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Factors affecting symbolic and use adoption of local foods for consumers in Black Hawk County, Iowa

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ABSTRACT

A local food system may be an alternative to the increasingly globalized and concentrated food market and a means to augment the availability of fresh foods, create economically viable options for farmers and enhance the health of local ecosystems. Consumers are a vital component of these systems. Insight into the decision-making process surrounding the purchase of local foods can aid in efforts to build thriving local food systems. Studies on consumer attitudes show that, in general, consumers are aware and supportive of local foods. Abstract or civic factors, such as concern for the environment or food safety, are often identified as predictive characteristics. Results conflict, however, as to the influence of traditional demographic factors. This study analyzes telephone survey data of consumers in Black Hawk County, Iowa. Causative factors are evaluated within the context of a two-phase decision-making model, which distinguishes symbolic adoption, the acceptance of an idea, from use adoption, the behavioral practice of the idea. Testable variables are grouped as either sociological/civic or expediency factors. Sociological/civic factors include social demographic variables in addition to civic concerns. Expediency factors include measures of time constraints and economic variables. It is hypothesized that sociological/civic factors are relatively more important than expediency factors in symbolic adoption of local foods, and these factors must interact positively with expediency factors for use adoption to occur. Final multivariate regression models are derived. A two-stage least squares approach is used to incorporate the final prediction model for symbolic adoption into that for use adoption. Results show that sociological/civic factors are relatively more important to symbolic adoption than expediency factors, particularly the civic factors of having concerns about food safety, following environmental issues and knowing a farmer. Use adoption is more likely if appropriate interactions with the expediency variables of price-consciousness and income take place. For symbolic adopters, lower price-consciousness and lower incomes lead to an increased tendency to buy local foods. For those with predicted values that did not indicate symbolic adoption, opposite effects occur. For both groups, a complementary interplay with the sociological factors of educational level and knowing a farmer also influences use adoption.

CHAPTER I. Introduction

Particularly in the last twenty years, scholars have been articulating concerns about economic globalization and the concentration of market power, especially regarding impacts on local communities and food supplies. A 1999 special issue of the journal, *Agriculture and Human Values*, compiled a selection of articles based on presentations from two conferences centering on food systems dynamics. Introducing this issue, Dahlberg and Koc link the articles under the theme of responding to globalization. They describe the impacts of globalization as an increasing exploitation of segments of society and the natural environment and an increasing loss of democratic, political power as economic, corporate power becomes more concentrated (Dahlberg & Koc, 1999).

Considerable market power has shifted to a relatively small number of large firms in the United States and abroad, which have vertically integrated many stages of the agriculture and food system. With the imbalance of power between such firms and producers and processors, methods are increasingly dictated with little negotiation. In the marketplace, the nature of competition and choice has changed. These shifts have been described within legal, economic, social, political and historical contexts (Castle, 1998; Harl, 2000; Harl, 2003; Heffernan et al., 1999; Hendrickson et al., 2001; Welsh, 1997).

Numerous scholars and practitioners assert that community-based, local food systems (LFS) are an alternative to these prevailing forces and can revitalize communities (Dahlberg et al., 1997; DeLind, 1993; Fischler, 1988; Kloppenburg et al., 1996; Lappe & Collins, 1978;

Lyson, 2000; McMichael, 2000; Riches, 1999). "[L]ocal food systems are rooted in particular places, aim to be economically viable for farmers and consumers, use ecologically sound production and distribution practices, and enhance social equity and democracy for all members of the community" (Feenstra, 1997, p. 28).

For many advocates, the concept of LFS is not necessarily one of isolationism, but rather a desire to be engaged in decisions regarding a region's food supply. Such decisions consider the links between food sources, food availability and accessibility, community nutrition, natural resources and economic vitality.

Closely related to the idea of local food systems is the concept of community food security (CFS). CFS became popular in the United States in the 1990s to address hunger and food system concerns through community-based solutions involving both public and private sectors. In its proposal for the 1995 Farm Bill, the Community Food Security Coalition defined food security as all persons obtaining at all times a culturally acceptable, nutritionally adequate diet through local, non-emergency sources (Gottlieb et al., 1994).

Food security efforts may be fueled by what has been suggested as modern society's move from an "industrial society" to a "risk society," where consumers may choose organic and local products to control risks, perceived or actual, of highly industrialized food production and distribution systems and to preserve local food cultures (Nygard & Storstad, 1998; Torjusen et al., 2001).

Proponents (Dahlberg, 1994; DeLind, 1994; Feenstra, 1997; Kloppenburg et al., 1996; Lyson, 2000) claim LFS can benefit communities in the following ways.

Nutrition. Regionally sourced foods are fresher and possibly more nutritious by being available soon after harvest. Community nutrition is improved by providing more whole food items, particularly fruits and vegetables. Also, developing local links between supply and distribution allow more food to be accessible to more people.

Security. Increased local reliance helps to shield a community from possible disruptions of food distribution networks by national security, weather or energy crises.

Ecological health. More closely linked production and consumption networks provide the demand for diversified agricultural production, thus lessening environmental impacts and creating more ecological stability and sustainability. Additionally, less processing, packaging and transportation of food items result.

Economic development. LFS offer economically viable alternatives to farmers and provide a development benefit. Developing marketing and distribution channels retains a greater percentage of the food dollar within the community and strengthens regional economies through a multiplier effect.

Community building. The involvement of a variety of community members in the food system strengthens relationships and promotes citizenship and participation in decision-making about natural resource use and other civic issues.

Many states and communities are acknowledging the importance of LFS and are implementing programs to grow them. One indicator of this trend is the increase in the number of food policy councils throughout the country. Currently, seven states and at least four cities and counties have formed councils; additionally, three states are exploring the idea (Borron, 2003; Dahlberg, 1995; Hamilton, 2002). In 2000, Governor Vilsack of Iowa formed the Iowa Food Policy Council by Executive Order.

Dahlberg (1995) organized food systems issues by production, distribution, access, use, recycling and waste stream. In order for LFS to thrive, each of these issues needs to be addressed through the contributions of a variety of community members, including planners, administrators, producers, distributors and consumers.

The study herein focuses on issues of access and use, in terms of consumer attitudes, behavior and decision-making. Although consumers are, of course, vital to growing LFS, there is presently a dearth of research regarding consumer behavior concerning locally produced or grown (LP/G) foods.

The Local Food Project in Black Hawk County, Iowa, is an initiative to build demand for LP/G foods through institutional and restaurant buying. Eight institutions in the

Waterloo-Cedar Falls area (including nursing homes, hospitals, schools and two restaurants) purchase meat, fruits and vegetables from farmers in Black Hawk and neighboring counties. The institutions have purchased close to $784,000 worth of products from these farmers over the past five years (Enshayan, 2003).

Marketing to individual consumers is a next step to growing a more integrated LFS in Black Hawk County. Presently, there are about seven farmers' markets in the county and some local foods are available in HyVee grocery stores (a regional chain), three small, independent groceries and a few meat lockers and restaurants. But, what are consumers' attitudes about LP/G foods in Black Hawk County? How often do they purchase LP/G foods? What are the factors that influence attitudes and purchasing behavior? What are the barriers to purchasing more LP/G foods? These questions are explored using the results from a telephone survey of Black Hawk County area residents.

The following literature review places this research within the context of scholarship on consumer decision-making and, more specifically, on attitudes and behavior concerning local foods.

CHAPTER II. Literature Review

Theoretical constructs of consumer decision-making

For most economists, the neoclassical economic theory of utility, or rational choice, has long been the accepted model for individual consumer decision-making. According to this theory, autonomous, rational individuals make decisions about consumption so that limited resources are divided in a manner to maximize personal utility, or satisfaction (Samuelson & Nordhaus, 2001).

In sociological agro-food studies, on the other hand, the focus on consumer behavior and decision-making at the level of the individual is a relatively recent shift. The perspective of much of the previous scholarship was that of the intellectual tradition of political economy, with its high-level concentration on institutional structures of production. Recent efforts of social scientists to theorize and analyze individual consumption may be interpreted as informing an expansion of the economic utility function with additional variables.

These efforts are explored below after a brief explanation of the political economy tradition. The section concludes with a description of an integrative model that serves as the overarching theoretical framework for this study.

The political economy of agriculture

The fledgling political economy tradition was reinforced by the agricultural crisis of the 1980s in the United States as social scientists began exploring new frameworks for analyzing the situation (Friedland, 1991). The first decade of this movement focused primarily on

experiences of the family farm from the perspective that capitalism in agriculture was distinct from other industrial sectors. This scholarship evolved into what Friedland (1991) calls the "new" political economy of agriculture in which agriculture is viewed as a global, integrated industrial sector and research attempts to identify and analyze the links and relationships "between agriculture, agri-capitalist enterprises, the state, and non-agricultural institutions" (Friedland, 1991, p. 26). Commodity/structuralist approaches to food systems analyses are frameworks identified with this tradition.

Commodity approaches attempt to describe and explain the forces and impacts of the market-oriented economy of agriculture. Raynolds provides a general description:

> Rooted in the political economy tradition, commodity approaches analyze the interconnected processes of raw material production, processing/packaging, shipping, marketing, and consumption embodied in a given commodity or set or related commodities. These approaches emphasize the social and political nature of the organizations and relations involved in the life of a commodity. (Raynolds, 2000, p. 405)

Even though commodity approaches attempt to incorporate social dimensions into the nature of commodities, analyses are framed by a production or supply-side perspective. Conceptually, their foundation lies within the structuralist, agrarian framework of classical Marxism where "power is located unequivocally in the sphere of production" (Goodman, 2002, p. 271). Dixon defends the "clarity of purpose" of Friedland's commodity systems analysis model (1999, p. 154) and offers the gentler explanation that although it "did not enter the world of the consumer... the omission is consistent with much political economy that assumes the Marxist dictum that production is consumption and vice versa, and focuses on that part of the equation governed by the wage relation" (1999, p. 155).

Theorizing consumption

In these frameworks of political economy, consumer behavior, individually or collectively, had not been purposefully described. Goodman and DuPuis state that "consumption has been neglected, under-theorized, treated as an exogenous structural category, and granted 'agency' or transformative power only in the economistic, abstract terms of demand" (Goodman & DuPuis, 2002, p. 10). Lockie characterizes the previous models of consumption "either as a set of practices manipulated by capital and the state in the interest of capital accumulation or as the simple agglomeration of individually free and rational choices" (Lockie, 2002, p. 279). More recently, within the last five years especially, some social scientists have tried to respond to limitations of the political economy models and rational choice theory.

Conceptual components of decision-making models

In many of the recent scholarly efforts to model consumer decision-making, three overarching concepts are often alluded to, if not directly referenced: (1) the postmodern perspective of identity and influence through consumption; (2) Granovetter's embeddedness of economic behavior in social relations; and (3) the relational linkages provided by Actor Network Theory (ANT). These concepts, from earlier interpretations of individual action in broader contexts, are being revived and incorporated into agro-food studies.

Identity and influence via consumption. In his study of consumer power and impact in the context of the recombinant bovine growth hormone (rBGH) controversy, Buttel considers consumption a "causal force" and explains that "the notion that meaning and identity are increasingly shaped through the practices of consumption rather than through

one's role in the division of labor and production is a core postulate of postmodernism" (Buttel, 2000, pp. 1-2). Self, from a postmodern perspective, is created. Class has dissolved as the primary determinant of taste and lifestyle, and people invent self-identities, which are projected through consumption and the display of purchased goods (Bauman, 1988; Warde, 1997).

Miller (1995) describes how, in today's highly globalized, vertically integrated marketplace, retailers respond to consumers' shifting preferences practically instantaneously through the use of point of purchase technologies, which then direct the output of manufacturers. This shift to demand-led capitalism, in the developed world, affords consumers the pleasure of obtaining and finding personal meaning in a broad spectrum of relatively inexpensive goods. But, the production and distribution of these goods affect natural and human (labor) resources globally and, so, with the power of mass demand comes moral responsibility.

Social embeddedness. Granovetter (1985), like others, criticizes the assumption that individual economic decisions are strictly utilitarian exercises, disconnected from social context. But, his view of socially embedded economic behavior differs from other social scientists. Granovetter claims:

> ... the level of embeddedness of economic behavior is lower in nonmarket societies than is claimed by substantivists and development theorists, and it has changed less with 'modernization' than they believe; but I argue also that this level has always been and continues to be more substantial than is allowed for by formalists and economists. (Granovetter, 1985, pp. 482-483)

By balancing the levels of socialization, the individual consumer is endowed with more purpose and agency, rather than reacting, as if in a fog, to internalized habits and norms (over-socialization) or, robot-like, to market forces (under-socialization). This point of view provides context to broaden rational choice theory:

> ... while the assumption of rational action must always be problematic, it is a good working hypothesis that should not be easily abandoned. What looks to the analyst like nonrational behavior may be quite sensible when situational constraints, especially those of embeddedness, are fully appreciated. (Granovetter, 1985, p. 506)

Actor Network Theory. Actor Network Theory (ANT) was borne out of sociological studies of science and technology and attempts to explain individual action in the context of relational networks, which are human, natural and technological collectives. Lockie characterizes ANT as "an attempt to dissolve dichotomies between: macro and micro-levels of sociological analysis; the role of structure and agency in the constitution of the social; and the very ideas of the social and the natural as distinct and independent spheres of reality" (Lockie, 2002, p. 281). [For more on ANT, see Callon 1991, 1998; Callon and Law, 1995; Latour, 1987, 1993; Law, 1991, 1994.] Goodman (1999, 2002), Lockie (2002), and Lockie and Kitto (2000) urge the use of the relational framework of ANT in agro-food systems analyses as a way of integrating production and consumption and identifying the capacity and power of consumption. Furthermore, Koponen adds an instructive comparison of social embeddedness and ANT:

> Both developments...offer an explanation of how economic activity is an extension of social life and provide an alternative to a universal, common rationality. Each of them looks at the tripartite relationship of the actor, the embedded values that motivate the actor, and the effect of values in the network creation of [economic] value (the production and circulation of things). (Koponen, 2002, pp.546-547)

Decision-making factors of food consumers

Models of food choice and consumer behavior are informed by psychological and nutritional literature as well. Most of the early models focused on product characteristics; situational and environmental qualities affecting the eating experience; and socio-economic, psychological, and physiological attributes of the individual (Booth & Shepherd, 1988; Khan, 1981; Pilgrim, 1957; Randall & Sanjur, 1981; Yudkin, 1956: as cited in Shepherd, 1989). The social and cultural environment, although noted in these models, was not fully articulated as a site for individual interaction with the food system.

