence, Paducah, and Somerset have higher concentrations.

Figure 1

My thesis analyzes restaurant development in Bowling Green over time, with a focus on the diversity of ethnic cuisines. The research questions for this thesis delve into
the historical geography of restaurant development. First of all, I analyze whether Bowling Green’s restaurant scene reflects internationalization and globalization over the past 65 years. Secondly, I investigate whether changes in Bowling Green’s income and education levels are related to changes in cuisine diversity, and whether the population of ethnic groups is associated with an increased diversity of ethnic restaurants. Third, is there a pattern to the location of ethnic restaurants within the city? Finally, I discuss how observed patterns relate to the residential locations of ethnic groups associated with a cuisine.

The methodology for this research includes mapping restaurant clusters, decoding the patterns of ethnic population and restaurant locations, and conducting a survey. By looking at census data, I investigate the changes in the demographic structure of Bowling Green to discover whether these changes evolved with the growing numbers of ethnic cuisines and the co-relationship of ethnic restaurants’ location and the ethnic neighborhoods in Bowling Green. Due to changes in Bowling Green’s demographic structure in recent decades, the implied hypothesis is that a relationship exists between the numbers, locations and diversity of ethnic restaurants and ethnic populations. Focusing on the diversity of available food styles, community perceptions, and community preferences, survey instruments are used to capture a snapshot of attitudes held by Bowling Green residents towards ethnic cuisines.

The purpose of this research is to analyze the shift in the spatial and ethnic distributions of Bowling Green’s restaurants from 1940 to 2005. First, I investigate whether the diversity of ethnic cuisines increased in Bowling Green during the study
period. I expect that globalization and an influx of ethnic groups reshaped the diversity of ethnic cuisines over time.

Next, I want to focus on the reasons for the increase in diversity of ethnic cuisines and examine the changes in income, education level, and ethnic structure of Bowling Green’s population. I expect that increasing diversity in the population, rising income, and higher educational attainment are associated with an increased diversity of ethnic restaurants in the city. Given that, nowadays, cities are increasingly globalized and that societies are often described as melting pots, a study of ethnic structure in population and the increasing numbers of ethnic restaurants in Bowling Green might show that globalization today not only affects primary cities such as New York and London, but also small cities such as Bowling Green. Furthermore, I explore whether a relationship exists between the location of ethnic neighborhoods and ethnic restaurants. It is easy to find an ethnic restaurant in or near a neighborhood populated by members of that ethnicity in major multicultural cities such as New York and Los Angeles because those primary cities have been globalized for a long time and have a high ethnic population density which provides a ready customer base for such restaurants. I would like to see whether this hypothesis applies to a small city like Bowling Green. Supporting this hypothesis would suggest that a similar process of restaurant creation and development has been at work in Bowling Green during these decades. If this hypothesis is not supported, the finding would suggest that other restaurant formation factors are at work, e.g. that new restaurants initially target the broader American public rather than a specific ethnic group.
Finally, to shed light on current consumer preferences, I surveyed a sample of Bowling Green residents to see how people incorporate ethnic cuisines into their diet. Residents’ dining preferences could also impact the success or failure of individual ethnic restaurants and further influence the current diversity of ethnic cuisines in Bowling Green.
Literature Review

For decades, the study of food has been a topic of research for scholars from fields as varied as cultural geography, sociology, psychology, anthropology, and folklore. Researchers have studied the relationships between foods, eating patterns, geographical locations of restaurants, and ethnic influences, but at present, scholars seem to be focused on the historical, social, and cultural meaning of food. Ruark (1999, 17), for instance, presents food as “a window into those popular scholarly subjects: gender, class, race, and ethnicity.” Researchers desire to know how food connects or ties people to culture and social status. Super (2002, 165) opines, “[F]ood is the ideal cultural symbol that allows the historian to uncover hidden levels of meaning in social relationships and arrive at new understandings of the human experience.” Based on his reviews of recent publications about food and history, he gives us some ideas about how scholars have mapped the relationship between food and culture. For instance, researchers suggest that beer might have preceded bread making, thus becoming the indispensable first step in the rise of ancient civilizations. Furthermore, he points out that by studying bioanthropological explorations of the diets and lives of early humans, we can predict that hunters and gatherers had better diets than the sedentary cultures that followed. Further, by analyzing the history of tea drinking in China, Japan, and India, researchers have shown how these individual cultures developed.

For years, researchers have tried to uncover the relationship between food, culture, and human activities. According to Shortridge (2003, 71), a geographer specializing in food studies, “the interplay of food, place, and culture provides a powerful vehicle for
monitoring the resurgent interest in regional-based identity within our postmodern society.”

Eating out a couple times per week composes a very important part of most Americans’ life. The places and the foods we consume when eating out also play an important role in fulfilling our lifestyle expectations. Restaurants not only constitute a place for recreation and entertainment, but our choice of restaurants says a lot about us, carrying symbolic value. Jakle and Sculle (1999, 324) define “restaurant” as follows:

Restaurants, like gas stations and motels, are places defined at the scale of the retail store. They are contained in buildings signed and otherwise configured as readily identifiable behavior settings. They open and close, functioning over set durations of time. They have location, being proximate to other things, while having, as well, their own spatial extent. They engender or invite sets of ongoing behaviors. They facilitate the activities of certain kinds of people engaged variously in acts of production and consumption. Restaurants are furnished to encourage expected behaviors, being programmed, in other words, to encourage some kinds of social interaction and discourage other kinds. They have physical substance; but, equally as important, they symbolize. They carry social meaning.

Jakle and Sculle (1999) studied the fast food and roadside restaurants’ overall development during the age of automobile convenience, which provides a good study case of restaurant locations and the history of roadside fast food entrepreneurs. The authors analyzed Springfield, Illinois, a place renowned as “Mr. Lincoln’s Hometown,” as a case study to investigate the restaurants’ development from 1915 to 1995. They generated a series of maps depicting restaurants at 20-year intervals – 1915, 1935, 1955, 1975, and 1995. Their maps indicate that restaurants were mainly located along the paved roads in downtown Springfield during the earlier decades. After the arrival of the automobile age and the subsequent construction of highways, chain restaurants offering fast food started to dominate the landscape. At the twentieth century’s end, Jakle and
Sculle (1999, 321) conclude that the automobile “accelerated and multiplied in magnitude because of the culture forces that Springfieldians had set in motion to create the Illinois capital’s landscape since its inception.” This case study decodes the pattern of restaurant development by mapping out restaurant locations by decade, which helps explain how restaurants contribute to the city’s landscape and how the automobile impacts the restaurant scene.

Zelinsky (1994), a cultural geographer who has studied North America’s ethnic restaurant development, used classified telephone directories (e.g. the “yellow pages”) as his primary data source for counting the numbers of ethnic restaurants of each Standard Metropolitan Statistical Area (SMSA) in the United States and Census Metropolitan Area (CMA) in Canada. His analysis revealed that the five leading cuisines in the United States are Chinese, Italian, Mexican, French, and Japanese. Zelinsky came to several conclusions. First, the higher the mean level of affluence, education, and other associated characteristics, the more likely a place is to have restaurants offering a greater diversity of ethnic specialties. Secondly, places with a high turnover of tourists and other affluent transients tend to have more ethnic restaurants. Third, the general cultural-cum-socioeconomic character of a region – such as the South, the Midwest or the Megalopolis – helps determine its receptivity to exotic dishes (Zelinsky 1994). Lastly, the ethnic geography of North America has in the past and continues to shape the regionalization of ethnic restaurant cuisines. Zelinsky’s article reveals the reasons for the influence of ethnic restaurants in the United States and provides a good model for analyzing the geography of ethnic restaurants in general.
Mariani (1991), an author of The Dictionary of American Food and Drink, as well as various food-themed magazines, introduces the history of American restaurants. He points out that over the last several decades, American restaurants have been irrevocably tied to our vaunted mobility, both geographic and social (Mariani 1991, 13). The part of his research related to the automobile age is a data mine for authors like Jakle and Sculle, who studied roadside restaurants in America. Unsurprisingly, dining behavior is unique in each era. Mariani’s study of America’s dining history shows that the way food is consumed reflects not only our life experiences, but also our social status; the age of conspicuous consumption in the late nineteenth century is an outstanding example. Mariani (1991, 49) states: “[T]his new class of Americans for whom the acquisition of more goods was an affirmation of both their social position and their self-esteem, no matter how much wealth was wasted in ways that did not serve human life or human well-being on the whole.”

The immigrants who came to America between the 1800s and the 1920s reshaped the history of American restaurants, as well as the diversity of cuisines. Mariani describes in detail how each ethnicity in America created changes in the American diet. He defines ethnic food in the United States as “a convenient term used to describe the foods the post-Civil War immigrants brought with them, from German sauerkraut to Greek baklava, from Hungarian goulash to Jewish pastrami” (Mariani 1991, 69). His research finds that Italian-American restaurants in America are overwhelmingly more numerous than all Chinese, Mexican, French, and Spanish eateries. Mariani uses “Italian-American restaurant” as opposed to Italian restaurant because “more than any other ethnic people, the Italians were exceptionally successful in adapting their food
culture to America’s, and in so doing created a hybrid – Italian-American cookery” (Mariani 1991, 64). In fact, these so-called Americanized ethnic cuisines, in all their modifications, are unrecognizable to visitors from the “mother countries.”

The history of ethnicity and ethnic restaurants can be traced back to the early immigrants in the nineteenth century. Polenberg (1980, 38) states: “Ethnicity was as closely related to occupation as to place of residence. People at the time often associated particular nationality groups with certain kinds of work: Greek restaurant owners; Jewish tailors; Polish foundry workers; Italian shoe repairmen; Irish mill hands; Swedish lumberjacks; Portuguese fishermen.” Cinotto (2004, 512), who studied the eating habits of Italian immigrants in New York, writes, “Ethnic food seemed to recall tradition, and all food-sharing rituals were very influential, both socially and symbolically, in the conceptual creation of Italian American family and domesticity.”

