Communication and local food:

Exploring the roles of selective exposure, social exposure, and lifestyle

by

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COMMUNICATION AND LOCAL FOOD: EXPLORING THE ROLES OF SELECTIVE EXPOSURE, SOCIAL EXPOSURE, AND LIFESTYLE

ABSTRACT

Communication scholarship increasingly focuses on selective exposure. Because of online media environments, it is easier for audiences to limit the content they view to that which aligns with their pre-existing interests and beliefs. This trend may limit media effects to strengthening or reinforcing individuals' beliefs, unless messages are tailored to specific groups or individuals. This dissertation aimed to add to understanding about selective exposure through examining issues related to selective exposure in a new context—local food purchasing. Local food is an important economic, social, environmental, and health issue. Data were collected through a mail survey of randomly sampled Wisconsin households in the summer of 2015. Three analyses were conducted with the data.

In the first analysis, political ideology was examined as a moderator between communication-related variables and variables related to local food beliefs and behavior. Studies investigating ideological selective exposure often focus on more overtly polarizing topics, making local food a unique context. This analysis also examined issue public membership as a basis for selective exposure, which is a growing area of interest in selective exposure work. The second analysis considered farmers' market shopper status as a moderator for how communication-related variables influence normative perceptions (descriptive and injunctive) of local food purchasing. This approach was different in that the moderator was related to a physical environment, in addition to the fact that this analysis brought concepts together from selective exposure and social exposure. Social exposure puts forward that information from our social, symbolic, and physical environments contributes to our normative perceptions.

The third analysis focused on the food-related lifestyle (FRL) framework. The FRL framework asserts that individuals' abstract values are connected to specific product choices through lifestyle factors, such as cooking and shopping preferences. Through clustering respondents based on FRL survey items and political ideology, this analysis was intended to be a first step in the ability to reach audiences with tailored messages in this context.

Key findings were that ideological selective exposure did not appear to be happening in the context of local food, but there was evidence for selective exposure occurring based on issue public membership. There was also evidence for farmers' market shopper status acting as a moderator of the influence of media on norms. For social exposure, this points to how information from different environments does not necessarily act on normative perceptions in an additive way. Also, descriptive norms, as opposed to injunctive norms, were more influential in this context. Lastly, distinct groups based on lifestyle were identified with some groups clearly aligning with factors that could ultimately be used for message tailoring. Groups were generally similar to those identified in European studies, with the Adventurous, Traditional, and Rational groups all showing interest in local food.

This work was limited in terms of sample size, in addition to generalizability as the focus was on Wisconsin. Future work should involve larger and more diverse samples. Next steps might include content analysis addressing local food coverage in media, testing the performance of tailored messages in this context, examining the role of trust in media sources among issue publics, and further exploring how personal experience or experience in a particular physical environment moderates media effects.

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CHAPTER 1: LOCAL FOOD IN THE AGE OF PREFERENCE-BASED EFFECTS

Recently, scholars described a new paradigm for media effects, called preference-based effects, that acknowledges our fractured media environment can result in effects being either weak or strong (Cacciatore, Scheufele, & Iyengar, 2016). Media effects are likely to be limited because of preference-based reinforcement — in general, the information individuals engage with is limited to strengthening or reinforcing their previously held beliefs (Cacciatore et al., 2016). At the same time, media effects have the potential to be strong if tailored persuasion is applied, as messages might capitalize on selective exposure through being tailored to individuals or target groups (Cacciatore et al., 2016).

Given this new paradigm, individuals seeking to promote local food face certain challenges. Local food is an important sustainability, health, and economic issue. Potential customers could remain largely unaware of social marketing campaigns (campaigns that "sell" an idea that is beneficial to society) to promote local food, and limiting the reach of such campaigns.

For those promoting local food, selective exposure also raises concerns in terms of generating support for policy related to promoting local food. Examples of local food and policy issues include how regulations can help or limit the development of farmers' markets (Morales, 2011), that incentives or taxes can promote particular kinds of land use decisions or impact profits of farms (Lewis, Barham, & Zimmerer, 2008), or that the government can pay (or not pay) for administrative positions that promote local food (Johnson, 2017). In fact, it's possible that for local farmers, generating support for policies aimed at funding research or education geared toward increasing farm productivity may be equally or even more important than marketing campaigns aimed at encouraging consumers to purchase or pay more for local food.