Recent social science analyses have expanded on these decision-making factors and theorized about the effects of personal, abstract factors. Concerns about environmental health, treatment of labor, animal welfare and community identity have been called "credence" or "civic" factors (Weatherell et al., 2003) or "reflection traits" (Torjusen et al., 2001).

Product choices of "green" consumers illustrate the priority of concern for the environment over other product or personal characteristics in decision-making. Those motivated by green consumerism attempt to effect change through the marketplace by product decisions, or voting with the dollar (Allen & Kovach, 2000; Elkington & Hailes, 1988; Elkington et al., 1990). Products are chosen over others based on the belief that the production or distribution processes used cause fewer environmental impacts.

Some food systems scholars have deepened these abstract factors of choice to include relational aspects between the food consumer and producer (DeLind, 1993; Fischler, 1988; Lyson, 2000; Marsden et al., 2000; McMichael, 2000). Accessible information about production methods and/or the producer, either through product labeling or personal interactions, engages the consumer in a different type of relationship with the producer, the community, its natural resources, and the food itself. This relational information then becomes a part of the consumer's decision matrix.

The reflexive consumer: from individual consciousness to social discourse

Warde (1994, 1997) criticizes the concept of a highly individualized, postmodern consumer and claims that consumer behavior is "more socially disciplined... and less concerned with self-identity" (1997, p. 11). Also, in an exercise to strengthen the traditional commodity framework with aspects of ANT, cultural studies and conventions approaches, Raynolds (2002) advised against "going too far in emphasizing the individual" and suggested maintaining "a commitment to issues of power and politics" (p. 407).

In her consideration of the consumer role in the development of the organic milk industry, DuPuis (2000) offers a framework that addresses these issues: the reflexive consumer. This framework regards consumer interaction with, even construction of, the food system as choices borne not of a particular political or lifestyle identity but of the social and commercial discourse surrounding each consumer.

Responding to the calls to employ ANT in food system analyses, DuPuis states:

> To fulfill the potential of this reformulation, however, requires a rethinking of the role of the consumer. Envisioning the consumer as having an active part in the creation of the food system requires thinking of the consumer as 'reflexive.' (DuPuis, 2000, p. 289).

To guide behavior, a reflexive consumer weighs economic, social and health factors and evaluates food claims by others. Claims about food come from various sources in a consumer's social network: friends, relatives, activists, media, advertising, product labeling, government and medical and scientific experts. Weatherell et al. (2003) found support for this framework in studies on consumer perceptions about local foods in the United Kingdom, as can be inferred from their conclusion that "individuals continually construct meanings to make sense of their choices in light of their positions relative to others and their environment" (p. 243).

Significantly, and unlike a green or concerned consumer, a reflexive consumer is not necessarily a social activist who is motivated by a specific, political agenda while participating in the marketplace. However, reflexive consumption is a "form of politics" by engaging in and reacting to public and private dialogue (DuPuis, 2000, p. 291). Thus, the reflexive consumer is a construct situated between the strict structuralist perspective of consumer as victim of macro-economic forces and that of the liberated, empowered and highly individualized consumer.

The reflexive consumer lends itself to the study of how individual behaviors of a broad group influence particular efforts, such as local food systems development, and, accordingly,

is utilized as a conceptual framework for this analysis of respondents in Black Hawk County, Iowa.

Consumer attitudes about local foods – Empirical data

Exploring consumer interest and behavior regarding local foods is fairly recent, and most of the work reviewed here was published within the last three years. Only seven studies were found, six in the United States and one in the United Kingdom, which focused specifically on consumer attitudes about local foods. Two of the seven provide analyses on personal factors, which may predict purchase behavior.

Research on food consumers' attitudes about organic food, health and environmental quality also provides another source of empirical data, and those studies which aid in building the hypotheses tested in this research are included. During decision-making, these "civic" or "reflection" traits may overlap with an interest in local production. A series of studies on consumer demand of local and organic produce in Kansas (Burress et al., 2000; Harris et al., 2000a; Harris et al., 2000b) use a grouping definition of "Environmentally-Identified Products" (EIPs), defined as "food and other products which have been produced in such a way so that their growth, processing, and/or distribution has a reduced environmental impact compared to conventionally-grown, processed, and distributed products" (Harris et al., 2000b, p. 5).

It is important, however, not to rely too heavily on research of other specific reflection traits. Burress et al. (2000) found that local product demand is more heterogenous, suggesting

a variety of motives, and more difficult to explain than organic product demand. Weatherell et al. (2003) caution that "'local food' is not such a tightly defined term as 'organic,' nor does a comparable system of regulation and certification exist into which consumers can engage" (p. 234).

This review is organized by themes describing consumer demand for LP/G foods and provides a rationale for the inclusion of variables in the hypotheses tested in this study.

Opinions and awareness of LP/G Foods

Most consumers when asked about local foods tend to have positive reactions (Harris et al., 2000a). In a national survey, Americans said they prefer food produced locally over food from further away or from other nations (Wimberley et al., 2003). Seven in ten respondents in a regional survey of four states (Iowa, Missouri, Nebraska and Wisconsin) placed great importance on LP/G food, especially if it supported a local family farm (Food Processing Center, 2001). Additionally, over one-third of the respondents from Iowa said it was extremely important to them to purchase "Iowa" grown products; this exceeded the other states surveyed where 22-24% said purchasing state grown products were as important (Food Processing Center, 2001). Similarly, the analysis of an Indiana survey indicated that over 60% of respondents would be highly likely to purchase LP/G food (Jekanowski et al., 2000). Kirksville, Missouri, shoppers were highly aware of and highly interested in purchasing LP/G food items as well (Garrett & Adams, 2000). And in surveys of supermarket shoppers in California, most respondents volunteered advantages to buying local (supports local agriculture, freshness, higher quality) (Bruhn et al., 1992).

In her review of international demand for organic products, Lohr (2001) offers the additional endorsement that consumers in the U.S. and Sweden have indicated a preference for local, conventionally grown products over imported organic products. In Norway, similarly, consumers tend to buy national food items over imported products, and there seems to be a belief that local food is better and safer and that purchasing LP/G food supports community interests (Nygard & Storstad, 1998). Market studies in the United Kingdom also show that a majority of consumers indicate interest in LP/G foods, although a small proportion (six to ten percent) actively seek them out (Weatherell et al., 2003).

Social psychological factors associated with demand

Research on the demand for LP/G and organic products and consumer concerns about health and the environment suggests possible predictive characteristics. Overall, demand for particular types of food in the U.S. seems to be driven by social-psychological factors (beliefs, attitudes, norms, values) more than economic or demographic factors (Breidenstein, 1988; Dietz et al., 1995; Guseman et al., 1987; Sapp & Harrod, 1989; Zey & McIntosh, 1992).

Positive attitudes towards organic and local produce in Kansas (Burress et al., 2000) were explained by values related to health and the environment, more so than demographic factors or political affiliation. In a literature review of studies on demand for local and organic produce (Harris et al., 2000a), concerns about pesticide residues, artificial coloring, additives and preservatives, irradiation, personal health and the environment were all

positively related to purchasing organic in most studies. Results of an experimental study measuring pork consumers' willingness-to-pay for environmental improvement found that over one-half of the consumers were willing to pay for pork products produced in systems which lessen environmental impacts and that environmental awareness and concern were high for most participants (Kliebenstein & Hurley, 1998). In a study comparing organic and non-organic consumers in Australia, organic consumers were shown to be slightly more motivated by health, environment, animal welfare, natural content of food, political values and mood (Lockie et al., 2002).

Demographic factors associated with demand

Results conflict as to the effects of traditional demographic factors, such as age, education, income and children at home. None of these seem to be highly correlated to purchase behavior. However, many studies agree that female consumers are highly supportive of EIPs.

Gender and marital status

Regarding the gender of the consumer, the Indiana study found that women tend to be more likely to purchase LP/G food than males (Jekanowski et al., 2000). And female consumers in Kirksville, Missouri, are defined as a target market for LP/G fruits and vegetables (Garrett & Adams, 2000). Similarly, women are more likely to purchase organic produce (Estes et al., 1994; Jolly, 1991; Lockie et al., 2002: as cited in Harris et al., 2000a, p. 29) and show a higher priority for environmental aspects than men (Uusitalo, 1990; Wandel & Bugge, 1997). But, marital status may play a role in these results regarding gender. Jolly

(1991) showed that singles, female and male, are more willing to pay for EIPs than married consumers (as cited in Harris et al., 2000a, p. 30).

Age

Age is not a predictive factor and results are contradictory. Younger respondents emphasized environmental quality preferences in Finland (Uusitalo, 1990) and seemed to be more interested in environmental and animal welfare in food evaluation in Norway (Wandel & Bugge, 1997). Older respondents, as well as women, are more interested in healthy dietary practices (Hayes & Ross, 1987; Roininen et al., 1999; Steptoe et al., 1995; Steptoe & Wardle, 1992; Wandel & Bugge, 1997). However, age added little predictive value in the studies reviewed by Harris et al. (2000a) or in surveys of California supermarket shoppers on attitudes towards local foods (Bruhn et al., 1992).

Education

In terms of education level, Jolly (1991) and Jolly and Dhesi (1989) found no relationship between education level and organic purchases (as cited in Harris et al., 2000a, p. 27). Regarding willingness to pay for organics, Jolly (1991) found college-educated consumers willing to pay the most, but Misra et al. (1991) found this same group to be price-elastic, and Buzby and Skees (1994) found that as education increases, the willingness to pay for reductions in pesticide exposure decreases (as cited in Harris et al., 2000a, p. 27). However, higher educational groups did correspond with organic purchases in Australia (Lockie et al., 2002); concern for environmental aspects of food quality in Norway (Wandel & Bugge, 1997); and support for environmental protection in Finland (Uusitalo, 1990).

Income and employment status

Income has not been shown to be a predictor of purchasing EIPs (Harris et al., 2000a). Income and employment status were not related to the attitude that locally grown was an important decision-making factor for certain Californian shoppers (Bruhn et al., 1992). And interest in environmental methods of food production was not related to only economically advantaged consumers in Norway; in fact, no independent effects of income or occupation were found (Wandel & Bugge, 1997).

The opportunity cost of time may provide an explanation for these counterintuitive results. With labor force participation of women increasing rather dramatically over the last forty years and high-speed communication technologies promoting an even faster pace, time has become costly relative to other goods. Becker (1965) revised the theory of rational choice to add the indirect cost of time of non-work activities to the resource constraint of income. In so doing, he created a "full income" constraint where maximum income is obtainable by devoting all available time and household resources to earning income. This, in turn, illustrates the substitution between time and market goods for utility maximizing households.

National trends in food consumption may demonstrate this substitution. Consumers are increasingly eating outside of the home rather than preparing meals for at-home dining. Away-from-home food expenditures account for about 47 percent of the U.S. food dollar, up from 39 percent in 1980 and 34 percent in 1970, and the National Restaurant Association projects this will exceed at-home food expenditures by 2010 (Davis & Stewart, 2002; Putnam & Allshouse, 1999).

Household size and children at home

Bruhn et al. (1992) found that the number of children had no effect on considering locally-grown as an important decision-making factor for California shoppers. Household size was also not important for distinguishing buyers and non-buyers of organic poultry (Jolly & Dhesi, 1989: cited in Harris et al., 2000a, p. 29). Although, single-person households have been shown to have more interest in the availability of organic products (Food Marketing Institute, 1997: as cited in Harris et al., 2000a, p. 29).

Barriers to purchase

Identified barriers to purchasing LP/G foods or other EIPs provide insight regarding the lag between stated interest and behavior. Lack of availability, inconvenient grocery outlet and price premiums are issues most commonly highlighted as barriers, whether real or perceived.

Over 60% of respondents in the four-state study said they would increase their purchases if more LP/G products were available, and 13% indicated that increased availability had already influenced their purchases (Food Processing Center, 2001). The analysis of the Indiana survey found "evidence that consumers have a tendency to favor the local brand when that option is available" (Jekanowski et al., 2000, p. 48).

Related to availability is the convenience of the grocery outlet and familiar grocery stores and supermarkets are preferred. Search and time costs seem to be a barrier to purchasing LP/G food for respondents from Indiana who indicated a desire to do so (Jekanowski et al., 2000). The Kansan focus group participants placed a high priority on

convenience in terms of location and the availability of other consumer services near the grocery outlet (Harris et al., 2000b). The four-state study found that 15% would increase their purchases if LP/G products were available at a grocery store and 80% were very or extremely interested in using this source. Slightly more Iowans (83%) were extremely or very interested in purchasing LP/G food from a grocery store than the total sample (Food Processing Center, 2001). Lockeretz's survey (1986) of shoppers at farmers' markets and supermarkets found that shoppers would like local produce available in more places, especially those locations already frequented. Finally, the survey on local foods in the United Kingdom also concluded that consumers want local foods accessible through familiar channels, i.e., supermarkets (Weatherell et al., 2003).

To build markets of LP/G food, price premiums are often necessary initially to support local producers. Most of the studies in the United States considering attitudes about local foods, specifically, do show support for price premiums. Wimberley et al. (2003) found that Americans would pay more for nationally sourced food, with over 70 percent being willing to spend more for LP/G food. Respondents from this national survey also expressed a willingness to pay more for production methods that protected the environment and used fewer chemicals. Almost 59% agreed that family farmers should be supported even if higher food prices result. The four-state survey gauged agreeable levels of price premiums; nearly half of the respondents would pay equal to typical retail price and approximately 36% would pay a 10% premium for LP/G products. A majority of respondents did not support premiums of 25% or more (Food Processing Center, 2001). The Kirksville, Missouri, study used results to describe target markets and found that those highly interested in purchasing LP/G meat are

willing to pay more for local products (Garrett & Adams, 2000). Interestingly, those surveyed in Indiana on average expect LP/G food to be less expensive than conventionally sourced food; however, even for those who expect to pay a premium, the likelihood of purchasing LP/G food was not lower (Jekanowski et al., 2000). Similarly, the survey of Californian supermarket shoppers (Bruhn et al., 1992) found that over 80% expected to pay the same price or less. And the focus group participants in Kansas suggested that decreasing price differentials would increase consumption of EIPs (Harris et al., 2000b).