Obviously, ethnic cuisines have shaped American dining from a social perspective. For example, Chinese restaurants, formerly low status establishments, are now one of the top five leading cuisines in the United States (Zelinsky, 1994). “Going for Chinese” is very much an American expression, and when Americans began moving to the suburbs in the 1950s and 1960s, Chinese restaurants followed on their heels, particularly in suburban shopping malls, according to Mariani (1991, 79). The history of eating Chinese in America also sheds light on certain cross-cultural influences. For example, “eating Chinese” was adapted into the Jewish culture of the United States. The preference for Chinese restaurants is now a distinctively Jewish cultural trait, showing the cross-cultural influence restaurants have on cultural identity (Barbara and James Shortridge 1998).
Lee (2008), a Chinese-American metro reporter, takes readers on a journey into the secret world of Chinese restaurants in her book, *The Fortune Cookie Chronicles: Adventures in the World of Chinese Food*. As a daughter of Chinese immigrants, Lee views Chinese food in the United States from the perspective of both a native-born American and a Chinese descendant. Having grown up eating her mother’s authentic Chinese food, Lee sought out restaurants which served dishes prepared in the same fashion, but came up empty-handed at the Chinese restaurants in her neighborhood. Lee (2008, 215) says, “The greatest Chinese restaurant in the world, I felt, had to offer some kind of twist that would hold up on the global stage. Maybe greatness wasn’t only about the dining experience itself. Perhaps there were intangible psychological factors.” Consequently, Lee traveled around the world, seeking out the greatest Chinese restaurant. She traveled to nearly every continent and interviewed numerous top Chinese restaurant owners trying to define what “Chinese restaurants for Chinese people” meant. By the end of her trip to the Los Angeles Chinese communities – including San Gabriel and Monterey Park – she had settled on patterns and criteria for framing the definition. Lee suggests “Chinese restaurants for Chinese people” should have chopsticks at the table and menus written in Chinese. The wait staff is ethnically Chinese or speaks Mandarin. Lee also noted the prominence of live seafood in fish tanks at these establishments. In the United States, Chinese restaurants that fit the above criteria are found only in the Chinese communities of big cities such as San Francisco, Los Angeles, and New York. Therefore, there are two types of ethnic cuisine: one is for ethnic natives and another, which Lee (2008, 212) calls “postmodern” ethnic cuisine in America. Surprisingly, Lee ultimately selected Zen Fine Chinese Cuisine, located in a two-story strip-mall with unremarkable
decor and mid-range pricing outside Vancouver in Canada, as the world’s greatest Chinese restaurant. Lee (2008, 248) chose Zen Fine “because it manages to uniquely balance a set of circumstances specific to the Chinese dining experience. From both the Chinese and non-Chinese perspective, Sam Lau [the owner] offers something audacious.” Lee’s hunt for the best Chinese restaurant in the world concludes that a successful ethnic cuisine attracts not only the native ethnicity, but also the population at large.

A survey is a suitable tool for determining peoples’ dining habits and restaurant preferences, specifically because it uncovers trends in food consumption as well as and the psychological aspects of eating. Selingo (1999) interviewed a Chinese-American professor of history at the University of California, Irvine to understand how immigrants keep their dining habits in a melting pot culture. His interviewee, Dr. Chen, mentions that he has observed changes in ethnic food over the years at ethnic restaurants, and that he has tracked how those changes have been impacted by people from outside the Chinese ethnic group. When people consume ethnic food at the family dining table, religious ceremonies, or social events, it usually brings back memories of the first generation immigrants and brings those individuals together. As Dr. Chen notes in his interview: “It’s one of the most lasting aspects of ethnic heritage” (Selingo 1999, 7). In order to serve non-ethnic groups, the first immigrants adapted their cooking habits; for example, garlic and tomato sauces, often eaten by southern Europeans, were once rumored to be suspicious and carcinogenic in the United States. However, immigrants resisted pressure to change their ingredients, in part, because food is as important as religion in many cultures. Dr. Chen argues, “That’s why dietary laws in numerous religions tell us what we can and cannot eat” (Selingo 1999, 7). As an immigrant from
China, Dr. Chen usually tries to replicate his mother’s recipes when cooking at home. As he described creating those dishes, he connected to his childhood; thus, food was intimately connected to his memories. This experience gave him the idea to study how food is a carrier of social memory and a marker of ethnicity. To conduct this research, Dr. Chen studied menus from ethnic restaurants and used city directories and phone books to plot how the geographical distribution of ethnic restaurants had changed over time. Dr. Chen concluded that “as the country has become more diverse, more people have more contact with other cultures, reducing the traditional intolerance to foreign food. Ethnic food also is perceived by many as healthy” (Selingo 1999, 7).

Stephenson (1996) examined how restaurants can be successfully marketed to Generation X, a group consisting of 21 to 35 years olds, based on a survey by the *Journal of Restaurant and Institutions* on the preferences of members in this group. Gen Xers, as they are commonly called, are relatively wealthier compared to teenagers, and generally have stable jobs. They are, therefore, more likely to eat out often. Stephenson shows that Gen Xers are the backbone of most restaurants’ business and that they care more about food quality than price. Further, these patrons are willing to try avant-garde food and tend to choose restaurants which fall into the medium price range. Restaurants have responded by designing their menus to meet Gen Xer needs by doing things such as serving a greater variety of food and changing the restaurant’s offerings more frequently. These strategies are meant to retain and increase the customer base in order to gain more profit. This case study makes a clear connection between demographic structures and the relationship to restaurant preferences.
Other authors, such as Atkins and Bowler (2001), address the political economy of food, global and geopolitical food issues, the political ecology of food, and food consumption spaces. This last category focuses on eating out in Europe and compares the pattern of consumption there with that of the United States. Cities in Europe are highly globalized, and the number of Europeans eating out is now at a historic high. As the fast food industry has grown rapidly world-wide, Europeans have begun to consume more hamburgers and pizza, much like their American counterparts. Atkins and Bowler use Warde and Martens’ survey (1998) to present a statistical analysis showing that 60 percent of respondents in Murcott, England, are willing to eat out and to try a wide variety of ethnic styles.

Modern technological improvements in transportation and communication have reduced the importance of spatial distance, and the causes and consequences of globalization have become a major area of scholarly research. As a society, we became aware of globalization – as it is now defined – in the 1970s. Globalization brings the world closer together and the global population finds itself living, working, and communicating with people from all over the globe; we are conscious of our relationship to people everywhere (Barlow 2003). Globalization processes are driven not just by technological improvements, but also by much more fundamental forces, such as social, cultural, economic, political processes and, human agendas (Murray 2006). The United Nations Human Settlements Programme (2004, 2) explains how global connections today differ in at least four important ways from those in the past:
1. [Globalization] function[s] at a much greater speed than ever before. Improved technologies enable much faster transportation of people and goods, as well as the instantaneous transmission of information.

2. Globalization operates on a much larger scale than ever before, leaving few people unaffected and making its influence felt in even the most remote places.

3. The scope of global connections is much broader and has multiple dimensions – economic, technological, political, legal, social and cultural, among others – each of which has multiple facets. Linkages have proliferated and now involve multiple, interdependent flows of a greater variety of goods, services, people, capital, information and disease.

4. The dynamic and often unmediated interactions among numerous global actors add a new level of complexity to relationships between policy, research and practice.

The above statements help us to understand how globalization works and impacts the environment around us, vividly— if silently. Contemporary globalization gradually leads to the increased hybridization of culture; thus, Amin (1997) argues that globalization has actually led to a reassertion of ethnic and cultural differences, and that this has come about as a form of resistance to homogenizing tendencies. Most geographers agree that globalization has an impact on many facets of our lives, such as cultural geography and a “stretching” of the social relations in our daily lives. Murray (2006, 259) states:

Contemporary globalization has led to the growing recognition of ties between distant and disparate places, symbols and ideas. The emphasis in cultural geography has thus shifted from consideration of bounded spaces to flows of commodities, people, ideas, images and beliefs. This is an unsettling time for cultural identities as globalization has proceeded at a rate unmatched in any other sphere.
Globalization impacts the spatial structure of cities, creating more dynamic cultural activities and landscapes, which, in turn, create new geographies and spatial patterns.

Globalization brings changes in patterns of leisure and consumption, as well as a democratization of restaurant culture. As cities are globalized, factors such as urbanization, technological innovation, demographic growth, employment patterns, and identity formation impact the food industry and people’s food preferences. In another case study of food preference, Schoenfeld (2004) presents information on food preferences in Chicago, Illinois. He interviewed people from different occupations within the food industry, including managers, chefs, and restaurant patrons, then wrote about their food preferences. Those interviewees expressed a set of consensus opinions about the food in Chicago. As a globalized city, food in Chicago has become more diverse. This higher level of multiculturalism has allowed people in Chicago not only to go to steak houses (a legacy of Chicago’s role as a meat processing center), but also a variety of ethnic restaurants. Residents have been immersed in this multicultural environment and are open-minded about ethnic food. By interviewing various people in the food industry in Chicago, we can see how globalization is shaping the food industry and influencing the food preferences in Chicago, the third-most populous city in the United States.

Kaufmann et al. (2004, 4) define a globalized city as follows:

…a sustained achievement of performance whether measures as the quality of services a city provides to its citizens (access to telephone services, waters, sewerage, or electricity),…Such a city would have relationships with other cities and key players in the global economy such as people, firms, and organizations that are distributed, with varying degrees of clustering and dispersion across the world-city network.
Cities such as Chicago and London are globalized. In these globalized cities, we can easily find a greater number of exotic restaurants and markets because of their international connections with other world cities. These big cities have been globalized for a long time. Bowling Green, Kentucky, is part of the next wave of globalization. Census data reveals that the population of ethnic groups in Bowling Green started to grow rapidly around 1990, and this city is just now becoming globalized (Table 1).

<table>
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<tr>
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<td>Filipino</td>
<td>Hispanic</td>
<td>Other Races</td>
<td>Sum of Percentage of Ethnicities</td>
<td>Percentage Completed 4 Year High School or More</td>
<td>Per Capita Income</td>
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<td>N/A</td>
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<td></td>
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<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>0.01%</td>
<td>0.21% 0.23% 1.26% 14.57%</td>
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<td></td>
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<td>N/A</td>
<td>N/A</td>
<td>0.21%</td>
<td>0.23% 1.26% 14.57%</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>0.23%</td>
<td>1.26% 14.57%</td>
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<tr>
<td></td>
<td></td>
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<td>N/A</td>
<td>N/A</td>
<td>1.26%</td>
<td>14.57%</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>14.57%</td>
<td></td>
<td>N/A</td>
</tr>
</tbody>
</table>

Source: Census Bureau

Table 1

Bowling Green, a small city in a rural region, may or may not have the same pattern of restaurant preferences. This study is an initial foray into the question of whether small cities now undergoing globalization will experience similar structural changes in their restaurant communities. This case study also predicts the direction future restaurant development will take in Bowling Green as the city becomes increasingly globalized.
Methodology

To track changes in the spatial distribution and number of restaurants, this research project assembled a database of historic restaurant information and mapped restaurant locations for a period of seven decades using Geographic Information Systems. Restaurant location data came from the addresses of restaurants listed in telephone directories dating back to 1940. After inputting all the addresses of restaurants in the attribute table of a geodatabase, I used address geocoding to plot their locations. Geocoding is a process that uses a textual description of a location, such as an address, and converts it into x, y coordinates that can be plotted on a map to indicate its geographical location. Seven maps, one for each decade from 1940 to 1990, and a 2005 map chart the changing pattern of all restaurants within the city of Bowling Green. I classified restaurants by type of cuisine so that I could understand the ethnic diversity of Bowling Green restaurants. Restaurant name was used as an indicator of ethnicity. In most cases, a Chinese restaurant will have name like “Great Wall Chinese Restaurant.” Based on the name of the restaurant, we can usually understand what kind of cuisine it offers. Classification by name was supplemented, when possible, by other information in the telephone yellow pages, such as advertisements for individual establishments (which would carry more information about cuisine) and cuisine-based listings within the restaurant phone listings. Using the maps, I analyzed the spatial patterns for various restaurant types, as well as the diversity of ethnic restaurants. This research aims to uncover how restaurants in Bowling Green developed over the very decades that saw a large increase in the number of ethnic groups in the city. One can understand what types
Location of specific types of ethnic restaurants was also analyzed using several measures. First, restaurants of a specific ethnicity were compared to the residential pattern of people of the same ethnicity. This will help uncover whether ethnic restaurants serve an ethnic population or the general population of Bowling Green. Second, calculating mean center and standard distances for restaurant locations in each decade unveils whether restaurant locations are concentrated or dispersed. These values can act as a central tendency for us to compare across decades and can also be revealing of selective customer bases.