For example, this was found to be the case for coffee growers in Mexico, where better yields had a greater impact on farmer livelihoods than capturing a price premium (Barham, Callenes, Gitter, Lewis, & Weber, 2011).

While selective exposure raises concerns for those seeking to promote local food, tailored persuasion can reach audiences. Tailored persuasion represents the other side of the preference-based effects paradigm, and suggests that media effects have the potential to be strong if messages can be designed to reach individuals effectively (Cacciatore et al., 2016). The authors who described this likened it to personalized medicine. It particular, they noted how messages might tap into cognitive schema to resonate with people on an individual level. For local food, this means identifying factors to inform tailored messaging could lead to more effective social marketing campaigns or help gain more support for policy related to local food.

This dissertation aims to explore issues related both to tailored persuasion and selective exposure, and makes several contributions to furthering our understanding of these phenomena in the context local food. Chapter 3, the first data-driven chapter, examines whether political ideology moderates the influence of media on beliefs about local food related to the environment and food quality. While beliefs related to the environment tend to be politically polarized, there is not an obvious ideological viewpoint regarding local food and food quality, making local food a thought-provoking topic. In addition, selectivity based on issue public membership is a growing area of research, and this chapter considers if there is evidence for selective exposure or motivated reasoning occurring based on issue public membership.

In Chapter 4, I consider how selective exposure relates to social exposure. Social exposure describes how information in multiple environments informs perceptions about what others do or approve of, which in turn can influence behavior (Mead, Rimal, Ferrence, & Cohen,

2014). While much research has investigated how particular sources or channels of information influence normative perceptions, little work has considered multiple pathways at once and in doing so, how experience in a physical environment could moderate the effect of other types of information. In particular, this analysis explores how being a regular farmers' market shopper may moderate how engagement with media influences normative perceptions.

Lastly, a third way this dissertation contributes to communication literature is through linking the food-related lifestyle (FRL) framework to other factors pertinent to creating messages for specific audience segments. In Chapter 5, I connect the FRL framework to other important concepts explored in this dissertation — political ideology, normative perceptions, and communication-related variables. The FRL framework is primarily concerned with segmenting individuals based on eating, shopping, and cooking behaviors to identify unique groups of people, respective to the food products that would most appeal to them.

The rest of this chapter elaborates on these concepts. First, I discuss selective exposure and its role in preference-based effects. The discussion moves from selective exposure to social exposure, and I describe connections between these theories. I then describe the FRL framework, and why it is a good choice as a platform to integrate concepts from the other chapters. Lastly, I provide more context about local food, including its importance to society in general and to Wisconsin in particular. Wisconsin is where the data that inform this dissertation were collected.

Selective exposure and preference-based effects

Broadly speaking, selective exposure is when individuals selectively engage with information that is congruent with their beliefs or interests. Sears and Freedman (1967) described it as a process where "people may organize their surroundings in a way that ensures *de facto*

selectivity." While selective exposure is not new, one can see how the current media environment, increasingly geared toward niche audiences, makes it easier for individuals to give preference to content that favors their pre-existing viewpoints or interests. Research confirms that individuals favor media likely to offer information consistent with their previously held beliefs (Bakshy, Messing, & Adamic, 2015; Dvir-Gvirsman, Tsfati, & Menchen-Trevino, 2016; Knobloch-Westerwick, Mothes, & Polavin, 2017). Audiences can also easily become selectively exposed to information through having likeminded individuals in their online social networks (Cacciatore et al., 2016). On top of this, search engines and personalized news aggregators can further tailor the information people receive, whether individuals intend for this or not (Cacciatore et al., 2016).

Literature on selective exposure suggests several reasons why individuals might be drawn to media that is congruent with pre-existing beliefs or interests. Individuals might reduce cognitive dissonance through seeking out information that is consistent with their previously held beliefs (Festinger, 1957; Knobloch-Westerwick et al., 2017). Individuals might also seek to expose themselves to information that aligns with their pre-existing beliefs as a means of reducing cognitive effort, as such information takes less effort to process than information that counters pre-existing beliefs (Smith, Fabrigar, & Norris, 2008; Yeo, Cacciatore, Scheufele, 2015).