In the United Kingdom, 25% to 30% surveyed indicated a willingness to pay a premium up to ten percent for local foods, but focus group participants revealed trade-offs of civic factors for price (Weatherell et al., 2003). The findings in Norway also diverge. Considering the attitudes of risk regarding the globalization of food, Nygard and Storstad (1998) did not find price to be a determining factor in food choice. Wandel and Bugge (1997), however, conclude that price premiums for food produced with fewer fertilizers and pesticides remains a barrier, and consumers do not want to give up personal aspects of consumption for the good of community via local foods or other EIPs.

Two-phase decision-making model

Even though a majority of respondents in the studies reviewed above express support for LP/G foods, this does not necessarily indicate a similarly high level of behavioral support, in terms of purchasing LP/G foods. Many of these studies either implicitly or explicitly identify this lag. As mentioned above, market studies in the United Kingdom indicate a small proportion (six to ten percent) of consumers actively seek out LP/G foods, although most

express interest (Weatherell et al., 2003). Consumers in Kansas also expressed positive attitudes towards EIPs but were not as likely to purchase; the researchers concluded that consumer proactivity or motivation are barriers, in addition to those discussed above (Burress et al., 2000). According to Lockeretz (1986), "preference for local produce is not the determining factor in consumers' buying habits" (p. 87).

Klonglan and Coward (1970) described this phenomenon within the context of individual adoption theory: "[T]he adoption process has two important elements, the symbolic adoption component, in which the idea is accepted, and the use adoption component, in which the material object or practice is accepted" (p. 77). Prior literature had used the term "symbolic adoption" to refer to the acceptance of a nonmaterial idea, rather than a phase in the adoption process. This interpretation by Klonglan and Coward (1970) established two explicit phases in adoption: the acceptance of an idea and then use adoption, "regardless of whether the innovation being adopted is material or nonmaterial" (p.77). The two-phase model facilitates identification of adoption lags and allows for explanatory study of the variables affecting each phase.

Using this model, rejection can also be differentiated as symbolic rejection and trial rejection. The process can be explained as follows. Awareness and evaluation lead to either symbolic acceptance or rejection. With symbolic acceptance, trial use of an innovation takes place; this is also referred to as implementation. After a trial period, trial acceptance or rejection occurs, and trial acceptance leads to use adoption, also referred to as continued use

or confirmation. Klonglan and Coward (1970, p. 80) provided the following graphic illustration.

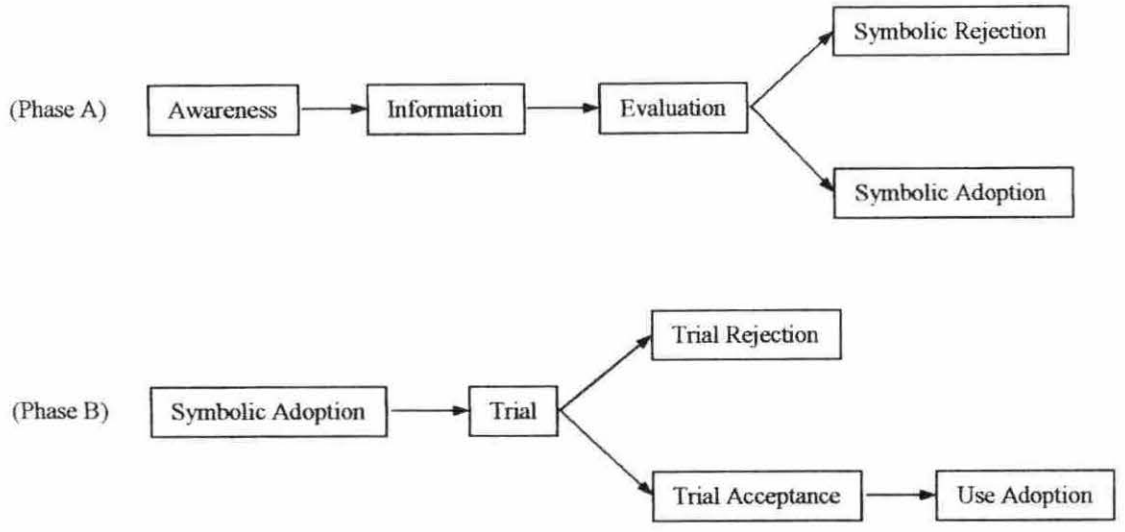

Figure 1. Two-phase decision-making model per Klonglan and Coward (1970)

Returning to the lag between symbolic adoption and use adoption, the two-phase model also provides for explanation via factors external to the individual, in addition to sociological or economic factors. "Incomplete adoption" describes a situation where the individual is quite favorably inclined to use an innovation, but structural factors constrain the movement towards use (Klonglan and Coward, 1970, p. 80). Two forms of incomplete adoption are "constrained adoption" and "anticipatory adoption." A case of constrained adoption is an individual in favor of using public transportation, but her community does not yet have a system of buses or trains available. Anticipatory adoption occurs in the instance of an individual deciding to report to a designated public building in case of extreme heat, but there has not been a heat wave since making this decision.

As mentioned previously, the two-phase model allows for differentiation between possible causative variables at each phase. Subsequent studies not explicitly employing this model have arrived at conflicting conclusions regarding whether economic or sociological factors explained a majority of variance in adoption (Hooks et al., 1983; Napier et al., 1984; Nowak, 1987; Pampel and van Es, 1977; Swanson et al., 1986: as cited in Sapp & Jensen, 1997, p. 511). This is not to broadly imply that use of the two-phase model will eliminate contradictions, but it has the potential to provide richer explanations of behavior.

Klonglan and Coward (1970) hypothesized "that sociological variables will be most important in explaining symbolic adoption, whereas economic variables will be relatively more important in explaining use adoption" (p. 80). Sapp and Jensen (1997) found support for this hypothesis in their study of adoption of beef from the United States in Japan. Also, economic and sociological factors were found to be complementary in predicting implementation and confirmation decisions when considering product and market infrastructure characteristics.

Sapp and Jensen (1997) mention that few studies have explored use adoption decisions as separate from symbolic adoption and suggest that further research is needed. The survey data used in this research offer an opportunity to do so. The tested hypotheses and these data are described in the following chapters.

Chapter III. Hypotheses

This study tests, in general, the two-phase decision-making model of Klonglan and Coward (1970) and their hypothesis that sociological variables are relatively more important than economic variables in explaining symbolic adoption and economic variables are relatively more important than sociological variables in explaining use adoption. However, these variable groupings are broadened to test sociological and civic factors versus expediency factors, as defined by Weatherell et al. (2003). In studies of consumer perceptions about local foods, Weatherell et al. (2003) found support for the concept that decision-making about food is a personal system of trade-offs between "civic" factors and "expediency" factors. Civic factors include perceived environmental benefits and support for local businesses, whereas expediency factors include price, availability and ease of preparation. Trade-offs were observed where civic factors were rated less important than some expediency factors and intrinsic product characteristics, such as good appearance and freshness.

The extension of the hypothesis of Klonglan and Coward (1970) also allows for the behavior of a reflexive consumer, who is not simply regulated by socio-demographic factors, but also considers civic, reflection or social psychological factors involving beliefs and attitudes.

The two-phase decision-making model indicates a direct link between symbolic adoption and use adoption through the interaction of variables affecting each phase. This research tests

factors for their association with symbolic adoption and considers the interactions leading to use adoption. The findings of studies described in the literature review above guide the inclusion of sociological and civic variables and the hypothesized direction of relationships with symbolic adoption. In addition to economic variables, the expediency factors tested include measures of time constraints and convenience. These are included to address the possible substitution of goods for time and are based, in part, on the findings that consumers desire LP/G foods to be available at grocery outlets they find convenient. The study's hypotheses follow.

H1: **Decision-making regarding support for and use of LP/G foods is a two-phase process.**

H2: **In symbolic adoption of LP/G foods, sociological and civic factors are relatively more important than expediency factors; hypothesized directions are presented in the following table.**

Table 1. Hypothesized directions for relationships between symbolic adoption and sociological and civic factors

Sociological and Civic Factors	Direction of relationship
Gender	– (more likely if female)
Follows environmental issues	+
Concerned about food safety	+
Personally knows a family farmer	+
Political ideology	no significant effect
Year of birth	no significant effect
Level of education	no significant effect
Marital status	– (more likely if single)
Has children 18 years of age or younger	+ (based on assumption that reflexive consumers with children symbolically adopt)

H3: **For use adoption of LP/G foods to occur, sociological and civic factors significant to symbolic adoption must interact positively with expediency factors; hypothesized interaction directions are presented in the following table.**

Table 2. Hypothesized directions for interactions between sociological/civic factors and expediency factors

Expediency Factors	Direction of interaction
How often eat out or buy take-out	+ (more likely if not often)
How often eat pre-prepared food for dinner	+ (more likely if not often)
Price-consciousness	+ (more likely if not price-conscious)
Monthly household spending on groceries	no significant effect
Income	no significant effect

Chapter IV. Materials and Methods

Materials

Efforts at bolstering the local food system in Black Hawk County have been underway for the last six years. Dr. Kamyar Enshayan at the University of Northern Iowa's Center for Energy and Environmental Education has been working with local institutions and state purchasing agents to promote institutional buying at area hospitals, schools, nursing homes and restaurants. Partly because of this work, FoodRoutes Network, Inc. (FRN) chose Black Hawk County as a site for a "Buy Local" campaign. FRN is a national nonprofit organization based in Millheim, Pennsylvania, with a mission to help build communication capacity of organizations developing community-based food systems. The Buy Local Initiative is a program of FRN in which it partners with organizations and provides assistance in designing effective communications campaigns.

To describe baseline, regional sentiments towards LP/G food, FRN contracted a series of telephone surveys in the areas launching "Buy Local" campaigns. The hypotheses described above are tested using the Black Hawk County area telephone survey data. Greenberg Quinlan Rosner Research, Inc. (GQR), a public opinion and strategic research consulting firm directed the survey and subcontracted its administration. The survey instrument and a frequency document produced by GQR are included as appendices. Prior to this study, two faculty members at Iowa State University (Dr. Terry L. Besser, Department of Sociology and Dr. Carl W. Roberts, Department of Sociology and Department of Statistics) reviewed the survey instrument and considered the design suitable and reliable.

The survey consisted of 69 questions and was administered between 5:00 PM and 8:00 PM, Monday, March 18 through Wednesday, March 20, 2002. Information on 400 respondents was collected, 307 self-identifying as the primary shopper or as one of two primary shoppers for the household. These 307 primary shoppers serve as the test population for this study.

This was a random digit dialing (RDD) telephone survey for which the vendor pre-screened exchanges to remove business telephone numbers. Thirty-one telephone exchanges, in the 319 area code, were used to cover the towns of Cedar Falls, Dunkerton, Hudson, LaPorte City, Washburn and Waterloo in Black Hawk County and the neighboring towns Grundy Center (Grundy County), Independence (Buchanan County) and Waverly (Bremer County). Thirteen percent of the respondents live in these neighboring towns.

By identifying the postal zip codes associated with each telephone exchange, the total number of households covered by the exchanges is calculated at 54,971 (United States Census Bureau, 2000). The number of households within the telephone exchanges for Grundy Center, Independence and Waverly is 9,083.

Regarding the utility of the findings, results are generalizable only for households in the Black Hawk County area. However, they may be preliminarily extended to other regions with similar demographics. Black Hawk County, Bremer County and Grundy County are components of the Waterloo-Cedar Falls Metropolitan Statistical Area, and the population of

Black Hawk County (2000) is 128,012. The combined population of the other three towns surveyed is 17,500. The following table provides other details on Black Hawk County according to the 2000 United States Census, unless otherwise noted.

Table 3. Black Hawk County Demographics

Persons under 5 years old	6.1%
Persons under 18 years old	23.1%
Persons 65 years old and over	14.0%
High school graduates (% of persons age 25 or older)	86.5%
Bachelor's degree or higher (% of persons age 25 or older)	23%
Race/Ethnicity:	
White	88.4%
Black/African American	8.0%
American Indian/Alaska Native	0.2%
Asian	1.0%
Hispanic/Latino	1.8%
Foreign born	3.7%
Housing:	
Housing units	51,759
Housing units in multi-unit structures	21.7%
Homeownership rate	68.9%
Median value of owner-occupied housing units	$77,000
Households	49,683
Persons per household	2.45
Income:	
Median household income (1999)	$37,266
Per capita money income (1999)	$18,885
Person below poverty (1999)	13.1%

In terms of receipts, the largest business sectors in Black Hawk County are manufacturing (over $5 billion), retail trade (over $1 billion) and wholesale trade (almost $1 billion). In terms of paid employees, the largest business sectors are manufacturing (13,542),

retail trade (9,386) and health care/social assistance (8,494) (United States Census Bureau, 1997).

Methods

Hypothesis 1 is tested via use of cross tabulations on the symbolic adoption and use adoption dependent variables. Additionally, outcomes regarding Hypothesis 3 will aid in accepting or rejecting Hypothesis 1. Using bivariate correlations and a series of multivariate regressions, Hypothesis 2 is tested to determine relationships between the independent variables and their explanatory power in regards to symbolic adoption.

For Hypothesis 3, a two-stage least squares (2SLS) approach is used to incorporate the final prediction model developed for symbolic adoption into the model for use adoption. A variable containing the predicted values of the final model for symbolic adoption is used as an independent variable in the use adoption model. The 2SLS method purges the errors associated with the measurement of use adoption from the independent variables in the model. Such errors are likely because symbolic adoption may be a prior cause to use adoption, and, in the context of the survey, respondents may react similarly to related questions attempting to differentiate between symbolic and use adoption.

The tested variables correspond to survey questions as follows. Note: the variable name is in brackets; survey questions are indicated with "Qxx;" and codes for responses are listed in parentheses. All "don't know" or "refused" responses were defined as missing values.

Symbolic adoption. [IMPORTLO] Q20: How important is it that the food you eat comes from farms and ranches in your own area rather than outside your area – is it (1) very important, (2) somewhat important, (3) not too important or (4) not at all important?

Use adoption. A new variable [BUYLOCAL] was created from two questions to incorporate the full range of responses from all primary shoppers.

> Q21: Do you ever buy food that is produced or grown locally? Respondents who answered "yes" to Q21 were asked Q22.
>
> Q22: How often do you buy locally produced or grown food - every week, once or twice a month, several times a year, or hardly ever?

BUYLOCAL is coded as (1) buys LP/G food every week, (2) buys LP/G food once or twice a month, (3) buys LP/G food several times a year, (4) buys LP/G food hardly ever and (5) does not buy LP/G food.

