Rural Vermont: the Food Environment and Cooking Practices As An Implication for Health

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RURAL VERMONT: THE FOOD ENVIRONMENT AND COOKING PRACTICES AS AN IMPLICATION FOR HEALTH

A Thesis Presented

by

Shauna Henley

to

The Faculty of the Graduate College

of

The University of Vermont

In Partial Fulfillment of the Requirements for the Degree of Master of Science Specializing in Nutrition and Food Science

October, 2010
ABSTRACT

The primary aim of this research was to investigate cooking practices and cooking knowledge in a rural environment, as well as learn how the kitchen environment may reflect and/or shape an individual’s process when creating a meal. Qualitative methods were implemented allowing for the data to be triangulated. The research methods used included a semi-structured interview, participant questionnaire, and videotaping dinner time meal preparations by the primary meal preparer on two separate occasions. Emergent themes about the role of the rural food environment began to develop surrounding how respondents procure food. The rural Vermonter relied on using home gardens, farmers’ markets, and community supported agriculture to procure food. Another theme that emerged was the role of the primary meal preparer, or the “nutritional gatekeeper.” The nutritional gatekeeper was a huge component in controlling family meals and portion sizes inside, and outside the home, and the ingredients used in homemade meals. All rural respondents had some degree of cooking skills that began at a young age. Their skills were honed over time by necessity and/or curiosity. Rural respondents had general nutrition knowledge that was evident by their definition of a healthy meal, and procuring the freshest ingredients. The kitchen space was less of an influential factor when creating a meal than initially anticipated, but was the processing center where procured food items were crafted into a meal. The theme surrounding the environment and local foods strengthens the 21st century’s shift of what consumers are demanding from the Nation’s food system. Understanding how nutritional gatekeepers choose to prepare meals, and the influence of their food environment on the meal thought process, may make the domestic home a platform to disseminate healthful cooking practices. This study concluded an ongoing ethnographic study investigating peoples cooking practices, and cooking knowledge in an urban (Boston metropolis), suburban (Burlington, VT), and rural (Franklin and Lamoille County, VT) environments as an implication towards health.
ACKNOWLEDGEMENTS

Thank you to Grammy & Papa, you have always been there for me and being able to spend time with you these past two years while I’ve been working on my masters has made my time at UVM more meaningful. And of course Mom & Dad, thank you for your advice, open ears, and endless support in whatever I do.

Thank you to Dr. Amy B. Trubek, you’ve been a great advisor, and have challenged me to think, observe, and process the world in a new way. My experience working with you has provided me with a different skill set that I will continue to improve throughout my career. Thank you for this amazing experience.

Thank you to my committee members Dr. Berlin and Dr. Bose, for your enthusiasm and expertise in your field of study.

Thank you to Anthony and Alyssa, your previous work in this study and advice helped me understand what was expected of me as a graduate student in Dr. Trubek’s ethnography study.

Thank you to my friends Court, Chris, Sarah, and my UVM Club Soccer teammates, for providing the positive outlet when I needed a break from my studies, you guys are the best!
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Introduction

Americans make decisions about what they eat every day over the course of their lifetime. Cooking in the modern day consists of many food choices. In the 21st century there are a host of possibilities to implement when cooking a meal. People have the choice to cook a meal at home, or eat outside the home. Cooking is defined as a way “to prepare food for eating especially by means of heat” [1]. Cooking at home can consist of preparing a meal from only raw ingredients, a mix of partially prepared food items that incorporate very little cooking, or mainly ready to eat foods (RTE). The option to eat outside the home could mean takeout to full service restaurants where the ethnic food possibilities are greater than what might be made at home.

Since the late 1980s, adults have increased the number of meals they eat outside the home which has been linked to becoming overweight and obese, and chronic diseases related to their food consumption [2]. Even children have become more readily prone to the same chronic health issues related to food consumption as adults (type II diabetes, gall stones, hypertension, etc) [3-7]. Portion sizes outside the home have increased, often containing more fats, sugars, and salt [8]. Therefore, making it hard to maintain one’s energy balance (calories in, equals calories out for no net weight gain) [7]. The role of the food environment has come under immense scrutiny as a main cause of America’s overweight and obese population.

This ethnographic study focuses on understanding the relationship between a person’s decision making process in the rural food environment outside the home, as well as their domestic kitchen environment. This study focuses primarily on the rural
food environment, but the data sets from the previous graduate students who investigated the urban and suburban food environments were also incorporated to have a larger data set for analysis, and provide a more complete understanding of the food environment in relationship to people’s dinner time decision making process.

In all studied food environments the same methodology was used and consisted of each investigator collecting empirical data via three qualitative research methods: participant questionnaire, semi-structured interview, and two video tapings on separate occasions preparing a typical dinner time meal. The data were triangulated, a popular method recognized among the social sciences because triangulation can both bolster the confidence of a result by implementing various research methods to examine the same phenomena and help filter out biases [9, 10].

Through the corroborated data a consistent and robust theme concerning the environment was observed in the rural subset. What emerged in the analysis was the unique food environment that takes place in the state of Vermont, and combines various methods to procure food items: gardening at home, farmers’ markets, and involvement in community supported agriculture (CSA). There was a social identity that people had to the land (Vermont), and their desire to eat locally in a sustainable manner was strong. Obtaining foods with the best flavor was often linked to locally sourced foods, and the “healthiest,” and “freshest” food items were also linked to locally grown foods. The perceived concept of healthy foods being local foods in Vermont contributes to the rural social identity associated with the state.
Many current studies have looked at cooking skills, health, and/or the relationship between the food environments, but have not used videotaping for in situ observations as part of their research methodology. Dr. Amy Trubek’s ethnographic study at the University of Vermont investigated the food environment, cooking skill and cooking knowledge, and individual health. The current study thoroughly explores many of the influences and personal values that are depicted in Furst et al. (1996) conceptual food choice model (Appendix-A). The current study takes a unique perspective by looking at Vermont’s history to provide a better understanding why Vermont’s food environment is the way it is, in the 21st century. The influences of the rural food environment in relation to the primary meal preparer, their food knowledge, and cooking skills integrating into a final meal for the family will aid in the overall trends about domestic cooking in the United States in the current time.

The ensuing journal articles and discussion provides greater background for understanding Vermont’s food environment, but also the shifting trends in America that relate to a larger national food system, and some of the collective thought processes of where and how people acquire food items when creating a meal. This research could have future use to help form community based interventions. Targeting cooking skills, and how the food environment outside the home plays an influential role in creating a meal that has implications towards their family’s health. The thesis is in journal article format using the citation styles of the Journal of Hunger and Environmental Nutrition, and the Journal of Nutrition Education & Behavior. The first journal article examines how the environment effects the primary meal preparer’s decision making process
when preparing a meal from an anthropological and historical perspective. The second journal article examines the connection between the primary meal preparer, or the “nutritional gatekeeper,” and their food knowledge to procure “fresh,” and “good” foods, as well as the meal thought process. The second article provides potential nutritional education implications that are geared towards the family’s nutritional gatekeeper.
Literature Review

The word “food” may be associated with reflections of significant places, people, and memories for an individual. Observing the nonverbal practices of what, how, and where a person eats may say a lot about their culture. People take pride in the familial and cultural traditions that have been passed down through the generations, and what people serve for celebratory occasions might stem from their heritage. This being said, what people eat on a daily basis might have more to do with the environment in which they live, in conjunction to their cooking skills and cooking knowledge. An expanding field of study involving health, food, and the environment is the obesogenic environment. An obesogenic environment is an environment that promotes poor food outlets and limited areas to engage in physical activities. The concept of an obesogenic environment alludes to a dichotomy that establishes a framework between the urban and rural environments. The dichotomy helps to better understand how environmental variables may influence a person’s food procurement and meal thought process. The obesogenic environment combined with one’s food knowledge, and cooking skills, are all contributing factors towards maintaining good health in the 21st century, which is not necessarily an easy task for many Americans. Vermont is recognized as a primarily rural state and provides a unique case study in New England, and possibly at a national level for analyzing the food environment. The rural food environment of Vermont represents a small microcosm of understanding the perceived changes in cooking values in America in the early part of the 21st century.
Obesity

The Center for Disease Control (CDC) states that a person with a body mass index (BMI) ranging from 25-29.9 is considered overweight, while having a BMI above 30 is considered obese [11]. Over the past 40 years, being overweight has placed a heavy burden on the Nation’s health care system, despite the evidence stating that the number of overweight and obese individuals are leveling-off [12],[3].

There are many illnesses associated with being overweight or obese. Depression can be a secondary illness (mental) deriving from significant weight gain, affecting the quality of life of the individual, their job and their family [13]. Primary illnesses related to being overweight or obese are the cause of many deaths in America. Related primary illnesses contributing to overweight and obesity mortalities are heart disease, various cancers, diabetes (specifically Type II diabetes mellitus), musculoskeletal disorders, sleep apnea, hypertension, and gallbladder disease, are some chronic diseases associated with being overweight and/or obese [3],[4],[5]. Type II diabetes, commonly associated with adults, and was once rare in children under 10 years of age, is now diagnosed in 3,700 children each year [6]. With more overweight and obese children perpetuates America’s overweight and obesity situation [6].

Since the 1970’s, there has been rigorous surveillance on obesity trends in America [12]. Surveillance data has shown that the prevalence of obesity has leveled-off within the last 10 years [12], holding at 32.2% [12], while a combined prevalence of American adults overweight and obese (BMI >25) has been steady at 68% [12].
Being overweight, and/or obese, places an individual outside the limits of what is considered a healthy weight given an individual’s height [11]. Being overweight and obese has been shown to have a direct correlation between BMI and annual healthcare costs [14]. Thompson et al. (2001) found that as an individual’s BMI increases, so does the cost of their healthcare services [14]. The average annual healthcare costs for an individual not considered overweight or obese (with a BMI of 20-24.99) is $261 [14], which includes annual inpatient and outpatient services, medical care, and prescription drugs [14]. The two-thirds of Americans who are overweight and obese accounts for 9.1% of the annual total of the United States medical expenditures [3]. That translates between $78.5-$96.2 billion dollars, if not more [3]. Nearly half of the healthcare cost towards obesity and overweight is financed by Medicare and Medicaid [3]. According to Behavioral Risk Factor Surveillance System (BRFSS) Vermont’s annual spending associated with obesity illnesses is $141 million dollars from 1998-2000 [15]. This is a lot of money that could be allocated towards other government endeavors, but instead millions of dollars is spent on a disease that could be individually controlled. The variables leading towards the majority of America’s population being overweight needs further examination.

Obesogenic Environment Etiology

As the number of obese individuals rose over the past 40 years, the role of an individual’s food environment in relation to food choice has been drawing more attention. From 1987-2000, there has been an increasing shift in the practice of
American’s (adults 40%) regularly eating at least one meal per week outside the home [2, 16]. The rise in the number of sales of snacks and meals eaten outside the home has been factors fostering Americans to live in an “obesogenic” environment [16-18]. The CDC defines the obesogenic environment as “environments that promote increased food intake, non-healthful foods, and physical inactivity” [11]. The environment is defined as bringing together “the complex of physical, chemical, and biotic factors (as climate, soil, and living things) that act upon an organism or an ecological community, and ultimately determine its form and survival b: the aggregate of social and cultural conditions that influence the life of an individual or community,” in the Merriam-Webster Online Dictionary [19]. At an individual level, genetics can more or less affect a person’s feeling of hunger and satiety [20], compared to others. However, the kind of environment which people live in cannot be ignored. Understanding the environment in relation to the town residents at a community level has important public health implications. When new franchises want to open in a neighborhood or town, town officials may be aware that some of the town’s residents may fall into poor food choices in their “new” food environment that could lead to becoming overweight and food related chronic diseases.

The environment is simple when categorizing it as urban, rural, and suburban, thus presenting a structured dichotomy for analysis. The urban/rural environment framework for the current study will draw out consistent and robust themes centering around the similarities and differences about an environment’s culture, economics, and food availability, as well as how these factors play out in an individual’s decision
making process when deciding what to cook, or not to cook, when preparing a dinner
time meal.

**The Rural Environment**

Understanding the term “rural” is important in making generalizations that can be applied to the larger study (about the urban and rural cooking dynamics) in relation to cooking in the 21st century. The term “rural” seems uncomplicated, but in fact consists of layers of complexity. Classifying the geographical environments seems straightforward when presented on a map, or talked about in a casual conversation. Creating boundaries and classifying environments as “rural,” “urban,” and “suburban” can be a useful framework when comparing people within a certain area, but the classified boundaries are not a natural phenomena, and can easily be redrawn and redefined [21]. The characteristics of a rural environment are defined as a population of 2,500 people or less [22] and “…of or relating to the country, country people or life, or agriculture…” [2]. Urban environments are distinguished by a population of 50,000 people or more, a population density exceeding 1,000 per square mile, and [22] consisting of a cluster of one or more block groups or a census block [3]. Unlike the rural and urban environments the suburban environment was not recognized or defined on the Government’s census website [23]. The government’s definition of urban and rural are solely based on a number (population), and fails to elaborate on the gradations of rural or urban that people identify themselves with and against.
Using food as a lens reveals a lot about the term “rural,” both in the general sense and in the context of the respondents’ everyday lives when planning a dinner time meal. Rural can be used as a categorical term to create a framework to compare people in America, and in other parts of Vermont, based on location as a commonality. The state of Vermont is commonly recognized as a “primarily rural state” [24], with images of the Green Mountains, dairy farms, and covered bridges as part of the romanticized rural lifestyle. Vermont is a special case where there are different degrees of what a “rural” lifestyle represents, ranging from agricultural rural, rural social identity of oneself in comparison to others, and rural branding as a marketing strategy. Reformulating the government’s definition of “rural” to incorporate the gradations of rural is important to the urban/rural dichotomy of the study. The layered complexity of the term rural in relation to a rural lifestyle is played out by each respondent’s day to day processes encompassing their identity, their food acquisition, and agricultural environment. The varying degrees of rural comes together to create a special quality about the state of Vermont that is unique versus other New England states, and possibly the rest of America.

**Rural Identity**

One way that makes Vermont different from the rest of the country is that Vermont is the most homogenous state in the country, where 96.4% of the state’s population identifies as Caucasian, compared to the rest of the country identifying as 79.8% Caucasian [23]. Vermont’s whiteness well represents the state’s history, identity,
and “liberal politics” [25]. The discourse of whiteness in different regions of the United States have numerous social identities associated with red-necks, hillbillies, country bumpkins, Yankees, etc…[25], depending where you live and how you compare yourself to these other groups. An example of associating whiteness and identity is the “typical” Vermont “Yankee,” where the term “Yankee” relates to a New England resident, and “Vermont” has deep cultural and historical meaning to the state. The term “Vermont” has also been marketed as tourist propaganda in Vermont’s history [25]. Despite Vermont's homogeneous make-up, there are varying degrees of the rural Vermonter. Consequentially, different rural social identities are underneath the umbrella term “Vermont,” as described by adolescents in an urban-rural dichotomy study of perceived social behavior [26].

The study conducted by Vanderbeck and Dunkley (2003) focused on interviewing young adolescents (ages 12-18 years) from St. Elizabeth, Vermont, and Clayford, an urban city, to see how they socially identified themselves similarly, and/or dissimilarly from others, when narrating their perception of urban-rural differences [26]. An important theme that developed from the study was the varying degrees of rural identity when the adolescents compared themselves to other youth in similar rural environments in America. The theme in the study that was most surprising was the emergence of the degrees of rural identity associated within various regions of Vermont. Some adolescents from the rural town of St. Elizabeth, Vermont viewed Burlington, Vermont as a bustling “metropolis,” and many adolescents preferred their “desolate” town to Burlington [26]. Vanderbeck and Dunkley’s (2003) study brought complexity to the word rural in
reference to identity, and the misconstrued assumptions that a “rural” environment equally represents all rural identities. Similar to the varying degrees of social identity within the state, there might also be varying, even false perceptions about the rural food environment that could contribute to better understanding food choice.

**Threats to Vermont’s Rural Identity**

The social identity tied to Vermont’s rural environment holds some concern. Vermont youth moving out-of-state in the early 20th Century can be a repeated pattern at the start of the 21st Century. The current anxiety centers on the future of Vermont’s agriculture [27]. In 2007, farming was the primary occupation for 49.6% of principle farm operators [22]. In 2007, the majority of Vermont farms were operated as a family business earning $34,472 [22], while only 0.6% of the State’s farms were non-family corporation farms [22]. Vermont’s farmers are roughly 52.7 years of age [22], and the state is concerned that young Vermonters will not follow in their parent’s footsteps into the agricultural industry as the farming population grows older [27]. The rural landscape and lifestyle that urbanites seek in Vermont, is the lifestyle that the youth of Vermont want to escape, and may hurt the State’s future agricultural industry and economy, in a cruel twist of fate [27, 28]. Vermont continues to be a popular year round vacation destination for out-of-staters, which leads one to question: how the rural Vermonters identity will evolve in the future. Currently, the state’s rural identity is threatened as the small family owned farms are becoming obsolete shifting towards monoculture farming. The out-of-state migration of young Vermonters is a threat by not having future
generations raise their own families and continue the state’s agricultural practices that are associated with a rural social identity [26-29].

The Built Environment

Part of the rural identity associated with the state is its lack of a built environment it maintained over time. The “Vermont identity” is an identity that has been forged over the centuries, and has been shaped by race, religion, community, and the environment. Vermonters have had a certain connection and respect with the environment that goes beyond the array of outdoor activities tourists and residents partake in year round. The role of the built environment, and manner in which it influences the rural gradations among the respondents, may interact at an unconscious level in day to day meal decisions [30]. An individual interacts with the environment as much as the environment interacts with them [30, 31].

The built environment is described as “…the way we design and build our communities and neighborhoods a source of individual outcomes such as mental health status, self-rated health, obesity, and health behaviors such as diet, physical activity…” [31]. Cohen, et al. (2006) explained that specific environmental features in an individual’s local environment “may set the stage for neighborhood social interactions, thus serving as a foundation for underlying health and well-being [31]. Altering these environmental features may have greater than expected impact on health” [31]. Changes in the built environment have been associated with America’s sedentary lifestyle [32, 33]. The characteristics of the built environment can speak volumes about the health and well
being for an individual, especially when investigating the “diversity of land-use” (presence of parks, etc.) [31]. Harrison (2006) talks about the well-being that Vermont’s residents want to maintain and can be identified by, but have been continually threatened through the years by the possibility of a more built environment [28].