A third process related to selective exposure is interest. While much literature on selective exposure focuses on political ideology or partisanship, research that involved tracking individuals' media selections online found that "issue publics" selected information on topics important to them personally (Kim, 2009). Issue publics are groups of people who are particularly interested in a specific issue (Kim, 2009). That research also found that most people

have at least one issue they consider to be very important, suggesting that favoring media content based on interest is likely a common behavior.

Selective exposure is typically couched in a discussion of motivated reasoning, as the two concepts are entwined. Motivated reasoning describes how individuals can process information with a goal of accuracy in mind, or with a directional goal in mind such as the goal of reinforcing one's pre-existing beliefs (Kunda, 1990). When people have directional goals, they typically still want to feel that their beliefs are rational and justified (Kunda, 1990). Motivated reasoning relates to selective exposure in a few ways.

For one, when individuals are motivated with a directional goal, they tend to judge research findings that counter their beliefs to be less valid (Kunda, 1990). For example, it is plausible that partisans might judge media outlets they find disagreeable to be less valid, influencing them to favor content agreeable with their pre-existing beliefs and driving selective exposure.

At the same time, it is also plausible that selective exposure contributes to motivated reasoning. Another mechanism of motivated reasoning is that when individuals are motivated with directional goals, they tend to favor their (mentally) stored information that confirms their pre-existing beliefs (Kunda, 1990). If an individual selectively exposes himself or herself to media content that is consistent with pre-existing beliefs, agreeable information could be disproportionately available. Having such agreeable and accessible information more readily available could, in turn, help individuals justify their biased conclusions.

People engaging in directional processing, however, are not necessarily engaging in selective exposure. Someone could engage with information representing multiple viewpoints but still process the information in a biased way so the information tends to favor their pre-

existing viewpoint. In particular, individuals may evaluate arguments that support their position as stronger than arguments that oppose it, or individuals could spend more time and resources counterarguing against incongruent information, known as disconfirmation bias (Yeo et al., 2015). Thus, selective exposure and motivated reasoning can reinforce each other, but can still occur without each other.

From selective exposure to social exposure

Media are also one pathway from which individuals form perceptions of social norms (Mead, et al., 2014). Such perceptions would address what others approve of, or what others do. Perceptions of social norms are often a significant predictor of behavior (Armitage & Conner, 2001). In particular, previous research suggests that normative perceptions play a role in purchasing sustainable products (Arce Salazar, Oerlemans, & van Stroe-Biezen, 2013), which is relevant to the context of local food. Normative perceptions are not static, and can be informed through information we encounter through different types of environments in our lives.

More broadly, the social exposure framework describes how information from different types of environments contributes to our normative perceptions (Mead et al., 2014). The environments are symbolic, physical, and social. Information in the symbolic environment includes media. Information in the physical environment includes observation of products or signage. Information in the social environment includes observing others' behavior or discussion with others. The authors who proposed the framework point toward a need for research to clarify how information relevant to normative perceptions from different sources interacts to influence behavior (Mead et al., 2014).

There are a few potential connections between selective exposure and the social exposure

framework. For one, it is plausible that as people are drawn to media that affirms their pre-existing beliefs or speaks to their personal interests, such media also affirms their pre-existing normative perceptions. This could limit the extent to which media might influence normative perceptions to strengthening or reinforcing these preexisting beliefs. Secondly, it's possible that selectivity happens to some degree with our physical environments. While acknowledging that there are many individuals unable to "select" into the physical environments in which they would most prefer to purchase food because of numerous limitations such as options available in their communities, income, transportation, or time (Walker, Keane, & Burke, 2010), it is also the case that some individuals can and do choose to buy food in particular places, such as farmers' markets. Given this, Chapter 4 investigates if being a farmers' market shopper moderates the influence of other communication channels relative to normative perceptions. More broadly, this chapter also considers how engagement with the different information environments described in the social exposure framework (social, physical, and symbolic) influences normative perceptions about local food purchasing, with farmers' markets representing a potentially important physical environment in the context of local food.