Gender. [GENDER] Q4: Respondent gender (coded by interviewer) – (1) male, (2) female.

Follows environmental issues. [LOCALENV] Q28: How closely do you follow environmental issues in your neighborhood and community - do you follow them (1) very closely, (2) somewhat closely, (3) not very closely or (4) not at all closely?

Concerned about food safety. [FOODSAFE] Q29: In general, how concerned are you about the safety of the food you eat - are you (1) very concerned, (2) somewhat concerned, (3) only a little concerned, or (4) not at all concerned?

Personally know a family farmer. [KNOWFARM] Q32: Are you a farmer or do you personally know a family farmer? Codes: (1) yes, I am/know a family farmer, (2) no.

Political ideology. [IDEO1] Q60: Thinking in political terms, would you say that you are (3) conservative, (2) moderate or (1) liberal?

Year of birth. [AGE_1] Q61: In what year were you born?

Level of education. [EDUC] Q62: What is the last year of schooling that you have completed? Codes: (1) 1 - 11th grade, (2) high school graduate, (3) non-college post high school, (4) some college, (5) college graduate, (6) post-graduate school.

Marital status. [MARITAL] Q63: Are you married, single, separated, divorced, or widowed? Codes: (1) married, (2) single, separated, divorced, or widowed.

Having children 18 years of age or younger. [KIDS] Q64: Do you have any children 18 years of age or younger? Codes: (1) yes, (2) no.

How often eat out or buy take-out. [SHOPFREQ] Q57: How often do you do you eat out or buy take-out food – (1) almost every night, (2) 2-3 times a week, (3) about once a week, (4) once every few weeks, or (5) almost never?

How often eat pre-prepared food for dinner. [EATOUT] Q58: How often do you eat pre-prepared food for dinner – (1) almost every night, (2) 2-3 times a week, (3) about once a week, (4) once every few weeks, or (5) almost never?

Price-consciousness. [PRICE] Q19: When you shop for day-to-day goods such as food, how important is it for you to find the lowest price possible - is it (1) very important, (2) somewhat important, (3) not very important or (4) not at all important?

Monthly household spending on groceries. [MONEYFOO] Q65: Generally how much does your household spend each month on food when you shop for groceries? Please exclude money spent eating out at restaurants. Codes: (1) under $50, (2) $51-100, (3) $101-150, (4) $151-200, (5) $201-250, (6) $251-300, (7) $300-400, (8) over $400.

Income. [INCOME] Q69: Last year, that is in 2001, what was your total family income from all sources, before taxes? Just stop me when I get to the right category. Codes: (1) Less than $10,000, (2) $10,000 to under $20,000, (3) $20,000 to under $30,000, (4) $30,000 to under $50,000, (5) $50,000 to under $75,000, (6) $75,000 to under $100,000, (7) $100,000 or more.

CHAPTER V. Results and Discussion

Hypothesis 1

A cross tabulation of the two dependent variables, symbolic adoption [IMPORTLO] and use adoption [BUYLOCAL], provides preliminary insight into a possible causal relationship. Table 4 below shows the cross tabulation on 286 primary shoppers, the listwise n after removing units with missing values.

Table 4. Cross tabulation of IMPORTLO and BUYLOCAL

	BUYLOCAL					
IMPORTLO	Buys LP/G every week	Buys LP/G once or twice per month	Buys LP/G several times per year	Buys LP/G hardly ever	Does not buy LP/G	**Totals**
Very important	17	22	14	3	9	**65**
Somewhat important	18	42	42	4	7	**113**
Not very important	8	17	37	3	12	**77**
Not at all important	2	7	10	6	6	**31**
Totals	**45**	**88**	**103**	**16**	**34**	**286**

For purposes here, symbolic adopters are those who indicate that it is very important or somewhat important that the food they eat comes from farms in their area; use adopters buy LP/G foods several times per year or more; high use adopters are those who buy LP/G foods once or twice per month or more. Symbolic adopters number 178 of 286 primary shoppers. Of this 178, 155 (87%) are use adopters and 99 (56%) are high use adopters. There are 236 use adopters, 66% of whom are symbolic adopters and 133 high use adopters, 74% of

whom are symbolic adopters. These high percentages indicate a possible causal relationship between symbolic adoption and use adoption, and the two variables are correlated ($r = 0.217$) significantly at $p=0.01$ (2-tailed).

Further evidence in support of a two-phase decision-making process is discussed in the results section of Hypothesis 3.

Hypothesis 2

A correlation matrix was developed for all the variables to identify significant bivariate relationships. These correlations are provided on the following pages in Table 5. The variables that show significant, positive correlations with symbolic adoption are, in order of greatest significance, concerned about food safety, follows environmental issues, price-consciousness, personally knows a family farmer, and age. A significant, negative relationship occurs between symbolic adoption and frequency of eating out or buying take-out food. Considering these individual relationships, it appears that sociological/civic and expediency variables may have a complementary effect on symbolic adoption.

To determine the combined effect of variables in explaining the variance in symbolic adoption, a series of multivariate regressions were performed. Variable reduction and combination was considered, and a Cronbach's alpha was calculated for each pair of variables with significant correlations. However, the relatively low results (less than 0.45) did not indicate that combinations were warranted.

Table 5. Bivariate Pearson Correlations

	IMPORTLO	BUYLOCAL	GENDER	PRICE	LOCALENV	FOODSAFE
IMPORTLO	1.000					
BUYLOCAL	0.217**	1.000				
GENDER	-0.085	0.092	1.000			
PRICE	0.153**	0.001	-0.116*	1.000		
LOCALENV	0.209	0.107	0.023	0.108	1.000	
FOODSAFE	0.247**	0.058	-0.094	0.130*	0.262**	1.000
KNOWFARM	0.131*	0.160**	0.090	-0.028	0.113*	0.059
SHOPFREQ	-0.149**	-0.054	0.119*	0.016	-0.031	-0.126*
EATOUT	-0.048	-0.026	0.101	0.024	-0.051	-0.071
IDEO1	-0.013	0.014	-0.054	-0.062	0.128*	0.030
AGE_1	0.118*	0.095	-0.122*	0.074	0.069	0.017
EDUC	0.060	-0.142*	-0.059	0.123*	-0.002	0.015
MARITAL	0.032	0.068	-0.038	0.040	0.037	0.010
KIDS	0.015	-0.022	-0.023	0.040	-0.052	0.043
MONEYFOO	-0.004	-0.022	0.037	-0.093	-0.032	-0.033
INCOME	-0.019	0.049	-0.005	0.066	0.011	-0.070

**Significant at p=0.01 level (2-tailed); * Significant at p=0.05 level (2-tailed)

Table 5. (continued)

	KNOWFARM	SHOPFREQ	EATOUT	IDEO1	AGE_1
KNOWFARM	1.000				
SHOPFREQ	-0.008	1.000			
EATOUT	-0.147**	0.310**	1.000		
IDEO1	-0.099	0.120*	0.130*	1.000	
AGE_1	0.045	-0.255**	-0.146*	-0.163**	1.000
EDUC	-0.149**	-0.076	-0.109	-0.104	0.206**
MARITAL	0.164**	0.012	-0.191**	-0.032	-0.037
KIDS	-0.024	0.088	0.017	0.076	-0.431**
MONEYFOO	-0.010	-0.177**	0.042	-0.102	0.334**
INCOME	-0.072	-0.125	-0.029	-0.034	0.066

	EDUC	MARITAL	KIDS	MONEYFOO
EDUC	1.000			
MARITAL	-0.142*	1.000		
KIDS	-0.075	0.241**	1.000	
MONEYFOO	0.110	-0.477**	-0.381**	1.000
INCOME	0.247**	-0.490**	-0.163*	0.459**

**Significant at p=0.01 level (2-tailed)
*Significant at p=0.05 level (2-tailed)

Initially, IMPORTLO was regressed on all variables, sociological/civic and expediency. Next, variables without significant partial slopes ($p>0.1$, 2-tailed) were removed from the model. However, all variables were used in these initial models to maintain a full listwise n=193.

An initial model included FOODSAFE, LOCALENV, KNOWFARM, AGE_1 and KIDS. PRICE did not illustrate significant explanatory power in the multivariate regressions. This may be a consequence of the nature of a question on price-consciousness in isolation. Predictably, most people will indicate they seek out low prices and 87% of primary shoppers in this survey responded that low prices are very to somewhat important. But, when applying the question of price-consciousness to particular items such as local foods, other values may play a more central role in symbolic adoption.

Age and having kids 18 years of age or younger are highly correlated (-0.431). Although this is expected, the behavior of these two variables when added to the model is not as intuitive. When AGE_1 or KIDS are added separately to a model using FOODSAFE, LOCALENV and KNOWFARM, neither have significant partial slopes. However, when both AGE_1 and KIDS are added, both partial slopes are significant. This indicates the interplay between the bivariate correlations, especially those between AGE_1 and the other four independent variables. An F-test indicates that this initial model significantly increments R^2 ($\alpha=0.005$) over that of a reduced model including only FOODSAFE, LOCALENV and KNOWFARM.

The initial model was then applied to a regression using only the entered variables. The listwise n increased and the resulting partial slope of KIDS lost significance, possibly because only a quarter of respondents indicated having children 18 years of age or younger.

Combinations of variables were then tested with lists of only entered variables. Two final models were developed, which both include FOODSAFE, LOCALENV and KNOWFARM, indicating the importance and power of these sociological, reflection traits. The two models differ by the addition of either AGE_1 or SHOPFREQ (frequency of eating out or buying take-out foods). Tables 6 and 7 present the analysis of each model for comparison. Both regressions use an equivalent listwise n=295 by including all five independent variables.

Table 6. Regression analysis of symbolic adoption: Final Model #1

Dependent Variable = IMPORTLO

Independent Variables	B	Std. Error	Beta	T	Sig. t
FOODSAFE	0.212	0.062	0.199	3.439	0.001
LOCALENV	0.155	0.067	0.133	2.309	0.022
KNOWFARM	0.222	0.111	0.111	1.995	0.047
SHOPFREQ	-0.121	0.049	-0.138	-2.480	0.014

Sig. t = 2p

Constant: 1.648

R^2: 0.118

F-value: 9.660

Significance of F: 0.000

Table 7. Regression analysis of symbolic adoption: Final Model #2

Dependent Variable = IMPORTLO

Independent Variables	B	Std. Error	Beta	T	Sig. t
FOODSAFE	0.234	0.061	0.219	3.806	0.000
LOCALENV	0.149	0.068	0.127	2.194	0.029
KNOWFARM	0.215	0.112	0.107	1.925	0.055
AGE_1	0.0055	0.003	0.107	1.918	0.056

Sig. t = 2p

Constant: -9.440

R^2: 0.110

F-value: 8.974

Significance of F: 0.000

Both models support Hypothesis 2, in general, that sociological/civic variables are more important to symbolic adoption than expediency variables. However, the relatively low R^2 values indicate that much of the variance in symbolic adoption remains unexplained by these measures. The significance of the partial slope of SHOPFREQ suggests that measures of convenience and time constraints need to be explored further. Perhaps if these issues are more fully assessed, more of the variance in symbolic adoption may be explained.

Examining frequencies relating eating out to symbolic adoption bolsters this suggestion. When the population of all primary shoppers is partitioned by frequency of eating out, 63% eat out or buy take-out about one time per week or more, and 37% eat out once every few weeks or less. For those indicating symbolic adoption, 59% eat out or buy take-out about one time per week or more, and the remaining respondents eat out once every few weeks or less. Although this shows a slight decrease in eating out for symbolic adopters, time constraints

may influence the majority to eat out often. Also, in comparing those eating out infrequently (once every few weeks or less) to those respondents who eat out more often, of all primary shoppers, both groups indicate comparable levels of awareness or concern regarding environmental issues and food safety.

This implies, again, that a complementary effect of sociological/civic variables and expediency variables may be at play in symbolic adoption. An alternate explanation is that rather than responding purely to a question about attitude, people may anticipate factors inhibiting behavioral follow-through and respond with those factors in mind.

One may question why eating out often significantly affects symbolic adoption but the frequency of eating pre-prepared food for dinner does not. This is especially curious when considering that primary shoppers indicated fairly comparable frequencies for both activities, as listed below.

How often do you do you eat out or buy take-out food -- almost every night, 2-3 times a week, about once a week, once every few weeks, or almost never?

	%
Almost every night	4
2-3 times a week	26
About once a week	32
Once every few weeks	26
Almost never	12

How often do you eat pre-prepared food for dinner -- almost every night, 2-3 times a week, about once a week, once every few weeks, or almost never?

	%
Almost every night	7
2-3 times a week	25
About once a week	22
Once every few weeks	21
Almost never	25

A possible reason for the difference in impact may be that those who eat out or buy take-out are being completely diverted from purchasing and preparing LP/G foods for those meals, whereas pre-prepared food items may only be one part of a meal, which could be supplemented (or not) with LP/G foods.

Model #1 has slightly higher explanatory power than Model #2 when comparing variance explained ($R^2 = 0.118 > R^2 = 0.110$) and the F-values ($9.660 > 8.974$). Also, although the partial slopes for FOODSAFE, LOCALENV and KNOWFARM do not differ substantially between the two models, the partial slope for SHOPFREQ is more significant that than of AGE_1. AGE_1 and SHOPFREQ are significantly correlated ($r = -0.255$), but Model #1 illustrates that sociological values and time constraints influence symbolic adoption beyond a possible prior cause effect of age.

To conclude, in the context of these survey data for Black Hawk County, Iowa, Hypothesis 2 is supported. The relationships between symbolic adoption and each of the civic factors (concern about food safety, follows local environmental issues and personally knows a family farmer) are in the directions hypothesized. Age and frequency of eating out were more influential than anticipated; but, gender, marital status and having children 18 years or younger were less influential.

Hypothesis 3

A two-stage least squares approach was used to build a model explaining use adoption [BUYLOCAL] of LP/G foods in Black Hawk County. A regression was run using the final Model #1 for symbolic adoption and the resulting unstandardized predicted values of symbolic adoption were saved into the variable, P_IMPLO.

Interaction variables were computed between P_IMPLO and each expediency variable (SHOPFREQ, EATOUT, PRICE, MONEYFOO, INCOME) in the form of:

[P_IMPLO – Mean(P_IMPLO)] * [(INCOME – Mean(INCOME)].