Food choice – what we consume and put into our bodies – is highly personal. The impersonal historical data serving as primary data cannot alone provide adequate insight into people’s food choice. Therefore, a survey of food preferences is included to help explain current restaurant patterns and give some idea of future trends. I conducted this survey using a questionnaire, which explored Bowling Green residents’ restaurant preferences, seeking to uncover the most influential factors impacting their choices of cuisine and the variation in restaurant preferences among different age groups. The results of the survey, which help reveal the perception and preferences of community residents, show the changes experienced by the various types of restaurants.

The survey was performed in public areas, such as Fountain Square Park, and at grocery stores, such as Wal-mart and Kroger. Restaurants were avoided to prevent bias. I went to different grocery stores and public areas to hand out my questionnaire on one or two randomly chosen days every week. To facilitate the gathering of a more random
sample and to guarantee a fair survey outcome that is not biased, I chose people of all ages, excluding children, as respondents for my survey. However, it is important to understand that choosing a sample group in a public area cannot provide a truly random sampling, as the sample would not cover the entirety of Bowling Green city. The limited number of respondents may also result in some degree of bias.

Interviews with the owners of ethnic restaurants also provided me additional information about the restaurant location process. I interviewed four owners who opened ethnic restaurants in town to decipher why they choose Bowling Green as their place of business. After all the data resources were collected, analysis determined whether the growing level of multiculturalism and increased numbers of ethnic groups have changed the food preferences within this region.
Historical Data of Ethnic Restaurants and Maps

First of all, summing up the numbers of restaurants for each decade reveals a trend in restaurant development in Bowling Green. Figure 2 shows that the number of restaurants has quadrupled since the 1940s, from 30 to 143.

Secondly, the number of restaurants per thousand people was calculated to see whether restaurants were growing proportional to the city population. This figure rose from 2.06, in 1940, to 2.90 in 2005, but exhibited significant fluctuation from decade to decade. In consequence, a three-year moving average was calculated for the years of 1940 to 2000. The three-year moving averages reveals the more stable, long-term trend of restaurant development. Using annual averages alone would not provide as clear of a picture of long-term trends, because restaurants are notorious for a high business failure rate and each year restaurants open and close. For example, the three-year moving average for 1950 was calculated as the average of 1940 to 1960. Figure 3 reveals the
three-year average decreased marginally between 1940 and 1970. This is most likely due to the post-World War II Baby Boom. When the population grows rapidly but the number of restaurants remains the same, we see a decline of the average of restaurants per thousand people. A comparison of these two figures indicates that the restaurant business in Bowling Green has been thriving and growing rapidly since the 1970s.

![Graph: Restaurants Per Thousand People, 1940-2005](attachment:graph.png)

**Figure 3**

The next step was mapping restaurant locations for each decade. Data was obtained from historical telephone books in the Kentucky Library; for the years 1941-1942, 1954, 1961, 1970, 1980, 1990, and 2005. Telephone books were not available for every year, so the ones selected were closest to the beginning of each decade that were available. I used the Yellow Pages section and collected all listings under the heading “restaurant,” including names and street addresses.

In order to map out each restaurant’s location, I used address geocoding to convert street address data to map locations. Address geocoding is a GIS tool, to convert
the descriptive location elements in the address and assign a coordinate value to locate the actual location for a specific address on a map (ESRI 2008). After entering all the restaurant addresses into a digital database format, I used the address locator function to standardize the addresses. The address locator is a vital tool for geocoding. The software standardizes the addresses (e.g. capitalization and address components), finds potential matches in a street database, and assigns a match score which indicates the likelihood of a match. After possible candidate locations were identified, I compared each candidate with the corresponding address in address locator. Figure 4 outlines the whole process, from standardizing addresses to the matching and plotting of each address on the map.

Table 2 summarizes the matches made for restaurant addresses by decade. Overall, 61% of restaurant addresses were matched with a high level of confidence (a score in the range 80-100) and an additional 38% of restaurant addresses were matched with moderate confidence (score < 80). Only 0.3% restaurant addresses were unmatched to a specific location. Note also that more recent decades had higher levels of good
matches. Fewer matches in earlier decades that probably relates to changes in street names that have occurred in the intervening time.

<table>
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<tr>
<th>Year</th>
<th>Matched with score 80 – 100 (%)</th>
<th>Matched with score &lt; 80 (%)</th>
<th>Unmatched (%)</th>
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</thead>
<tbody>
<tr>
<td>1940s</td>
<td>43 %</td>
<td>57 %</td>
<td>0 %</td>
</tr>
<tr>
<td>1950s</td>
<td>73 %</td>
<td>27 %</td>
<td>0 %</td>
</tr>
<tr>
<td>1960s</td>
<td>64 %</td>
<td>36 %</td>
<td>0 %</td>
</tr>
<tr>
<td>1970s</td>
<td>46 %</td>
<td>53 %</td>
<td>2 %</td>
</tr>
<tr>
<td>1980s</td>
<td>50 %</td>
<td>50 %</td>
<td>0 %</td>
</tr>
<tr>
<td>1990s</td>
<td>76 %</td>
<td>24 %</td>
<td>0 %</td>
</tr>
<tr>
<td>2005</td>
<td>76 %</td>
<td>24 %</td>
<td>0 %</td>
</tr>
<tr>
<td>Average (%)</td>
<td>61%</td>
<td>38%</td>
<td>0.3%</td>
</tr>
</tbody>
</table>

Table 2

Using address geocoding to plot restaurant locations based on restaurant addresses met with some difficulties due to changing street names. For example, after 1960, Morgantown Road was divided into East and West Morgantown Road. Address geocoder will show both East and West Morgantown Road locations for an address like 35 Morgantown Road, the address indicated in the historical telephone book. In this case, I judged the most probable location of the plot point and manually tied this point to the problematic address. Of course, those problematic addresses have lower match scores associated with them because a manual process is required to judge the possible location. Because the street data was from Census 2000 TIGER/Line (Topologically Integrated Geographic Encoding and Referencing), but the restaurants addresses were obtained from historical phone books, I was not always able to simply choose from the candidates list in the address locator. I needed to manually choose the best candidate for those restaurant addresses with a matching score lower than 80% by comparing the restaurant address to an aerial photo of Bowling Green city. The only decade which has unmatched scores is...
the 1970s. This was apparently due to one restaurant being located in a plaza which has since been razed, and I was unable to match the plaza name with any existing street name; hence, this address remained unmatched.

The resulting seven maps reveal the pattern of restaurant development over time in Bowling Green. I will refer to Figures 6 through 12 to show how the distribution of restaurants spread out from Main Street to Scottsville Road from 1940 to 2005. To understand Bowling Green’s overall development, I referenced Graham’s (2003) map of Bowling Green’s historical patterns of urban growth (Figure 5) and digitized the historical city boundaries, working my way back from the 2005 city boundaries. I chose data from the years of 1931, 1950, 1976, and 1983, since they were the closest years available to those from my study period of the time between the 1940s and 2005.

Source: Mark Graham 2003 Figure 5
In the 1940s, restaurants were mainly located downtown and showed a clustered pattern (Figure 6). A total of 30 restaurants existed in 1941. World War II ended in 1945, and after the war the economy improved and industrial expansion began anew. By the end of that decade, US 31W Bypass had been constructed. The mean center and standard distance of major restaurants was still located in the northeastern part of the 1931 city boundary. The restaurants in this decade were highly concentrated in the downtown business district.
During the next two decades, the 1950s and the 1960s, the geographic location of restaurants did not change significantly (Figure 7 and 8). Most restaurants were still located near Main Street, but gradually moved to other major roads, such as Morgantown Road and the US 31W Bypass. During the 1950s, Bowling Green’s three hubs were downtown, Veterans Memorial Road, and Morgantown Road. The numbers of
restaurants increased from 30 to 52, representing a growth rate of 73 percent, due to the post-World War II economic boom. By 1950, the city boundaries had expanded toward the southeast and the southwest, a shift prompted in part by the completion of the 31W Bypass.

Figure 7
During the 1960s, the number of restaurants did not grow as in the previous decade, but contracted by 15%. A total of 18 restaurants closed, and ten new ones open. All were located in the downtown area and along Veterans Memorial Road. The closed restaurants were either cafés or coffee shops, venues which mainly served sandwiches and light meals. This type of business usually generated a small profit and was hard to maintain over the long run, as competition was intense.
Bowling Green experienced an intensive urban growth at its territorial fringes with the completion of Interstate 65 during the mid-1960s and after the construction of the Owensboro Parkway in the 1970s (Graham 2003). During the 1970s, some restaurants began to open on Nashville Road (see Figure 9). The area around downtown still had a higher density of restaurants, and a small hub of restaurants around Veterans Memorial Road saw growth. There were 57 restaurants representing all styles of American cuisine. The growth rate in this decade was 30%.
The map of the following decade, the 1980s (Figure 10), shows that restaurant clusters gradually shifted to the US 31W Bypass and Scottsville Road, where there was significant growth. All restaurants that existed between the 1940s and the 1970s are classified as American. The first ethnic restaurant, Taco Tico, serving Mexican cuisine, appeared in the 1980s and was located on the US 31W Bypass. Kukathas (2008) states that almost all the newcomers were Hispanic immigrants and worked mainly in blue collar jobs. In order to serve these low-wage workers, low-priced Mexican fast food
restaurants started to appear in most Hispanic immigrant communities and in big cities across the United States. According to Mariani (1991), Mexican restaurants gained popularity with the arrival of large numbers of Mexican immigrants in the U.S after 1959. In this respect, Bowling Green appears to have lagged behind the national trend. Mariani (1991, 80) also described taco restaurants as places that “served up cheap, belly-filling food made without much finesse from readily available ingredients.” The location of Bowling Green’s first taco restaurant was probably chosen to attract college students seeking inexpensive food from the nearby WKU campus population.
During the 1980s, two malls opened in the south of town as Bowling Green expanded toward the southeast. Graham (2003, 51) noted that “the growth axis of the city now followed Scottsville road toward I-65.” Baird (1989, 6) described the overall growth of the town, indicating that construction “has turned acres of farmland into shopping centers, car lots, restaurants and motels.” The growth rate of restaurants in this
decade rose to 71%, the second lofty peak since the 1950s. The first Mexican restaurant appeared in this decade, giving Bowling Green residents a taste of something different.