Tailored messages and lifestyle

The focus on selective exposure in Chapter 3, and social exposure in Chapter 4, speak to the preference-based effects paradigm in that these chapters explore whether selective exposure is occurring in the context of local food. While preference-based reinforcement would suggest media effects might be limited to strengthening perceptions held by particular groups (e.g., farmers' market shoppers), Chapter 5 explores issues related to other side of the paradigm – tailored persuasion. Media effects could be strong if messages are tailored (Cacciatore et al.,

2016). Considering this, promoting local food effectively in the media requires investigating what factors might resonate with different audiences.

Chapter 5 takes a step in this direction by considering different audience segments in the context of local food. The chapter involves the food-related lifestyle (FRL) framework, which suggests consumer behavior is linked to individuals' values through their lifestyle (Brunsø, Scholderer, & Grunert, 2004). This is pertinent to the idea of tailored persuasion, as grouping audiences by lifestyle could result in exposing a suite of characteristics such groups have that could then be developed for tailored messaging. Finding better ways to describe U.S. local food consumers matters, as demographics alone have been found to be poor predictors of interest in local food (Byker, Shanks, Misyak, & Serrano, 2012; Feldmann & Hamm, 2015).

The assumption underlying the FRL framework is that values represent the most abstract cognitive category (Brunsø et al., 2004). Then, it is "lifestyle" that connects these abstract values to products (Brunsø et al., 2004). Lifestyle is a collection of behaviors, preferences, and skills (Brunsø et al., 2004). The scholars who designed the FRL framework created a corresponding survey instrument (Grunert, Brunsø, Bredahl, & Bech, 2001).

Distinct and consistent consumer segments have emerged when individuals have been segmented via FRL variables in European studies, resulting in the following five typical categories: Careless, Adventurous, Conservative/Traditional, Uninvolved, and Rational (Grunert, et al., 2001; Grunert et al., 2011). While not many studies have used the FRL framework in the U.S., those that have found it to successfully categorize individuals. A main difference between the work in the U.S. and Europe, however, is that in the U.S. convenience appears to be more valued (Jang, Kim, & Bonn, 2011; Nie & Zepeda, 2011; Zepeda & Nie, 2012).

While political ideology was not included as a segmentation variable in the original FRL

instrument, this factor may be pertinent to U.S. consumers as political orientation clearly relates to both abstract values and media selection. Thus in Chapter 5, the analysis includes political ideology as a segmentation variable. After segmenting groups, each group was then profiled on additional factors explored in Chapter 3 and Chapter 4, as these factors are also important to tailored messages. These include normative perceptions, beliefs about local food, communication-related variables, and frequency of farmers' market shopping.

The context of local food

This section provides background on the definition of local food and its importance to society. Wisconsin is emphasized, as the data used in this dissertation were collected there. In lay terms, "local food" is food that is sold close to where it was produced (e.g., the same state). A legal definition of "local food" does not exist, however, as it does for other food categories such as "organic food." The closest one might get to a legal definition of local (at least in the U.S.) is that the 2008 Farm Act suggests that a product grown under 400 miles from its origin, or the state in which it was produced, could be eligible for being marketed as a local or regional product (Martinez et al., 2010). This stipulation refers to products fitting a definition for a particular funding program, however, and does not imply a nationally recognized definition for local food.

Indeed, research suggests that most individuals would not be in agreement that food coming from 400 miles away means local food. Instead, many individuals think of local in terms of political boundaries. Exactly what that boundary is depends on where people live. In a phone survey in Michigan, for example, researchers found the most agreement among respondents that locally grown meant grown in Michigan (49%), while minorities of respondents agreed more that

local food meant grown in the Great Lakes Region or grown 100 miles away (Conner, Colasanti, Ross, & Smalley, 2010).

Another study compared definitions of local food among people in different parts of the U.S., and found variation in how people define the political boundaries of local food (Durham, King, & Roheim, 2009). Individuals in Rhode Island and Oregon most often selected a subset of their state (e.g., "Southern Rhode Island") as signifying locally grown (Durham, et al., 2009). However, in the Minneapolis and St. Paul area, the most frequently chosen definition was a Minnesota *plus* Wisconsin (Durham, et al., 2009). Some people even adjust the boundaries by which they judge localness by food product or product availability (Carroll & Fahy, 2015). In sum, political boundaries appear to resonate with people when it comes to defining local food, though opinion differs about which boundaries matter.