People constantly interact with the built environment every day to the extent that the environment is disregarded [30]. A study by Hackett et al. (2008) that investigated the role of the built environment and food choice worked backwards. His study recruited children with similar socioeconomic backgrounds to fill out a food intake questionnaire (FIQ) in order to observe food intake patterns that could show connections to their environment [30]. What they found was that food choice can be a very local phenomena, and the built environment is a spontaneous agent in food choice [30]. Dovey (1999) describes the built environment as the “invisible context for our lives of which we may not be fully aware” [34]. Studies have shown that living in an urban setting has latent characteristics linked to the built environment. For instance, the food environment with the types of food outlets for meals and food procurement may influence a person’s decisions more than they realize on a regular basis. Their living environment can expose them to safe, or unsafe, parks to engage in physical activities, a higher number of fast food restaurants, and liquor stores [31]. The availability of food from particular food establishments along with poor outlets for physical activities undoubtedly affects an individual’s overall health and well-being [31, 35]. The beautiful landscape in Vermont never really becomes “invisible,” and is essential to all Vermonter’s sense of well-being. The gradation of the rural identities in Vermont begins to fit together when
comprehending food choice as local phenomena, as the rural environment is the scenic backdrop for standard food practices.

**Collective Efficacy**

Stemming from the topic of the built environment is collective efficacy. Collective efficacy is a term that measures social capital and community cohesion [31]. Collective efficacy supports a nexus between the fixed physical features of the built environment which may have lasting health ramifications no matter where an individual lives [31], [24]. A study conducted in the late 1970s supports that collective efficacy and the community is not size dependant. The study tested the social interactions of an urban population, focusing on an individual’s anonymity by testing the overload hypothesis [36]. “The overload hypothesis thus implies the operation of a ‘sociostat’ that maintains social interaction within certain bounds, neither too much nor too little…urban individuals avoid a dysfunctional state of overload by reducing the number, duration, or intimacy of social contacts…” [36]. Though the collective efficacy of the urban built environment has a perception of being associated to poor health outcomes [31, 35], Segal and McCauley (1986) found that collective efficacy is obtainable in urban communities, and is not exclusively a rural community phenomena.

Many of Vermont’s small towns had a strong sense of collective efficacy, when tested during the 20th Century. Concerns were voiced by the local Vermonters who felt threatened by the influx of summer homes being bought and mounting pressure for
farmers to sell their once active farms [28, 37]. The out-of-staters voiced their views regarding rural and developing town hierarchy based on their purchasing power [37]. Some summer home owners made thoughtful attempts to blend into the Vermonter mentality and identity [38], either by naming summer homes to represent creative names derived by the home’s nearby country side (’Meadowbank’), while some were self-serving and named them after themselves (’old Abel farm’) [37]. The self-serving transformations with property names that the out-of-staters were provoking on the landscape were equally transforming a town’s identity. “Indeed, if you asked rural Vermonters to describe their definition of an ideal, “typical” rural community, they would not likely have described a world where farms were sold to non-Vermonters who let most of their land grow back to trees, or who ‘played’ at work on their property” [37]. Here the “lack of” a built environment is what drew Vermont communities together. Year round Vermonters had to come together as a community to stand as one voice against seasonal Vermonters who viewed the land-use in the state differently than those who made their living off the land. Out-of-staters lacked awareness of the established collective efficacy in the community, forcing changes in the community that some Vermonters were not ready to handle.

**Social and Environmental Identity**

The environment is part of a Vermont town’s collective efficacy that strongly enhances Vermonter’s quality of life, which dates back to hiking enthusiasts along the Long Trail [28]. The state’s reach to draw hikers was an intended action to improve
Vermont’s tourist propaganda at the turn of the 20th Century as a reaction to the Progressive Era and Gilded Ages. It stressed that the individual who came to Vermont to hike the Green Mountains would reconnect with nature. Further, the visit would be a “get away” from the feeling of congested living in an urban society.

By the 1960s-1970s, Vermont’s natural scenic beauty was being compromised by the demands for modernization in ski towns like Stowe, Vermont. During this time, there was an urgency towards “scenic preservation” as Stowe became the “sewage capital of the East” [28]. Act 250 was created to apprehend the concerns of Vermont’s scenic landscape. The law dictated that all new developments, especially ski expansions, were required to go through Act 250’s review process to safeguard the environment. This was crucial to preserving the Vermonter identity, and prevented landscape from being over developed [28].

**Regional Food Culture**

Vermont’s conscience effort to protect the land has a connection to the food choices a person makes. Their decisions are dependent on many variables such as the environment, time, money, social obligations, health, and food availability, etc [39-41]. There has been great interest in the farm to table initiative echoing a shift in consumers favoring locally and regionally crafted foods in America. Consumers want to know where their food came from and who grew it [42, 43], which means they are leading towards a sustainable food system [43, 44]. The locality of the region mainly influences food culture, where:
food *culture* arises out of the place of a people’s origin, whether they still live there or not, but is shaped by resources (climate, land, soil, water, and fuel), by belief and information (religion, education and literacy, communication), by ethnicity (indigenous or immigrant), technology (hunting, gathering, agricultural, horticultural, aquacultural, fishing; food processing and storage, transport, cooking)… [43].

Regional food cultures have the potential to improve health and economic development as well as subtly exhibiting certain food knowledge, towards a specific region [43]. In Vermont, the State’s regional food culture represents a livelihood as well as an identity that defines Vermonters. The food culture has rural landscape and lifestyle imagery placing certain quality expectations on the food items that the state is known for, such as cheese, apples, maple syrup, and microbrews.

The farm to table food initiative resonates with Vermont as a way to support local farmers’ in their community, and has functioned to develop a specific regional food niche. The small farms that dominate Vermont’s agricultural industry are more than just an alternative to the “impersonal” monoculture farming. The small farms support local businesses with the goods and services they provide, and in turn, supply jobs that help to sustain the local food system. The produce farms grow and raise is beneficial to the local rural economies and creates a regional food niche [45].

**Vermont’s Branding Niche**

Vermont’s food availability is not limited by the topography, or climate for favorable agricultural conditions to harvest produce, and develop a regional food culture [28, 43]. The state has been conditioned through the centuries of tourist propaganda to eventual reap the benefits of establishing a regional food culture. The original tourist
appeal that drew out-of-staters to Vermont was its rural landscape and outdoor activities, but now [28] tourists have other reasons to visit Vermont, which include sampling maple syrup, artisanal cheese, and microbrews crafted throughout the state [46, 47].

The romanticized image of Vermont’s pastoral landscape creates a commercial appeal that is unique to the rest of New England, by embodying a nostalgic time period that is Norman Rockwell-esque. Vermont’s Pure Maple Syrup represents a rurally produced food item that has specific parameters. Vermont Pure Maple Syrup has aided in preserving the romanticized rural image with product quality as part of Vermont’s regional food culture. Without the specific parameters on maple syrup, maple syrup’s association to quality and Vermont’s geography would cause “a loss of food culture…a loss of a sense of identity and dignity” [43, 48], especially in Franklin and Lamoille County, which are Vermont’s top maple syrup producing areas.

Vermont’s landscape has slight fluctuations from North to South and East to West where the landscape’s variability is reflected in how the land is used. It has carved a regional food niche and food system that may be an important food system model in America’s future food system. Vermonter’s respect for nature and empathy towards their neighbors (often farmers) has lead towards a sustainable food system. There is a certain trusting quality that is linked when marketing any food product or craft from Vermont to the consumer.
Cooking Skills

Anthropologist Sidney Mintz (1992) has said “food represents us…eating habits, in other words, are not only acquired habits but also historically derived habits, uninscribed in our natures” [49]. Learning cooking skills, gaining cooking knowledge, and the ingredients people use in their cooking are as unique as our own DNA. Food items crafted from Vermont assumes cooking skills/techniques that have been passed down over time. Food trends and cooking styles have come and gone, reflecting the skills, knowledge, and food items that were once deemed important in that time period. Cooking skills in the 21st Century are a hodgepodge of skills that has evolved over time, and occasionally faded in and out of practice.

Similar to “rural,” “cooking skills” has provoked a debate regarding what defines such skill among public health groups and social scientists. The conundrum centers on several areas of how “skill” is acknowledged, the values of obtaining such skill, and whether or not society as a whole in the 21st Century is becoming desskilled with the ready to eat (RTE) foods that are convenient. Individuals may perceive read to eat meals with beneficial health trade-offs, and time-saving solutions. The traditional concept of cooking skills such as chopping an onion using the French technique, is to include technology (microwave, toaster ovens, ovens, etc.) to one’s cooking skill regime.

There have been many studies conducted regarding increasing cooking skills and health improvements, as well as an increased consumption of fruits, vegetables, and fiber, which could potentially lead to a decrease in food related chronic diseases [50, 51]. A study conducted by Larson et al. (2006), discovered that young adults who reported
frequent food preparation reported less frequent fast-food use, and were more likely to meet dietary objectives in calcium, fiber, vegetables, and whole grains [17, 52]. On a similar note, the 2008 Vermonter Poll found a combined 86% of Vermonters agree, or strongly agree, that the better cooking skills lead to a healthier diet [17].

Possessing cooking skills is an end result of some level of practice [53]. Cooking skills incorporate many cognitive processes, and is a reflection of an individual’s knowledge arising by observing their own and others physical actions in the kitchen while preparing a meal [19] [53]. While these skills are not inscribed in our nature, they are often the results of hard work and practice that is defined as:

a routinized type of behavior which consists of several elements, interconnected to one other: forms of bodily activities, forms of mental activities, ‘things’ and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge. A practice – a way of cooking, of consuming, of working…Likewise, a practice represents a pattern which can be filled out by a multitude of single and often unique actions reproducing the practice…a practice is thus a routinized way in which bodies are moved, objects are handled, subjects are treated, things are described and the world is understood… [54]

A cooking practice is simultaneously representative of culture when certain tools, food items, and knowledge from an indigenous location are used.

The close yet complex relationship between cooking skills and culture is echoed by Short (2003). From his empirical study, he concluded that there is no exact “definition of cooking skills,” but rather a mutual definition of cooking skills that was “found to be used vaguely and in reference to techniques (often culturally specific)…described and understood at different levels of detail” [50]. For example, chopping an onion using the French technique involves using a chef’s knife, while the
same task in China would use a cleaver [55]. The knives to do the same job are different based on different cultural understandings of how to “chop” an onion. The relationship between cooking skill, knowledge, and practices was not “straightforward,” and ultimately, Short’s (2003) investigation of cooking skills discovered it to be exceptionally complex and individualized [50]. People will create their own technique to prepare food, such as chopping an onion that is comfortable to them, even if it does not follow a culinary cooking technique.

**History, Technology, and the Kitchen**

Short’s (2003) findings of cooking skills being highly individualized poses the question if the 21st century might observe a “deskilling.” To understand if a deskilling transformation is taking place requires an understanding for when in American history modern cooking really began to take shape. Prior to the Civil War, and slightly thru to the 1880s, America’s transportation was still in its infancy making it difficult for consumers to obtain “exotic” and affordable produce [56]. “Local geography was therefore still the most important factor in shaping rural diets, helping preserve the regional culinary traditions of the past” [56]. After the Civil War (1865) America’s food industry began to change. America’s food industry gained footing during the 1880s, right up until World War I [56]. During this period there was a growing divide between social classes, and rise in the number of middle-class Americans, causing the middle-class to rely on their own laurels to produce meals, and less upon servants [28, 56]. The growth of America’s middle-class placed a demand on cooking classes [57]. As society’s
knowledge of what to eat improved in the early parts of the 20th century, so did people’s hygiene and the kitchen space as kitchen efficiency became increasingly important in the 1920s [56, 58, 59]. Scientific experiments were designed to make the kitchen space have continual flow, where the space “minimized unnecessary motions and movements” [60]. Creating meals in the kitchen became easier as the kitchens were being designed more efficiently, and modern conveniences such as indoor plumbing and electricity were entering apartments and households [57].

The table below clearly sums up the trends of kitchen space from the 1920s to the 21st century [57].

<table>
<thead>
<tr>
<th>Year</th>
<th>Material arrangements and technologies</th>
<th>Meanings and Images</th>
<th>Skills competences, and forms of know-how</th>
</tr>
</thead>
<tbody>
<tr>
<td>1922</td>
<td>Isolated appliances</td>
<td>Efficiency and time saving, back region work place</td>
<td>Judgments of quality, culinary skills, and domestic management servants’ skills</td>
</tr>
<tr>
<td>1952</td>
<td>Coordinated system, sets of appliances, new materials, and color schemes</td>
<td>Modernity Streamlined place to live and integral part of the home</td>
<td>Delegation (to machines), time management, coordination of the whole ensemble</td>
</tr>
<tr>
<td>2002</td>
<td>Surfaces and appearances are important but appliances are invisible</td>
<td>Customized expression of style Place to live an integral part of your home</td>
<td>Image managements Design and lifestyle to the fore</td>
</tr>
</tbody>
</table>

Based on Table 1, before and during the 1920s, kitchen appliances demonstrated quality and culinary skill. Because there was not a huge market that demanded such appliances, there was modest marketing of kitchen appliances to “liberate” women from their
domestic spaces at the height of the Women’s Suffrage movement [60]. Post World War II saw an increase of women entering the work force while keeping the same regimes that home life demanded [57, 61, 62]. Along with the kitchen appliances was a new awareness of kitchen décor, coordinating appliances with the kitchen aesthetics, giving the kitchen its own personality and reflecting identity [57, 60, 63]. Today’s kitchen appliances are omnipresent in the marketplace, and do not necessarily reflect cooking skill or knowledge [57, 60, 64], but are still advertised for saving time and personal safety [64], emphasizing a “lifestyle, not a life” [60]. As long as a person has the income, they can purchase the appliances that reflect cooking skill and knowledge even if they do not know anything about cooking. The kitchen space today represents a person’s ability to “keep up with the Jones,” and the culinary skills connected with certain appliances [60]. For instance, some people might not be able to survive without a microwave in the kitchen while others might not keep one in their kitchen with health risks being their main concern (i.e. the small amounts of radiation they omit). Microwaves may be the conventional way to quickly reheat or “cook” a meal for an unskilled cook.

The kitchen is a unique space that is very symbolic. It can be the “heart” of the home, and the nexus between technological innovations where home cooks, architects, and technological innovators continually push the envelope towards developing the kitchen of the future. How the kitchen is organized, the machinery, and a person’s fluidity in their kitchen is indicative of better understanding where cooking in the 21\textsuperscript{st} Century is headed.
Barriers to Cooking

Having a lack of cooking resources and knowledge may prevent people from cooking home-made meals? The kitchen space is often one that is warm and inviting, but can equally be viewed as intimidating. Many of the perceived barriers preventing people from cooking more meals is time, money, and the convenience of prepared foods, or eating out [2]. There are many published studies that point out convenient, ready to eat, fast foods, and restaurants as the culprits that are partially to blame for America’s increasing waistline. The movie *Super Size Me* shows that a person does not require a high degree of cooking skills or culinary appliances to acquire breakfast, lunch, and dinner [65]. The premise of this documentary was to have the main character, Morgan Spurlock, mimic a lifestyle where he only consumes fast food for breakfast, lunch, and dinner from McDonald’s for 30 days [65]. Spurlock does not quite finish his 30 day mission, but he gets the point across that people can obtain every meal without preparing it [65]. Cooking meals at home the “right” way may be just as convenient and provide more nutritious food options, if patrons do not know what nutritional traps to look for when eating meals outside the home [52].

Time

A consistent barrier is time poverty. Time “moderates cultural differences,” and in America “time poverty” has become a social problem that has greatly defined our culture [66, 67]. Time poverty can generally be defined as “a lack of time at the right time of the day/week and a lack of time shared with family and friends …” [66]. Time
poverty was created when more women were entering the work force, and opened up a new wave of innovations of kitchen “gadgets.” Using time as the attractive draw to these gadgets, they were marketed for working women as a means to save time when cooking [57, 63]. People want the satisfaction of a home-cooked meal made from “scratch” while having it take very little time to craft, thus providing the best of both worlds. This concept has opened similar niches that cooking appliances did in the early to mid 20th Century. Books, magazines, television programs, and internet are catering and creating demands on the domestic cooks to harness time with an excessive amount of quick fix recipes.

Time, like food, can be controlling and is something that Americans try to control. Often times what a person or family eats for a dinner time meal is shaped by time constraints. The American Time Use Survey found that in a 24 hour period, Americans between the ages of 25-54 years spent about 1 hour of their day eating and drinking [61, 68, 69]. The survey is in accordance with Beck’s (2007) study on dinner preparation in the United States. Beck found that home-cooked meals took 34 minutes of hands-on preparation time, and 52 minutes total time to prepare while prepared commercial foods saved about 12 minutes of preparation time, but did not decrease the total time [70].
Figure 1: Time Use on the Average Work Day for Employed Persons with Children

NOTE: Data include employed persons on days they worked, ages 25 to 54, who lived in households with children under 18. Data include non-holiday weekdays are annual average for 2008. Source: Bureau of Labor Statistics

Time may only be a perceived barrier that can be defeated by improving one’s organizational skills in the kitchen and in life. The perception of time being a barrier towards preparing a meal may also be rerouted by diffusing meal preparation tasks with other family members.

**Family and Cooking Trade-Offs**

Western culture has an obsession with time creating perceived trade-offs leading to conflicts with “structures and demands in society” [67, 71], and also leading to health and family trade-offs in relation to food. Time provides a framework where people might feel pressured to get a meal completed by a certain time, but learning new cooking skill is intimidating and may not fit the allotted time frame for the primary meal preparer. The time framework and time trade-off places parameters towards specific cooking practices.
that limit meal options. The trade-off for saving more time in meal preparation merely for the benefit of having a family eating together has a stronger value than what and where the meal on the table came from [72]. “Eating together in contemporary society is still viewed as a family-sustaining institution” [71], even as family members social schedules become more complex. Food can express your love to your family, and is a great way to initiate conversation with family members creating emotional bonds and a sense of community [72]. Roughly 55% of American dinners include one or more homemade dishes, so that time and energy in food preparation can be saved [39]. Ready to eat foods, and commercially prepared foods are highly regarded as meal solutions keeping within the ideals of a family meal time.