During the 1990s, more restaurants opened on the US 31W Bypass, Russellville Road and Scottsville Road (see Figure 11). We can also see the variety of ethnic cuisine broadened to include three ethnic types – Chinese, Italian, and Mexican. This particular combination mirrors the top three leading national cuisines found in Zelinsky’s (1994) research. Mexican, Italian, and Chinese immigrants entered the United States in large numbers in the early nineteenth century, however they were not present or their presence was not felt in Bowling Green’s restaurant industry until decades later. From the 1980s to the 1990s, restaurant numbers declined 15%. The closed restaurants had a dispersed geographic pattern, with most located along the US 31W Bypass, reflecting the decline of the Bypass business era. Many were restaurants in motels or inns, serving the customers who lodged there. These motel restaurants had difficulty competing against newer franchise hotels on Scottsville Road and with general purpose restaurants. Some of the closed restaurants were replaced by restaurant chains or franchises. For instance, the local Famous Recipe Fried Chicken was replaced by a Sonic.
By 2005, Bowling Green had a high concentration of restaurants on Scottsville Road which included nine types of ethnic cuisines (see Figure 12). Restaurants at this time were even more obviously tied to infrastructure than in previous decades. The growth rate was 72% since the 1990s. Restaurants in 2005 had a widespread pattern of locations with a total of 143 venues in the city. Thirty-six of the restaurants are classified
as ethnic restaurants. Mexican was the leading cuisine, with 14 restaurants in Bowling Green selling such fare. Most were located either on US 31W Bypass or Scottsville Road. Chinese restaurants were located on US 31 W Bypass and Campbell Lane. Italian restaurants clustered around downtown and Scottsville Road. Japanese restaurants were located mainly on Scottsville Road; other ethnic restaurants were more dispersed, tending to stand alone.
The restaurant maps for each decade make clear how restaurant development was impacted by the suburban movement from the 1950s through the 1960s. New infrastructure, especially the US 31W Bypass and Interstate 65, proved to be new backbones for restaurants spreading away from the central business district in downtown, stretching into the southern suburban area. This decentralization of restaurant locations can be visualized by examining the maps above. Infrastructure – especially major roads – impacts accessibility to urban city business. The United Nations Human Settlements Programme (2004, 3), which studied urban culture and city development, demonstrated that “the associated decentralization has major implications for investments in infrastructure development and maintenance. Such investments have been highly uneven, which, in turn, has significant impacts on access to the urban services necessary for live ability.” This statement indicates that the investment in infrastructure development in urban areas is high correlated with access to urban services like restaurants.

While ethnic restaurants started to appear during the 1980s, the first major influx of ethnic restaurants occurred during the 1990s, and exotic cuisines were thriving by 2005. Figure 13 shows the development of this trend over the 25 year period. The number of Mexican restaurants increased significantly between the 1990s and 2005. Italian and Chinese restaurants were also more numerous than other cuisines. This phenomenon again mirrors the three leading cuisines in the United States enumerated by Zelinsky (1994) – Mexican, Chinese, and Italian. A detailed analysis of ethnic
populations’ impact on ethnic restaurant development will be made later in the section on census data.

Figure 13

To calculate the central tendency of Bowling Green restaurants, I established the mean center and its standard distance for each decade to determine the average location of all restaurants. The mean center is the average x and y coordinate of all restaurant locations in Bowling Green. It is useful for us to track changes in the restaurant distribution and compare the distributions of six decades. Here I used ESRI’s Mean Center tool to create a new point feature for all restaurant locations in each decade to represent a mean center. After the mean center for each decade was determined, I calculated the standard distance for each decade. Chapman and Monroe (2000, 56) explain that, “just as the mean center serves as a locational analogue to the mean, standard distance is the spatial equivalent of standard deviation. Standard distance measures the amount of absolute dispersion in a point pattern.” I used ESRI’s Standard
Distance tool to create a circle centered on each of the decadal mean centers with a radius equal to the standard distance. Table 4 shows the standard distances, measured in miles, for the six decades. We can see that as the standard distance got larger, restaurants became more dispersed. In the 1940s and 1950s, the standard distance was less than one mile. The standard distance in the 1970s was slightly smaller than in the 1960s, which indicates that the restaurants in 1970s were more concentrated than during the 1960s. In Figure 14, we can see that from 1940 through 1970, the mean center hovered in the downtown area, reflecting the location of the business hub in downtown. The mean center then shifted southward along Scottsville Road, reflecting the fact that restaurants expanded along with the urban area and infrastructure development such as major roads. The circle of standard distance became larger in the latter decades and shifted southward along with its mean center. This phenomenon of larger standard distance simply indicated that there are more restaurants in latter decades, which may also contribute to this trend. Even if restaurants remained a fixed distance from each other, more restaurants would translate to a larger standard distance. The map of central tendency helps us visualize spatial patterns of restaurant growth. We can see Bowling Green city infrastructure development was moving to suburban areas, and restaurant development expanded to the same locations over these six decades.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Restaurants</th>
<th>Standard Distance (Miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1940s</td>
<td>30</td>
<td>0.44</td>
</tr>
<tr>
<td>1950s</td>
<td>52</td>
<td>0.58</td>
</tr>
<tr>
<td>1960s</td>
<td>44</td>
<td>1.20</td>
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<tr>
<td>1970s</td>
<td>57</td>
<td>1.06</td>
</tr>
<tr>
<td>1980s</td>
<td>98</td>
<td>1.53</td>
</tr>
</tbody>
</table>
In multicultural cities such as New York or Los Angeles, we usually see a high density of ethnic restaurants located in ethnic neighborhoods; for instance, Chinese restaurants in Los Angeles often open in San Gabriel and Arcadia. According to the
United Nations Human Settlements Programme’s report (2004, 11), in the past, immigrant families “moved between the relatively simple spaces of home, work and neighborhood, all of which reinforced bonds based on ethnicity and social class. Networks and institutions of sociability, from mothers chatting at the corner grocery store or open-air market to children attending religious school at the local parish or mosque, directly formed local cultures.” Those immigrants tend to fit into the urban economy in ethnic enclaves, where they cater to the needs of their own community and specialize in certain jobs and businesses in the mainstream economy, based on their training or the available opportunities. The report (2004, 82) also states that the spatial distribution of immigrant populations is not necessary the result of segregation, but rather a tendency to concentrate in one area. Instead of discrimination, this tendency to concentrate may derive from a process of “self-selection – with new arrivals preferring to be among their community and close to the places that can give them the special assistance they need (which is difficult to receive from local institutions).”

In order to understand the relationship between ethnic neighborhoods and ethnic restaurants, I mapped out the ethnic population areas in Bowling Green and compared them to the locations of ethnic restaurants. Then, based on those GIS maps, we can analyze the pattern to test the hypothesis that ethnic restaurants tend to open near neighborhoods with a heavily ethnic neighborhood.

Clustering, especially if it occurs within one part of town, might be suggestive of an ethnic neighborhood. For instance, the location of Chinese restaurants near Los Angeles shows a clustered pattern near San Gabriel and Arcadia. Those cities are well-
known as largely Chinese communities, and more Chinese restaurants are clustered in them than in other cities near Los Angeles.

We can map population ethnicity in conjunction with ethnic restaurant locations to see whether ethnic restaurants tend to locate near ethnic neighborhoods. Figure 15 shows that Asian restaurants, instead of locating in densely Asian areas, are located on major roads. In fact, the one census tract that is most heavily Asian contains no Asian restaurants, although several are located nearby.
Note that proximity of an ethnic population and restaurants of that same ethnicity might have dual causes. While the restaurant might be located to serve the population, it is also true that ethnic employees in an ethnic restaurant might choose to live near their places of work to save time and money on the commute.

Figure 16 also shows a similar pattern, with Mexican restaurants serving the whole community and not just an ethnic enclave. Most Mexican restaurants are located along major roads, and only one is located near the most concentrated Mexican population area in the far northern part in town. Brettel and Kemper (2002) also observe a pattern where some ethnic neighborhoods in urban settings are both residential and commercial, while others are strictly commercial. For example, Italian immigrants in New York are residentially dispersed, but the Jackson Heights area of Queens serves as the core of their commercial and social exchange. In contrast, the Washington Heights area of New York, where Dominican immigrants both live and work, has between 1500 and 2000 visible Dominican-owned enterprises. The Kreuzberg area of Berlin, a place known as Little Istanbul, is a commercial and residential center for most of the Turkish immigrants in that city. In sum, ethnic group businesses and residences are dynamic and not limited to zones with a high concentration of an ethnic group. These GIS maps confirm that ethnic restaurants in Bowling Green serve both the general public and ethnic neighborhoods, a mark of globalization.
We can confirm that ethnic groups’ communities are both residential and commercial by plotting the restaurants on a map of the city’s zoning districts. According to the City-County Planning Commission of Warren County’s zoning ordinance (2001), restaurants are only allowed in the following zones: central business, general business, neighborhood business, highway business and light industry districts. Figure 17 shows...
that most restaurants, ethnic or non-ethnic, place themselves in the restaurants-allowed districts, with two exceptions – one American and one Mexican restaurant. One Mexican restaurant, Sol Azteca, is located in a multifamily residential district, which is not a restaurants-allowed district. Possible reasons could be that the error occurred in geocoding process (has only 13% match score) or zoning exceptions were made for those two restaurants. In some cases, non-conforming land uses can exist if they were present within a zone prior to initial zoning or rezoning of a district. The area around Sol Azteca also has a denser Hispanic population, indicating the restaurant is serving the surrounding Hispanic residents. One American restaurant, Nell’s Café, is located in a heavy industrial district, which suggests this restaurant mainly serves the laborers who work in the industrial district. According to Figure 17, another Mexican restaurant, El Norteno, is located in the allowed light industrial district; however, this area is surrounded by a business district, and so El Norteno’s target demographic is probably the general public instead of just nearby industrial workers.
However, Bowling Green only recently began to globalize, and the numbers of ethnic groups and restaurants are still growing; the data is not sufficient enough to see a clear cluster pattern yet. Maps of ethnic population and ethnic restaurant locations in Bowling Green do not confirm the hypothesis that ethnic restaurants show a clustered pattern with smaller mean distances from their ethnic communities. Now, we turn to the
people who actually make the decisions to the choice of restaurant locations. Based on
interviews with ethnic restaurant owners, I determined that the location of restaurants is
determined mainly by accessibility to infrastructure. For example, Chinese restaurants
favor locations on main streets, interstates, and close to WKU’s campus, largely because
these locations will help the owner pick up business from highway commuters and the
large student population in Bowling Green.

Interviewing ethnic restaurant owners also revealed the specific reasons the
owners chose Bowling Green for business. I visited Bosnian, Chinese, Japanese, and
Vietnamese restaurants to interview the restaurant owners individually. Most owners I
talked with said that Bowling Green lacks an authentic ethnic cuisine and is less
competitive, attracting them to the city. They are concerned about market share more
than serving their own ethnicities. Further, some of the ethnic restaurant owners are
refugees, and Bowling Green was the first city they relocated to. Finding a regular job in
a small city can be difficult, and many owners were people who had opted to open an
ethnic restaurant instead. In other cities, those ethnic restaurants mainly served their own
ethnic groups and were most often located near their own ethnic community. Further,
owners said they also considered rent prices when they chose the location for their
businesses. Rent, then, motivated some to choose more remote areas over a central
business district.