Pairs of regressions were run for all expediency variables: (1) P_IMPLO and the expediency variable and (2) P_IMPLO, the expediency variable and the interaction variable. This was done to determine significant effects of the interaction variable and to supply the second regression with the appropriate partial slopes for P_IMPLO and the expediency variable from the first regression. A listwise n=196 was used for all initial regressions by including BUYLOCAL, P_IMPLO and all expediency variables.

The partial slope for P_IMPLO was found to be significant in all regressions, and in a bivariate regression with BUYLOCAL, P_IMPLO is significant at p=0.010 (2-tailed). This provides further evidence that decision-making is a two-stage process.

The interaction regressions revealed significant interactions between P_IMPLO and PRICE (variable name: IPIMPPRI) and P_IMPLO and INCOME (variable name: IPIMPINC). When these were run using a higher, common listwise n=205, partial slopes were significant at p=0.052 (2-tailed) for IPIMPPRI and p=0.029 (2-tailed) for IPIMPINC. Tables 8 and 9 present the analyses of the interaction regression models. The constant and partial slopes of P_IMPLO and the expediency variable from the regression using only these independent variables are substituted into the analysis of the regression including the interaction variable. A new variance for each partial slope was calculated using the equation:

$$[\sigma_b^2 * (\text{Mean Square Error}_{complete} / \text{Mean Square Error}_{reduced})],$$

where *complete* refers to the full model including the interaction variable, *reduced* refers to the model without the interaction variable and b is the partial slope from the reduced model.

Table 8. Regression analysis of use adoption on PRICE interaction

Dependent Variable = BUYLOCAL

Independent Variables	B	Std. Error	t	Sig. t
P_IMPLO	0.537	0.259	2.073	0.038
PRICE	-0.113	0.116	-0.974	0.330
IPIMPPRI	0.342	0.174	1.958	0.052

Sig. t = 2p

Constant: 1.649

R^2: 0.041

F-value: 2.899

Significance of F: 0.036

Table 9. Regression analysis of use adoption on INCOME interaction

Dependent Variable = BUYLOCAL

Independent Variables	B	Std. Error	t	Sig. t
P_IMPLO	0.510	0.258	1.977	0.048
INCOME	0.034	0.056	0.604	0.546
IPIMPINC	-0.117	0.053	-2.204	0.029

Sig. t = 2p

Constant: 1.396

R^2: 0.043

F-value: 3.046

Significance of F: 0.030

To aid in interpreting the interaction variables, plots were constructed using the regression results to illustrate the effects of PRICE and INCOME on predicted purchasing behavior of LP/G foods (use adoption) for symbolic and non-symbolic adopters. Symbolic adopters in the model are defined as those with predicted values of P_IMPLO less than or equal to 2.5. The remaining, with P_IMPLO values greater than 2.5, are non-symbolic adopters. Again, the scale for IMPORTLO, symbolic adoption, is (1) very important, (2) somewhat important, (3) not too important or (4) not at all important that food comes from farms and ranches in the respondent's area. Figures 2 through 5 below illustrate the findings.

The behavior of symbolic adopters with a decrease in price-consciousness, as indicated in Figure 2, is as hypothesized and is expected if one believes that LP/G foods are relatively high priced. As importance of low prices decreases, symbolic adopters purchase LP/G foods more often. According to Figure 3, non-symbolic adopters tend to purchase LP/G foods less often with a decrease in price-consciousness. A possible explanation for this seemingly confounding behavior is that non-symbolic adopters may expect LP/G foods to be worth less and less expensive than food available through more conventional channels. The type of grocery outlet may also be a factor. Roadside stands or farmers' markets may have less expensive food than conventional groceries and may be where non-symbolic adopters purchase LP/G foods. Whereas, natural food stores or conventional groceries may add price premiums to LP/G foods and may be where symbolic adopters are more likely to purchase.

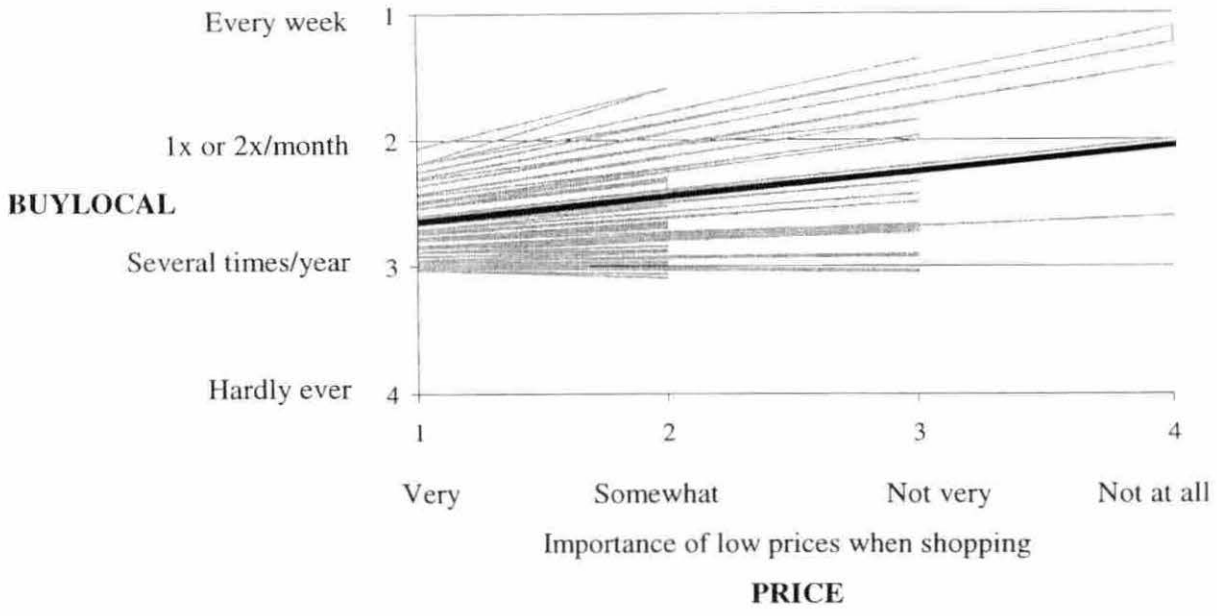

Figure 2. Predicted values of BUYLOCAL (y) for symbolic adopters with change in PRICE-consciousness (x)

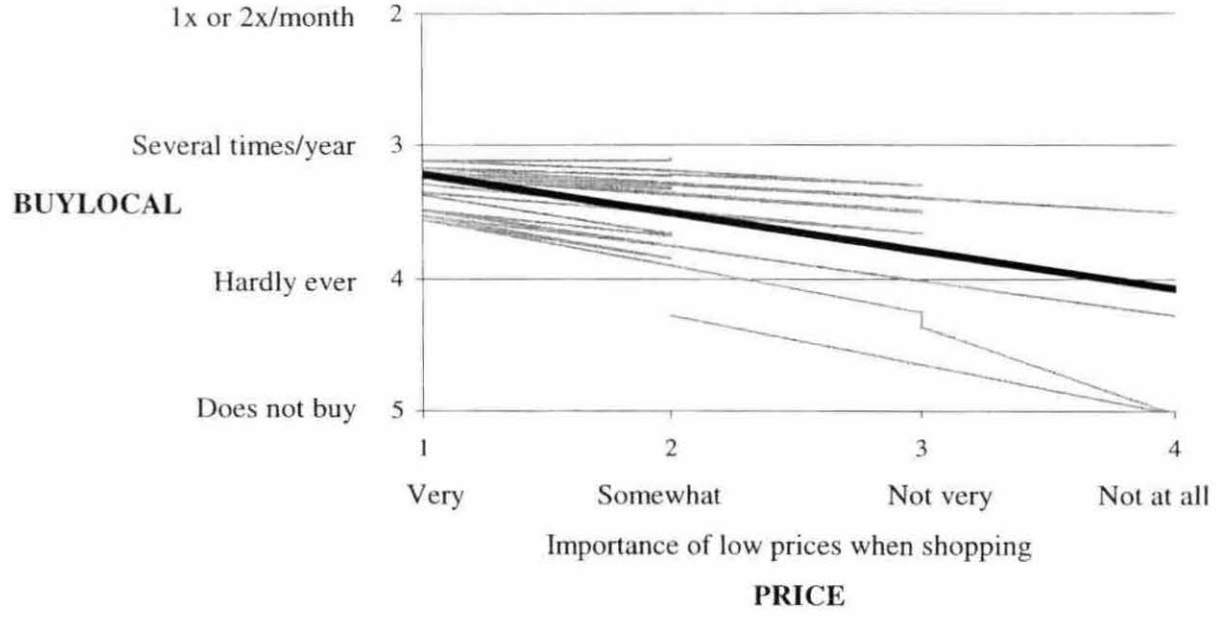

Figure 3. Predicted values of BUYLOCAL (y) for non-symbolic adopters with change in PRICE-consciousness (x)

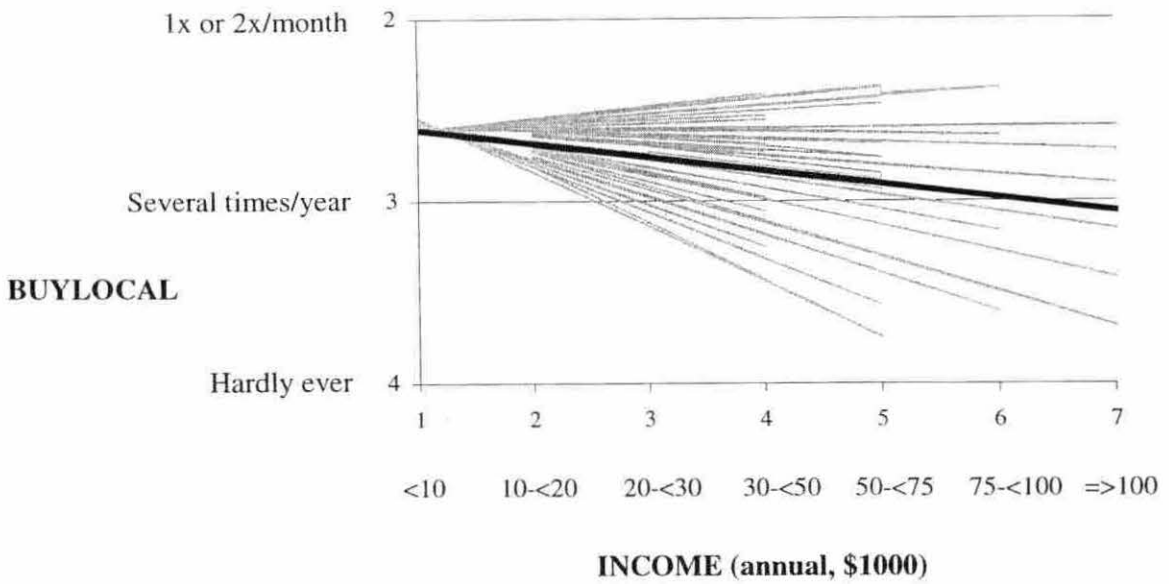

Figure 4. Predicted values of BUYLOCAL (y) for symbolic adopters with change in INCOME (x)

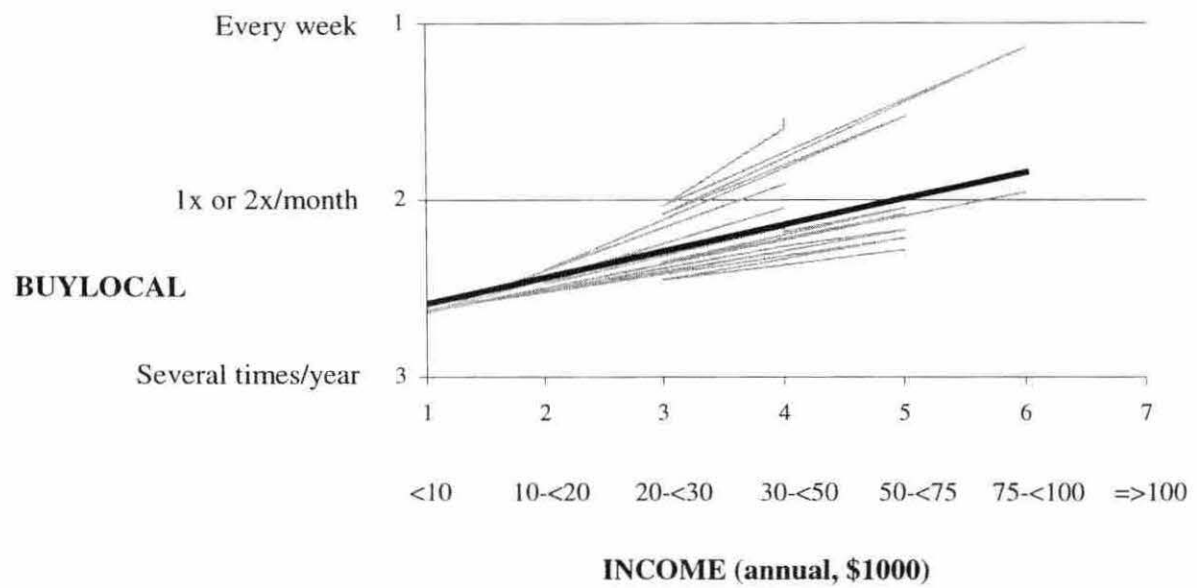

Figure 5. Predicted values of BUYLOCAL (y) for non-symbolic adopters with change in INCOME (x)

Figure 4 illustrates an overall trend that symbolic adopters purchase LP/G foods slightly less often as income increases. Symbolic adopters are predisposed to purchasing LP/G foods, but as income increases, job demands may create time constraints that hinder purchase and preparation. This effect may occur subsequent to a period of increased purchases with decreased price-consciousness. Another explanation may be that as income increases symbolic adopters move beyond LP/G foods, purchasing more gourmet or imported food items. Symbolic adopters as predicted by the models have a higher range of income than non-symbolic adopters and may be more desirous of and able to purchase specialty foods.

As with price-consciousness, a reverse effect on the behavior of non-symbolic adopters to a change in income is observed in Figure 5. As income increases, non-symbolic adopters purchase LP/G foods more frequently. This may indicate a "lag" in adoption for those not predisposed to supporting LP/G foods. With an increase in income, non-symbolic adopters may become drawn to LP/G foods, possibly by social pressures and reasons related to conspicuous consumption.