The American family choice of choosing not to cook at all, and eat out instead, is similar to using alternative meal options when creating meals at home [39]. Restaurants such as McDonald’s have beneficial trade-offs for parents of younger children [72]. Brembreck’s (2005) study using McDonald’s as the outside food establishment, found McDonald’s equally creates a “home” space where families can sit together and eat a meal. Eating at McDonald’s, or any food establishment, can regularly illustrate that the primary meal preparer is showing care and concern for their family not by the food on the table, but rather their restaurant selection [72]. Eating outside of the home can also decrease the stress the primary meal preparers may feel when they continually create meals catering to each finicky eater every night [72].

The choice to eat meals outside the home has become normal in American life. Food accounted for 3.6 billion dollars in sales outside of the home, while American’s
spent 15.1 billion dollars for food consumed at home [73]. From 1987 to 2000, there was a 40% increase in adults eating out at least one meal per week [2]. The growing shift of eating out was also true for adolescents [74], causing perceived health trade-offs between eating out and health risks [2, 74]. Kant’s (2004) study found a positive correlation with the “estimated intakes of energy and percentage of energy from total and saturated fat…” [2, 74]. While dining at restaurants and purchasing prepared meals is more convenient, “customers often miss out on fruits, vegetables, whole grains, beans and other vitamin-rich ‘powerhouse foods’ that may reduce the risk of cancer” [17, 75, 76].

In addition, the portion size for many restaurants and fast food establishments increased between 1977 and 1996, for most foods other than pizza [8, 77]. The trend of increased portion sizes has rubbed off with foods consumed at home, both in meal portions and the consumption of snacks [8]. Studies have confirmed a general trend with people consuming a higher diet of fat, saturated fat, and sodium when eating out [52]. This is concerning as portion sizes increase, and 31.3% of the people surveyed in the Vermonter Poll (2008) falsely perceive eating out as being equally healthy to meals made at home. The lack of cooking skills may lead a person to eat out more frequently, or use eating out as a means to create more family time.

**Perceived Benefits of Cooking Skills**

The perceived barriers of lacking cooking skills can be confronted by making behavioral changes for the positive attributes cooking skills can bring. Having basic cooking skills and knowledge are invaluable. An article in *USA Today* stated that there
are many benefits associated with cooking at home [78]. Besides being able to produce a meal for the whole family to sit and enjoy, the person creating the meal controls the ingredients that are put into the dish, therefore acting as a nutritional gatekeeper [78].

*The New York Times* ran an article outlining the importance of nutritional gatekeepers. “Nutritional gatekeepers as researchers call them, influence more than 70 percent of the foods we eat, according to a 2006 report in The Journal of the American Dietetic Association — not just home meals, but children’s lunches, snacks eaten outside the home, and even what family members order at restaurants” [79]. Hung’s (2004) study showed that increasing the amount and variety of fruits and vegetables consumed has a positive correlation in “reducing the development of major chronic diseases” [75]. Creating meals at home that have a higher serving of fruits and vegetables can help prevent eating habits that fosters type II diabetes, control blood sugar for an individual with diabetes, and prevent other food related chronic diseases [75, 80, 81]. The perceived benefits of cooking skills that are executed at home, versus eating outside the home brings to light the many variables that influences a person’s food choice within their food environment, with basic cooking skills and knowledge to craft meals.

**Limitations to the Current Research**

After reviewing the available literature, most of the research attempts to quantify the meal thought process. Hierarchical value maps (HVM) have been used to help connect the quantitative with the qualitative to provide a holistic understanding of food choice. Many more studies have only used one or two research methods (i.e. interviews,
focus groups, or surveys) to investigate a narrow range of the variable that go into meal choice that Furst et al. (2006) depicts (Appendix A) [41]. There is even less research in the United States, Canada, Australia, and Europe that have regularly incorporated videotaping a dinner time meal preparation. Videotaping allows for a real in situ observation to understand what people (American’s in this case) are doing with the foods they procure to make a complete meal, and how their family’s culture, and the region that they live in may influence their food practices and cooking skills. Additionally, there are a handful of articles looking at Nutritional gatekeepers [82, 83], but these articles do not attempt to highlight the influence of the food environment, or kitchen environment on gatekeeper’s meal thought process. These articles only exhibit the influence nutritional gatekeeper’s have on the meals they prepare for their family.

The current study’s two specific aims while studying the rural environment were to investigate people’s cooking practices and cooking knowledge in a rural environment, and to how the kitchen environment reflects and/or shapes an individual’s process in creating a meal. The two specific aims were guided by an overarching question of how living in a rural environment influences an individual’s everyday cooking practices and choices.

This research looks to bridge the gap between the food environment, and how people (specifically the nutritional gatekeeper) interact with their food environment and kitchen environment to procure food items, and prepare meals. The study strives to better understand the complex environmental and personal decisions that go into food choice. The study undoubtedly showed that the food environment is linked to the nutritional
gatekeeper’s food choice, and how the gatekeeper’s nutritional knowledge and cooking skills play a pivotal role in the “healthy” meals they craft.
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Journal #1 – The Local Food Environment and its Influence on the Primary Meal Preparer

Introduction

Vermont’s unique identity in relation to the state’s food practices reflects a growing trend in America. Vermont’s environmental consciousness and appreciation of local foods is contributing to a shift in what consumers are demanding from the nation’s food system. In an ethnographic study of the relationship of cooking and the food environment conducted from 2007 thru 2010, the respondents from the urban to rural environments collectively represent a growing population with a united voice who want to change how Americans acquire food. An overarching theme throughout the study was the concept of the environment, whether the primary meal preparer’s home and kitchen environment or the larger food environment. Food acquisition in both kinds of environments had benefits and limitations requiring flexibility among the respondents’ ability to procure food items. Respondent’s home and kitchen environment allowed for corroboration of the collected data from the participant questionnaire, semi-structured interview, and videotaping a real in situ observation of their home and kitchen environments to observe the respondent’s relationship in these spaces. More explicitly explain the following as results. The domestic kitchen environment was less of an influential factor in the meal preparer’s dinner time meal preparation, than initially anticipated in the study. Rather the kitchen environment acted as the “command center” where processing the procured food items were crafted into a meal. All of the respondents discussed procuring food locally, either by their town’s farmer’s market, partaking in a community supported agriculture (CSA), or gardening at home.
Themes which were consistent in the interviews of respondents in the Boston metropolis (urban), Burlington and Middlebury, Vermont (suburban), and Franklin and Lamoille County, Vermont (rural), were the following: money (influence on food item procurement), family (division of labor), health (individual and family), time/organization (towards food procurement and preparation), and the local environment. These themes emerged during the initial transcriptions of the semi-structured interviews. The theme of the environment’s impact while procuring food items was evident in both the suburban and rural Vermont environments studied. This theme may be an intra-state phenomenon. The consumer demand for a more sustainable food system is apparent throughout the state, but especially in the rural environment where residents are more occupationally linked to the land and the economic benefits of a local food system. Historian Blake Harrison (2005) states that the landscape of the state is a significant part of Vermonters’ identity, an identity that is rooted in the state’s history.

Vermont’s food system may be influential on a national scale. Over the past several decades improvements towards agriculture efficiency has opened the floodgates for a market of inexpensive food which is not always “better” food. Such improvements have increased quantity, but not quality, perhaps at the expense of America’s health and the environment. Consumers are becoming more environmentally accountable in their food choices, and the hedonistic ends-means approach is becoming no longer acceptable when America’s environment is detrimentally impacted. There is more of a conscious thought process where consumers are thinking about their environmental impact with
what products they purchase. The food system in the 21st century might be reaching a saturation point, or as Malcom Gladwell (2000) states a “tipping point… the levels at which the momentum for change becomes unstoppable.”

America has been a country that has prided itself on progress and innovation, especially within the food industry, which began to flourish in the 1880s. Since that time, America, as well as the world, has seen the rapid growth of the fast food industry, restaurants, ready-to-eat foods, portion sizes, monoculture farming, and kitchen equipment technology. The negative attention that America’s environment and health issues have drawn in relationship to food, may serve Vermont as a pragmatic paradigm towards another type of food system.

Since the late 1990s, a thriving local foods movement has emerged. Movies and non-fiction books have been alerting consumers to the harsh reality of how the food Americans consume is raised and processed. Documentaries like *Food Inc.* and non-fiction books like *Fast Food Nation* and *In Defense of Food* increase consumers’ awareness of America’s food system. The wide influence of the media has initiated a public interest in a sustainable food system. Consumers have placed pressure on food processors in consumers desire to know the farm(er) and where their food was raised and grown. The state of Vermont’s agriculture is predominantly small family owned farms. These small farms foster a food environment that is more sustainable and more effectively satisfies consumers’ demand to know about where their food comes from and under what conditions it is produced.³

Today’s food environment can present an overwhelming number of food choices. Together, these choices form a unique set of complex cognitive decision-making
processes towards putting a meal on the table. The two previous University of Vermont graduate students (Alyssa Nathanson (2008) and Anthony Epter (2009)) investigated questions regarding the home cook’s cooking knowledge and cooking skills in urban and suburban environments. The urban study investigated the food environment in relationship to time, while the suburban study investigated the food environment in relationship to eat outside the domestic food environment. Vermont was the ideal location to investigate the final environment, the rural environment, because it is recognized as a primarily rural state.\textsuperscript{4} The specific aims of the current study were to observe how living in a “rural” food environment influences an individual’s everyday cooking practices, consciously and unconsciously, with a focus on the primary meal provider. Primary meal preparers may not be consciously aware of how influential the landscape, built environment, and kitchen environment are in their everyday meal decisions. The rural study’s findings would add to the knowledge gained from the urban and suburban studies towards providing a better understanding of food item procurement with applicable insight (perspicacity). The results from the larger ethnography would ideally help consumers make informed decisions regarding shopping, cooking and eating in relationship to their food environment.

**Background**

Since the 19\textsuperscript{th} century Vermont asserted its individuality by resisting modernization, refusing to go along with the rest of the country. This resistance to modernization may have laid the foundation for a progressive food system in the modern
era. The stubbornness about modernization was originally an attempt to preserve the state’s identity. To appreciate the contemporary Vermonter’s social identity and collective mentality towards the rural environment requires an understanding of how the rural Vermonter’s social identity was forged and evolved over time. The evolution of Vermonters’ identity provides a historical framework necessary for an analysis of how the rural Vermonter’s social identity plays out for the modern day American’s meal thought process. The meal thought process included but was not limited to planning what to eat for the day/week, the resources used to procure food items and how respondents would transform the procured items into a finished dinner time meal.

Historical Background

Historians Harrison, Vanderbeck, and Searls,’ Vermont research adds historical depth to the appeal of the term “Vermonter” to maintain the romanticized image of the state. According to historian Blake Harrison, in the 1880s, “Vermonters” represented “harmoniously pastoral” communities and a “peaceful coexistence of tradition and progress” that evolved into a struggle of the state’s forward progress by the latter part of the decade. Immigrants, vacationers (out-of-staters), and urbanization challenged what it meant to be a Vermonter. The threatened Vermonter identity has been debated since the 1890s. Prior to the 1890s, there was some deliberation on the two streams of thought about what characterized a Vermonter. One group was referred to as “uphill” and represented the first generation of settlers, men and women who lived in farming villages. The “downhill” Vermonters were described as cosmopolitan individuals with professional interests versus the traditional uphill agricultural occupations. In addition,
historian Paul Searls continues to state “both kinds of Vermonters sought to respond and modify the forces of modernization in a way that preserved what they thought to be the state’s traditional virtues. Both contained a vision of Vermont as a community and single, coherent idea.”6 By the end of the Gilded Age (1865-1901),6,7 the “uphill” and “downhill” divide between Vermonsters was more distant with the “uphill” group keeping its ideology of maintaining Vermont’s traditions, and preserving its concerns about the state’s modernization and progress.5,6 The state’s lack of forward progression compared to other New England states ultimately hurt the state’s future with the younger generations migrating out-of-state for a modernized lifestyle.5

Vermont youth were attracted to the “up and coming” lucrative financial and social allure of urban locations (Boston, Hartford, and New York City), an allure which caused many to migrate to these out-of-state locations.5 The fractured understanding of the “Vermont” was strained during this time (Gilded Ages, 1865-1901)7 and continued through the Progressive Era (1890s-1920).8 In addition to the youth migration, the Progressive Era was a time of reform in response to the economic and social conditions of the late 19th century.8 During this period, Americans focused on ending the corruption that was plaguing American politics and the flux of immigrants into America, specifically from Southern and Eastern Europe.8 Anti-immigration reforms were widely supported by the middle class because job security was severely threatened by the cheap labor forces of new immigrants.5,8,9 Job security and the increase in immigration to the Northeastern part of the United States deeply worried Vermonsters, their concern stemming from their uncertainty about the farms and futures that they had worked so hard to develop.
Immigration pressured Vermont residents to refine the definition of the “true Vermonter.” The complexity of this time period intersects with the rise in Vermont’s tourism. During the Progressive era, Vermont became idealized, especially by New England’s middle-class. According to Harrison, “for many middle-class Americans, that ideal lay at the heart of their nation’s cultural identity.” As a response to the late 19th century’s industrialization, immigration, and urbanization. The full emergence of the term “Vermonter” and the depth and complexity of its meaning became central to the state’s identity and set the stage for years to come.

The pressure for the state to uphold a certain non-modernized rural identity has helped Vermont to create a more sustainable food system and to become a national leader in a local sustainable foods movement. The kinds of advertisements, stores, and restaurants supporting local foods in a community creates collective efficacy. Collective efficacy applies to a measurement of community cohesion and social capital. The social cohesion of a community has been shown to connect the built environment with the natural physical features of the landscape leading to a lifestyle with lasting health outcomes regardless of where a person lives.

Part of deciding where to live is based on an individual’s prioritized personal values. Some people prefer to live in rural areas where they can engage in outdoor activities. An example of this would be having access to remote roads to engage in physical activities such as running and biking, while others prefer the bustling atmosphere of an urban metropolis where they can engage in similar activities in a rural environment, but encounter different landscapes. In Franklin County, Vermont there are
open roads to cycling and run on, while in a city like Philadelphia you can bike and run but the landscape is more congested with traffic and detract from the experience. Just as new residents in an urban area may find themselves under pressure to conform to social norms such as clothing fashions, new residents in urban areas may find themselves under pressure to conform to social norms like shopping locally at farmers’ markets.

Just as local environments, whether urban or rural, embody certain values, so too does the kitchen environment. The primary meal preparer’s personal values are expressed in the meals they cook in his or her kitchen environment. Kitchens, like any space in the home, reflect a certain tone, ranging from warm and traditional to state-of-the-art and efficient.\textsuperscript{11,12} How the primary meal preparer moves about his/her domestic space and uses cooking machinery is representative of his or her cooking confidence and skill in manipulating the ingredients and machines to create a meal. It is not just the larger food environment that influences the primary meal preparer; the smaller home and kitchen environment also influences the primary meal preparer, and this influence is evident in food choice and meal decisions. The primary meal preparer’s physical interactions with the food environment, built environment, and domestic kitchen space, pose questions relating to respondents awareness of these environments and their impact on food choices.
Methods

The investigation of the rural food environment was a study in relation to the respondents’ cooking skills and cooking knowledge. A mix of research methods was used: semi-structured interview, participant questionnaire, and video-tapings of the respondent’s preparation of two typical dinnertime meals. The data was compiled using qualitative research methods during the respondent’s preparation of a dinner time meal from the raw ingredients to a finished product. Coded and compiled data was then corroborated in order to explore the what, how, and why of the social phenomenon of domestic cooking. Using The rural subset (consisting of rural six respondents) the researchers sought to triangulate emergent themes (see Figure 2 below), analyzing how living in a rural environment influences an individual’s everyday cooking practices and food choices, as well as how the kitchen environment affects an individual’s ability to create a meal.¹³ The qualitative approach implementing various disciplines helps to construct generalizations about cooking among individuals in specific geographic environments (urban, suburban, and rural), generalizations that represent larger trends in twenty-first-century America..

The broad flow of the study is pictured in Figure 2 (below). Triangulation is a popular method recognized among the social sciences.¹⁴ Triangulation can bolster the confidence of a result by implementing mixed methods to examine the same phenomena.¹⁴ Triangulating data helps filters out biases, corroborating the data in a credible and reproducible fashion.¹⁴-¹⁶
Network sampling, a form of non-probability sampling, was used to recruit participants in specific geographic regions with the help of key informants. From May 2007 through August 2009, a total of twenty-three respondents were recruited for this ethnographic study. The first phase of the study took place in Boston, Massachusetts, the second in Burlington and Middlebury, Vermont, and the third in a rural area of northwest Vermont. Respondents in the study were approved based on the study’s eligibility criteria. Respondents were eligible if they were 18 years old or older and acted as the primary meal preparer. Respondents had to be able to allocate 4-6 hours of their time by taking part in one semi-structured interview, completing the participant survey, and agreeing to be videotaped preparing a dinner-time meal on two separate occasions.
Respondents in the rural subset had to meet additional inclusion criteria. Rural respondents were required to live 45-60 minutes North-Northeast of Burlington, Vermont, narrowing the recruitment to Lamoille and Franklin Counties. Rural respondents were also excluded if any family member living in the household commuted to Burlington for work because this would give the cook easy access to “exotic” food items. Burlington is a different food environment compared to rural Vermont, and the Burlington suburbs were investigated the previous year as part of a larger ethnography study, so the rural environment had to be kept separate. Five of the six rural respondents were recruited by a graduate student in the Nutrition and Food Science Department at the University of Vermont. The sixth respondent was recruited by a local bread baker.