Consumer interest in local food is strong. A recent estimate from the United States Department of Agriculture (USDA) places local food sales in the U.S. at $6.1 billion in 2012 (Low et al., 2015). While a directly comparable figure is not available for Wisconsin specifically, the USDA does provide statistics about the number of farms likely participating in local food sales. In Wisconsin, the most recent USDA statistics available found that 6,243 farms sold direct to consumers in 2007 (USDA, 2016a). "Direct to consumer" means these farms sold products to customers through farmers' markets, farm stands, or community supported agriculture (CSA) arrangements. CSA is a business model for farms where customers pay farmers for a "share" or subscription to food and subsequently receive food during the harvest season, usually on a weekly or biweekly basis. As the USDA also found that the state had 68,700 agricultural operations in 2016 (USDA, 2017), this suggests at least 9% of Wisconsin farms engaged in local food sales. This estimate could even be low, as it does not account for farms that only sell local

food through intermediate channels (restaurants, grocery stores, or institutions like schools).

Support for local food is likely due, in part, to the various benefits local food systems offer in terms of the economy, public health, community building, and the environment. Indeed, many government bodies have adopted policies that promote local food sales and local farmers (Martinez et al., 2010). These benefits will be discussed, beginning with those that relate to the economy.

One economic benefit of local food is that there is an opportunity for a multiplier effect — when consumers buy food locally, farmers or businesses that sold the food in turn spend money on other local products or services (Low et al., 2015). In Wisconsin, researchers estimated that local food economic activity contributed $9 billion to the Gross State Product during 2012, when accounting for factors beyond sales, such as economic multipliers (Watson, Kay, Alward, Cooke, & Morales, 2015). This estimate also included venues where local products might be sold other than farmers' markets, such as to processors. It is not entirely surprising that local food is an important part of Wisconsin's economy, as agriculture is generally important to the state. In 2012, Wisconsin ranked 9th for all agricultural products sold in the U.S., being first for corn silage, second for milk, and fourth for vegetables (USDA, 2017).

Another economic benefit of local food is that farms that sell directly to consumers have better chances of staying in business than similarly sized farms that do not sell directly to consumers (Low et al., 2015). Farms may still be challenged by profitability, however. The USDA (2017) found that the average Wisconsin farm net income to be only $44,058. In addition, half of farmers in the state reported having a second, non-farm occupation as the source of their primary income (USDA, 2017). This suggests many farmers are challenged by profitability, and brings into focus the value in identifying effective local food marketing strategies.

Other aspects of local food relate to health and communities. Regarding public health, farmers' markets increase access to healthy food (Morales, 2011), and farm-to-school programs result in increased fruit and vegetable consumption for students (Joshi, Azuma, & Feenstra, 2008). Additionally, farms and farmers' markets can be places for community members to socialize, learn, and feel connected to a place (Aucoin & Fry, 2015; Trauger, Sachs, Barbercheck, Brasier, & Kiernan, 2010).

There are also many studies that argue for a connection between local food and reduced carbon emissions, relative to food produced farther afield from where it was sold. However, making definitive claims about local food and carbon emissions is controversial as many other factors are at play aside from transportation distance, such as the mode of transportation (e.g., truck or rail) or efficiencies due to economies of scale (Low et al., 2015).

Lastly, many consumers perceive local food to be of superior quality. A systematic review of 73 studies about consumers and local food found that reasons related to food quality were more often cited as reasons to buy local food than other reasons, including environmental or economic benefits (Feldmann & Hamm, 2015). In sum, beliefs individuals have about local food are an important part of this dissertation, as are factors that have received less attention in local food scholarship such as political ideology, normative perceptions, and communication-related variables.

CHAPTER 2: METHODOLOGY

The data that inform this dissertation came from a survey distributed in Wisconsin in 2015. The survey was developed by a team at the University of Wisconsin-Madison and University of Wisconsin-River Falls, including Dr. Bret Shaw, Dr. David Trechter, and myself. Questions were designed to measure concepts related to communication, perceptions about local food, local food purchasing, lifestyle, political ideology, and demographics. The survey was administered through the University of Wisconsin-River Falls Survey Research Center.