To develop a final predictive model, BUYLOCAL was also regressed on both significant interaction variables and their associated individual variables. In this case, both interaction variables maintain significance and R^2 increases significantly as compared to either model using IPIMPPRI or IPIMPINC. However, P_IMPLO, the predicted value of symbolic adoption, loses its influence. A series of regressions were also run using all sociological/civic and expediency independent variables, similar to the procedure described for building the final symbolic adoption model. Influential variables were then added in stepwise fashion to

the interaction model. A final model was generated which includes level of education [EDUC] and knowing a farmer [KNOWFARM]. The regression analysis of this model is presented in Table 10. Again, partial slopes were substituted from the regression run without interaction variables and new variance and t values were calculated.

Table 10. Regression analysis of final model for use adoption

Dependent Variable = BUYLOCAL

Independent Variables	B	Std. Error	T	Sig. t
P_IMPLO	0.314	0.279	1.125	0.261
PRICE	-0.058	0.115	-0.507	0.612
INCOME	0.079	0.057	1.386	0.177
EDUCATION	-0.124	0.056	-2.239	0.026
KNOWFARM	0.380	0.191	1.990	0.048
IPIMPINC	-0.129	0.052	-2.463	0.015
IPIMPPRI	0.333	0.172	1.934	0.055

Sig. t = 2p

Constant: 1.781

R^2: 0.114

F-value: 3.601

Significance of F: 0.001

This final model illustrates that in order for symbolic adoption to translate into use adoption appropriate interactions must take place with the expediency variables of price-consciousness and income. Thus, Hypothesis 1 gains more support. Additionally, use adoption is more likely if one is more highly educated and personally knows a farmer. Hence, although it appears that symbolic adoption is influenced more by sociological and

civic factors than by expediency factors, use adoption is influenced by a complementary effect of both types.

In terms of hypothesized effects of interactions with expediency variables, interactions with price-consciousness (+) for symbolic adopters and monthly household grocery expenditures (no effect) are as expected. Measures of frequency of eating out or eating pre-prepared foods do not appear to be consequential, whereas, of course, income is important.

Similar to the final model for symbolic adoption, this model for use adoption does not explain a great amount of variance ($R^2 = 0.114$). Again, this may be accounted for by enhanced measures of time constraints and, especially in regards to use adoption, measures of availability and awareness of grocery outlets carrying LP/G foods.

The influence of educational level on use adoption is curious, considering it did not play a significant role in explaining symbolic adoption. One reason may be that educational level is significantly ($p=0.01$) correlated with income ($r = 0.247$) and issues of status and conspicuous consumption come into play, as proposed above to explain why non-symbolic adopters are likely to purchase LP/G foods more frequently with an increase in income.

Finally, the predictive power of knowing a farmer on both symbolic and use adoption is informative and supports consumer theories that relational aspects of a product carry weight during decision-making, possibly by more deeply engaging the consumer in the local food system.

CHAPTER VI. Conclusions and Implications

Summary

This research provides insights into the decision-making process of consumers in Black Hawk County, Iowa, in regards to locally produced and grown foods. The results suggest that decision-making is a two-stage process with differing sets of factors affecting each stage. The two stages are symbolic adoption, which is the acceptance of an idea, and use adoption, the behavioral practice of the idea.

Of the variables tested, sociological or civic factors are more important to symbolic adoption than expediency factors. Symbolic adoption is determined, in part, by the sociological or civic factors of having concerns about food safety, following community environmental issues and knowing a farmer and the expediency factor of eating out infrequently.

It is more likely for symbolic adoption to translate into use adoption for these consumers if appropriate interactions with the expediency variables of price-consciousness and income take place. The results that price-consciousness and income have opposing effects on use adoption are quite intriguing. Further, the direction of these effects flip for symbolic adopters in contrast to non-symbolic adopters.

For symbolic adopters, lower price-consciousness and lower incomes lead to an increased tendency to buy local foods. For non-symbolic adopters, opposite effects take

place: increased price-consciousness and higher incomes lead to an increased tendency to buy local. For both groups, a complementary interplay with sociological factors also occurs affecting use adoption. Having attained a higher educational level and knowing a farmer are significant to the expectation of someone purchasing local foods.

Suggestions for future research

The causes of human behavior are complex and difficult to measure. Not only is research design problematic, but also it is dependent on respondents' ability to identify their own behavior, as well as possible explanatory influences. A complementary research effort would be valuable. Such an undertaking might use multiple methodologies, both quantitative and qualitative, to analyze related data. For example, focus groups or interviews may further qualify the differences between symbolic and non-symbolic adopters. Identifying motivations of these groups may aid in designing quantitative tools aimed at broader populations.

Additional studies similar to this thesis, but purposefully designed, would qualify the findings. Research in other locales would allow more generalization. A larger, more diverse sample could explore ethnic, race and class differences.

Further insight into symbolic adoption is needed. Possible questions to pursue include: Are there common formative events leading to significant civic factors? What factors lead people to link local foods with other civic or personal concerns? Additionally, research regarding particular causative factors would be instructive: What triggers concerns about

food safety or the environment? How do people get to know local farmers? Are there differences, in regards to local foods, between knowing a farmer and being a farmer?

As mentioned previously, in regards to time constraints, further definition and quantification of barriers to purchasing local foods are needed, especially those inhibiting symbolic adopters. Better understanding of the interactions between symbolic adoption and convenience, availability and awareness of availability may facilitate efforts to increase the percentage of symbolic adopters who follow through on their support with purchases.

Research on present efforts to overcome barriers could document successes and failures. How are barriers best overcome? For instance, considering local foods in restaurants, studies on consumers' reactions may reveal if symbolic adopters recognize the opportunity or if local foods in restaurants inspire consumers to seek out local foods for home use as well.

Use adoption and point of purchase behavior may be better understood through research on use adoption without indications of symbolic adoption. What factors may make locally produced food attractive to those who are not invested in civic concerns about food production?

Finally, additional insight into perceptions of food may help to describe divergent attitudes and behavior of symbolic and non-symbolic adopters. How does each group identify with food? How is quality defined? How does food relate to culture and lifestyle?

Policy implications

Consumer participation, of course, is vital to the health of local food systems. The results of this study point to certain policy initiatives, which may increase support – attitudinal and behavioral - for a local food system in Black Hawk County.

Given that knowing a farmer plays a role in both symbolic and use adoption, efforts to boost the relational aspects of food products are warranted. Labeling and store displays can provide consumers with information about where a product was produced and by whom. These introductions may initiate more involved relationships between farmers and consumers. Increasing the awareness of area farmers can be also achieved via informational directories of farmers and their products and promoting opportunities for face-to-face contact, such as farmers' markets, local events and farm tours. Agritourism may especially provide influential on-farm experiences.

The use of local foods in restaurants may also increase the visibility of farmer-suppliers and address the negative effect of frequently eating out. Local foods in low to medium priced, "faster" type establishments may be especially constructive in regards to time constraints. For example, Rudy's Tacos in Waterloo, Iowa, has been buying local supplies for over five years. In 2002, purchases from local producers accounted for 65 percent ($120,535) of the restaurant's total food expenditures (Enshayan, 2003). All of the beef, pork, chicken, cheese, tomatoes and black beans for Rudy's are locally sourced, as well as half of its garlic, sour cream and ice cream. Rudy's advertises its use of local products with table tents that tell patrons about the farmers' businesses, families and farmsteads.

Governmental entities could promote similar involvement by restaurateurs through business and tax incentives.

To facilitate the process of linking local farmers and institutions, additional assistance may be needed. Often at issue for food service establishments is the complexity that comes with using raw products directly from local farmers because quality, quantity, item size and availability often vary. With large food distributors, such issues are addressed by pre-processing. These vendors also have supply advantages that allow them to deliver on demand. Although restaurants may need to make concessions in order to use some local products, policy and funding support for creating regional processing and distribution networks would be valuable. Finally, open communication between producers and users is critical to building these relationships, and initiatives would need to actively involve input from all parties.

Food safety and environmental concerns are positively related to an interest in local foods. Promoting the benefits of local food systems may strengthen these connections. Policy makers might also support additional research to quantify differences in this regard between local activities and conventional channels in particular regions.

This research illustrates opposing effects of price-consciousness on buying local. Certainly, a locally produced food item should carry a price that indicates its worth and provides the farmer with adequate return. However, funding or programs to lessen price differentials initially may increase purchases, especially for symbolic adopters. Promoting

quality aspects of local foods (freshness, taste, nutrition) may attract more consumers who do not symbolically adopt local foods on civic grounds. These non-symbolic adopters may, with an increased sense of the quality of local foods, purchase more often and continue to purchase regardless of price-consciousness.

Local food systems continue to grow in many regions of the country indicating that some consumers are responding positively and supporting these efforts. This trend will provide further opportunities to analyze the role of consumers in building healthy, stable food systems.

APPENDIX A. Survey Instrument

Version: 03/14/2002 at 18:42

Q.1 Interviewer initials Hello, my name is (caller name). I'm calling for National Opinion Surveys. I would like to ask you a few questions concerning food. I am NOT selling anything, and I will NOT ask you for a donation. Since this is a scientific survey, we need a balance of men and women. May I speak to the youngest man, 18 years or older, who is at home right now?
(IF RESPONDENT, CONTINUE) (IF YES, REPEAT INTRODUCTION FOR NEW RESPONDENT AND CONTINUE) (IF NO MALE) Okay, may I speak to the youngest woman, 18 years or older, who is at home right now? (REPEAT INTRODUCTION OR CONTINUE WITH INTERVIEW)

❑ 8 Logoff

(ref:0)

Q.2 What county do you reside in?

❑ 1 Black Hawk (SKIP CITY)
❑ 2 Other

(ref:COUNTY)

Q.3 (ONLY ASK IF COUNTY IS NOT BLACK HAWK) What town do you live in?

❑ 1 Grundy Center
❑ 2 Independence
❑ 3 Waverly/Bremer
❑ 4 (Other) (TERMINATE)

(ref:CITY)

Q.4 Sex of respondent (INTERVIEWER CODE--DO NOT ASK RESPONDENT)

❑ 1 Male
❑ 2 Female

(ref:GENDER)

Q.5 Now, I am going to read you a list of places people shop for food and I want you to tell me how often you shop at each one -- more than once a week, once a week, once or twice a month, a few times a year, or never. (ROTATE)

1 = More than once a week
2 = Once a week
3 = Once or twice a month
4 = A few times a year
5 = Never
6 = (Don't know/refused)

____ 5 Large grocery stores/supermarkets

____ 6 Small independent grocery stores

____ 7 Farmers' markets

____ 8 Road side stands

____ 9 Community supported agricultural farms

____ 10 Warehouse stores such as Sam's Club

____ 11 Convenience stores

(ref:FRELOC)

Q.12 I am going to list different factors which you may use when deciding to purchase food, including fruits, vegetables, dairy products, meat, eggs and poultry. For each one, please tell me whether it is a very important, a somewhat important, a not very important, or a not at all important factor.
(FOLLOWUP: Is that a very important, a somewhat important, a not very important, or a not at all important factor).

1 = Very important
2 = Somewhat important
3 = Not very important
4 = Not at all important
5 = (Don't know/refused)
(RANDOMIZE)

____ 12 Cost

____ 13 Freshness

____ 14 Locally produced or grown

____ 15 Nutritious or healthy

____ 16 Free of chemicals and pesticides

____ 17 Organic

____ 18 Convenience

(ref:SHOPBATT)

Q.19 When you shop for day to day goods such as food, how important is it for you to find the lowest price possible - is it very important, somewhat important, not too important or not at all important?

❑ 1 Very important
❑ 2 Somewhat important
❑ 3 Not very important
❑ 4 Not at all important
❑ 5 (Don't know/refused)

(ref:PRICE)

Q.20 How important is it that the food you eat comes from farms and ranches in your own area rather than outside your area - is it very important, somewhat important, not too important or not at all important?

- ❑ 1 Very important
- ❑ 2 Somewhat important
- ❑ 3 Not very important
- ❑ 4 Not at all important
- ❑ 5 (Don't know/refused)

(ref:IMPORTLO)

Q.21 Do you ever buy food that is produced or grown locally?

- ❑ 1 Yes
- ❑ 2 No
- ❑ 3 (Don't know/refused)

(ref:BUYLO_1)

Q.22 (IF YES IN BUYLOCAL; IF NO, SKIP TO BUYLOC3) How often do you buy locally produced or grown food - every week, once or twice a month, several times a year, or hardly ever?

- ❑ 1 Every week
- ❑ 2 Once or twice a month
- ❑ 3 Several times a year
- ❑ 4 Hardly ever
- ❑ 5 (Don't know/refused)

(ref:BUYLO_1B)

Q.23 (IF YES IN BUYLOCAL) Please tell me the most important reason you buy locally produced or grown food. (ACCEPT MULTIPLE RESPONSES)

(ref:WHYBUY)

Q.24 (IF NO or DON'T KNOW in BUY LOCAL) I am going to read you a list of reasons people give for not buying locally grown food. Could you please tell me what are the TWO most important reasons you may not buy locally produced food. (READ LIST, ENCOURAGE TWO RESPONSES) (RANDOMIZE)

- ❑ 1 Inconvenient location
- ❑ 2 Lack of selection
- ❑ 3 Prices are too high
- ❑ 4 Lack of information about where to buy it
- ❑ 5 No labeling on food indicating it's grown locally
- ❑ 6 Can't use coupons
- ❑ 7 Don't think it's important
- ❑ 8 (Don't know/refused)

(ref:BUYLOC3)

Q.25 How do you identify food that is produced or grown locally? (DON'T READ LIST)

- ❑ 1 Where I buy it (e.g., farmers market, outdoor market)
- ❑ 2 Sign that states it is locally grown
- ❑ 3 Label on product
- ❑ 4 In-Store promotion
- ❑ 5 Personal knowledge of product or producer
- ❑ 6 Other (RECORD RESPONSES)
- ❑ 7 (Don't know/refused)

(ref:IDENTIFY)

Q.26 When you purchase food, how often do you look at the labels to see where the food was produced - frequently, sometimes, rarely or never?

- ❑ 1 Frequently
- ❑ 2 Sometimes
- ❑ 3 Rarely
- ❑ 4 Never
- ❑ 5 (Don't know/refused)

(ref:LOCALPROD)

Q.27 Some people prefer to buy certain kinds of food from local producers. Regardless of whether you buy locally produced or grown food, do you think it is important to buy certain kinds of food from local producers? (IF YES) Which types of food? (ACCEPT MULTIPLE RESPONSES)

- ❑ 1 Fruit
- ❑ 2 Vegetables
- ❑ 3 Meat
- ❑ 4 Poultry
- ❑ 5 Dairy
- ❑ 6 Other (RECORD RESPONSES)
- ❑ 7 Not important to buy locally produced or grown food
- ❑ 8 (Don't know/Refused)

(ref:KINDLOCFOOD)

Q.28 How closely do you follow environmental issues in your neighborhood and community --do you follow them very closely, somewhat closely, not very closely or not at all closely?