The study’s research methods were prepared following ethics guidelines as stated and reviewed by the University’s Institutional Review Board (IRB). Once the participant consent form was signed, the audio-taped, semi-structured interview began. The open-ended semi-structured format of the interviews was appropriate for this study for several reasons. Conducting the semi-structured interviews at each participant’s home contributed to a relaxed atmosphere where meal preparers felt comfortable and could freely express their experiences and perspectives about cooking.\textsuperscript{13} Semi-structured interviews facilitated natural, informal conversation and allowed the respondent to freely expand upon the topic based on the guiding questions. The questions asked were designed to fit a 30-45 minute interview session. The supplementary questions were bundled into three areas and constructed specifically for the rural environment subset.
The three areas include cooking and health, meal thought process, and resources for purchasing/collecting food.

The questions for the semi-structured interviews were based on data from the 2008 Vermonter Poll. The Vermonter Poll was founded by the University of Vermont and run by the Center for Rural Studies (CRS). The CRS is a telephone polling service collecting quantitative data addressing the social and economic resourced-based issues facing rural Vermont residents.17

Perceptions about respondent’s cooking skills and knowledge were similarly structured to the Vermonter Poll questions. The participant questionnaires were intended to take about 20 minutes to complete. The questions in the larger ethnographic study asked respondents to provide basic demographic information and to answer cooking questions such as “During the past week, how many dinner meals did YOU prepare at home?” as well as personal values questions about their meal decision making process, such as “When purchasing food for a meal, which of the following factors is the most important?” Respondents were also asked to check where they would like their $100 gift certificate as part of their compensation for participating in the study. The gift certificates were mailed immediately after the survey was collected, and the second dinner preparation videotaping was completed.

The videotaped meal preparations were the last piece of empirical data collected in the study. The videotaping recorded further discussion on topics discussed during the interview. Videotaping also facilitated the discussion of other relevant and not so relevant topics after rapport was established during the initial interview. Taping the
respondents preparing a dinner-time meal supplied the opportunity for unlimited review of minute details of human behavior, which in turn confirmed the credibility of the data.\textsuperscript{18} Recording also permits a visual schematic of the kitchen’s spatial layout, verifying the respondents’ description of their cooking skills and knowledge from the interview and self-reported survey. Tuomi-Grohn (2001) states that not many studies have captured a “real \emph{in situ} food-related activity” to show how the kitchen environment affects an individual’s ability to make a dinner-time meal.\textsuperscript{19} Videotaping allows for observing respondents in the larger study’s behavior in the physical space of the kitchen, including but not limited to kitchen setup, cooking confidence, technique, cooking skills and cooking knowledge.

Data analysis for all three investigated environments followed a similar process. The semi-structured interviews were transcribed verbatim, and the videos were marked with a time stamp for pertinent conversations and actions throughout the course of the meal preparation. The transcriptions from the rural investigation were transcribed verbatim within 24 hours of the actual interview because the conversation was fresh. All investigators for each food environment transcribed using the program “Express Scribe.” Express Scribe is a “free professional audio player software for PC, Mac or Linux designed to assist the transcription of audio recordings. A typist can install it on their computer and control audio playback using transcription foot pedal or keyboard (with ‘hot’ keys). This computer transcriber application also offers valuable features for typists including variable speed playback…”\textsuperscript{20} Coding the videos and transcriptions occurred after several viewings and readings. Collaboration with the primary investigator

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(Professor Amy Trubek) ensured that any emergent themes were not overlooked and that personal biases did not influence the emergent themes.

Table 2: The Rural Environment Timeline

<table>
<thead>
<tr>
<th>2009</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
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Respondents

Table 3 (below) offers some of basic demographic information about each of the twenty-three respondents participating in the study. The age range of the respondents is late 20s to early 70s. There are a total of five males and eighteen females. The dominant gender is female which is not surprising because most primary meal preparers are still traditionally female.

The majority of the respondents were born in the United States and were of Caucasian descent. That all the respondents from the rural subset have Caucasian roots is not surprising because Vermont is 96.4% Caucasian, though some respondents were not born in Vermont.21 The larger data set includes two immigrants: one is from Trinidad and the other from Russia. The ethnic perspective of the two immigrants provides some insight into the experience of transitioning from a foreign food culture into American
food culture, but there was not enough immigrant representation to make reliable conclusions about immigrant experience from this particular ethnographic study.

From May 2007 through October 2007, seven respondents were interviewed in the Boston metropolis. During the spring of 2008, three respondents were interviewed from Addison County, Vermont, near the town of Middlebury, Vermont. From June 2008 through September 2008, an additional seven respondents were interviewed in the suburbs surrounding Burlington, Vermont. The last six respondents to complete the study’s data set were interviewed in the months of July and August of 2009, in Franklin and Lamoille Counties, Vermont.

Half of the twenty-three respondents were married, six were single, and four were divorced. Eleven respondents had children who were postgraduates and who had returned home, or were children living at home, while three no longer had children living at home. Nine respondents did not have any children, including one in the rural subset. Having children at home during the time of the interview added pertinent insight about the family dynamics of respondents and revealed the integral role that family plays in the primary meal preparer’s dinner-time meal preparation.

The study did have adequate income representation among the twenty-three respondents, with incomes spanning from $15,000 to over $75,000. Income levels within the urban subset were heavily skewed towards an income of $75,000 and above, as many of the urban respondents worked in an academic setting.

The respondents brought to the interview a host of life stories about their health, travel, and culinary experiences. They elaborated on how they have altered or have left
unchanged their shopping, cooking, and eating due to time, money, and family structure while living in Vermont. The primary meal preparers provided insight towards understanding the direction that food and food choices are taking for a larger group of people in the 21st century that extended beyond the rural food environment.

Table 3: Demographics of Urban, Suburban, and Rural Participants

<table>
<thead>
<tr>
<th>Environment</th>
<th>Ethnic origin</th>
<th>Age</th>
<th>Sex</th>
<th>BMI*</th>
<th>Marital Status</th>
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</tr>
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<td></td>
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<td>F</td>
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<td>F</td>
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<tr>
<td>CG</td>
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<td>M</td>
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<td>2 kids, 1 @ home</td>
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*Calculations for BMI used [http://ww.nhlbisupport.com/bmi/](http://ww.nhlbisupport.com/bmi/) (Overweight is a BMI > 24.99)

**Results & Discussion**

**Food Access**

The term “food desert” was first used in the 1990s and defined by McEntee and Agyeman (2010) as “areas of relative exclusion where people experience physical and economic barriers to accessing healthy food.” More recently, scholars have referred alternately to “urban food deserts” and “rural food deserts.” In an urban setting, a food desert occurs when an city-dweller lives more than 500 meters from a food retailer under walking conditions, and in a rural setting, a food desert occurs when a resident lives 10 miles or more from a food retailer. None of the rural respondents in this study lived in a rural food desert based on McEntee’s and Agyeman (2010) map of Vermont, though several census tracts were identified as rural food deserts in his study (Appendix C).

Fresh produce was available to the rural respondents in the study, but accessing “exotic” ingredients could be difficult. Rural respondent MG was stationed in Africa while partaking in Greenpeace, but could not easily find the ingredients to recreate certain recipes without driving 6 hours round trip to Montreal, Canada, a city with an active African community. Another rural respondent, EG, was an adventurous cook...
(whose family lived in Costa Rica for several years). She constantly read cooking magazines at her town library to find new recipes to try for her family.

They all have good recipes and um, *Cooking Light* sometimes has strange ingredients. I don’t know if you’re familiar with that. Sometimes hard to find ingredients…just like herbs that you wouldn’t normally have around the house…

[Respondent EG]

She would use magazines that required basic ingredients as found in *Family Circle*. City living facilitates easier access to exotic ingredients that associated with ethnic culinary traditions. In turn, these ethnic culinary traditions are usually associated with urban rather than rural environments.

Various ethnic communities help shape urban demographics and provide heterogeneity of food cultures, making indigenous food items more accessible. A rural food environment does not usually have a mix of ethnicities on this scale, and thus has a smaller market (if any) for specific ethnic food items. Food access was problematic for some urbanites due to a lack of transportation, but did not pose problems for the rural subset. (Note that the rural Vermont subset may not be completely representative of the United States in terms of transportation). Despite public transportation in her urban environment, one Boston respondent found food shopping extremely difficult. Her experience illustrates life in an urban food desert:

Yeah, actually this past fall I fell into this habit of eating out and getting, this is horribly embarrassing, getting groceries at Seven-eleven, you can imagine what my groceries looked like. School is here, my home is here, and the supermarket is there so my home was between school and the supermarket so I had to go past home to get to the supermarket and come back so it was that extra 20 minutes eastbound that at the end of the day that’s the last thing you want to do…I felt like every time I went they wouldn’t have something on my list and it was something basic… [Respondent MC]
Lacking the flexibility of car ownership makes it difficult to access desired food retailers. Respondent KO always had a car in Boston, so transportation was never an inconvenience for her. Conversely, for rural Respondent JW, growing produce at home eliminated constant reliance on transportation for food procurement in the rural environment.

Many of the rural study’s respondents were planting gardens ranging from large self-sustainable gardens to modest window boxes of herbs. Having property with land gave more rural and suburban respondents the option to have a garden at their home. The values behind gardening varied for each respondent. For example, Respondent PM had two younger children, and he tried “not to put too much in (his garden),” so he could shop at the local farmer’s market where he valued supporting the local farmers. The garden was primarily an educational experience for his children. Respondent PJ had a garden at one point, but found it unrewarding when the family had a farm share (CSA).

Another rural respondent, JW, had several large vegetable gardens, allowing the family to be self sustainable. Members of the family canned and froze the produce they did not consume immediately to eat during the winter months. At the same time, other respondents kept gardens for less practical purposes and found gardening to be a leisurely hobby (respondent MG and EG).

Urban residents have been getting more involved with urban agriculture with the goal of creating a more practical and sustainable food system. Asphalt and roof-top gardens are slowly catching on in cities where larger tracts of agricultural land is missing.\textsuperscript{23, 24} In the near future, hydroponic gardens (growing plants in a nutritious
solution versus soil) might be more practical. Until then, many urban residents have small window boxes with herbs to add a practical décor as seen in a Boston respondent’s small kitchen (Respondent MC).

Food access can be as close and easy as a garden in one’s own back yard, but for some, acquiring essential foodstuffs can be a daunting task when transportation is not available and there is a lack of “adequate stores.” Primary meal preparers are constantly making these daily decisions of how to obtain food items for a meal.

**Staying Local**

An analysis of this study’s data brings into focus the primary meal preparers’ values, especially with regard to where they shop. The respondents’ primary value was focused on providing a nutritious meal that would satisfy the whole family, but if they could they would shop for local food items. The state’s initiative to support local Vermont farmers is well supported throughout the state with advertisements (see Figure 3 below) and car bumper stickers. Eating locally not only nourishes the body, but can also nourish the brain when the consumer is fully aware that he/she is engaging in an activity that supports a fellow Vermonter’s livelihood. Magazines published from the *edible Communities* Publications and similar magazines throughout the state have also been an advocate for Vermont’s local foods initiative as well as other local communities around the globe. *edible Communities* describes itself as:

> a publishing and information services company that creates editorially rich, community-based, local-foods publications in distinct culinary regions throughout the United States, Canada, and Europe. Through our publications, supporting
websites, and events, we connect consumers with family farmers, growers, chefs, and food artisans of all kinds.26

Figure 3: Respondent Recommended Strategies for Encouraging Local Food Consumption

Vermonter Poll 2007

The magazine’s publication exemplifies the cultural food niches in various regions across the United States and Canada (i.e. Vancouver to Brooklyn, New York).

Some Vermont respondents made a conscious effort to be dedicated localvores, eating only what was in season and available locally. The attempt to eat locally can provide a community with collective efficacy, decrease the carbon footprint, and connect farmers to their consumers.10,27 More importantly, local foods are associated with quality and flavor, developing a notion of taste of place.

Other respondents were less concerned about eating as a localvore, selecting all kinds of fruits and vegetables that are accessible year round in many food stores. One respondent who was a professionally trained chef from the Culinary Institute of America (CIA) in Hyde Park, New York, explained that he tries to “use really good ingredients…having the
flavor of what you’re cooking come through...” Later in the conversation, the topic of Vermont as a good place for quality food items arose.

Vermont is an awesome place for food…I mean the local food knowledge of food, and the um...like you take the Mad River localvore group which is really pushing the localvore uh local um...localvore challenges and, and it’s really help raise awareness of local foods, but knowing your food, the food stream kind of where your food came from, knowing the farmer, um...that’s really seems to be getting a lot more focus, but there is a lot of people that have been doing it for a long time um... [Respondent PM].

The Figure 4 (below) shows that nearly anything grown in Vermont is considered locally grown and fresh to some degree by rural Vermont residents.

**Figure 4: Respondents’ Perceptions of the Appropriate Definition of Local**

![Pie chart showing perceptions of local food]

(\(n=601\))  
Vermont Poll 2007

Respondent JW may be one of the Vermonters that PM was referring to. JW’s family runs its own maple syrup production in Franklin, County, where they live an extremely self-sustainable lifestyle. She admitted the family did not have a lot of variation in their diet because they grew most of their food:

I think we, we kind of eat seasonally that way you know...we rarely buy lettuce in the winter, but it always tastes good then...Around Christmas time we may buy some, but...yeah. You know fresh fruit and berries, you know...yeah and I don’t, I guess, I don’t know. We just don’t  [Respondent JW].
The family raises twenty-four milking cows and a pig to be slaughtered, and it cultivates several large vegetable gardens that are situated on 200 plus acres of land. The family sells raw milk to customers that come to the home, makes its own yogurt and bread, and barterers for the few things that it does not buy in bulk (alcohol, rice, pasta, and coffee).

Each interview with JW started out by walking to the garden to pick what was in season and fresh for that evening’s dinner. The knowledge that she possessed about the land she lived on was evident by her dexterity while moving about her garden. She knew the land well and explained that the garden was compromised by the sloping topography of the land which created a wet end where vegetables did not grow as well. Inside, the family had stacks of Mason Jars for canning, while the rest of its produce would be frozen in two large coolers because “most vegetables are better frozen just in terms of taste” [Respondent JW]. JW’s family has a deep connection to and respect for the land. She showed remorse about pulling some new potatoes that were not ready to be pulled, saying that they had so much more potential. Her family showed a deeper connection to the land because it was more reliant on the land than were families using relying on farmers’ markets and CSAs. JW’s family was living the idealized lifestyle that suburban respondent RV talked about:

I really want to be a farmer. I just would love to, and it’s not so much farming like I wasn’t fifty head of cattle, it’s more like if I can grow my own food for my family, and cook every day I would be the happiest person alive. That’s my idea of happiness is just, you know, like having goats, and sheeps, and herbs, and making cheese and wine and that just to me is heaven… [Respondent RV]

During JW’s interview, she explained that she was more interested in farming and gardening than traditional schooling, having dropped out of Stanford after 1-3 semesters
(she could not quite remember). Part of her influence to come back to Vermont and farm might have been something she has grown-up with as a native Vermonter.

Occasionally, local foods are tainted by their association with the Slow Food movement championed by Alice Waters. The social stigma placed on local foods promotes the Slow Food movement, which refers to a slower and less hectic pace of one’s lifestyle that is described “as a life-enhancing quality.” Romanticized ideals about local foods have added to an “elitist” mentality tied to Slow Food, and those who embrace Alice Waters’ food values. Alice Waters is the owner of the restaurant Chez Panisse in Berkley, California, and is a leader in the push for organic and freshly grown foods (termed slow foods), dating back to the 1970s-1980s. The local foods social labeling was evident in one respondent’s comments:

I’m not like an elitist localvore (in reference to their CSA), but I just have a real passion as a localvore. I just love the idea of using stuff that is really fresh and tastes really good… [Respondent RV].

RV spoke of how he was “trying to be a serious localvore,” making a conscious effort to eat foods in season while adapting recipes to use food he already had. He was also attempting to abstain from “needless” trips to City Market, (Burlington, Vermont’s central health-food store), an “elitist-feeling food store.” The negative stigma towards local food was not an emergent theme, but brought some attention to the negativity associated with local foods that has been nationally expressed in the larger ethnographic study.

The aspiration of purchasing local foods for great flavor was a credible theme expressed by all rural and suburban respondents:
I go to Westford, (Vermont) I go buy the Cambridge Market and they’re a great little store. They have very good meat, and it’s reasonably priced. And it’s fresh, they do local um bread vendors, things like that so, that’s good. The Green Top at this house is superb. They have Boyden, they have Niman Ranch, they have Belle and Evens, they have Misty Knoll, oh my gosh!...If people could do like a side by side comparison, you would never eat some of the stuff that they put into these grocery stores never. Never! And it’s worth it, I’m willing to give up something else you know. I don’t know what it is I have to give up, but I’m willing to do it now… [Respondent MG]

The perception that produce acquires distinct and desired favor quality and profiles derives from the land in which it is grown. Local food was “tastier food” for MG and for several other respondents in the study. Local foods were purchased through two main channels: farmers’ markets and community supported agriculture farm shares (CSA).

**Food Acquisition: Farmers’ Markets**

There are roughly 4,800 farmers’ markets throughout America. The growing number of farmers’ markets reflects a shift in food procurement for at least some consumers. Farmers’ markets are designed to help consumers obtain “fresh products directly from the land:

…obtaining fresh products directly from the farm. Farmers markets allow consumers to have access to locally grown food, farm fresh produce, enables farmers the opportunity to develop personal relationship with their customers, and cultivate consumer loyalty with the farmers who grows the produce.  

Because of the modern food industry, consumers do not rely on seasonal hunting and growing to obtain food, though hunting is still a popular American pastime, as is gardening. Vermonters often choose to food shop at one of the 73 farmers’ markets in the state, and in many of the state’s towns, markets are held on multiple days of the
During the study the sheer number of farmers’ markets in Vermont did not go unnoticed:

...eh you know it’s really nice to even the amount of farmers markets that are in Vermont it’s really pretty amazing [Respondent PM].

During respondent CC’s meal preparation she claimed that farmers’ markets were not as popular during the 1970s, but that she has noticed the growth since that time.