As globalization has become more entrenched, Bowling Green’s economy has
boomed and road infrastructure has expanded. As a result, people are more willing to
travel farther for higher value food. In response, ethnic restaurants started to serve the
general public and not only their own communities. Many owners opened a second
branch on a main street or in a more highly populated area. Clearly, globalization reshapes the relationship between ethnic restaurant locations and ethnic communities.

According to the United Nations Human Settlements Programme (2004), developments at the urban and metropolitan levels are now greatly affected by national and global developments. International migration is one such global development with a far reaching impact. The increasing diversity of populations is an important characteristic of globalizing cities. Migration streams today are much more diverse than those in the past and include service workers, highly-skilled professionals, international students, refugees, and undocumented persons. Bowling Green is a city that is still globalizing, situated in-between non-globalized cities such as New Castle, Kentucky, and globalized cities such as New York City (see Figure 18).
Globalization in urban areas is driven by economic, political, social, cultural, and technological factors. Bowling Green is globalizing due to economic influences, such as the automobile industry’s development in Kentucky; political factors, especially since Bowling Green is the seat of Warren County’s government and therefore presents some attractive features for immigrants; and cultural factors, especially the presence of academic institutes and motor vehicle-related facilities. These factors are driving Bowling Green to become a competitive globalizing city and have created a more multicultural landscape.

It is necessary to recognize that great diversity exists within each ethnic group. Each group, no matter how small, has developed its own ways of dealing with its unique situation. It is important to remember that urban environments most often do not seek to eliminate differences between these groups, but value and celebrate them (United Nations Human Settlements Programme 2004).

I believe the ethnic restaurant owners’ drive to serve both the general public and their own communities is necessary to their survival in a smaller globalizing city. A globalized city would have more dense ethnic population areas and would be able to remain profitable operating in those enclaves. I see a clear relationship between ethnic restaurant locations and a city’s globalization status—pre-globalized, in transition, or fully globalized – which is diagrammed in Figure 19. During the pre-globalization phase (from the 1940s to the 1980s), there are no or few ethnic restaurants in Bowling Green. At that point, the automobile industry had not yet developed and the population was smaller. The transitional phase of globalization was driven by factors such as economic improvement; Bowling Green attracted a greater diversity of ethnic populations, which
brought demand for the serving of ethnic cuisines. This period occurred between the 1980s and 2000. After 2000, we start to see ethnic restaurants serving the general public in addition to their own ethnic population, in part because there is not an adequately dense ethnic community to support ethnic restaurants’ business. Once a city is fully globalized, we see areas of dense ethnic populations with many ethnic restaurants located there, as the ethnic community can support the restaurant by themselves. Those ethnic restaurants located in the same ethnic community can focus on serving their own ethnic population without considering the general public. Those restaurants usually tend to serve more authentic dishes to their regular patrons. That is why we sometimes see Chinese-only menus in some restaurants located in Chinese communities in globalized cities such as Los Angeles and New York.

![Figure 19](image_url)
Census Data

Questions of ethnicity have never been clear cut in the United States, a country often called a “melting pot society.” The categories the US Census and US immigration have used to classify ethnicity have shifted considerably throughout the years. As Wong (1999) demonstrates, racial and ethnic categories in the United States have consistently been shaped by the political and social agendas of their times. For example, in the late 1800s and early 1900s, debates raged over whether Irish or Italians could be classified as Caucasian, a critical question in deciding verdicts when enforcing miscegenation laws (Aronson 2007, 192). The ambiguity surrounding ethnicity remains an issue in modern times, but analyzing this data is key to understanding ethnic restaurant development, since these changes contribute to the diversity of foodways. Therefore, it is necessary to settle on a proper scheme for defining ethnic categories.

The Office of Management and Budget’s Statistical Directive No. 15 (Primary Sources Workshops 1977, 1) defines ethnic categories for the purpose of Federal Statistics and administrative reporting as below:

a. American Indiana or Alaskan Natives are those with origins in any of the original peoples of North America, and who maintains cultural identification through tribal affiliation or community recognition.

b. Asian or Pacific Islanders are people originating from the Asian continent, Indian subcontinent or the Pacific Islands.

c. Black persons are classified as those having origins in any of Africa’s black racial groups.
d. Hispanic persons are those of a Spanish Culture or origin, regardless of race, and include people of Mexican, Central and South American, Puerto Rican, and Cuban origin.

e. White persons are defined as those with origins in Europe, North Africa or the Middle East.

For some purposes, separate race and ethnic categories are used, and those categories break down as follows:

1. Race:
   - American Indian or Alaskan Native
   - Asian or Pacific Islander
   - Black
   - White

2. Ethnicity:
   - Hispanic origin
   - Not of Hispanic origin

As the data makes clear, some of these categories are racial, some geographic, and some cultural. Ambiguity is especially striking in the case of Hispanics. Are the majority of Dominicans Hispanic, black or both? How does a Hispanic who does not self-identify as Black, White, or Native American fill out relevant survey questions? How do White Hispanics identify themselves in the first classification scheme? Why is Hispanic origin the only ethnicity category considered when there are obviously other ethnic categories with which people identify? Clear cut answers are simply not forthcoming. The
inadequacy of the census data’s racial and ethnicity data for the purposes of our study is glaring.

Unfortunately, scholarly analysis of what constitutes a racial or ethnic group is not much more helpful. Scholars have advanced a wide variety of definitions of ethnicity, and the many different ways they separate race and ethnicity demonstrates the inability to make definitive statements on these topics. Consider, for example, the following range of definitions of ethnicity:

1. “…‘ethnic groups’ [are] those human groups that entertain a subjective belief in their common descent – because of similarities of physical type or of customs or both, or because of memories of colonization and emigration – and in such a way that this belief is important for the continuation of non-kinship communal relationships...regardless of whether an objective blood relationship exists or not (Weber 1968, 389).”

2. “An ethnic group is a self-perceived inclusion of those who hold in common a set of traditions not shared by others with whom they are in contact. Such traditions typically include “folk” religious beliefs and practices, language, and common ancestry or place of origin...which includes some concept of an unbroken biological-genetic generational continuity.... Endogamy is usual....(De Vos 1975, 9).”

3. “…[Ethnic groups] are social phenomena which call upon primordial sentiments and bonds based upon common ancestry (Bonacich 1980, 11).”

4. “The only reference point for identifying an ethnic role is a belief in common descent as a basis for group identification that is acknowledged by members of other groups (Banton 1994, 9).”

5. “Ethnic groups, whatever their composition, purport to be founded on descent. Endogamy gives concreteness to conceptions of ethnic affinity and makes the group a descent affiliation (Horowitz 1999, 355–356).”

6. “Ethnicity is conceptually distinct from race, but is, in some important ways, bound up with it. The social construction of ethnicity, like race, begins with acts of power: The process by which groups are marginalized as “different” and unequal in their access to social resources from the “mainstream” society (Sanchez 1993, 259).”
Despite the fact scholars are unable to agree on a single definition of ethnicity, common themes emerge; self-identification and the concept of “common decent” are critical markers of what constitutes an ethnic group, regardless of racial categories.

It is this theme of common decent which will prove most helpful to my analysis. The concepts of ancestry and place of origin are clearly the most prominent factors in defining ethnic and racial categories, regardless of the way those categories are ultimately divvied up. When examining the census data in this case study, I will use the census’ ancestry report data to calculate the population percentages of various ethnic groups’ and how they have changed over the last several decades.

Thankfully, in addition to racial and ethnic categories, the census data also reports several ancestry variables: first ancestry, second ancestry and total specified ancestries reported. In the interest of gathering the most comprehensive data, I will use and analyze the data from the total specified ancestries reported in census data.

The pace of international migration has accelerated as globalization has begun to reshape societies. According to Barlow (2003), immigrants in the United States today comprise over 8 percent of the population, proportionately less than the 14.8 percent they made up in 1910, the year with the highest percentage of immigrants in U.S history. The numbers of immigrants have been growing steadily since 1965.

Refer to Table 1, it shows the demographic patterns in Bowling Green between the 1940s and 2005. The population increased approximately threefold during these six decades. I noted a grand total for the population of all those not US native born. In the ethnicity category, I included foreign-born Whites (which Europeans might report), Italian, Greek, Yugoslavian, Indian, Japanese, Chinese, Filipino, Korean, Thai,
Vietnamese, Hispanics and other races. Native Whites, a category which only includes Whites born in the United States, represents the dominant ethnic group and makes up an average of 86% of the total population. Native Blacks, a category that counts only that part of the black population born in the United States, composes an average of 13% of the total population. Looking at the census table, we see that ethnic populations accounted for less than 0.1% of the total population between the 1940s and the 1960s. The 1960s saw some growth of the ethnic population, but it still only represented 0.2% of the total population. This result is unsurprising if we consider Barlow’s (2003) statement that immigration surged in the 1960s. Ethnic populations started to grow steadily around 1970 and there was a sudden influx of immigrants around 2000. We can also see that there were no ethnic restaurants in Bowling Green between the 1940s and the 1970s. We can suggest there may be a threshold where perhaps 1% of the population must be of a particular ethnicity to support the opening of an ethnic restaurant. Indians and Japanese were among the first ethnic groups moving to Bowling Green in force during the 1960s, coming with the nation’s concurrent immigration wave.

Due to the inherent limitations of the census survey and question categories, we are not able to distinguish what ethnic groups are present in the category of Other Race. Beginning in the 1970s, the number of ethnic groups in Bowling Green increases to five – Hispanic, Japanese, Indian, Chinese, and Filipino. In the 1980s, one additional ethnic group, Korean, was added to Bowling Green’s ethnic population. These ethnic groups continued to grow steadily between the 1960s and the 1980s, and even greater growth came in the 1990s. The population growth of the Eastern European ethnic groups is difficult to see until the 1900s and then again with a sudden increase of the Yugoslavian
population in 2000. The Italian population also changed from 0.01% to 0.20% during just one decade. The Greek population has always remained a very low, 0.01% of total population. In 2000, we also see other Asian ethnic groups such as Thai and Vietnamese, but they only occupy 0.06% of total population in town.

The Hispanic population has consistently been the largest ethnic minority group in Bowling Green since the 1970s. A large numbers of Hispanic immigrants, most of them from Mexico, arrived in the U.S after 1950 (Mariani 1991). Unsurprisingly, Mexican restaurants were also the first ethnic restaurants appearing in town during the 1980s (see Table 5). From the 1980s onward, Mexican restaurants were the leading ethnic cuisine, reflecting the large Mexican population and the cuisine’s popularity at the national level.