- ❑ 1 Very closely
- ❑ 2 Somewhat closely
- ❑ 3 Not very closely
- ❑ 4 Not at all closely
- ❑ 5 (Don't know/refused)

(ref:LOCALENV)

Q.29 In general, how concerned are you about the safety of the food you eat - are you very concerned, somewhat concerned, only a little concerned, or not at all concerned?

- ❑ 1 Very concerned
- ❑ 2 Somewhat concerned
- ❑ 3 Only a little concerned
- ❑ 4 Not at all concerned
- ❑ 5 (Don't know/refused)

(ref:FOODSAFE)

Q.30 What specific concerns do you have about the safety of the food you eat?
(FOLLOW UP - ACCEPT MULTIPLE RESPONSES.)

_____

_____

_____

_____

_____

(ref:SAFEOPEN)

Q.31 Do you know where to find the local meatlockers, the facilities that store meat and poultry, in your community? (Practical Farmers)

- ❑ 1 Yes
- ❑ 2 No
- ❑ 3 (Don't know/refused)

(ref:MEATLOCKER)

Q.32 Are you a farmer or do you personally know a family farmer? (Pratical Farmers)

- ❑ 1 Yes - I am a farmer
- ❑ 2 Yes - I know a family farmer
- ❑ 3 Both
- ❑ 4 No
- ❑ 5 (Don't know/refused)

(ref:KNOWFARM)

Q.33 Do you favor city and county governments using taxpayer money to promote buying locally produced and grown food or do you think taxpayer money shouldn't be used for this? (Practical Farmers)
(FOLLOW UP): Do you favor/oppose that strongly or somewhat?

- ❑ 1 Strongly favor
- ❑ 2 Somewhat favor
- ❑ 3 Somewhat oppose
- ❑ 4 Strongly oppose
- ❑ 5 (Don't know/refused)

(ref:GOVTLOCAL)

Q.34 Do you favor or oppose local hospitals such as Allen Hospital, local restaurants such as Rudy's Tacos or local institutions such as Covenant Medical Center purchasing locally produced and grown food for their meal services or doesn't it make a difference to you?
(FOLLOW UP): Do you favor/oppose that strongly or somewhat?

- ❑ 1 Strongly favor
- ❑ 2 Somewhat favor
- ❑ 3 Somewhat oppose
- ❑ 4 Strongly oppose
- ❑ 5 (Don't know/refused)

(ref:ORGSLOCAL)

Q.35 How important is it that the food you eat comes from farms and ranches in the United States rather than from foreign countries -- is it very important, somewhat important, not too important or not at all important?

- ❑ 1 Very important
- ❑ 2 Somewhat important
- ❑ 3 Not too important
- ❑ 4 Not at all important
- ❑ 5 (Don't know/refused)

(ref:GLOBALIZATION)

Q.36 Now I am going to read you a series of statements about food that is produced in your local communities. I would like you tell me if it makes you much more likely, somewhat more likely, a little more likely, or less likely to purchase locally produced and grown food, or does it make no difference?
(PROMPT AFTER READING STATEMENT BELOW: Does that make you much more likely, somewhat more likely, a little more likely, or less likely to purchase locally produced and grown food, or does it make no difference?)

1 = Much more likely
2 = Somewhat more likely
3 = A little more likely
4 = Less likely
5 = No difference
6 = (Don't know/refused)
(RANDOMIZE)

____ 36 Buying food that is produced or grown locally supports the local economy by keeping farms in the community, providing revenue to other local businesses, and reducing our need to import food from other states or countries.

____ 37 (SPLIT A) Buying food that is produced or grown locally supports endangered family farms, which are an important part of the American tradition of self-sufficiency and the foundation of local communities.

____ 38 (SPLIT B) Buying food that is produced or grown locally supports family farmers as opposed to large, corporate-owned farms that don't create good local jobs or support the local economy.

____ 39 Buying food that is produced or grown locally helps protect the environment because local farmers use fewer of the pesticides and chemicals that pollute our drinking water, rivers, and streams.

____ 40 Buying food that is produced or grown locally is fresher and better quality than food imported from other states or countries.

____ 41 Locally produced or grown food is safer and healthier because small, local farmers use fewer chemicals to produce food since the food is fresh off the farm.

____ 42 Locally grown food is safer because local family farms are less of a target for chemical attacks by terrorists than large consolidated farms.

(ref:MESSAGE2)

Q.43 Which statement I just read stood out for you as the best reason for buying locally produced or grown food? (RANDOMIZE)

- ❑ 1 Supports local economy
- ❑ 2 Supports family farmers
- ❑ 3 Protects the environment
- ❑ 4 Fresher and better quality food
- ❑ 5 Healthier
- ❑ 6 Safer from terrorists
- ❑ 7 (Don't know/refused)

(ref:RANKMESS)

Q.44 Now that you have heard more about locally produced and grown food, how important is it that the food you eat comes from farms and ranches in your own area rather than outside your area - is it very important, somewhat important, not too important, not important at all?

- ❑ 1 Very important
- ❑ 2 Somewhat important
- ❑ 3 Not too important
- ❑ 4 Not important at all
- ❑ 5 (Don't know/refused)

(ref:IMPORTLOCAL2)

Q.45 I am going to read you a statement about how the production and storage of meat. I would like you tell me if it makes you much more likely, somewhat more likely, a little more likely, or less likely to purchase meat raised and processed locally or does it make no difference? (Practical Farmers) (PROMPT: Does that make you much more likely, somewhat more likely, a little more likely, no more likely or less likely to purchase locally to meat raised and processed locally or does it make no difference?)

1 = Much more likely
2 = Somewhat more likely
3 = A little more likely
4 = Less likely
5 = No difference
6 = (Don't know/refused)
(RANDOMIZE)

____ 46 Locally raised meat that is processed in nearby meat lockers is safer because they have higher safety standards than large packing plants.

(ref:MEATMESSAGE)

Q.47 Now, I am going to read you a list of names and I want you to tell me how much you would trust what they had to say about buying local food. Please tell me if you would trust what they had to say very much, some, not very much, or not at all.
1 = Very much
2 = Some
3 = Not very much
4 = Not at all
5 = (Don't know/refused)
(FOLLOW UP Would you trust what (READ BELOW) had to say about local food very much, some, not very much, or not at all).

____ 47 Local farmers

____ 48 Public health officials

____ 49 Doctors

____ 50 Chefs or other Food Professionals

____ 51 Non profit organizations

____ 52 News anchors or other journalists

(ref:MESSGR)

Q.53 What newspaper do you read most frequently? (RANDOMIZE)
(FOLLOW-UP: Which other newspapers do you read regularly?) (ACCEPT MULTIPLE RESPONSES)

❑ 1 The Courier
❑ 2 The Des Moines Register
❑ 3 The Cedar Rapid Gazette
❑ 4 (Other - INTERVIEWER RECORD VERBATIM)
❑ 5 (None/Don't know/refused)

(ref:MEDIAUSE)

Q.54 What type of radio stations do you typically listen to? (ACCEPT MULTIPLE RESPONSES) (RANDOMIZE)

❑ 1 All talk
❑ 2 All news
❑ 3 Country
❑ 4 NRP or National Public Radio
❑ 5 Easy Listening
❑ 6 Hard Rock
❑ 7 Soft Rock
❑ 8 Don't listen to radio (DON'T READ)
❑ 9 Don't know

(ref:RADIO)

Q.55 In general, which one of the following kinds of advertising has the most influence on your decision to buy particular food items -- advertisements on television, advertisements on radio, advertisements in magazines, advertisements in newspapers, or signs or displays inside your grocery store? (RANDOMIZE)

- ❑ 1 Advertisements on television
- ❑ 2 Advertisements on radio
- ❑ 3 Advertisements in magazines
- ❑ 4 Advertisements in newspapers
- ❑ 5 Signs or displays inside store
- ❑ 6 Billboards
- ❑ 7 None
- ❑ 8 Other
- ❑ 9 (Don't know/refused)

(ref:ADVERTISE)

Q.56 Are you the primary food shopper in your household?

(IF NO) Would you say you do some of the food shopping for your household or almost none of the food shopping?

- ❑ 1 Yes, primary shopper
- ❑ 2 No, not primary shopper, but do some of the shopping
- ❑ 3 No, almost none of the shopping
- ❑ 4 (Split food shopping with another household member)
- ❑ 5 (Don't know/refused)

(ref:PRIMSHOP)

Q.57 How often do you eat out or buy take-out food -- almost every night, 2-3 times a week, about once a week, once every few weeks, or almost never?

- ❑ 1 Almost every night
- ❑ 2 2-3 times a week
- ❑ 3 About once a week
- ❑ 4 Once every few weeks
- ❑ 5 Almost never
- ❑ 6 (Don't know/refused)

(ref:SHOPFREQ)

Q.58 How often do you do you eat pre-prepared food for dinner -- almost every night, 2-3 times a week, about once a week, once every few weeks, or almost never?

❑ 1 Almost every night
❑ 2 2-3 times a week
❑ 3 About once a week
❑ 4 Once every few weeks
❑ 5 Almost never
❑ 6 (Don't know/refused)

(ref:EATOUT)

Q.59 Do you use coupons when you buy groceries?

❑ 1 Yes
❑ 2 No
❑ 3 (Don't know/refused)

(ref:COUPONS)

Q.60 Thinking in political terms, would you say that you are (ROTATE, KEEPING MODERATE IN THE MIDDLE)
Conservative, Moderate, or Liberal?

❑ 1 Liberal
❑ 2 Moderate
❑ 3 Conservative
❑ 4 (Don't know/refused)

(ref:IDEO1)

Q.61 In what year were you born? (DON'T KNOW = 0000)

____ Year

(ref:AGE)

Q.62 What is the last year of schooling that you have completed?

❑ 1 1 - 11th grade
❑ 2 High school graduate
❑ 3 Non-college post H.S.
❑ 4 Some college
❑ 5 College graduate
❑ 6 Post-graduate school
❑ 7 (Don't know/refused)

(ref:EDUC)

Q.63 Are you married, single, separated, divorced, or widowed?

- ❑ 1 Married
- ❑ 2 Single
- ❑ 3 Separated/divorced
- ❑ 4 Widowed
- ❑ 5 (Don't know/refused)

(ref:MARITAL)

Q.64 Do you have any children 18 years of age or younger?

- ❑ 1 Yes
- ❑ 2 No
- ❑ 3 (Don't know/refused)

(ref:KIDS)

Q.65 Generally how much does your household spend each month on food when you shop for groceries? Please exclude money spent eating out at restaurants.

- ❑ 1 Under $50
- ❑ 2 $51-100
- ❑ 3 $101-150
- ❑ 4 $151-200
- ❑ 5 $201-250
- ❑ 6 $251-300
- ❑ 7 $300-400
- ❑ 8 Over $400
- ❑ 9 Don't know

(ref:MONEYFOO)

Q.66 What is your race?

- ❑ 1 White
- ❑ 2 Black
- ❑ 3 Hispanic
- ❑ 4 (Other)
- ❑ 5 (Don't know/refused)

(ref:RACE)

Q.67 Do you consider yourself an Hispanic, Latino or a Spanish-speaking American?

- ❑ 1 Yes
- ❑ 2 No
- ❑ 3 (Don't know/refused)

(ref:RACE2)

Q.68 In terms of your job status, are you employed, unemployed but looking for work, retired, a student, or a homemaker?

- ❑ 1 Employed
- ❑ 2 Unemployed
- ❑ 3 Retired
- ❑ 4 Student
- ❑ 5 Homemaker
- ❑ 6 (Other)
- ❑ 7 (Don't know/refused)

(ref:EMPLOY)

Q.69 Last year, that is in 2001, what was your total family income from all sources, before taxes? Just stop me when I get to the right category. (READ LIST)

- ❑ 1 Less than $10,000
- ❑ 2 $10,000 to under $20,000
- ❑ 3 $20,000 to under $30,000
- ❑ 4 $30,000 to under $50,000
- ❑ 5 $50,000 to under $75,000
- ❑ 6 $75,000 to under $100,000
- ❑ 7 $100,000 or more
- ❑ 8 (Refused)
- ❑ 9 (Don't know)

(ref:INCOME)

Q.70 And finally, strictly for verification purposes, can I have just your first name?

_____

_____

_____

_____

_____

(ref:NAME)

APPENDIX B. Survey Frequencies

PERCENTAGES
Q.2 What county do you reside in?

	Total
Black Hawk	87
Other	13
(ref:COUNTY)	

[51 Respondents]
Q.3 What town do you live in?

	Total
Grundy Center	34
Independence	32
Waverly/Bremer	35
(Other)	-
(ref:CITY)	

Q.5 Now, I am going to read you a list of places people shop for food and I want you to tell me how often you shop at each one -- more than once a week, once a week, once or twice a month, a few times a year, or never.

	More Once Week	Once Week	Once/ Twice Month	Few Times Year	Never	DK/ Ref	Once Week	Once/ Twice Month
5 Large grocery stores/supermarkets	29	42	21	5	3	-	**71**	**92**
6 Small independent grocery stores	12	25	25	11	27	0	**37**	**62**
7 Farmers' markets	2	8	11	38	41	0	**10**	**21**
8 Road side stands	0	2	7	33	58	-	**3**	**9**
9 Community supported agricultural farms	0	2	3	7	86	1	**2**	**6**
10 Warehouse stores such as Sam's Club	3	6	24	21	46	0	**8**	**33**
11 Convenience stores	19	19	17	14	32	-	**37**	**54**
(ref:FRELOC)								

Q.12 I am going to list different factors which you may use when deciding to purchase food, including fruits, vegetables, dairy products, meat, eggs and poultry. For each one, please tell me whether it is a very important, a somewhat important, a not very important, or a not at all important factor.