The farmers’ markets’ increasing popularity could be due to their practicality, as seen in Lamoille County, where local consumers can buy food during the week as they head home from work:

…Wednesday afternoons we have a farmers market from 3-7… it’s right in the center of town… I’ll get some fresh vegetables and things. Elmo Mountain bread at the farmers market. Um, and um other things like cheese, goat cheese ‘cause I can’t eat dairy products [Respondent EG].

Respondent PM expressed a similar sentiment about weekday farmers’ markets. He felt that “part of me thinks yeah it’s easier to just pick some stuff up at the farmer’s market.”

Respondent PM also noticed that Stowe, Vermont’s farmer’s market has a “different feel” to it compared to the nearby Waterbury, Vermont, farmer’s market. Stowe, Vermont, is a popular ski destination on the East coast. The area’s tourist appeal might pressure Stowe’s farmer’s market to be an “entertaining” experience, exemplifying Vermont’s rural image. Farmers’ markets occurring during the weekend still serve the main purpose of providing fresh local produce to the community, and may also function as a source of entertainment for the whole family to enjoy, so even “the kids like going to the farmers markets” [Respondent PM].
Farmers’ markets have also played an integral role in providing access to fresh, affordable food to people in urban locations. Respondents generally saw farmers’ markets as a great way to support local farmers and create a sustainable food system. Larsen’s study (2009) discovered that a weekly farmer’s market in an urban food desert (500 meters and more for urban residents to access food retailers that supply good quality and affordable food) can cause competition among the neighborhood’s bodegas. This drives down prices of fresh fruits and vegetables sold at the small bodegas, making healthful foods more affordable and accessible to people in the lower socioeconomic bracket. Farmers’ markets in urban environments are one way to access fresh produce in a specific environment. Urban residents might not have the physical space, or they might have contaminated soil unfit for a garden.

Farmers’ markets in urban areas still have the sense of community exhibited in rural environments, but accessing urban farmers’ markets is not always an easy task. One Bostonian (Respondent MC) had the opportunity to experience a farmer’s market while studying abroad in Galway, Ireland:

Places like Galway where it [farmers market] is a center for a rural area so they also have farmer’s markets every Saturday that my roommates and I would buy most of our produce from local farmers so you know that’s fresh and even cheeses… [Respondent MC]

When asked about farmers’ markets in Boston, she responded:

I heard there was one (farmer’s market) in Somerville. For me it’s a hassle to get there. To get to Central Square from where I live you got to take the T, take the green line in and the red line out or take the bus to the red line. That would be an all day thing [Respondent MC].
Food shopping at a farmers’ market was too time consuming when there were other food stores that sold similar items and were closer.

Farmers’ markets epitomize the optimism about the future of America’s food system. The demand by American consumers for fresh, healthy, and good-quality foods does not seem to be slowing down. Since 1994, there has been an increase in farmer’s markets by 13% nation-wide. The demand to know where our food is grown and who grows it is becoming a standard food value in America. Farmers’ markets are practical for consuming locally fresh fruits and vegetables that are in season as well as for providing weekend and weekday entertainment for individuals and families alike. Farmers’ markets provide a social space that encourages dialogue among fellow community members and promotes a sense of community. In the study, attending farmers’ markets in rural and urban environments influences the primary meal preparer’s decision making process. Farmers’ markets are a place to find new and inspiring foods to cook or to see a familiar face.

**Food Acquisition: Community Supported Agriculture**

Community supported agriculture (CSA) is another outlet supporting America’s growing trend of sustainable food. CSAs “consists of a community of individuals who pledge support to a farm operation so that the farmland becomes, either legally or spiritually, the community's farm with the growers and consumers providing mutual support and sharing the risks and benefits of food production.” CSAs can be central food producers that serve farmers’ markets, restaurants, patron sharers, and other food
CSAs are a way of connecting consumers to their local farmers and environment. Study respondents were involved in CSAs in urban, suburban, and rural environments. Many families and individuals who join CSAs do so to support their local farmers, save money on produce, and assert environmental responsibility. The concept of a rural respondent having a CSA share seemed strange, knowing that the respondent had sufficient property at his/her rental to keep a small garden, but CSA popularity is evident with the 81 CSAs in the state of Vermont. Essex County, Vermont is the exception and did not have any listings of a CSA. McEntee and Agyeman (2010) discovered Essex County as one of the census tracts found to be a rural food desert in the state of Vermont, where a CSA would not be well supported if many residents are farming.

During Respondent PJ’s first visit (Lamoille, County) she used to have a garden:

"We really support the CSAs though. And so to-to do that you know you pay like $300 to the CSA and then to do your own vegetables is kind of, it just didn’t make any sense, and we really wanted to support the CSAs so we don’t (garden)."

[Respondent PJ]

On Mondays, the day of their CSA pick-up, PJ and her children would spend most of the day preparing the vegetables to be consumed the rest of the week. They did not always know what vegetables they would receive, or in what quantity, which posed a creative challenge with each delivery. The cognitive challenge of the CSA was discussed during Respondent PJ’s second meal-preparation video when the family recently moved into a new apartment shortly after the first visit was made. They were unaware that their crisper was too cold and was accidentally freezing the tomatoes they had just received. Instead of throwing out the frozen tomatoes, they made salsa and tomato sauce.
CSAs are educational, and much of that education comes through the excitement of the cognitive cooking challenge shareholders face every week since there is always a level of uncertainty about what they receive. The CSA helped a Russian immigrant learn about the local foods that are grown in the United States, specifically in Vermont. She worked with these unfamiliar ingredients from the CSA, using the internet to look up recipes for vegetables like Brussel sprouts, slowly acclimating to some of America’s produce [Respondent VPH].

The weekly CSA delivery can equally pose a daunting task in attempts to eat all the produce:

The amount of lettuce alone is more than just the two of us in the house can eat, so it’s definitely, this year especially (summer of 2008), especially in the summertime…I can’t imagine how one person, one household could eat even a small share… [Respondent LMS]

LMS had a similar outlook towards the plethora of vegetables CSAs can and often deliver:

…you know you get your choice of things, but there is always this gallon bag of lettuce and five or six cucumbers and so and even splitting it again kind of gets old quick…I don’t know if I want a pound of rutabagas [Respondent LMS].

A respondent from Boston had a CSA that ran differently from the CSAs discussed by the Vermont respondents. During the course of respondent MC’s first meal preparation, she talked of joining a Boston CSA to see if it was cheaper than buying conventional produce at a super market or Whole Foods. She would go online and click what “size” basket she wanted with a corresponding price. Likewise, suburban respondent LMS felt that CSAs were cost effective compared to buying produce at a conventional food store.
Farmers’ markets and CSAs are similar to each other in that they are both family oriented. Respondent LMS described her CSA as a family event. There were toys for children to play with while parents picked up their produce. Farmers’ markets and CSAs also allowed for the primary meal preparer to interact with others in the community. The discussed the produce they were purchasing and exchanged recipe ideas.

A unique feature of CSAs is the specific pick-up time that helps prevent patron overflow. Respondent LMS discussed how CSAs eliminate produce competition which is not an uncommon sight at farmers’ markets. Despite some of the variances, farmers’ markets and CSA both provide a way to support local farmers and contribute toward a sustainable food system.

The link between CSAs, cooking creativity, the community, and food acquisition is strong. CSAs provide an additional way to source fresh produce for individuals and families and have monetary, environmental, and communal benefits. Ideally, the benefits of the fresh produce outweigh the price and quantity.

**The Domestic Kitchen Space**

Because the domestic kitchen space is one that has traditionally been run by the wife of the family, this study focused on female food preparers, with five female respondents and one male respondent. (The male was professionally trained.) The décor of the kitchen space can yield insight about family dynamics and the primary meal preparer’s cooking skills and cooking values. Numerous gadgets in a kitchen space can make a person look like he/she is adept in the kitchen whether this is true or not.
Having two in situ videotaped dinner-time meals was extremely useful to corroborate the data from the participant survey and interview. The kitchen design is an important quality that reveals insights about one’s confidence and willingness to cook. A cramped space can easily turn an otherwise enjoyable activity into a chore.

I just got my kitchen renovated last year and I definitely enjoy cooking more in this kitchen than I did in the other one. The other one was very old, 1970s style. Even though things are pretty much in the same general location as they were before, I have better cabinets and I’m able to reach up and reach the spices right over the pot. Some of the little basic things and I’m able to clean up right after, which is also, to me, important to be able to clean as you go, on some things [Respondent SH].

New appliances can also have a positive or negative influence in a meal preparer’s confidence and willingness to cook. A married couple in the study was inspired to start cooking with the items they received on their wedding registry. At the same time, not having the right equipment made it difficult to attempt certain recipes. Not trying a tuna recipe because they did not own the right pan in which to sear the tuna shows a lack in cooking confidence by the married couple. [Respondent Cooking 7] Such a feat could have been attempted with some of the ingenuity and flexibility that other respondents exhibited.

Having too many appliances and very little storage was also a hindrance during meal preparations:

I have good stuff. My knives are good, my cutting boards are good. I’m pretty much set… I have a very small kitchen so my Cuisinart stays in the basement until I need it. I have all this stuff but a lot of it is downstairs. When I bake, for instance, I have to bring everything up and bring everything down…I don’t bake that much [Urban Respondent KO].
During KO’s dinner-time meal preparation videos, one could observe that her kitchen was so small that she barely had room for a garbage canister. Similar to Respondent Cooking 7, Respondent KO had a lot of cookware utensils that were precariously placed on the stove, or extremely close to it, because they lacked kitchen space for their utensils and appliances. This posed a possible fire hazard. An even more peculiar use of space was keeping an empty bowl in the refrigerator, guaranteeing that respondent KO would be able to have room for a salad. She said she would “utilize all possible space,” even if it meant using the sink as a food preparation area and dangerously balancing full pots on the sink ledge, pots which could be easily knocked over.

The kitchen space was not only an issue in the urban environment. People in the rural environment also felt pressured by lack of space:

PJ: We lug from out there (after grocery shopping), all those bags, up the stairs, and then we have this teeny-tiny little kitchen that has very little space to put anything so…

Son: Yeah it’s kind of difficult, when you step in this kitchen you’re stepping over bags.

Daughter: The limited counter space if you want to start something, right away. You have the groceries on one, two counters and then we have no counter space to chop stuff up on.

The family’s lack of pantry space and the fight for counter space while preparing dinner was evident during their first meal preparation in a previous home. If it was only one or two people, counter space might not have been an issue, but the three of them working together to prepare a meal placed too many cooks in the kitchen. When this family moved into their new home during the second visit, they were ecstatic about having a larger kitchen with more pantry space and plenty of workspace.
In our first meeting, PJ talked about how she had a very traumatic head injury ten years ago which severely affect her cognitive process and hindered her ability to perform simple tasks like cooking. She had to relearn to cook by using 4-ingredient cookbooks. An interesting outcome from her head injury she did not see as a cooking skill, but her children did (now 17-20 years old), was her increased organizational skills. Her children both said that everything was more organized. Everything had a place because “if you misplace it she’ll have noooo clue where to find it,” though she is much better if some items are out of place [Son]. PJ’s newly adept organizational skills were obvious in the second taping at their new home. There were post-it notes on every kitchen cabinet and drawer stating what was behind each cabinet door. PJ’s head injury forced her to become reoriented with her kitchen space in ways most of us never have to and has made her a more efficient cook.

Having too much counter space could also be a negative from a sanitary standpoint. Urban respondent LT had so much counter space that keeping his work area clean was not a high priority when preparing meals. Smaller kitchens often forced respondents to clean as they go in order to (CAG) create space needed for their next preparation task.

Rural respondents EG and MG were fortunate enough to built their own homes, and design their kitchen to be work efficient for their needs. Their kitchens had conveniently located spice racks and special pull-out drawers for specific appliances. PM’s professional training and many years of work as a chef influenced his home kitchen environment. Working in large commercial kitchens allowed him to move fluidly around
his own kitchen. PM had a modest-sized kitchen that could comfortably fit two working people, and it did not permit extra counter space for appliances. He had sizzle plates that would not regularly be seen in most domestic American kitchens. He did have a gas stove with a plate-warming shelf and a stainless-steel backsplash. He felt that a lot of kitchen gadgets on the market were useless and that all one needs is a good set of knives, pots, and pans. This attitude was reiterated in his simplistic cooking style and lack of kitchen appliances. His physical actions within the kitchen environment and his unique kitchen appliances insinuated that he had formidable cooking skills and knowledge.

PM found the professional kitchen environment just as exciting as the domestic kitchen environment when trying to come up with a meal:

Everyday’s different so just being you know really go with the flow and make, you know…need to make it happen so, whatever, whatever cards your dealt you have to figure-out how to eh how to prepare whatever you have…you open your refrigerator with what’s in there and what can you make out of it… [Respondent PM].

The set-up of the kitchen space could either be a hindrance or a help when it came to completing a dinner-time meal in the study. Every participant in the study was comfortable conducting meal preparation with non-cumbersome movements in his or her own home kitchen.

Composting does not hold any direct benefit, nor act as an impediment towards preparing a meal, but nevertheless, every rural respondent and the majority of the suburban respondents composted. These individuals created space to compost excess produce. They either had buckets underneath the sink or smaller containers on the counter that they showed during the video tapings. Respondent EG had two comports,
one for his/her goats and one for a composting reciprocal, and respondent JW gave the compost directly to the pig. Unlike urban environments that do not easily offer composing reciprocals, suburban and rural environments were usually found to have enough property to accommodate a larger composting reciprocal. The nutrient-rich soil that comes from composting can go right back into the gardens, enhancing the soil for future crops. Composting was the final step for respondents, and it brought them full circle, giving back to the environment the nutrients that the environment was able to provide to the respondent in the produce.

**Conclusion**

Analysis of the time stamps, coding, and compiled data from the participant questionnaire with special attention to time, money, and family structure revealed the emergent theme of the environment and its role in food item procurement and the kitchen environment within the rural environment subset. The natural environment was an important influence towards respondents’ access to acquire food. Further analysis showed that rural respondents interacted with their local food environment on a regular basis to procure fresh produce from their own gardens, as well as from farmers’ markets, and community supported agriculture. The common practice of procuring produce locally and in a sustainable manner was a consistent theme that held true for the suburban respondents from Middlebury and Burlington, Vermont. The local foods movement is arguably an intrastate phenomenon; however, cooking with the freshest produce was an aspiration that urban Bostonian respondents shared with the rural Vermont respondents,
only the Bostonians accessed their food from different food outlets (Trader Joes and Whole Foods).

Vermont’s resistance of modernization at the turn of the 19th century has led the way for the majority of the state’s agriculture today which is composed of small, local, family-owned farms, as in JW’s case. There is an element of altruism in many of the respondents’ choice to buy local food. In addition to benefiting from the freshness and health of the food, the families want to see the farmers survive and even prosper. Farmers’ markets and CSAs were more accessible for rural respondents than for their urban counterparts, while suburban respondents had similar if not equal access to these local food outlets as did rural respondents. The number of available community supported agriculture farm shares and farmers’ markets in almost every county of Vermont exemplify the state’s inhabitants’ desire to eat more locally.

The rise in consumption of local food has occurred across the nation, not just in Vermont. Throughout the course of the study, all respondents in each food environment stayed true to their food values with the shared aspiration of achieving a sustainable food system. Both farmers’ markets and CSAs provide ample opportunities to build collective efficacy in a community.

Choices about food items purchased by the respondents from local food outlets, or by more commercial means, are further influenced by the primary meal preparer’s ability to navigate his or her local kitchen environment. This study has observed a trend of vertical urban kitchen spaces designed with less area, but this trend is not evident in every city apartment. An initial false presumption was in rural and suburban
environments, where owning more property equated to a larger homes, kitchens, and land for gardens. The role of the kitchen environment was not as substantial as initially put forth, but was the processing center of the procured food items when crafting a meal from raw ingredients.

Based on this ethnographic study, it is evident that Vermont residents significantly engage the local food environment, either by taking part in home gardening, CSAs, or farmers’ markets. The “rural” Vermonter mentality of eating locally-sourced foods is a model of a sustainable food system starting to catch on throughout the country. Overall, the primary meal preparers in this study were greatly influenced by their food environments. Their own personal food values developed from a combination of their family’s heritage and their own life experiences. These factors will help influence a new wave of home-cooks’ interactions with the local food environment. How America’s food system will evolve in the future is based on what happens now in the 21st century.
Literature Cited

Introduction

Mass media in the United States is constantly covering the latest weight loss programs, new reality television shows, health magazines, books, and cooking shows to encourage Americans to become healthier. Overweight and obesity have become an issue of the nation’s public health. Nearly 68% of the nation is categorized as being overweight or obese (Body Mass Index > 24.99). Obesogenic environments, defined by the Center for Disease Control and Prevention as “environments that promote increased food intake, non-healthful foods, and physical inactivity,” make it easier to develop unhealthy food choices and behaviors. The obesogenic environment is not a cause-and-effect phenomenon. For example, the fact that a town or city has several fast food establishments in its vicinity does not necessarily mean that the whole town’s population will be overweight or obese. Some town’s people may be making better food choices regarding their local fast food restaurants compared to others, leading some people to become overweight while others remain at an appropriate weight. Further research must be done to better understand the relationship between an individual’s food environment, his or her food item procurement, and how food environment and procurement decisions might have possible implications for their health.

Studies have shown that foods consumed away from home and obtained from convenience stores, full-service restaurants, and limited-service restaurants, are higher in fat, salt, and sugar content and are usually served in larger portion sizes than at home. For instance, patrons may not be aware that the French fries they eat with their meal at
one restaurant do not have the same nutrient content (fat, sodium, etc) as the French fries they eat with their meal at a different restaurant. Consumers must be critical of the food environment outside the home. Recognizing that restaurants serve larger portions that are usually consumed at home should be considered when eating away out. In addition, over time, the food environment outside the home has influenced the food environment inside the home, namely in terms of larger portion sizes of homemade meals. This serves as further evidence that the external food environment influences the way we eat and plays a key role in the nation’s overweight and obese epidemic.