<table>
<thead>
<tr>
<th>Cuisine Type</th>
<th>1980s</th>
<th>1990s</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bosnian</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Chinese</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Greek</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Indian</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Italian</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Japanese</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Mexican</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Thai</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Vietnamese</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 5

Asian Indian immigrants arrived in the U.S beginning in the late 1960s (Wikipedia 2009). Unlike other ethnic groups, Asian Indians were only allowed to immigrate to the U.S. if they had completed a bachelor’s or master’s degree; thus, they have the highest educational qualifications of all national origin groups in the U.S (Rao 2003). The Indian population in Bowling Green has had steady growth, but the growth is limited. We only see one Indian restaurant in town in 2005.
The Japanese population in Bowling Green started small in the 1960s but increased dramatically in the 1990s. The automobile industry exploded in Kentucky at the same time as this influx of Japanese immigrants. In 1981, General Motors moved production of the Corvette from St. Louis to Bowling Green, and this event triggered automobile development in town (Kentucky Cabinet for Economic Development 2009). As the automobile industry developed, Japanese companies relocated their overseas offices to Bowling Green. Many Japanese engineers or employees of motor vehicle facilities arrived in Bowling Green in the 1990s. Table 5 shows that Japanese restaurants are the fourth most common ethnic cuisine in Bowling Green, which reflects the fact that there is a high demand for Japanese cuisine driven in part by those Japanese employees at motor vehicle-related facilities.

Chinese immigrants are the oldest and largest ethnic group of Asian ancestry in the U.S and their history of migration and settlement can be traced back to the late 1840s (Zhou 2003). Early Chinese immigrants concentrated on the West Coast and in urban areas. Another influx of Chinese immigrants, including a large numbers of refugees fleeing Communist China, arrived in the U.S during the 1950s. According to Zhou (2003, 1), those immigrants came “with little money, minimum education and few job skills, which forced them to take low-wage jobs and settle in deteriorating urban neighborhoods.” Chinese populations in Bowling Green remained at a low rate of 0.03% throughout the 1970s and 1980s. The Chinese, like other ethnic groups, became a larger proportion of the population in the 1990s. The number of Chinese restaurants grew from 3 to 7 in less than two decades. Looking at the census table, the population of Asian Indian, Japanese, and Chinese groups were all about the same (0.23%-0.25%) in 2000,
while the number of restaurants has a large gap. Chinese restaurants lead this group with a total of seven. On the other hand, there is only one Indian restaurant despite comparable population. Possibly, most of the Chinese immigrants, as Zhou (2003) said, had little education and few job skills. They were forced to work in labor intensive, low-skill jobs such as restaurant services, and only later opened their own restaurants. Asian Indians hold higher education qualifications, and so instead of running restaurants, might choose jobs requiring a higher degree. Other Asian ethnic groups such as Thai and Vietnamese, who came in 2000, are the latest ethnic groups in Bowling Green. However, they have two ethnic restaurants in town even though they are the most minor ethnic groups. This suggests that the owners came to town specifically to open ethnic restaurants and not to serve a large ethnic population. More likely, they came looking for a less competitive market, but one where the population dines out frequently.

Due to the lack of census data for foreign-born Whites and European ancestries before 1990s, we are not able to analyze the relationship between ethnic population growth and the development of European ethnic cuisine precisely in the earlier decades. However, since the 1990s, census data started to include ancestry related information, which allowed me to see Eastern European ethnic groups, especially the Yugoslavian population in town. In the 1990s, the target European ethnic groups such as Italian, Greek and Yugoslavian only made up 0.07% of Bowling Green’s total population. In 2000, foreign Whites and target European ethnic groups made up 7.44% of the population, and three European cuisines existed – Italian, Bosnian, and Greek. Nowadays, most Italian restaurants are run by native-born Americans or franchise organizations. Therefore, we are not able to see clearly how Italian immigrants impacted
Italian restaurants in Bowling Green, although 0.20% of the city’s population reported Italian ancestry in 2000. Refugees from Bosnia ran Bosnian and Greek restaurants in the city. In the 1990s, the Yugoslavian population made up only 0.05% of the population, but the number jumps to 0.23% in 2000. According to Kemp and Rasbridge (2004), the Yugoslav wars, a series of violent conflicts fought in the former Socialist Federal Republic of Yugoslavia, led to an influx of Bosnian refugees to the U.S between the 1990s and 2001. These wars were the main reason we see a sudden influx of the Yugoslavian population in town because some of those Bosnian refugees relocated to Bowling Green, thus contributing to the diversity of European cuisines in town by 2000.

Looking at census data and the number of ethnic restaurants between the 1940s and 2000, we find a significant correlation between ethnic population growth and ethnic restaurant development. As the United Nations Human Settlements Programme (2004, 13) reports, “the standardization of urban culture is significantly reinforced by the increasing multicultural nature of cities, which is itself a direct result of international migration. The principal outcome of this has been the emergence of what may be called urban ethnic spaces within cities, often in the form of ethnic ghettos, but also in the form of culturally distinct non-residential spaces, such as shops and restaurants.” Thus, we can see from census data and restaurant development trends that international immigrants have contributed to the diversity of population and ethnic cuisines and reshaped the cultural landscape in Bowling Green over the past six decades.

How do income and education levels factor into the Bowling Green scene? Zelinsky (1994) mentions that places with higher mean levels of affluence and education tend to offer more ethnic cuisines. A city with a favorable economic situation and a
culturally sophisticated community, such as a metropolitan city, tends to have more ethnic restaurants. When people have greater income, they are more often able to afford higher education, traveling, and eating out. In other words, increased income feeds other factors correlated with a taste for exotic food. We can examine and assess income and education levels in Bowling Green since 1940 to see what has changed since then.

To understand the changing level of income per capita overtime, we have to calculate income with an inflation calculator to arrive at a figure for real growth in 2005 dollars. I used the CPI Inflation Calculator provided by the Bureau of Labor Statistics website (Bureau of Labor Statistics 2009, 1). This inflation calculator uses an index value to calculate the raw income in 1970, 1980 and 1990 in terms of 2005 dollars. Figure 20 indicates that income per capita in Bowling Green has risen approximately 66% since 1970. The higher income level in Bowling Green also indicates residents have more disposable income. While income levels improved between 1970 and 2005, the rate of increase was steady and not dramatic. In contrast, ethnic restaurants exploded (from 7 to 37 restaurants) between the 1990s and 2005 (Table 6). Correlation between income level and ethnic restaurant development thus is relatively weak in Bowling Green.
Figure 20

![Graph showing Raw and Adjusted Income Per Capita for Inflation in Bowling Green, Kentucky.](image)

Table 6

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Ethnic Restaurants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980s</td>
<td>1</td>
</tr>
<tr>
<td>1990s</td>
<td>7</td>
</tr>
<tr>
<td>2005</td>
<td>37</td>
</tr>
</tbody>
</table>

Figure 21 shows the growth rate of the percentage of residents completing four years of high school or more. This rate has risen dramatically from 24% to 78% since the 1940s, a fact that suggests the level of education is also improving. Again, according to Zelinsky’s findings, a higher mean level of education can also impact the number of ethnic restaurants. The education level increased greatly between the 1940s and the 1960s, nearly doubling in that period, and grew more slowly afterwards. Based on this chart, we assume that there might be a lag factor which educational level rises, but it
takes some time for that to translate to exploration of ethnic cuisines. Besides, educational level is getting quite high by 1990, and there is less room for growth. While it is not possible to make a tight correlation, the dramatic rise in educational levels since the 1950s is corresponding to Zelinsky’s observations. Immigration of foreign nations did not take off till the 1980s, so we assume that the population was primed with a sufficiently high educational level to appreciate the endeavors of this new ethnic population.

![Percentage of Population who Completed 4 or more Years of High School](image)

**Figure 21**

Education levels seem to be a weaker contributing factor to Bowling Green’s ethnic restaurants development than income level. However, trends indicate that the level of income and education will continue to grow and might skyrocket in the future. Overall, we see that the automobile industry’s development improved Bowling Green’s economy and brought greater wealth to residents. As globalization proceeds, we can expect the overall ethnic population and the level of income to keep growing. We can
also expect that the residents of Bowling Green will be able to find more ethnic cuisines available in town as time goes by.
Authentication or Americanization of Ethnic Cuisines

Montanar (2006, 87) states: “When foods and beverages resurface in the
gastronomy of different countries or regions, they are never exactly the same.” For
example, McDonald’s burgers can be found worldwide nowadays. If you ever travel to
another country and eat a McDonald’s burger, you would notice a fusion taste or the use
of local ingredients; examples include Teriyaki chicken burgers in Japan and Kimchi
burgers in Korea. McDonald’s claims that all ingredients are imported from the United
States and that their burgers will taste the same no matter where you are in the world.
However, McDonald’s American menu does not mesh entirely with local people’s eating
cultures and taste preferences. This example illustrates that when food is transported
from one culture to another, it will be rethought and repositioned in a sequence and
structure different from that of its original place (Montanar 2006). When cultures mix to
reproduce unique outcomes, it results in “localized hybridity” (Murry 2006, 242). For
example, Australian cuisine is a mixture of traditional British cooking and local
Australian ingredients such as kangaroo, plus influences from Italians, Greeks, and
Spanish immigrants. This mixture of forms combines old styles in new and tasty ways
(Murry 2006).

The United States is a country with immigrants from all over the world. Each
ethnic group brought their own culture and foods when they first arrived. Those ethnic
cuisines later became Americanized to cater to local food preferences. James Beard, a
TV host and noted cookbook writer, observes that foreign dishes in the United States, like
immigrants, were transmuted to an American model. Beard (1972, 5) says, “…very few
foreign dishes survive in their pure form when they become nationally popular; they take
on the stamp of the American kitchen so quickly that in many cases they cease to be exotic and are accepted as casually as a plate of ham and eggs.” It is true that no Chinese would recognize the Chinese cuisine in most U.S Chinese restaurants as “Chinese food.” Someone from Japan would not feel at home in an American sushi restaurant, nor would Italians be immediately comfortable with American pizza. This Americanization process, according to Kiple (2007, 230), becomes “a function of American abundance, the addition of great amounts of animal protein to foreign dishes, particularly since the beginning of what Look Magazine in 1954 called the “Protein Era.””

Yet America was at the forefront of food globalization and Americans were not chained to English tastes. As Kiple (2007, 230) asserts, “with food globalization, it is the foreign influence compelling the adoption of new foods and the ways of preparing them that matters, and not the dish that Americanization ultimately molds.”

Since the 17th century, American cuisine has been a work in progress, kneaded, shaped, and reshaped by immigrants from Africa, Asia and Europe (Kiple 2007). Three leading ethnic cuisines in the U.S – Mexican, Chinese, and Italian – were greatly influenced by those early immigrants. Kenneth Kiple, the editor of The Cambridge World History of Food, researched the immigrants’ influences on ethnic cuisines in the U.S. Kiple (2007) describes how the construction of railroads, and especially the joining of the Central and the Union Pacific rails at Promontory Point, helped Chinese and Italian cuisines to become transcontinental. The Hispanic influence of Mexican cuisine was fed by both Spain and Mexico.