During survey development, social scientists and local food practitioners provided feedback. Most of the practitioners who provided feedback were community educators that participated in the University of Wisconsin-Extension Community Food Systems team. Twenty-four practitioners provided feedback, and these practitioners were based in a range of counties around the state (Columbia, Crawford, Dane, Portage, Price, Racine, Sawyer, Walworth, Waushara, and Winnebago) in addition to those who worked on a statewide basis. This was important to help ensure that the survey would speak to experiences of people from all regions of Wisconsin. Based on feedback, questions were adjusted and the survey was piloted with a group of Wisconsin shoppers.

After the survey was finalized and Institutional Review Board approval was received, the Survey Research Center at the University of Wisconsin-River Falls administered the survey in July of 2015 to an approximately random sample of Wisconsin households. Off of a list of 2,058,198 Wisconsin addresses, 3,000 were randomly selected for receiving the survey. This sampling is only approximately random as not every Wisconsin household was included in the original list. The U.S. Census Bureau (2017) reports 2,310,246 Wisconsin households for the 2012 to 2016 period.

The timing (July) was chosen deliberately to reduce respondent burden as some of the local food questions focused on purchasing local produce when in season. In other words, it could have been difficult for respondents to report about their seasonal purchasing of local produce during a time when such products were not in season.

The survey included a cover letter asking the primary grocery shopper for the household to complete the survey and a pre-addressed, postage-paid, return envelope. The survey was followed by a reminder postcard after four weeks, and another copy of the survey was sent with a letter and stamped return envelope two weeks after the postcard. A total of 341 surveys were undeliverable, with 691 people returning surveys. The response rate was 23% (calculated with the AAPOR standard formula using the Outcome Rate Calculator Version 3.1).

Next, respondents were filtered so that only those who reported doing half or more of the grocery shopping for their household were included. For the filter, a survey question that asked how much of the grocery shopping the respondent did for their household in the last year was used. The choices were "None," "A little," "About half," "Most," and "All." Forty-nine respondents who selected "None," "A little," or did not answer this question were excluded. It appears most respondents followed the directions, which specifically asked for the primary household shopper to complete the survey. This mattered, as questions about local food purchasing behavior could be inapplicable to individuals who do not purchase food for their households.

To ensure a similar understanding of "local food" among respondents, a statement accompanied the section of the survey pertaining to local food that read, "There is no right or wrong way to define local food. But for these questions, local food refers to food sold within the state where it was grown, and/or within 100 miles of where it was grown." Providing this

definition aimed to reduce respondent burden, as respondents did not need to make assumptions about how their personal definition of local food might correspond to that of the researchers. The definition chosen was done in accordance with other research, which finds political boundaries are widely accepted as a definition of local food. The definition also recognized that distance is how some individuals do tend to think of local food.

An additional strategy to reduce respondent burden was that questions related to beliefs and norms about local food were focused on local fruits and vegetables. Because an individual's perceptions or behaviors might vary when it comes to the type of product involved (e.g., produce, meat, dairy, or packaged goods), focusing on one product category was done to make responding to those questions easier. For example, packaged goods raise questions about localness in that they could be manufactured locally, but made without local ingredients. Animal products bring up other issues in terms of animal treatment, or could inadvertently exclude individuals that follow vegetarian or vegan diets.

Variable construction is described in the following chapters as particular variables become relevant. Study variables in Chapter 3 include those related to communication, beliefs about local food, and local food purchasing. In Chapter 4, the emphasis is on social exposure, so variables related to normative perceptions and the farmers' market are introduced. Chapter 5 details the FRL survey items. The entire survey may be found in Appendix 1. The survey also includes some items that are not used in this dissertation, as those items served separate, applied goals of the survey.

CHAPTER 3: POLITICAL IDEOLOGY AND ISSUE PUBLIC MEMBERSHIP AS MODERATORS FOR THE EFFECTS OF MEDIA ON BELIEFS AND BEHAVIOR ABOUT LOCAL FOOD

Differences in beliefs regarding numerous important issues have become more polarized amongst Democrats and Republicans in recent years (Pew Research Center, 2017). Food-related issues may be no exception. Food production and distribution have wide ranging implications for society, with such issues highlighted cyclically during the construction of the farm bill. Farm bills are introduced approximately every five years. The last version of the farm bill, which became the Agricultural Act of 2014, was a piece of multi-billion dollar legislation that had implications for environmental protection, the regulation of businesses, poverty, and states' rights (Chappell, 2014; Runyon, 2014). While the last farm bill was ultimately passed through a bipartisan vote, the bill spent years "mired in partisan gridlock" (Nixon, 2014). Discussions surrounding the next farm bill have begun with a "partisan food fight" brewing over new work requirements for those receiving supplemental nutrition benefits (Brodey, 2018) and major cuts to farm conservation programs (O'Neill, 2018).