Not only are Americans’ food choices affecting their mental and physical health, but they are also impacting the country’s economic health. Depression is a secondary illness that may result from significant weight gain which hinders an individual’s performance at work and at home. Primary illnesses associated with being overweight or obese can lead to a variety of cancers as well as heart disease, sleep apnea, musculoskeletal disorders, hypertension, and type II diabetes mellitus. Most of these food-related illnesses rank high among America’s annual causes of death. Overweight, and obesity cost the government 9.1% of the nation’s medical spending, equating to at least $78.5-$90.2 billion dollars per year. The Behavioral Risk Factor Surveillance System (BRFSS) shows that Vermont spent about $141 million dollars between 1998-2000. These obesity-associated expenses adult medical expenses (Medicare and Medicaid). Even more problematic is an increasing shift in the number of children being diagnosed with type II diabetes mellitus. About 3,700 young children
are being diagnosed annually with this disease due to weight gain that was once common only in adults over the age of 40, not in children under 10 years of age.\textsuperscript{11,12}

Despite the influence of an individual’s food environment, a family’s final meal of the day is usually designed by the primary meal preparer, also known as a “nutritional gatekeeper.”\textsuperscript{13} A gatekeeper is generally referred to as a person who controls access to something. In this case, a nutritional gatekeeper is one who controls family meals and plays a large part in family health.\textsuperscript{14} In this ethnographic study, nutritional gatekeepers possessed a unique set of cognitive skills, cooking skills, and cooking knowledge reflecting their food values.\textsuperscript{13} Cornell University professor Brian Wansink (2003), found meals can be characterized by the personalities of nutritional gatekeepers who in turn can be categorized as “Giving Cooks, Innovative Cooks, Healthy Cooks, Athletic Cooks, Competitive Cooks, Methodical Cooks…” These are just a few of the kinds of cooks this study found.\textsuperscript{13} The personal characteristics of nutritional gatekeepers that Wansink (2003) describes changed the dynamics of how respondents in the current study interacted with the physical environment as well as with their kitchen environment. The theme of the nutritional gatekeeper’s aspired food values becomes more evident with the food items they obtain and the kinds of meals they prepare for their family.\textsuperscript{13,15} Nutritional gatekeepers are autonomous entities whose practices and ideals coalesce to represent a larger group of people who act to control a shared food environment. Both Wansink’s (2003) study and this study of nutritional gatekeepers illustrates the path home-cooks are taking in the 21\textsuperscript{st} century
Background

As discussed above, a term that is becoming important to food and nutrition research is “nutritional gatekeepers.” Wansink (2006) defines the term “gatekeeper” in reference to any number of “distribution channels…physicians, parents, media program directors…can all be gatekeepers depending on the service being offered and the target audience.”15 The identification of the importance of food gatekeepers began during World War II when the government was pushing for American to eat differently, more frugally, as part of the war effort. For example, families were strongly encouraged to eat organ meat for a source of protein, thus diverting the rest of the meat to be used towards the war effort.15 During this period, women were viewed as the main nutritional gatekeeper because women were usually the ones who stayed at home, and supervised the domestic duties. As more women entered the work force after the war, the role of the nutritional gatekeeper evolved to include responsibilities other than merely cooking meals.13

During the 1940s women were targeted as the family’s source for nutrition education and the argument becomes more complex in the modern day with who should be educated about making better food choices. Is it the nutritional gatekeeper or the general audience that the nutritional gatekeeper would be cooking for? Wansink (2006) found that the nutritional gatekeeper remains highly influential to a family’s food choices, especially children’s food choices.15 He found that 72% of nutritional gatekeepers controlled what their children ate inside and outside the home.15 Whether it
was dinners and lunches prepared at home or eaten outside the home, nutritional
gatekeepers played a significant role in every decision.\textsuperscript{15}

Nutritional gatekeepers possess an overwhelming ability to influence the diet of
their families. How they utilize their cooking skills can be crucial towards their family’s
health. One of the benefits of cooking meals at home is the controls it allows the
nutritional gatekeeper over the amount of vegetables, starches, dairy, sugars, proteins,
and fats that go into each meal. Wansink (2006) found that 82\% of nutritional
gatekeepers believed that they were more influential in others eating habits as their
cooking skills advance.\textsuperscript{13,15} More advanced cooking skills allow the nutritional
gatekeeper to prepare more kinds of meals, as he or she becomes more creative in their
use of ingredients and command of their skill set. More advanced cooking skills and
cooking confidence also enable gatekeepers to be more adventurous with new recipes and
ingredients and inspire them to create their own recipes.

Understanding a nutritional gatekeeper’s personality can help researchers better
understand their food values and what they perceive as “healthy foods” in relation to
food groups as outlined by the USDA food pyramid. Below is the USDA’s current
definition of healthy foods:

[Healthy foods] must still be low in fat and saturated fat and contain limited amounts of
cholesterol and sodium. In addition, if it’s a single-item food, it must provide at least 10 percent
of one or more of vitamins A or C, iron, calcium, protein, or fiber. The first-tier sodium levels
provide a reduction of sodium levels over many products available in the marketplace...might help target specific health-based interventions, establishing long term eating habits that
can begin at a very young age.\textsuperscript{16}

The government has used the food guide pyramid as a visual representation of the
“variety, moderation, and proportionality needed for a healthful diet,” stressing the
balance between each food group and the balance between intake and physical activities.\textsuperscript{12} The food guide pyramid of 2005, named MyPyramid, was the first American food pyramid to depict the importance of physical activity. MyPyramid also stresses that individuals should know their limits when it comes to consuming fats, sugars, and sodium.\textsuperscript{12} How to efficiently reach the nutritional gatekeeper to help realize the influence they have on the meal thought process, improve their overall cooking skills, with the understanding there exists a strong perception between having more advanced cooking skills and a healthier diet (Vermont Poll 2007).\textsuperscript{15} Nutritional gatekeepers are at the heart of the matter. If they use the influences they have on their family’ meals and health, they could ultimately improve America’s overall health.

\textbf{Descriptions of Evaluation}

Data pertaining to the nutritional gatekeepers meal thought process was collected between May 2007 and August 2009 by a research group from the University of Vermont. The testing procedure for the urban, suburban, and rural subsets investigating home-cooks’ cooking skills, cooking knowledge, and the implications of home cooking on individual health, was reviewed and approved by the University’s Institutional Review Board (IRB). The study to look and cooking skill, cooking knowledge and the food environment occurred from October 2006 - October 2009. The first phase of the ethnographic study involved interviewing seven urban residents in Boston, Massachusetts. Between winter 2007 and spring of 2008, three suburban respondents were interviewed near Middlebury, Vermont. In the next phase, seven participants from
the suburban location outside Burlington, Vermont, were interviewed. During the last phase of the study, researchers investigated the rural environment, interviewing six participants from Franklin and Lamoille counties in Vermont. The larger ethnographic study engaged a total of twenty-three participants who were recruited via network sampling. A graduate student from the University of Vermont in the Nutrition and Food Science Department acted as a key informant for recruiting participants in rural areas. The sixth rural participant was recruited through a local bread baker.

The participant inclusion criteria for the larger ethnographic study required that participants were 18 years or older, acted as the primary meal preparer, and could set aside 4-6 hours to complete the four parts of the study. Additional inclusion criteria were required for the rural participants. In the rural subset, participants were excluded if any member of the household commuted to the city of Burlington, Vermont, for work or school. To qualify, participants had to live 45-60 minutes north-north-east of Burlington, resulting in participant recruitment from Franklin and Lamoille counties in Vermont. Commuters to Burlington would place these households at an unfair advantage for food items because Burlington is a different food environment. Also, the area surrounding the city was already investigated in the previous year. The rural food environment is a different food environment where some "specialty ingredients" might not be easily accessible.

The study used three research methods: a participant questionnaire, a semi-structured interview, and two video tapings which recorded the preparation of a typical dinner-time meal to collect empirical data that would later be triangulated.17-20
Participants were required to sign the consent form before any aspect of the study could begin. The semi-structured interviews followed a script that guided the interviewer through a series of questions to elicit conversation about the meal thought process, cooking/healthy cooking, and resources for collecting food in a non-direct manner. The interviews fit a 30-45 minute window that was audio taped and transcribed within 24 hours of the interview using Express Scribe.

<table>
<thead>
<tr>
<th>Bundle 1: Cooking/Healthy Cooking</th>
<th>How did you learn to cook?</th>
<th>What is your definition of cooking?</th>
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<td>Bundle 2: Meal Thought Process</td>
<td>What is the decision-making process that occurs when you are deciding what to cook, and eat at dinner time?</td>
<td>On average how long does it take you to prepare a dinner meal? Does your weekday cooking process follow a similar schedule to your weekend cooking process?</td>
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<tr>
<td>Bundle 3: Resources for collecting food</td>
<td>Where do you get your food?</td>
<td>How often do you go grocery shopping? How does living in a rural area sway your decision to eat at home or eat out?</td>
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Each respondent’s data set consisted of two videotaped meal preparations. Each meal preparation began with the processing of raw ingredients and ended with the presentation of a finished product. Videotaping proved to be an invaluable research method. The kitchen space could easily be viewed while observing the respondent’s
cooking skills and behaviors in situ. Videotaping also allowed for conversations that the interview did not cover and extra time to elaborate on the interview topics.

The transcribed audiotapes and videotapes were coded for emergent themes after multiple readings of the transcriptions of all twenty-three respondents. Coding for emergent themes results in what Edwards and Sims-Jones (1998) discuss as “labeling each concept represented by every piece of data. Each code was compared with other codes for similarities and differences, and to begin to identify general patterns in categories.” The videotapes were time stamped when the respondents engaged in pertinent conversations and actions. The coded emergent themes were compared to the emergent themes coded by other researchers for verification.

The final research method was the participant questionnaire that inquired about participants’ socioeconomic status and demographics as well as their cooking knowledge and skills. The survey also asked about the food values that informed their food purchases. The questions in the survey and semi-structured questionnaire were based on the 2008 Vermonter Poll conducted by the Center for Rural Studies at the University of Vermont. The Vermonter Poll is a telephone survey that gathers data related to the social and economic resourced-based issues concerning rural Vermonters. Our survey would later be corroborated to their videotapes and semi-structured interview.

**Characteristics of the Sample**

Table 5 (below) lists some of the information provided by the twenty-three respondents within the entire ethnographic study. The age range for the respondents was
from the late 20s to early 70s. There were five males and eighteen females. All but two of the participants were Caucasian. There were two immigrants, one from Russia and one from Trinidad. Half the respondents were married, six were single, and four were divorced. Nine respondents had young children or recent postgraduates living at home, while three no longer had children living at home. The respondents’ income ranged from $15,000 to over $75,000. In this ethnographic study it was observed that the urban respondents were more likely to have an income of or approaching $75,000 than their rural counterparts.

Table 5: Respondents Definition of a Healthy Meal

<table>
<thead>
<tr>
<th></th>
<th>Ethnic origin</th>
<th>Sex</th>
<th>Age</th>
<th><strong>How do you define a healthy meal?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RURAL.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PM</td>
<td>Caucasian</td>
<td>M</td>
<td>40s</td>
<td>One that definitively has veggies, um and maybe not a lot of protein, and something that is pretty much balanced. You know something with not a lot of fried stuff... Ya know something that’s really balanced and has some green to it.</td>
</tr>
<tr>
<td>CC</td>
<td>Caucasian</td>
<td>F</td>
<td>50s</td>
<td>“Vegetables, you know things like that, things that are going to make you feel good...and balanced with some I guess you have your, triangle of a little bit of starch and a little bit of protein and um you know your vegetable and stuff, that would be my health definition. And making sure you’re getting all the nutrients you need.”</td>
</tr>
<tr>
<td>EG</td>
<td>Caucasian</td>
<td>F</td>
<td>50s</td>
<td>“Um a variety of foods from different food groups and not a lot of fat”</td>
</tr>
<tr>
<td>PJ</td>
<td>Caucasian</td>
<td>F</td>
<td>50s</td>
<td>“I define a healthy meal as lots of different, um different nutrients you know. All the groups (balanced out) yeah and we try to do that”</td>
</tr>
<tr>
<td>MG</td>
<td>Caucasian</td>
<td>F</td>
<td>60s</td>
<td>“Oh, lean protein, small amount. Vegetables, good starch...Lots of vegetables, fresh, salads...good bread, um, sometimes wine...sometimes not. Depends, um...but as fresh as you can make it”</td>
</tr>
<tr>
<td>JW</td>
<td>Caucasian</td>
<td>F</td>
<td>60s</td>
<td>“I think pretty traditionally probably. You know so that there’s a balance of you know, starch and vegetables and protein”</td>
</tr>
<tr>
<td><strong>SUBURBAN</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MW</td>
<td>Caucasian</td>
<td>F</td>
<td>70s</td>
<td>“Low fat meats, High Whole grain Fiber Carbs, two or more Veggies, Type of oil used to cook with, Fresh Salads, Fruits”</td>
</tr>
<tr>
<td>PB</td>
<td>Caucasian</td>
<td>M</td>
<td>60s</td>
<td>“Using a high level or raw materials...Avoid poisons &amp; genetic modified food”</td>
</tr>
<tr>
<td>Name</td>
<td>Ethnicity</td>
<td>Gender</td>
<td>Age</td>
<td>Description</td>
</tr>
<tr>
<td>------</td>
<td>-----------</td>
<td>--------</td>
<td>-----</td>
<td>-------------</td>
</tr>
<tr>
<td>BN</td>
<td>Caucasian</td>
<td>F</td>
<td>40s</td>
<td>“Balanced meal with whole grains, fish, vegetables, no creamy sauces – cooked w/olive oil. 4 food groups basically covered”</td>
</tr>
<tr>
<td>DS</td>
<td>Caucasian</td>
<td>M</td>
<td>20s</td>
<td>“In order to be a “Healthy Meal”, it needs to include veggies, protein, &amp; carbs. Try to be low in fat &amp; calories”</td>
</tr>
<tr>
<td>RV</td>
<td>Caucasian</td>
<td>F</td>
<td>30s</td>
<td>“Fresh, nutrient dense foods, cooking vegetables lightly, including something raw w/a cooked meal”</td>
</tr>
<tr>
<td>VPH</td>
<td>Russian</td>
<td>F</td>
<td>30s</td>
<td>“Prepared from minimally processed, local organic food; nutrition, small portions”</td>
</tr>
<tr>
<td>LW</td>
<td>Caucasian</td>
<td>F</td>
<td>30s</td>
<td>“Protein, veggie, starch combo”</td>
</tr>
<tr>
<td>N</td>
<td>Caucasian</td>
<td>F</td>
<td>30s</td>
<td>“Fresh food, no chemicals in food, most of the organic food”</td>
</tr>
<tr>
<td>LQ</td>
<td>Caucasian</td>
<td>F</td>
<td>40s</td>
<td>“Fresh food from a variety of food groups prepared with the least destruction of nutrients and with the most flavor also the family has to eat it”</td>
</tr>
<tr>
<td>JI</td>
<td>Caucasian</td>
<td>M</td>
<td>70s</td>
<td>“Use of olive oil – fresh not frozen – lots of salad – really fresh eggs”</td>
</tr>
</tbody>
</table>

**URBAN**

*What do you think makes a “healthy meal”?*

| Cooking 4 | Caucasian | F      | 40s | “Lots of vegetables, nothing fried” |
| Cooking 5 | Caucasian | F      | 50s | “Protein, vegetables, olive oil, healthy starch” |
| Cooking 6 | African American | F | 50s | “Fresh food, not too much processed, not too much salt salad with most dinners, drinks without sugar” |
| Cooking 7 | Trinidad | F      | NNA | “Unprocessed foods, fresh, minimum amount of fats” |
| Cooking 8 | Caucasian | F      | 50s | “Minimal processing plenty of fruits and/or vegetables congenial atmosphere (relaxation, companionship)” |

**LR Or Cooking 9**

Caucasian | F | NNA | “Organic food. Vegetarian food. Unprocessed food (mostly produce w/some bulk – like rice). Lots of fruits, vegetables, and whole grains” |

**Cooking 10**

Caucasian | M | 60s | “Combination of food groups, low fat, fresh ingredients and local products.” |

**Rural participants were asked during the semi-structured interview**

*Urban and Suburban participants were asked in the survey

### Qualitative Themes Identified

#### Gatekeepers and Food Purchases

The study’s results are organized by emergent themes that emerged during the analysis and which spanned all of the studied environments (urban, suburban, and rural).

The results of the different qualitative methods were triangulated. Triangulation is a popular method to analyze data recognized among the social sciences. Triangulation
bolsters the confidence and credibility of a result by implementing various methods to examine the same phenomena and filtering out possible biases.17,18, 21

The first identified theme pertained to the nutritional gatekeepers’ taking control of the food the family eats before the food reaches the home by procuring food items that aligned with the gatekeeper’s definition of “healthy.” In these cases, the cost of food was also a driving factor. Table 6 (below) is from the Vermonter Poll and provides additional information to help paint a picture of the rural food environment, echoing the nutritional gatekeepers’ responses with their concerns and aspirations to eat healthy foods. One respondent says:

*Depending what the sales are I’ll make up my menu for the week, and I start with Sunday usually, and put the days and decide what I’ll make for each day. Um what I just pullout recipes or I’ll have recipes in a certain area that I’ve been wanting to make for a while and I’ll pull them out of there (recipe drawer), and see if it matches up with what’s on sale like if beef or chicken or whatever is on sale...Price Chopper has the best sales, and I will buy some things at the um...the farmer’s market...I’ll get some fresh vegetables and things.*

This respondent felt a healthy meal had:

*a variety of foods from different food groups and not a lot of fat.*

Her definition of a healthy meal helped to provide structure for the meals her family would eat throughout the week.

A respondent who is a student expressed the difficulty of eating healthily in the context of her food environment:

*I’m always a little frustrated because where I live I feel like the options aren’t really great and if I do want a little healthier option, it's even that much more expensive so I get trapped in this do I eat healthy or do I spend money or where do I go. There’s a burrito place around the corner from me that’s fairly cheap. You can get a burrito for under $5- I do that a lot. Occasionally I'll go a little bit further and get sushi but that's the healthy versus expense trade off.*
This respondent’s food environment does not satisfy her definition of healthy:

Lots of vegetables, nothing fried.