Chinese immigrants in early decades mostly settled on the West Coast. Most of them were Cantonese from southern China. They introduced Cantonese dishes, which
were based on rice and stir-fried vegetables such as bean sprouts and bak choy. The early Chinese restaurant businesses, at first, mainly served Chinese laborers who laid track for the railroads or who worked in California canneries. After the completion of the transcontinental railroad, Chinese cuisine started to spread eastward to the inner states. However, Chinese food in America became quite different from Cantonese dishes (Kiple 2007). Being a Chinese from Taiwan, I did not enjoy visiting Chinese restaurants when I first arrived in the U.S. Neither the dish names on the menu, nor the plates on the table in front of me, were recognizable or anything like homemade dishes in Taiwan. I had no idea what “chop suey” or “General Tsao’s chicken” were when I looked at the menu. What made me realize the dishes I ate were considered Chinese were the steamed white rice and the stir-fried tofu and vegetables, but the stir-fried dishes were sweetened and disappointed me. I walked into a Chinese restaurant with the hope of finding authentic, home-style dishes. None of the Chinese dishes I ate in Taiwan were seasoned with sweet and sour sauce or a sweet soy sauce. After I came to understand the history of Chinese food in America, I understood that Chinese food here was based on the Cantonese style and transmuted into Americanized Chinese food. The fortune cookie, which does not exist outside of the U.S., was another new and interesting find for me.

Much like the history of Chinese cuisine in America, Italian cuisine was influenced by the Sicilian and southern Italian laborers who laid railroad tracks through Omaha, Nebraska. Their diets were based on pasta, olive oil, cheese, tomato sauce, and wine. These ingredients were composed into a new cuisine and became what most Americans known as Italian cuisine. Some Italians opened restaurants that served meatballs and marinara sauce over spaghetti. Other Italians moved westward from Utah
to open restaurants, and later on became movers and shakers in the California wine industry (Kiple 2007). Italian cuisine is now one of the three most popular cuisines and influences American pizza and pastas, which can now be found in mainstream American restaurants. Pizza and pasta are also common frozen foods found in any supermarket in the U.S. Because pizza and pasta were so popular in the U.S, they gradually became a dominant food in the American diet. Oddly enough, American pizza franchises like Pizza Hut and Domino’s have popularized pizza as an *American* food, not an *Italian* food. Overseas, this often confuses foreigners, who think pizza has American origin.

Mexican cuisine in the U.S was influenced by Spain and Mexico during the war with Mexico. According to Kiple (2007), both Spain and Mexico continued to exert a vast influence over the cuisine in a belt running from southern California to Florida. Mexico’s influence was dominant from California and Texas. Spain’s influence continued along the Gulf Coast from Louisiana to Florida. Hispanic cuisine is tortilla and bean based. Tacos, tostados, and enchiladas are the most common foods in Mexican restaurants. Some Mexican food was transmuted into mixed-culinary, such as Tex-Mex chili con carne. Guacamole, an avocado-based dip, is popular and can be seen in most Mexican cuisine. However, avocados only become an integral part of the Hispanic food in the U.S beginning at the end of the 19th century (Jones 1999).

All these fusion-style or Americanized ethnic cuisines indicate that differences in food culture do not seem to disappear, but as Montanar (2006, 89) said, “to be even more accentuated in the wider competition of globalization that has heightened awareness and endowed with new meanings the cycles of discovery and rediscovery – and the
invention – of food identities.” Only in a melting-pot society like the U.S can we see people celebrating culture diversity and creating its own unique multi-culinary style.
Survey of Food Preference

One hypothesis of this research is that residents’ food preferences have impacted the success or failure of individual ethnic restaurants; therefore, I conducted a survey to gather sufficient information to support this hypothesis. This survey was conducted in public areas of Bowling Green over two months, with a total of 182 respondents participating. The survey areas were shopping centers, grocery stores, and public areas such as Fountain Square Park. Respondents were randomly selected. It is necessary to understand that any survey may carry bias as we cannot find a truly random sample of the entire city population in just a handful of areas. The result of this survey can serve as a reference for this case study, but do not accurately represent Bowling Green residents’ food preference in general.

The survey was designed with 14 closed-ended questions to gauge the residents’ preferences and perceptions of ethnic restaurants. Closed-ended questions, unlike open-ended questions, are straightforward and narrow down the respondents’ possible answers. Questions with multiple-choices answers more readily reveal a specific pattern. Respondents are also more willing to answer a survey if answers are provided for them to select from, reducing the time spent thinking and writing. Each respondent answered questions about basic demographics, food quality, and dining habits.

At the beginning of the survey, respondents were asked to indicate which ethnic foods are now available in Bowling Green. I provided 13 choices, in order to track people’s perceptions and awareness of ethnic restaurants here. On the list of choices, I listed those cuisines available in the city – Bosnian, Chinese, Greek, Indian, Italian, Japanese, Mexican, Thai, and Vietnamese – as well as four unavailable ethnic cuisines,
namely French, Korean, Russian and Turkish. Figures 22 and 23 show that over 50% of respondents did not know that there are Greek, Vietnamese, and Bosnian restaurants in Bowling Green. On the other hand, 11% of respondents think Bowling Green has a Korean restaurant, while this cuisine is not actually present. A possible reason could be that Japanese and Korean foods are similar in terms of food materials and in the preparation of dishes. Both Japanese and Korean foods are largely based on rice, noodles, meats, vegetables and tofu, and both serve cold and raw dishes. For inexperienced Westerners, it may be difficult to tell the difference between Japanese and Korean cuisines. Even as an Asian from Taiwan, I was once confused about the difference between Japanese sushi and Korean kimbap. Both Japanese sushi and Korean kimbap are made with rice and wrapped with seaweed. The difference is that in kimbap the ingredients are wrapped and the sauce is mixed into the rice. Thus, it is understandable that respondents mistake Bowling Green’s Japanese restaurants for Korean restaurants.

Further, most respondents are aware of the availability of the three leading ethnic cuisines – Mexican, Chinese, and Italian. Most respondents were also aware of the availability of Japanese food. Japanese auto part companies such as Sumitomo are located in Bowling Green, and may raise the profile of Japanese restaurants. According to the Kentucky Automotive Industry Profile report, there are a total of 22 motor vehicle production-related facilities, supporting approximately 3911 employees, in Bowling Green (Kentucky Cabinet for Economic Development 2009). These motor vehicle-related facilities brought lots of Japanese engineers into town, attracting Japanese restaurants to open businesses in Bowling Green.
The respondents were asked whether they had visited ethnic restaurants, and if so, which kinds. By asking this question, I hoped to understand respondents’ ethnic cuisine preferences in general. The result (Figure 24) shows that 94% of respondents have dined
on Chinese, 88% on Mexican, and 75% on Italian meals. This result closely reflects the perception of those ethnic cuisines available in Bowling Green.

However, when examining Figure 22 and Figure 24, we see a gap between being familiar with a category of ethnic restaurant and having visited it. Table 7 compares the percentage of people visiting and familiar with each cuisine. The number inside parentheses is the Visiting column indicates whether the rank of that cuisine is relatively higher or lower than the rank of that cuisine in the Familiar column. What we see is that Italian, Indian, and Greek cuisines rank relatively higher in terms visiting than familiarity (although the percentage of population is lower in each case). Respondents might not know about Italian, Indian, and Greek restaurants in Bowling Green, but may have actually eaten at one somewhere else. On the other hand, respondents are actually familiar with Japanese, Thai, and Bosnian restaurants but probably have never visited one. Japanese restaurants are the fourth leading cuisine in Bowling Green, and the fifth leading cuisine at national level, which 73% of respondents have visited. This is probably due to the numerous Japanese motor vehicle-related facilities that bring patrons in and the high familiarity of Japanese cuisine in the United States (by looking at the sushi sold in super markets and the popular Japanese cooking show, the Iron Chief, on food channel).
Next, respondents were asked to indicate which cuisine they eat most often, with 13 possible choices. The answers hint at which ethnic cuisine is the most popular in general. When the respondents were asked what ethnic restaurants they visited most, the
three leading cuisines – Mexican, Chinese, and Italian – remained at the top of the list (Figure 25).

![Restaurants Most Visited by Cuisine Chart]

Figure 25

The frequency of visits is also considered, because this figure will give a fuller picture of the respondents’ dining habits. Respondents were asked to indicate how often they eat their favorite ethnic cuisine. Figure 26 shows that most respondents visit their most frequently visited ethnic restaurants once a week or once a month, a moderate frequency.
To gather qualitative information, respondents were asked why they visit a particular ethnic restaurant. Reasons such as location close to their houses, the price of food, the taste of cuisine, and learning or experiencing a different culture could impact respondents’ willingness to visit the ethnic restaurant. Fifty percent of respondents said that they dined out for delicious food, the most common response (Figure 27). Globalization has resulted in greater popularity for ethnic restaurants. Intense competition between restaurants ensures the price of ethnic cuisine remains competitive. In the survey, 22% of respondents, a high percentage, were concerned with the price of a meal; an inexpensive price attracted them to restaurants. Additionally, 15% of respondents visit an ethnic restaurant because they want to experience another culture. Only 10% of respondents choose to visit an ethnic restaurant simply because it is near to home. The remaining 3% of respondents visit ethnic restaurants for other reasons, such as an exotic atmosphere, cleanliness, or an ethnic friend.
To uncover information about dining preferences, I asked respondents if they prefer to dine in, take out, or avoid a specific ethnic cuisine. Figure 28 shows that most respondents prefer to dine in at most ethnic restaurants, especially Mexican, Chinese, and Japanese places. Respondents prefer to take out Chinese food more than any other. Ethnic cuisines which are eschewed by respondents include Turkish, Bosnian, and French cuisine. Reviewing Figure 22, we see that most of the respondents didn’t know about the availability of Bosnian cuisine; only 48% of respondents knew that Bosnian cuisine was available in town. It seems respondents tend to dislike cuisines they are not familiar with, such as Bosnian and Turkish. French cuisine may have received negative marks due to high prices, political factors (renaming French Fries to Freedom Fries), or sophisticated images associated with it.
The demographic patterns of all the respondents were recorded so as to understand the correlation between demographics and food preference. Fifty-eight percent of respondents were male and 42% were female (Figure 29). Men comprised a higher percentage of the respondents, perhaps because the surveyor was female. Respondents between 19 and 25 years old made up the bulk of respondents (Figure 30).
Based on the survey data we gathered, we can tell that people in the 19 to 25 age group show a stronger preference for ethnic cuisine than the 26 to 40 age group. Youth interest in ethnic restaurants is principally attributed to the fact that Western Kentucky
University attracts students to town. The respondents were predominantly White – 89% (Figure 31), reflecting the racial structure of Bowling Green.

![Respondents by Race](image)

**Figure 31**

When we compare demographic patterns of survey respondents with census data in 2000, Whites are obviously the dominant group on both sources. We would expect African Americans to be our second largest responding group. Yet, in this survey Asians responded at a higher rate, a result which may also relate to the background of the surveyor.

Several factors that may have influenced the selection of respondents for this survey. First of all, in order to ensure that respondents were randomly selected, only every other person who passed before the surveyor was asked to participate. However,
some refused to participate or withdrew in the middle of the survey. In the field, I observed that women seemed more defensive and more likely to reject participation than men. This is the reason men dominate among the respondents. Likewise, as the surveyor is Asian, more Asians were willing to participate. Male respondents were also more willing to help a female surveyor as they felt less defensive talking to a female. In addition, based on casual chats with the respondents, I noticed that male respondents prefer low price, large quantity choices such as buffets, while female respondents preferred restaurants with a good atmosphere, regardless of meal price.