	Very imp	Smwt imp	Not very imp	Not at all	DK/ Ref	Total Imp	Total Not Imp	Imp - Not
12 Cost	59	35	4	2	1	**94**	**6**	**88**
13 Freshness	86	12	2	-	-	**98**	**2**	**96**
14 Locally produced or grown	24	39	25	11	1	**63**	**36**	**27**
15 Nutritious or healthy	63	29	5	3	1	**91**	**8**	**83**
16 Free of chemicals and pesticides	51	32	11	5	1	**83**	**16**	**66**
17 Organic	15	25	32	26	2	**39**	**58**	**-19**
18 Convenience	40	40	12	7	1	**80**	**18**	**62**

(ref:SHOPBATT)

Q.19 When you shop for day to day goods such as food, how important is it for you to find the lowest price possible - is it very important, somewhat important, not too important or not at all important?

	Total
Very important	48
Somewhat important	41
Not very important	9
Not at all important	3
(Don't know/Refused)	-
Total important	**88**
Total not important	**12**
Important - Not important	**77**

(ref:PRICE)

Q.20 How important is it that the food you eat comes from farms and ranches in your own area rather than outside your area - is it very important, somewhat important, not too important or not at all important?

	Total
Very important	21
Somewhat important	39
Not very important	28
Not at all important	11
(Don't know/Refused)	1
Total important	**60**
Total not important	**39**
Important - Not important	**21**

(ref:IMPORTLO)

Q.21 Do you ever buy food that is produced or grown locally?

	Total
Yes	85
No	12
(Don't know/refused)	3
Yes - no	**73**

(ref:BUYLO_1)

[341 Respondents]

Q.22 How often do you buy locally produced or grown food - every week, once or twice a month, several times a year, or hardly ever?

	Total
Every week	18
Once or twice a month	33
Several times a year	41
Hardly ever	6
(Don't know/refused)	3

(ref:BUYLO_1B)

[341 Respondents]
Q.23 Please tell me the most important reason you buy locally produced or grown food.

	Total
Food is fresher	42
Supports local economy/local farmers/local communities	39
Tastes good	12
Convenient	6
Cheaper/better price	6
Quality	6
Less chemicals/pesticides	4
Nutritious/healthy	3
Organic	1
No reason/nothing	1
Don't know/refused	8

(ref:WHYBUY)

[59 Respondents]
Q.24 I am going to read you a list of reasons people give for not buying locally grown food. Could you please tell me what are the TWO most important reasons you may not buy locally produced food.

	Total
Inconvenient location	37
Lack of information about where to buy it	28
Prices are too high	15
Lack of selection	14
No labeling on food indicating it's grown locally	12
Don't think it's important	22
(Don't know/refused)	13

(ref:BUYLOC3)

Q.25 How do you identify food that is produced or grown locally?

	Total
Where I buy it (e.g., farmers market, outdoor market)	34
Label on product	19
Sign that states it is locally grown	17
Personal knowledge of product or producer	15
In-Store promotion	7
Other	1
(Don't know/refused)	8

(ref:IDENTIFY)

Q.26 When you purchase food, how often do you look at the labels to see where the food was produced - frequently, sometimes, rarely or never?

	Total
Frequently	26
Sometimes	26
Rarely	29
Never	18
(Don't know/refused)	1
Frequently/Sometimes	**52**
Rarely/Never	**47**
F/S - R/N	**5**

(ref:LOCALPROD)

Q.27 Some people prefer to buy certain kinds of food from local producers. Regardless of whether you buy locally produced or grown food, do you think it is important to buy certain kinds of food from local producers? If so, which types of food?

	Total
Vegetables	73
Fruit	51
Meat	26
Dairy	12
Poultry	9
Other	1
Not important to buy locally produced or grown food	11
(Don't know/Refused)	5

(ref:KINDLOCFOOD)

Q.28 How closely do you follow environmental issues in your neighborhood and community --do you follow them very closely, somewhat closely, not very closely or not at all closely?

	Total
Very closely	15
Somewhat closely	48
Not very closely	31
Not at all closely	6
(Don't know/refused)	-
Total closely	**63**
Total not closely	**37**
Closely - Not closely	**26**

(ref:LOCALENV)

Q.29 In general, how concerned are you about the safety of the food you eat - are you very concerned, somewhat concerned, only a little concerned, or not at all concerned?

	Total
Very concerned	51
Somewhat concerned	30
Only a little concerned	13
Not at all concerned	6
(Don't know/refused)	0
Very/Somewhat	**81**
Little/Not at all	**19**
Very/Somewhat - Little/Not at all	**62**

(ref:FOODSAFE)

Q.30 What specific concerns do you have about the safety of the food you eat?

	Total
Chemicals/pesticides/hormones	40
Wonder whether food is fresh/out of date/spoiled	18
Worried about health	10
Worry about salmonella/bacteria/e coli	5
Wonder whether food is clean or not	5
People tampering with food/poor handling	4
Contamination	3
Food is treated/processed	2
Bacteria	2
Genetically modified/engineered	1
No reason/Nothing	12
Don't know/refused	11

(ref:SAFEOPEN)

Q.31 Do you know where to find the local meatlockers, the facilities that store meat and poultry, in your community?

	Total
Yes	79
No	20
(Don't know/refused)	1
Yes - No	**59**

(ref:MEATLOCKER)

Q.32 Are you a farmer or do you personally know a family farmer?

	Total
Yes - I am a farmer	8
Yes - I know a family farmer	57
Both	3
No	33
(Don't know/refused)	-

(ref:KNOWFARM)

Q.33 Do you favor city and county governments using taxpayer money to promote buying locally produced and grown food or do you think taxpayer money shouldn't be used for this?

	Total
Strongly favor	22
Somewhat favor	28
Somewhat oppose	15
Strongly oppose	19
(Don't know/refused)	17
Total favor	**50**
Total oppose	**34**
Favor - Oppose	**16**

(ref:GOVTLOCAL)

Q.34 Do you favor or oppose local hospitals such as Allen Hospital, local restaurants such as Rudy's Tacos or local institutions such as Covenant Medical Center purchasing locally produced and grown food for their meal services or doesn't it make a difference to you?

	Total
Strongly favor	48
Somewhat favor	28
Somewhat oppose	2
Strongly oppose	1
No difference	21
(Don't know/refused)	1
Total favor	**75**
Total oppose	**3**
Favor - Oppose	**73**

(ref:ORGSLOCAL)

Q.35 How important is it that the food you eat comes from farms and ranches in the United States rather than from foreign countries -- is it very important, somewhat important, not too important or not at all important?

	Total
Very important	67
Somewhat important	22
Not very important	7
Not at all important	3
(Don't know/Refused)	1
Total important	**90**
Total not important	**10**
Important - Not important	**80**

(ref:GLOBALIZATION)

Q.36 Now I am going to read you a series of statements about food that is produced in your local communities. I would like you tell me if it makes you much more likely, somewhat more likely, a little more likely, or less likely to purchase locally produced and grown food, or does it make no difference?

	Much more Likly	Smwt more Likly	Lttle more Likly	Less Likly	No Diff	DK/ Ref	Much/ Smwt More	Much/ Smwt/ Lttle
36 Buying food that is produced or grown locally supports the local economy by keeping farms in the community, providing revenue to other local businesses, and reducing our need to import food from other states or countries.	52	33	11	1	3	0	**85**	**96**
[200 Respondents] 37 (SPLIT A) Buying food that is produced or grown locally supports endangered family farms, which are an important part of the American tradition of self-sufficiency and the foundation of local communities.	55	31	9	2	4	1	**86**	**94**
[200 Respondents] 38 (SPLIT B) Buying food that is produced or grown locally supports family farmers as opposed to large, corporate-owned farms that don't create good local jobs or support the local economy.	44	32	19	1	3	1	**76**	**95**
39 Buying food that is produced or grown locally helps protect the environment because local farmers use fewer of the pesticides and chemicals that pollute our drinking water, rivers, and streams.	39	37	15	1	5	3	**76**	**91**
40 Buying food that is produced or grown locally is fresher and better quality than food imported from other states or countries.	51	31	13	1	3	0	**82**	**96**
41 Locally produced or grown food is safer and healthier because small, local farmers use fewer chemicals to produce food since the food is fresh off the farm.	43	35	13	2	5	2	**78**	**91**

42 Locally grown food is safer because local family farms are less of a target for chemical attacks by terrorists than large consolidated farms.	39	27	16	2	12	4	**65**	**82**

Q.43 Which statement I just read stood out for you as the best reason for buying locally produced or grown food?

	Total
Supports local economy	30
Supports family farmers	29
Fresher and better quality food	24
Protects the environment	6
Healthier	6
Safer from terrorists	3
(Don't know/refused)	3

(ref:RANKMESS)

Q.44 Now that you have heard more about locally produced and grown food, how important is it that the food you eat comes from farms and ranches in your own area rather than outside your area - is it very important, somewhat important, not too important, not important at all?

	Total
Very important	36
Somewhat important	47
Not very important	13
Not at all important	3
(Don't know/Refused)	1
Total important	**84**
Total not important	**16**
Important - Not important	**68**

(ref:IMPORTLOCAL2)

Q.45 I am going to read you a statement about how the production and storage of meat. I would like you tell me if it makes you much more likely, somewhat more likely, a little more likely, or less likely to purchase meat raised and processed locally or does it make no difference?

	Much more Likly	**Smwt more Likly**	**Lttle more Likly**	**Less Likly**	**No Diff**	**DK/ Ref**	**Much/Smwt More**	**Much/Smwt/ Lttle**
46 Locally raised meat that is processed in nearby meat lockers is safer because they have higher safety standards than large packing plants.	39	33	11	1	11	5	**72**	**83**

(ref:MEATMESSAGE)

Q.47 Now, I am going to read you a list of names and I want you to tell me how much you would trust what they had to say about buying local food. Please tell me if you would trust what they had to say very much, some, not very much, or not at all.

	Very/Some	Very much	Some	Not very much	Not at all	DK/ Ref	Very much/ Some	Not very/ at all	- Not
47 Local farmers	59	33	5	1	2	**92**	6	**86**
48 Public health officials	42	42	9	4	3	**84**	13	**71**
49 Doctors	45	41	9	4	2	**86**	13	**73**
50 Chefs or other Food Professionals	27	50	12	5	5	**77**	18	**59**
51 Non profit organizations	16	40	23	12	9	**56**	35	**21**
52 News anchors or other journalists (ref:MESSGR)	9	31	27	29	4	**40**	56	**-16**

Q.53 What newspaper do you read most frequently?

	Total
The Courier	78
The Des Moines Register	15
The Cedar Rapid Gazette	4
(Other)	8
(None/Don't know/refused)	6

(ref:MEDIAUSE)

Q.54 What type of radio stations do you typically listen to?

	Total
All talk	13
All news	12
Country	23
NRP or National Public Radio	10
Easy Listening	17
Hard Rock	15
Soft Rock	19
Don't listen to radio	10
Don't know	1

(ref:RADIO)

Q.55 In general, which one of the following kinds of advertising has the most influence on your decision to buy particular food items -- advertisements on television, advertisements on radio, advertisements in magazines, advertisements in newspapers, or signs or displays inside your grocery store?

	Total
Advertisements on television	27
Advertisements on radio	7
Advertisements in magazines	3
Advertisements in newspapers	27
Signs or displays inside store	20
Billboards	1
None	13
Other	1
(Don't know/refused)	2

(ref:ADVERTISE)

Q.56 Are you the primary food shopper in your household?

	Total
Yes, primary shopper	73
No, not primary shopper, but do some of the shopping	20
No, almost none of the shopping	3
(Split food shopping with another household member)	4
(Don't know/refused)	-

(ref:PRIMSHOP)

Q.57 How often do you eat out or buy take-out food -- almost every night, 2-3 times a week, about once a week, once every few weeks, or almost never?

	Total
Almost every night	4
2-3 times a week	29
About once a week	32
Once every few weeks	24
Almost never	11
(Don't know/refused)	-

(ref:SHOPFREQ)

Q.58 How often do you do you eat pre-prepared food for dinner -- almost every night, 2-3 times a week, about once a week, once every few weeks, or almost never?

	Total
Almost every night	8
2-3 times a week	25
About once a week	23
Once every few weeks	21
Almost never	23
(Don't know/refused)	-

(ref:EATOUT)

Q.59 Do you use coupons when you buy groceries?

	Total
Yes	71
No	29
(Don't know/refused)	-
Yes - no	**42**

(ref:COUPONS)

Q.60 Thinking in political terms, would you say that you are Conservative, Moderate, or Liberal?

	Total
Liberal	21
Moderate	36
Conservative	38
(Don't know/refused)	5

(ref:IDEO1)

Q.61 In what year were you born?

	Total
18 - 24	13
25 - 29	6
30 - 34	6
35 - 39	8
40 - 44	9
45 - 49	7
50 - 54	10
55 - 59	9
60 - 64	9
Over 64	23
No answer	2

(ref:AGE)

Q.62 What is the last year of schooling that you have completed?

	Total
1 - 11th grade	7
High School graduate	35
Non-college post H.S.	3
Some college	24
College graduate	23
Post-graduate school	8
(Don't know/refused)	0

(ref:EDUC)

Q.63 Are you married, single, separated, divorced, or widowed?

	Total
Married	57
Single	22
Separated/divorced	9
Widowed	11
(Don't know/refused)	0

(ref:MARITAL)

Q.64 Do you have any children 18 years of age or younger?

	Total
Yes	26
No	74
(Don't know/refused)	0

(ref:KIDS)

Q.65 Generally how much does your household spend each month on food when you shop for groceries? Please exclude money spent eating out at restaurants.

	Total
Under $50	3
$51-100	13
$101-150	12
$151-200	15
$201-250	13
$251-300	8
$300-400	15
Over $400	14
Don't know	7

(ref:MONEYFOO)

Q.66 What is your race?

	Total
White	94
Black	3
Hispanic	1
(Other)	1
(Don't know/refused)	1

(ref:RACE)

Q.68 In terms of your job status, are you employed, unemployed but looking for work, retired, a student, or a homemaker?

	Total
Employed	53
Unemployed	1
Retired	30
Student	6
Homemaker	7
(Other)	2
(Don't know/refused)	0

(ref:EMPLOY)

Q.69 Last year, that is in 2001, what was your total family income from all sources, before taxes? Just stop me when I get to the right category.

	Total
Less than $10,000	5
$10,000 to under $20,000	12
$20,000 to under $30,000	13
$30,000 to under $50,000	22
$50,000 to under $75,000	13
$75,000 to under $100,000	4
$100,000 or more	2
(Refused)	18
(Don't know)	10

(ref:INCOME)

Q.4 Respondent Gender

	Total
Male	47
Female	53

(ref:GENDER)

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