In contrast, there is evidence to suggest that, at least for some food-related issues, differences in belief might not fall along party lines. A recent Pew Research Center report focused on beliefs about genetically modified (GM) food and found nearly identical proportions of Democrats and Republicans believed that GM foods are worse for health (Funk & Kennedy, 2017). A difference in opinion was found, however, between individuals who reported being concerned deeply about GM foods and those who were not, with a majority if individuals who were deeply concerned about GM foods reporting GM foods are worse for health (Funk & Kennedy, 2017). Thus, while food has the potential to be politically divisive, divides in beliefs or

behaviors about food may be more related to a particular interests or concerns in some cases.

Consequently, food-related issues are suitable contexts for exploring selective exposure based on both political ideology and issue interest. Indeed, communication scholars seek to describe circumstances that intensify our tendency to selectively expose ourselves to information, given that information environments are now highly customizable (Dylko, 2016). Much research has focused on political ideology or partisanship as a means by which we selectively expose ourselves to information (Dylko, 2016). As less research has examined whether or not strong interest or concern about a particular issue influences selectivity, this remains a growing area for research.

A few studies have examined interest-based selectivity and identified individuals with a strong interest in a particular topic as an "issue public" (Iyengar, Hahn, Krosnick, & Walker, 2008; Kim, 2009; Peralta, Wojcieszak, Lelkes, & de Vreese, 2017). Issue publics are groups of people who are particularly interested in a specific issue (e.g., gun ownership, reproductive rights, conservation, etc.) and are very knowledgeable about that issue (Kim, 2009). Most people are part of at least one issue public (Kim, 2009). The group deeply concerned about GM foods in the Pew report (Funk & Kennedy, 2017), for example, could plausibly be thought of as an issue public.

This chapter seeks to expand upon the previous work done with issue publics and selective exposure in a few ways. For one, this chapter compares selectivity based on political ideology and issue public membership in a novel context, local food purchasing. As findings are inconsistent for the pervasiveness of selective exposure (Peralta et al., 2017), it is important to explore new contexts to increase understanding about the phenomena.

Secondly, this chapter explores whether or not selective exposure and motivated reasoning are occurring based on issue public membership, an area where scholars have pointed toward a need for more work (Peralta, 2017). Previous research has found that people who consider an issue important seek more information about that issue (Iyengar et al., 2008). Additionally, one experiment found that issue public members selected balanced content about their issue, in contrast to non-balanced content, at rates consistent with non-issue publics (Peralta et al., 2017). That finding suggests that issue public members are not disproportionally seeking out information that agrees with their stance on their issue.

The characterizations of issue public members as non-biased individuals seeking balanced information about a topic, however, is not without contestation—Kim (2009) found that issue public members that sought more information about their issue also tended to have more extreme beliefs about their issue. Consequently, more clarification is needed to understand if issue publics seek balanced information in order to hold accurate views of the issue they care about as some research suggests (Peralta et al., 2017), or if issue-specific information-searching leads to more extreme views, as other work suggests (Kim, 2009).

Beliefs and behaviors related to local food provide context for this chapter. In particular, this chapter focuses on beliefs related to the superior quality and environmental benefits of local food purchasing. These two beliefs were selected because people report buying local food for both of these reasons, but these beliefs differ in how overtly political they likely are. The belief that local food is of superior quality appears to be the major motivation for purchasing local food (Byker et al., 2012; Dodds et al., 2014; Feldmann & Hamm, 2015), and is ostensibly less overtly political. While research also finds that some consumers report buying local food for its purported environmental benefits (Byker et al., 2012; Dodds et al., 2014; Feldmann & Hamm,

2015; Kumar & Smith, 2018), this belief is likely to be more overtly political as environmental beliefs generally tend to be politically polarizing (Anderson, 2017; Funk & Kennedy, 2017; Stokes, Wike, & Carle, 2015).