This nutritional gatekeeper’s food values are constantly being tested because the food environment she lives in is less than ideal and fails to meet her health standards.

In this study, eating well usually meant spending more money on nutrient-dense foods. Two respondents did not have to worry about feeding other family members and were fully employed had more discretionary income. Because their only concern was to feed themselves, not a family, they were able to focus on health and avoid buying what they called “crap food” and still keep the cost marginal. Regardless of the state of the person's income, health was always at the forefront of purchases.

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>575</td>
<td>93.6</td>
</tr>
<tr>
<td>No</td>
<td>39</td>
<td>6.4</td>
</tr>
<tr>
<td>Total</td>
<td>614</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Vermont Poll 2007

**Table 6: If Respondent is Concerned with Eating Healthy Foods**

**Gatekeepers: Ingredient Control**

Nutritional gatekeepers were conscious of their ability to control the ingredients in their family’s dinner-time meal having peace of mind in knowing that they were offering a nutritious meal.

I don’t make a lot of food that’s not healthy. Just can’t bring myself to do it... I just can’t...
Controlling the meal, for example, controlling the amount of fat in a particular dish, one way that nutritional gatekeepers used their power to make a meal more healthful:

*Why I make dinner as opposed to someone else, when someone else is preparing the meal and I’m eating it is, I’m controlling what’s going into it. Without a doubt, I have control over it. I can see when Chris [husband] and I cook…For example, if we make the salad dressing, it calls for a certain amount of oil, I will cheat and put more water and vinegar and less oil, whereas he will just put the required amount of oil which is usually…If I’m trying to make it less fattening and I find that a little bit more water and less oil, doesn’t really change the taste that much, in the case of salad dressing.*

Adding extra vegetables to a recipe is another easy way in which respondents made meals less fattening and more nutritious.

A person’s choice to be a vegetarian or vegan requires more thought about the kinds of meals he or she will create and what ingredients will be incorporated so as to avoid protein or iron deficiency. One vegetarian respondent said:

*So, for me, we are not talking about nutrition we are talking about what am I getting from the food, and not that we are, eat, everything raw, and do all these other kinds of things, but I probably try to be very careful about, sort of what we are eating…*

Command over what is added to, substituted for, and omitted from a meal places gatekeepers in a less meal controlled environment that becomes limited when eating outside the home. A suburban respondent tried to recreate a recipe from one of his favorite restaurants:

*I was so psyched to come home and try it (recipe), and then I tried and I’m saying, huh, how close is that to what it is down there. How much is it part of the way of what they serve with it, because I throw in a lot more vegetables than they do, and they have more Buddha beef and I have more vegetables.*

Respondents realize that they exhibit some power over what their families eat when preparing meals at home, and the best way is from the very beginning when they
are procuring food. Shoppers’ purchasing decisions are influenced by what is healthiest and freshest as well as by what is on sale. Through personal experience over time, they learn how to make regular meals "more nutritious" in a way that does not compromise the meal’s flavor.

**Gatekeepers: Foods Consumed Outside the Home**

A nutritional gatekeeper’s vigilance to control portion sizes inside the home, may become a larger priority while dining outside the home. Nutritional gatekeepers, in a health-conscious acknowledgement of the larger portion sizes being served outside the home, might encourage family members to split an entrée. Restaurant patrons can usually switch “unhealthy sides” for healthier options like fruits, vegetables, or a different starch (rice versus French fries), but any of these "healthier" options usually come with a fee. One respondent revealed her family’s health-conscious eating-out habits:

...and when we go to a restaurant we never each order an entrée. We split everything all the way down, that way we can have a little something of everything so we'll order an appetizer, and we always start out with the waitress we're going to be sharing our meals. Because we find that people restaurants make too huge a serving and we can't eat all that you know...So we'll share a salad, we'll share an entrée, and eh appetizer, it's interesting how restaurants are, are more and more in keeping with, with that kind of protocol. They're more than happy to do it. And they'll bring you two plates you know which is really nice.

Health as a motivating factor in the purchase and consumption of restaurant meals was also a motivating factor when nutritional gatekeepers were shopping for ready-to-eat meals (RTE) or partially prepared foods. Nutritional gatekeepers who diligently controlled the ingredients that they used in preparing homemade foods felt more
comfortable when buying foods from a reputable food distributor as a loophole around their food values nutritional gatekeepers otherwise would look down upon.

The nutritional gatekeeper’s trust in certain ready-to-eat foods provides peace of mind. She knows she has picked the best food option for her family if aside from making the meal herself. Nutritional gatekeepers don’t just grab any meal that’s ready to eat. They often choose ready-to-eat foods carefully. This approach provides a peace of mind. The gatekeeper knows that she has picked the best option:

*I’m pretty fussy about what take-out I consider. So, if I get prepared foods, it’s only Healthy Living or Fresh Market, Sugarsnap, so I want local foods or I want food that’s prepared in a way that I would prepare it.*

There is certain health awareness of organic, conventional, and convenient that attracts nutritional gatekeeper’s to certain ready to eat foods:

*Last night we had frozen pizza, BUT! It was organic*

Even take-out foods were at the scrutiny of one nutritional gatekeeper:

*[Discussing take-out] “I try to make an event out of that too. Like I try to always try to present it. Like I would never eat take-out out of the container, no matter what it is. You know, I want it to, I always make sure it is hot, I want it to feel like I had some sort of making it or presenting even if I picked it up on the way home or I might add some spices or something to it just to tweak it a little bit...It’s got to be of a certain quality and not too much quantity...*

These gatekeepers felt that foods which were organic or from a known and reputable health-food distributor met their standards for quality. If outsourced meals allowed for a homemade touch, gatekeepers would give these “impersonalized” meals a personalized feeling when serving them to the family.
Gatekeepers: Urban/Rural Fresh Dichotomy

One rural respondent has a self-sustainable farm which enables her and her family to live off the land and purchase very few food items from the store. Their diet was essentially based on the seeds she ordered:

*I think it’s always been tied into providing you know food for our family we have four kids, um so it’s not just the cooking itself it’s kind of what it’s, the process...What ingredients are available at the time haha...most of the ingredients are here...what’s fresh in the garden, what needs to be used from the freezer...*

The rural respondent’s family would plant the seeds and harvest the food throughout the picking season, and anything extra would be frozen or canned to consume throughout the winter months. During the picking season, it was a daily routine to go out to the garden to see what was ripe and available for picking for that night’s dinner. The family’s self-sustainability required the gatekeeper to put much more forethought into their meals based on which vegetables would grow well in their part of Vermont, long before any part of the cooking process could occur. In a sense, they were planning their meals months earlier when they bought the seeds.

How the nutritional gatekeepers gathered food items for meal preparation varied with their food knowledge, and what food values they deemed important. The last respondent was extremely knowledgeable, indeed, more knowledgeable than the other rural respondents as evidenced by the fact that she and her family maintained many large gardens to supply the family with fresh produce.

The concept of “fresh” was slightly different in the urban environment with this particular rural respondent being at the “extreme” end of appreciation for and
consumption of fresh produce. Procuring fresh produce in the Boston metropolis was voiced by many urban respondents as:

...going to Whole Foods because everything is fresh...

Fresh produce for many of the rural respondents meant going outside to their garden, or stopping by a nearby farm stand.

The urban subset included only one respondent who mentioned using a farmers’ market to access fresh produce, and when she did go to the farmer’s market, it was not in Boston, but during her experience studying abroad in Ireland as an undergraduate student. She now resides in Boston, and a roundtrip to the closest farmers’ market takes a whole day on public transportation. Her lack of private transportation and the excessive time required to travel on public transportation makes shopping at the farmers’ market unfeasible for her. The international experience some respondents had while living abroad was explained by an immigrant. The respondent emigrating from Trinidad noticed that the fish in America is “a little different here than the Caribbean.” For many of the Boston respondents, buying fresh meat was similar to buying fresh produce: they bought it at the Whole Foods store instead of growing/raising it themselves.

**Gatekeepers and Cooking Skills**

The extent of the nutritional gatekeeper’s own cooking skills and cooking knowledge might dictate what a healthy balanced meal should look like, especially if her knowledge and skills are at the level of a novice. Anthropologist Short (2003) concluded
that there is no agreed upon “definition of ‘cooking skills,’” but rather a mutual definition of cooking skills that was “found to be used vaguely and in reference to techniques (often culturally specific)…described and understood at different levels of detail.”\textsuperscript{23} The 2007 Vermonter Poll (Table 7 below) reveals that Vermonters perceive those having more advanced cooking skills as more capable of following a healthier diet. The Vermonter Poll bears similar findings to Wansink (2006), who found that nutritional gatekeepers are more influential (82\%) in others’ eating habits or advancing skill level.\textsuperscript{13,14} One rural respondent (who was not a professionally trained chef) revealed her cooking skills and knowledge when talking about the infinite variation of culinary possibilities:

“There’s so many different kinds of taste combinations and different ways to prepare, even using the same ingredients. We don’t have a lot of variation here, cause we grow most of our own food, but, but there are so many ways to even cut a vegetable, you know that make it different to eat and different ways of cooking that vegetable.

Her cooking knowledge developed over time through personal experience and a lifelong effort to keep meals exciting.

Table 7: Agreement and Disagreement Level That Better Cooking Skills Lead to a Healthier Diet

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>293</td>
<td>50</td>
</tr>
<tr>
<td>Agree</td>
<td>208</td>
<td>36</td>
</tr>
<tr>
<td>Neither agree nor disagree</td>
<td>41</td>
<td>7</td>
</tr>
<tr>
<td>Disagree</td>
<td>32</td>
<td>6</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>7</td>
<td>1</td>
</tr>
</tbody>
</table>

(n=581) Vermonter Poll 2007

The one cooking skill that nutritional gatekeepers in all environments found most problematic was baking. Baking proved to be too “scientific” and “exacting,” and nutritional gatekeepers thought of it as old-fashioned, part of the “farm diets,” of people
who were active enough to need the excess calories that liberal quantities of bread afford. A few felt that not baking was a way to cut back on consuming excessive amounts of fat and sugar in their diet.

...biscuits, my biscuits don’t come-out good no matter what I do they don’t rise, they’re not light and flaky so um...I just haven’t had good luck with biscuits, but that’s ok we don’t eat biscuits very much. Cornbread, my family loves cornbread...

One perception from the study was that improved cooking skills and knowledge seems to be a generational improvement. Respondents were using advances in science, technology, and nutrition to make more informed decisions about how they prepared meals, and whether or not to eat away from home.

I used to do a lot of volunteering in the school when the children were small. And I looked at those diets and think Oh My God this is just horrible food! Horrible food...try to make it nutritious...I’m hoping that my grandchildren will be able to eat in school and have it be a healthy and enticing experience you know.

Over time, America is slowly making changes in the school lunch menu. For example, Vermont has the farm-to-table initiative where the University of Vermont and other schools source local produce for their dining halls. Regularly sourcing local and fresh produce for a new generation is part of the younger generation’s involvement in the meal thought process. The younger generation’s exposure with becoming involved in the meal thought process may provide future generations of home-cooks to make more informed food choices. One respondent had a son who was learning how to cook in preparation for moving off campus (2009/2010 academic school year). He described his idea of a good meal as an ice cream sundae. Despite his mother’s joking disapproval, her son was educated enough about nutrition to know that it was not best food option in terms of nutrition, but still “good” according to his standards. Because of growing nutrition
education and awareness, future generations may have a higher standard of common knowledge about nutrition than does the current generation today.

**Discussion**

The role of the nutritional gatekeeper is the subject of this investigation of cooking in the United States. Both food and labor (professional and domestic labor) are themes in this investigation which looks in particular at the relationship between a cook’s food environment and her cooking skills, cooking knowledge, and perceptions of healthy meals.

Every respondent in the urban, suburban, and rural subset exhibited some knowledge about nutrition. Respondent also demonstrated some degree of cooking skill, and cooking knowledge, which was evident when corroborating data from the participant questionnaires, semi-structured interviews, and two video tapings of preparing a typical dinner-time meal. Most of the respondents’ cooking knowledge was generational; they had learned skills from one of their family members at a young age and then honed these skills over the course of their lives out of necessity and/or culinary curiosity. Improving one’s cooking skills can lead to better health through creative manipulation of the same food item giving meals “new life.”

One variable that past generations might not have been able to prepare future cooks for is the evolving food environment. A major trend in the study showed that the local food environment was extremely influential on nutritional gatekeepers and was a variable that they were constantly trying to control. The influence that the environment
places on a nutritional gatekeeper’s meal process became a trend seen throughout every investigated food environment. The main goal for all the nutritional gatekeepers was to put a nutritious meal on the table for their family and/or their close friends. The gatekeepers would act to control their food environment by limiting the kinds of food items they purchased, the amount of each ingredient used in a recipe, and the size of portions consumed by the family in or outside the home.

A trend in the study was the dichotomy between urban/rural environments and the relationship between fresh produce and health. In this study, respondents had a general understanding of the five basic food groups and what a balanced meal consisted of, even if they did not strictly follow MyPyramid. Respondents in the urban, suburban, and rural environments spoke of the healthiest foods as being made from the freshest produce they could obtain. The differences between the urban/rural food environments caused the respondents to associate different food outlets with providing fresh produce. The rural respondents correlated fresh produce with that which they grew in their gardens, bought at local farmers’ markets, or obtained through community supported agriculture (CSAs). None of the urban respondents initiated a conversation about farmers’ markets, urban Bostonians described fresh produce as that which they obtained by shopping at Whole Foods Market and Trader Joe’s.

This study found that the creative process of crafting raw ingredients into the final product, a dinner-time meal, is constantly refined by the nutritional gatekeeper. Meals eaten and prepared at home were controlled from an early stage—the food purchase. Control was also imposed on the food preparation process and serving size.
Gatekeepers relied on a combination of culinary skills, and their ability to maneuver around their food environment (kitchen environment) to complete dinner preparations. Some found it harder than others in their kitchen environment, where there was limited counter and storage space to prepare meals. The larger food environment and domestic kitchen environment exerted constant pressure on the primary meal preparer, continually influencing the gatekeeper at every step of the meal thought process and during meal preparation.

The development of cooking skills is a lifelong process, and one’s health can benefit from having a strong foundation in basic cooking skills. The respondents’ cooking knowledge and skill set led them to work with the best produce possible. In the current study, obtaining foods with the best flavor was often linked to locally sourced foods, and the “healthiest” and “freshest” food items were generally considered the as the most locally produced ones. All of the participants thought of healthy foods as being fresh food as well as being represented in the food pyramid. The nutritional gatekeeper’s style of cooking with the freshest produce may affect how their children and grandchildren cook. Many of the nutritional gatekeepers may pass on their cooking skills, as well as their nutrition knowledge to the next generation. Since the 1980s the number of meals consumed by Americans outside the home has increased by 40%, and knowing that these meals are high in fat, sodium, and sugar, yet low in fiber and fruits and vegetables, is cause for concern. What is the most effective way for America to stop this vicious cycle of eating behaviors which promote overweight and obesity? The answer may start at home with the nutritional gatekeepers. Young adults who reported
frequent food preparation reported less frequent fast-food use and were more likely to meet dietary objectives for calcium, whole grains, vegetables, and fruit. Hopefully, a trend of younger generations becoming more involved in the meal thought/cooking process will reap healthier eating habits for the general population, as suggested by this study. This ethnographic study shows that the cooking characteristics, nutritional knowledge, cooking skills, and personal values of nutritional gatekeepers are evident and influential in their food item procurement within their food environment. The meals created from their food procurement places nutritional gatekeepers in a position to improve America’s overall eating habits one family at a time.
Literature Cited


Comprehensive Bibliography


Appendices

Appendix A – A Conceptual Model of the Components in the Food Choice Process


113
Appendix B – Vermont’s Average Distance to a Grocery Store by Census Tract

Appendix C – Food Deserts Greater than 10 Miles Mean Distance by Census Tract

Appendix D – Number of Operating Farmers Markets in the United States

Appendix E – Sales of meals and snacks away from home by type of outlet 2008

Appendix F – Local Food Consumption per capita in the USA (USDA 2002)

Local Food Consumption per capita (USDA 2002)

1997 2002
Direct Sales $6.79M $ 9.57M (41%)
to Individuals

Vermont

U.S. average
Appendix G - Nutrition and Healthy Foods Section, Vermonter Poll 2008

Frequency Report – March 31, 2008

Introduction
The Vermonter Poll is an annual public opinion survey of Vermont residents who are 18 years of age and older, conducted by the Center for Rural Studies at the University of Vermont, to gage Vermonter’s opinions on current issues of interest to non-profit agencies, government officials, and researchers. On the 2008 Vermonter Poll, six questions were asked of residents to understand their level of concern for eating healthy foods, what is important to them in preparing a healthy meal, and how their time influences their cooking and dining out practices (See Appendix A for a complete list of questions).

Respondent demographics
Slightly more than half of respondents surveyed are female (52%, 320) and 48% (294) are male. The average age of respondents was 56 years old (Std. = 15.3) with a median age of 57 years. The youngest age was 20 years, and the oldest was 95. Education data was collapsed into two categories, with 24% (149) having attained a high school diploma or GED certificate and 76% (465) completed some college education or a higher degree. Examining household income by median income in Vermont ($50,000), 39% (213) of respondents earn less than the median income in Vermont and 61% (335) earn at or above the median income. Respondents had a median household size of two, with a range of one to nine members in one’s household. An analysis of family composition showed that 72% (439) of households had no children, while 28% (17) had children in their household. The number of children in households ranged from 1 to 5 with a median and mode of two children. The majority of Vermonters surveyed reported that they are of a Caucasian decent (97%, 582).

Findings
Table 1 shows that three quarters of Vermonter Poll respondents reported that the “type of ingredients used” is the most important factor to them when preparing a healthy meal in their home.