Residents’ cuisine expectations would be an indicator for untapped interest in ethnic restaurants. Respondents were asked to answer whether they are satisfied with the currently available cuisines or they are hoping for a new cuisine. When respondents were asked about the satisfaction of the available ethnic cuisines in Bowling Green, 60% of respondents were satisfied, while 40% would like to see more European and Asian ethnic cuisines (Figures 32 and 33). Due to the difficulty of listing all the desired cuisines listed by respondents, I classified the restaurants listed in the survey into six categories based on the regions of cuisine.
Is there an ethnic cuisine you would like to see in Bowling Green which is not available currently?

Yes 40%
No 60%

Figure 32

Desired Cuisine

<table>
<thead>
<tr>
<th>Cuisine</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>9%</td>
</tr>
<tr>
<td>Other</td>
<td>13%</td>
</tr>
<tr>
<td>European</td>
<td>42%</td>
</tr>
<tr>
<td>Central American</td>
<td>4.00%</td>
</tr>
<tr>
<td>Middle Eastern</td>
<td>7%</td>
</tr>
<tr>
<td>Asian</td>
<td>25%</td>
</tr>
</tbody>
</table>

Figure 33
Children are another factor impacting people’s food choices. This survey found that 33% of respondents have children (Figure 34).

![Pie chart showing 33% yes and 67% no for having children.](image)

**Figure 34**

Respondents with children were asked how children impacted their meal choice. Exactly 50% of respondents choose cuisine based on their children’s preference (Figure 35). Most said that children are hamburger and junk food eaters, and that their kids will not always eat foreign foods. Parents usually choose restaurants where children are more likely to accept the menu choices. However, some respondents also said that their children like trying foreign food, such as Mexican and Chinese, because of the cheese in Mexican food and the sweetness of Chinese food. Most parents said that their kids favor cheese enchiladas in Mexican restaurants and sweet and sour chicken in Chinese restaurants. Respondents often give children a list of restaurants to choose from to make sure their kids eat more nutritional food. Respondents usually include ethnic restaurants.
in the list, such as Mexican and Chinese, since children can readily accept those two options. Some parents thought Chinese food is healthier than fast food.

Figure 35
Conclusion

This research shows that restaurant development in Bowling Green between the 1940s and 2005 has been geographically complex, but displays identifiable patterns. Bowling Green serves as the seat of Warren County and was recognized as the fourth largest city in Kentucky in the last census. Therefore, Bowling Green is a major economic and transportation hub for Warren and adjacent counties. Restaurants have developed rapidly during this time, especially between 1950 and the 1980s. In the beginning of the 1940s, restaurants were mainly located in downtown, but in the 1950s restaurants began to spread out toward the northwest, on Morgantown Road and Veterans Memorial Road. This decade marks the first peak in restaurant growth. Gradually, in the 1960s, restaurants started to locate on the US 31W Bypass, and at this time restaurant closings became more frequent downtown. During the 1970s, new restaurants opened on Nashville Road and clustered on Morgantown Road. In the 1980s, restaurants grew rapidly on Scottsville Road and the US 31W Bypass, and a Mexican restaurant arrived on the US 31W Bypass. The 1990s saw the restaurant business decline, with most closings located on the US 31W Bypass. However, the number of ethnic cuisines available expanded to three – Chinese, Italian, and Mexican. Three clusters of restaurants in the 1990s were found on the US 31W Bypass, Russellville Road, and Scottsville Road. In 2005, the number of restaurants increased to 143, including 37 ethnic restaurants offering nine types of cuisine. Ethnic restaurants were thriving by 2005. At present, the three leading cuisines are still Mexican, Chinese, and Italian.

Before the 1970s, the mean center for each decade since the 1940s slowly shifted northward. From the 1980s on, the mean center started to shift southeast, toward
Scottsville Road, indicating that the growth axis of restaurants followed the major infrastructure developments in Bowling Green. The standard distance in each decade also indicates that restaurant locations in early decades tended to concentrate in the downtown business district. As the city expanded into suburban areas, restaurant locations gradually became more dispersed.

Globalization is proceeding in Bowling Green, driven in part by the city’s economic improvement, which was mainly a result of Kentucky’s automobile industry development during the 1990s. Many motor vehicle-related facilities relocated to Bowling Green, which brought new immigrants to town. Academic institutes such as Western Kentucky University also attract large numbers of international students and faculty. These economic and social factors are driving Bowling Green’s globalization and further reshaping the correlation of ethnic restaurant locations and ethnic communities. Based on my observations, I developed a model relating ethnic restaurant development to three stages of globalization. In Bowling Green’s pre-globalization phase between the 1940s to the 1970s, there are no ethnic restaurants – just as you would expect from an isolated or non-globalized area, like the small town of New Castle in Kentucky. Once Bowling Green began globalizing economically, politically and socially, it moved into a transitional phase which started in the 1980s. In this period, we saw a growing number of ethnic immigration and restaurants; these establishments continue to serve both the immigrant community and the general public. When a city like New York City globalizes and has dense pockets of ethnic populations, a clustered pattern of ethnic restaurants located in ethnic communities becomes the norm. Bowling Green falls into the transition phase of globalization.
Historical census data showed that Bowling Green’s ethnic population has grown with the number of ethnic restaurants. The diversity of ethnic groups in Bowling Green contributed to ethnic restaurant development in recent decades. This supports one of my hypotheses, namely that the influx of ethnic groups reshaped the diversity of ethnic cuisines during these decades. The increasing diversity in the population correlated with the increasing diversity in ethnic restaurants. An increased income level may also have meant more business for ethnic restaurants, but the statistical data in this study is not sufficient to support such a conclusion in the case of Bowling Green. Improved levels of education also could not be precisely correlated to the development of ethnic restaurants, but the marked increase over the past four decades is suggestive of associations reported by Zelinsky. Thus, the historical census data indicates that the growth of an ethnic population is the major factor impacting ethnic restaurants’ development in Bowling Green.

I hypothesized that ethnic restaurants tend to be found in ethnic neighborhoods. Based on maps of the ethnic population and ethnic restaurants, we observe a pattern that some ethnic restaurants tend to be located near an ethnic enclave. However, most ethnic restaurants locate on major roads and in business districts, aiming to serve not only one minority ethnicity but also the general public. This hypothesis is not supported for Bowling Green, suggesting that small cities may differ from major globalized cities in this dimension of restaurant development.

A survey was conducted to gauge residents’ preferences for ethnic restaurants and to test the hypothesis that residents’ food preferences are impacted by an influx of ethnic restaurants. The survey’s results show that the respondents’ favorite and most visited
ethnic restaurants are Mexican, Chinese, and Italian restaurants. These three ethnic cuisines are also the most common ones in Bowling Green, which indicates that residents’ food preferences have likely been impacted by the higher availability of these three cuisines.

As society becomes more globalized, Bowling Green is on the crest of a wave of emerging globalized cities in the U.S. We can predict that more exotic food places will be found in Bowling Green in the near future because of its increasingly diverse population. This micro-scale ethnic restaurant study not only benefits the residents of Bowling Green who immerse themselves in various cultures through ethnic restaurants, but also predicts the future of our global society, which will be defined by a higher level of multiculturalism. As Mariani (1991, 87) said, “For these Russians, and for the Germans and Jews, the Italians and the Chinese, the Cambodians and the Mexicans who came before them, America was a land of milk and honey, all served up on silver platters in restaurants they themselves crafted to replicate some fantastic restaurant of their imagination, places they might only have dreamed of being part of before coming to America.” Ethnic groups and restaurants, indeed, have shaped American’s foodways and the diversity of the dining experience since the 1800s; certainly, they will definitely continue to do so in the coming era.


Survey of Restaurant Preferences

We appreciate you taking time to fill out this survey, which will take roughly five minutes. You may stop participating in this survey at any time. Completion of it signifies informed consent, and you must be 18 or older to participate.

This survey is designed to investigate Bowling Green residents' preferences for ethnic restaurants. This survey is completely anonymous; neither Western Kentucky University, nor the researcher, will know the name of particular participants. This survey is completely confidential. Only aggregate data will be used in any publication involving this study.

Investigator: Shwu-Jing Jeng 810 Cabell Drive Apt. B, Bowling Green, KY 42101. (270) 782-8046

1. Which types of restaurants currently exist in Bowling Green? (Check each that exists.)
   - Bosnian
   - Chinese
   - French
   - Greek
   - Indian
   - Italian
   - Japanese
   - Korean
   - Mexican
   - Russian
   - Thai
   - Turkish
   - Vietnamese

2. Have you ever eaten these cuisines? (Check as many as apply)
   - Bosnian
   - Chinese
   - French
   - Greek
   - Indian
   - Italian
   - Japanese
   - Korean
   - Mexican
   - Russian
   - Thai
   - Turkish
   - Vietnamese

3. Which of the following cuisines do you eat most often? (Check Only One)
   - Bosnian
   - Chinese
   - French
   - Greek
   - Indian
   - Italian
   - Japanese
   - Korean
   - Mexican
   - Russian
   - Thai
   - Turkish
   - Vietnamese
   - I eat none of these (Skip to question #7)

4. How often do you eat the cuisine selected above?
   - Every day
   - More than twice a week
   - Once a week
   - Once a month

[Other Side, Please]
5. Why do you go to this type of restaurant? (Check all that apply)
   ___ Delicious food
   ___ Close to house
   ___ Inexpensive
   ___ Experiencing other culture
   ___ Other (Please Specify): __________________________

6. When you eat at the following types of restaurants, do you prefer to dine in or take out? (Check one column for each row)

<table>
<thead>
<tr>
<th>Restaurant Type</th>
<th>Dine In</th>
<th>Take Out</th>
<th>Both</th>
<th>Don't Eat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bosnian</td>
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<td>Chinese</td>
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<tr>
<td>Vietnamese</td>
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</tbody>
</table>

7. To what age group do you belong?
   ___ 19-25 years old
   ___ 26-40 years old
   ___ 41-65 years old
   ___ Over 65 years old

8. What is your gender?
   ___ Male   ___ Female

9. What is your Ethnicity?
   ___ White   ___ African American   ___ Hispanic   ___ Asian   ___ Other: ______________________

10. Is there an ethnic cuisine you would like to see in Bowling Green which is not available currently?
    ___ Yes    ___ No

11. If Yes, what is it?

12. Do you have children?
    ___ Yes    ___ No

13. Do your children influence your choice of restaurant?
    ___ Yes    ___ No

14. If Yes, in what way?

[Thank you for your participation in this survey]

THE DATED APPROVAL ON THIS SURVEY INDICATES THAT
THIS PROJECT HAS BEEN REVIEWED AND APPROVED BY
THE WESTERN KENTUCKY UNIVERSITY HUMAN SUBJECTS REVIEW BOARD
Dr. Phillip E. Myers, Human Subjects Administrator
TELEPHONE: (270) 745-4652

HSRB APPLICATION # 1506-026
APPROVED 9/24/05 TO 12/31/05
EXEMPT EXPEDITED FULL BOARD
DATE APPROVED: 9/24/05