Table 1. Most important factor when preparing a healthy meal at home

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of ingredients used</td>
<td>445</td>
<td>74.9</td>
</tr>
<tr>
<td>Total number of calories</td>
<td>54</td>
<td>9.1</td>
</tr>
<tr>
<td>Cooking techniques used</td>
<td>47</td>
<td>7.9</td>
</tr>
<tr>
<td>Other</td>
<td>31</td>
<td>5.2</td>
</tr>
<tr>
<td>Amount of food served</td>
<td>17</td>
<td>2.9</td>
</tr>
<tr>
<td>Total</td>
<td>594</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Other options include:
• All of the above or combination (8)
• Local/organic/quality ingredients (6)
• Amount of time to cook/prepare (3)
• Appearance/desire for food (2)
• Prepared foods based on dietary needs such as having diabetes or high cholesterol (2)
• Ease of preparation
• Like a good meal every night
• Nutrition
• Price
• Taste
• Theme / culture
• Whatever is available

Table 2 shows that the majority of Vermonters surveyed, 94%, commented that they are concerned with eating healthy foods.

<table>
<thead>
<tr>
<th>Table 2. If respondent is concerned with eating healthy foods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Table 3 reports that for almost two thirds of Vermont respondents, the ability to prepare a healthy meal is not impacted by the amount of time they have to cook.

<table>
<thead>
<tr>
<th>Table 3. If ability to prepare a healthy meal is impacted by the amount of time respondents have to cook</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Table 4 shows that 51% of respondents reported not eating their dinner meal out at a restaurant, while 49% (299) reported going out between one and six times per week for dinner at a restaurant. Of those who eat out at least once a week at a restaurant, the average is 1.3 times a week, and the median and mode are one time a week.

<table>
<thead>
<tr>
<th>Table 4. Number of times respondent has dinner at a restaurant on a weekly basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

120
Table 5 shows that two thirds of respondents indicated that meals served as restaurants are less healthy than meals they prepare at home. On the contrary, 31% noted that meals from restaurants are equally as healthy as a meal made at home.

**Table 5. Perceived healthiness of meals at restaurant compared to meals at home**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less healthy than a meal at home</td>
<td>191</td>
<td>65.6</td>
</tr>
<tr>
<td>Equally healthy as a meal at home</td>
<td>91</td>
<td>31.3</td>
</tr>
<tr>
<td>More healthy than a meal at home</td>
<td>9</td>
<td>3.1</td>
</tr>
<tr>
<td>Total</td>
<td>291</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 6 shows that 70% of Vermonters surveyed do not feel that the amount of time they have to cook influences how often they go to a restaurant.

**Table 6. If amount of time to cook influences how often respondent eats out at a restaurant**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>211</td>
<td>70.1</td>
</tr>
<tr>
<td>Yes</td>
<td>90</td>
<td>29.9</td>
</tr>
<tr>
<td>Total</td>
<td>301</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Methodology
The data used in this report was collected by the Center for Rural Studies at the University of Vermont as part of the annual Vermonter Poll. The survey was conducted between the hours of 4:00 p.m. and 9:00 p.m. beginning on February 26, 2008 and ending on March 7, 2008. The telephone polling was conducted from the University of Vermont using computer-aided telephone interviewing (CATI). The sample for the poll was drawn using a simple random sample of telephone exchanges in the state of Vermont as the sampling frame. Only Vermont residents over the age of eighteen were interviewed. The poll included questions on a variety of issues related to public policy in the state of Vermont. There were 617 respondents to the 2007 Vermonter Poll (Version II). The results based on a group of this size have a margin of error of plus or minus 4 percent at a confidence interval of 95 percent. This report was compiled by Michele Cranwell Schmidt at the Center for Rural Studies.

Appendix A.
Q: q9 ****************
Now I have several questions about your meal choices.
Of the following choices, which is most important to you when preparing a healthy meal in your home?

1. The type of ingredients used
2. The amount of food served
3. The total number of calories
4. The cooking techniques used
5. Another option (please specify)
6. I don't prepare meals [DO NOT READ]
7. Don't Know [DO NOT READ]
8. Refused [DO NOT READ]

Q: q10 ****************
Are you concerned with eating healthy foods?

1. Yes
2. No
3. Don't know [DO NOT READ]
4. Refused [DO NOT READ]

Q: q11 ****************
Is your ability to prepare a healthy meal impacted by the amount of time you have to cook?

1. Yes
2. No
3. Don't know [DO NOT READ]
4. Refused [DO NOT READ]

Q: q12 *********************
In a typical week, how many times do you have DINNER at a restaurant?
Number of times [INTERVIEWER: Don't know = 8 Refused = 9]
if (q12=0) skp q15
Q: q13 *********************
Typically, do you think that a meal at a restaurant is:
1. Less healthy than a meal at home
2. Equally healthy as a meal at home
3. More healthy than a meal at home
4. I do not purchase meals at restaurants [DO NOT READ]
5. Don't know [DO NOT READ]
6. Refused [DO NOT READ]

Q: q14 ****************************
Does the amount of time you have to cook influence how often you go to restaurants?

1. Yes
2. No
3. Don't Know [DO NOT READ]
4. Refused [DO NOT READ]
Appendix H – Informed Consent 5.8

Title of Research Project: A Qualitative, Longitudinal Study of Cooking Skill and Cooking Knowledge: How Can Kitchens and Cooking Help Us Understand the Obesity Epidemic and Our Food Environment?

Principal Investigator: Dr. Amy B. Trubek

Introduction:
You are being asked to be in a research study, sponsored by the United States Department of Agriculture (USDA), focused on cooking skill and cooking knowledge. You were invited to take part in this research study because you have identified yourself as the person who is responsible for the majority of meal preparation that takes place in your household. This study is being conducted by Dr. Amy B. Trubek, an assistant professor in the Nutrition and Food Sciences Department at the University of Vermont.

We ask that you read this form and ask any questions that you may have before agreeing to be in the study. We encourage you to take the opportunity to discuss the study with anybody you think can help you make the decision to participate in this research project.

Purpose of the Study:
This study is being conducted in order to examine the link between the organization of our food environment and individual health. The area of food preparation has yet to be studied extensively. This study seeks to understand what people know about the entire process of food preparation in order to forward both food research and action. Everyday purchasing and cooking practices have been affected by many physical and social environmental changes, and these data can help us understand not just what we do in our kitchens, but how and why, providing new insights into the relationship between food preparation, food consumption, and individual health and wellbeing.

The total number of subjects is expected to be 35.

Description of the Study Procedures
Ethnography is a method for learning about human behavior. An ethnographic research project, such as this one, places the highest value on fully understanding human behavior within local environments and in the context of people’s everyday lives. If you agree to be in this study, we would ask you to do the following things: complete a twenty minute survey, participate in a 30 minute audio taped interview at your home or place of employment, and participate in two 60-90 minute meetings where you will be videotaped preparing a family meal at your home. The audio and videotaped portions of the study can occur on the same day, or can be scheduled for two different days, depending on your preference.
As compensation, you will receive a $100 gift certificate to one of a number of restaurants and markets in either Burlington, Vermont or Lamoille and Franklin County after completion of the study.

All recordings, audio and video, will become the property of the University of Vermont and will be stored and secured in a locked office in a locked file cabinet, and will be disposed of in a manner that protects your privacy. Any and all electronic information will be kept on a password protected network. All information will be coded and a master list will be kept in a separate file. Your name will be separated from the survey once it is received by the researchers. The Institutional Review Board and regulatory authorities may inspect the records at any time.

**Risks/Discomforts of Being in the Study**

You will be audio and videotaped which may cause some individuals some discomfort. An inventory will be taken of the items and appliances in your pantry and kitchen, which may feel like an inconvenience or cause some discomfort. You will be asked to provide general income information, as well as height and weight information on the survey, which some individuals may not be comfortable with. This study may include risks that are unknown at this time.

You have been given and have read or have had read to you a summary of this research study. Should you have any further questions about the research, you may contact the person conducting the study at the address and telephone number given below. Your participation is voluntary and you may refuse to participate or withdraw at any time without penalty.

☐ You agree to participate in this study and you understand that you will receive a signed copy of this form.

<table>
<thead>
<tr>
<th>Signature of Subject</th>
<th>Date</th>
</tr>
</thead>
</table>

This form is valid only if the Committee on Human Research’s current stamp of approval is shown below.

Name of Subject Printed

| Signature of Principal Investigator or Designee | Date |
Dr. Amy B. Trubek
University of Vermont
251 Marsh Life Sciences – Carrigan Wing
Burlington, Vermont 05401
Phone (802) 656-0833
Fax (802) 656-6001
Appendix I – Letter of Invitation to Study

Hi Everyone,

I'm sending you this e-mail because I'm in a slight pinch to find some recruits for my summer's research. If you're parents, relatives, bosses, teachers etc. live in Lamoille or Franklin County please send me an email or forward this one to them.

My name is Shauna Henley, and I am a graduate student at the University of Vermont working on my Master's Degree in Nutrition. I am writing you to invite you to participate in a research study seeking to better understand how people cook today. You are being invited to take part in this research study because you are responsible for the majority of the meal preparation that takes place in your household. This study seeks to examine the connections between our food environment and our health. I have a specific interest in looking at the home cooking environment in a rural location (45-60 minutes from Burlington) in the Franklin & Lamoille Co. area, and do not commute to Burlington for work.

If you choose to participate in this study, you will be asked to do the following:
- Complete a short survey which will be mailed to you
- Participate in one 30- 45 minute audio taped interview at your home.
- Cook /two typical /family meals at home. I will videotape both meal preparations.

The audio portion of the study can occur on the same day as one of the videotaped portions, or can be scheduled at a different time, depending on your preference. The survey and interview will primarily involve questions about how you learned to cook, how you assess your level of cooking skill, what makes cooking a family meal enjoyable or difficult, and your decision-making process when it is time to decide what to have for dinner.

As compensation, you will receive a $100 gift certificate to one of a number of restaurants and markets in the Burlington area after completion of the survey, interview, and both meal preparations. We may contact you in the future but on-going participation in this research project is entirely optional.

I hope you are interested in participating in this research study. I feel that having a conversation about food and cooking with you will be very rewarding and beneficial to my project. Please feel free to contact me if you have any questions (Shauna.Henley@uvm.edu, 203-206-2415) or, if you would like to participate, please let me know and we can set up our first time to meet.

Sincerely,

-Shauna Henley
Appendix J – Participant Cooking Survey  
University of Vermont, Dr. Amy B. Trubek

A Study of Cooking Skill and Cooking Knowledge

Thank you for agreeing to participate in this survey. Your participation is completely voluntary. Your time and effort is greatly appreciated. The survey should take less than twenty minutes to complete.

**Instructions**

**Question 1:** Who should respond to this survey?

**Answer 1:** This survey has been sent to you as part of a larger study examining the link between cooking skill and cooking knowledge and individual health. The individual in your household who is responsible for the majority of the meal preparation and is the participant in the study should complete this survey.

**Question 2:** How do I respond to the survey?

**Answer 2:** Please take the following steps.

1. Proceed through the survey one page at a time.
2. Follow the instructions on the individual pages; and
3. Make check marks (✓) in the box that corresponds with your answer. Please do not leave any question blank.

**Question 3:** How do I return the survey?

**Answer 3:** After you have completed the survey, please return it to the researcher at the time of your cooking interview or one of your videotaping sessions.

Once again, thank you for your time and participation. If you have any comments or questions after finishing the survey, please include them in the space provided on the last page. We can also be reached for comments or questions using the email or phone number provided below.

**Question 4:** If I have any questions while completing the survey, how can I contact the researchers?

**Answer 4:** If you have any questions while completing the survey, please contact the Research Coordinator, Shauna Henley, by phone at (203) 206-2415 or by email at Shauna.Henley@uvm.edu
1. *Fill in the blank:* My favorite recipe to prepare is:

_______________________________________________________________________

2. *Fill in the blank:* What is your favorite restaurant?

_______________________________________________________________________

3. During the past week, how many dinner meals did YOU prepare at home?

   - 0 – 1 dinner meals
   - 2 – 4 dinner meals
   - 5 – 7 dinner meals
   - Don’t know

4. Which of the following terms best describes YOUR cooking ability? (*check only one*)

   - Advanced skill
   - Intermediate skill
   - Basic skill
   - Little or no skill
   - Don’t know
   - Decline to state

5. Read each of the following statements and check all that apply.
I’ve learned cooking skills from:

   - Cookbooks
   - Cooking classes
   - My family members
   - My friends
   - The Internet
   - Repetition and personal experience
   - Television
   - Other: _________________________________________
6. When purchasing food for a meal, which of the following factors is the most important: (check only one)

- Convenience
- Cost
- Flavor
- Health
- Decline to state

Other ________________________________

7. When deciding on what meal to prepare, which of the following factors is the most important: (check only one)

- Ease of preparation
- Family tradition
- Food availability
- Time
- Total calories
- Using minimally processed foods
- Using local foods
- Using organic foods
- Declined to state

Other ________________________________

8. During a typical week, how many nights per week do you have dinner purchased from a restaurant (either eat-in or take-out)?

- 0
- 1 - 2
- 3 – 4
- 5 – 6
- 7
- Declined to State

*Note: If you answered 0, please estimate the number of times that you may have dinner purchased from a restaurant in a typical month: ____________________
9. What is your preferred grocery store to shop on a daily and/or weekly basis?:
________________________________________

10. During a typical month, do you shop at other food retail stores? ____Yes     ____No
    If so, please list below:
___________________________________________________

11. When you go out to dinner, what are the main contributing factors as to why you
    choose to eat a meal prepared outside the home? (Check all that apply)

    ☐ There are more food options at a restaurant.

    ☐ It is more convenient than cooking.

    ☐ Going out to eat is usually a social event.

    ☐ I cannot prepare foods at home with the same taste and flavor.

    ☐ I do not know how to prepare certain foods.

    ☐ Other______________________________________________________________.

Cooking Skill and Cooking Knowledge

Section II: Demographics

12. What ethnic origin do you consider yourself to be: (You may check more than one
    box.)

    ☐ American Indian or Alaska Native
    ☐ African American
    ☐ Asian Indian
    ☐ Caucasian
    ☐ Chinese
    ☐ Filipino
    ☐ Japanese
    ☐ Korean
☐ Middle Eastern
☐ Native Hawaiian
☐ Other Pacific Islander ________________________________
☐ Samoan
☐ Spanish/Hispanic/Latino
☐ Vietnamese
☐ Decline to state
Other ________________________________

13. Please indicate your date of birth (mm/dd/yyyy): _____/_____/_____  
14. Please indicate your gender:
☐ Female        ☐ Male         ☐ Other        ☐ Decline to state

Cooking Skill and Cooking Knowledge
15. Based on your household’s TOTAL income in 2008, please indicate which category is most appropriate:
☐ Below $15,000   ☐ $15,000 - $24,999
☐ $25,000 - $49,999 ☐ $50,000 - $74,999
☐ $75,000 and above ☐ Decline to state
Other ________________________________

16. Approximately, how much do you weigh in pounds?
   ______ Pounds            ☐ Decline to state

17. Approximately, how tall are you?
   ______ Feet ______ Inches            ☐ Decline to state
14. Please feel free to use this section of the survey to make any comments or questions you have regarding this survey or to provide us with any additional information.
Section IV: Respondent Information

Respondent name: __________________________________________________________
Respondent occupation: ______________________________________________________
Date survey completed: _______________________________________________________
Respondent phone number/email address: ______________________________________

Section V: Gift Certificate

Please indicate your top three choices for restaurants/markets you would like to receive a $100 gift certificate to, with 1 being your first choice, 2 being your second choice and 3 being your third choice.

___ Price Chopper Supermarkets
___ Hannaford Supermarkets
___ Shaw’s Supermarkets
___ Healthy Living – South Burlington, Vermont
___ City Market – Burlington, Vermont
___ Blue Moon Café - Stowe, Vermont
___ Lounge at Trapp Family Lodge – Stowe, Vermont
___ Winfield’s Bistro – Stowe, Vermont
___ Bonz Smokehouse & Grill – Morrisville, Vermont
___ Lori’s Brunch Café – Morrisville, Vermont
___ Stella Notte – Jeffersonville, Vermont
___ The Village Tavern – Jeffersonville, Vermont

If you choose to receive a gift certificate, you must provide your social security number and mailing address.

If you are not comfortable with providing your social security number, you may elect to receive a gift box full of Vermont food products.

___ Vermont Gift Box

Once the survey is received by the researchers, this page will be separated from the rest of the survey.
Thank you very much for completing this survey. Please return the survey at the time of either your interview or one of your videotaping sessions. For any further information please contact:

Dr. Amy B. Trubek  
University of Vermont  
251 Marsh Life Sciences–Carrigan Wing  
Burlington, Vermont 05401  
Phone (802) 656-0833  
Fax (802) 656-6001

Shauna Henley  
University of Vermont  
354 Marsh Life Sciences–Carrigan Wing  
Burlington, VT 05401  
Phone (203) 206-2415
Appendix K – Interview Questions

Bundle 1: Cooking/Healthy Cooking

1. How did you learn to cook?

2. What is your definition of cooking

3. Do you feel like you are still learning to cook?
   • If so, how do you keep learning?

4. What do you feel are your cooking strengths/weaknesses?
   • Are there any kinds of cooking techniques in food preparation you want to learn but find there are barriers in learning a particular skill?
   • Are/were there any aspects in cooking that intimidate you?

5. Do you enjoy cooking?
   • What makes it enjoyable and not enjoyable for you?

Bundle 2: Meal Thought Process

6. What is the decision-making process that occurs when you are deciding what to cook and eat at dinner time?
   •

7. On average how long does it take you to prepare a dinner meal?
   • Does your weekday cooking process follow a similar schedule to your weekend cooking process?

8. Do other family members regularly cook meals?
   • Is there anything that you feel prevents them from making more meals?

Bundle 3: Resources for collecting food

8. Where do you get your food?

9. How often do you go grocery shopping?
   • Is it near your work?
   • Does winter weather affect your grocery shopping schedule?
   • What are your feelings towards grocery shopping?
   • Living in a rural community do you get the chance to barter with friends and neighbors?

10. Do you garden for practical purposes or for pleasure?”
- Do the items you grown in your garden effect the frequency and what you shop for at a super market during the year?
- What will you grow?

11. How does living in a rural area sway your decision to eat at home or eat out?

12. How do you define a healthy meal?

13. How would you describe a good meal?

14. Do you feel that the meals you cook everyday also fulfill your definitions of a healthy and good meal?