While local food provides context for the beliefs and behaviors in this chapter, the issue public considered in this chapter is that of political consumers of food. "Political consumers" are individuals who boycott (purposefully avoid) or buycott (purposefully seek out) products for political or ethical reasons (Atkinson, 2012). As issue publics are identified as individuals for whom a particular issue is very important to them personally (Kim, 2009), the assumption in this context is that being a political consumer of food indicates issue importance. In other words, if someone adjusts their food purchasing for political or ethical reasons, they are also likely someone who is personally concerned with food-related issues (an issue public member).

Background predictors of local food purchasing

Before discussing selective exposure and motivated reasoning in more detail, potential background predictors of local food purchasing need to be addressed. While research has largely not considered a connection between political ideology and local food purchasing, other background factors have been identified as predictors. The previously mentioned review (Feldmann & Hamm, 2015), and another review looking at 22 studies focused on characteristics of farmers' market shoppers, found that there is a trend for local food consumers to be older and female (Byker et al., 2012; Feldmann & Hamm, 2015). Studies have also found consistently, at least in a farmers' market context, that convenience is a barrier to local food purchasing (Detre, Mark, & Clark, 2010; Wolf, Spittler, & Ahern, 2005). This leads to the first hypotheses, which seek to validate prior research on local food:

H1a: Being female will be positively associated with purchasing more local food.

H1b: Being older will be positively associated with purchasing more local food.

H1c: Finding local food inconvenient to purchase will be negatively associated with purchasing local food.

Other background variables such as income and education are not consistent predictors of local food purchasing. Byker et al. (2012) suggest that farmers' market shoppers may be diversifying as a group, leading to conflicting results when it comes to certain predictors. Number of children present in a household is also an important factor to explore, as convenience or price of food may be increasingly important to larger households. Therefore the first research question is:

RQ1: Will socioeconomic status (SES) and number of children in a household be associated with local food purchasing?

The last two background variables this chapter examines are political ideology and membership in an issue public. Political ideology has generally been excluded as a potential background predictor in studies about local food consumers (e.g., Dukeshire, Garbes, Kennedy, Boudreau, & Osborne, 2011; Nie & Zepeda, 2011; Racine, Mumford, Laditka, & Lowe, 2013; Stanton, Wiley, & Wirth, 2012; Zepeda & Nie, 2012). Indeed, in a systematic review of 73 studies about consumers and local food, political ideology was not examined, which may be because political ideology was not a study variable in the individual studies examined (Feldmann & Hamm, 2015).

One study did consider a connection between political ideology and local food, however,

and found it not to be a factor when it comes to opinions about local food. In that study, researchers examined opinions about local food in a pair of communities in Oregon, one of which trended conservative, the other liberal (Stephenson & Lev, 2004). No differences were found between the communities in terms of reasons to buy local food. So at least in that one community, political ideology was not directly associated with purchasing local food. However, as the connection between local food and political ideology has not been examined rigorously, a research question is posed:

RQ2: Will political ideology be directly associated with purchasing local food?

While it is questionable as to whether or not political ideology will be directly related to local food purchasing, issue public membership may likely be positively associated with local food purchasing. As the issue public this chapter considers is political consumers of food, and there are both political and ethical reasons to purchase food locally, it is hypothesized that:

H1d: Issue public membership (being a political consumer of food) will be positively associated with purchasing local food.

Knowledge about local food

Issue publics have been found to have greater knowledge about their own issue (Kim, 2009). Consequently, if political food consumers are indeed an issue public, issue public membership should be associated with greater knowledge about local food. This analysis, however, did not use a measure of factual knowledge but instead uses a measure of self-reported knowledge. It is important to acknowledge this difference, as the concepts are different. Individuals' perceptions of their own knowledge may be inflated and influenced by their

attitudes, preferences, or emotions (Ladwig, Dalrymple, Brossard, Scheufele, & Corley, 2012). Nevertheless, it may be that issue public members are also likely to self-report more knowledge about their issue, as their issue is important to them. It is less clear whether or not political ideology would be associated with self-reported knowledge about local food, as previously research has not clarified whether or not local food is an issue of special importance or interest to people of a particular ideology. Therefore the next hypothesis and research question are:

H2a: Issue public membership (being a political consumer of food) will be positively associated with greater self-reported knowledge about local food.

RQ3: Will political ideology be associated with greater self-reported knowledge about local food?

This chapter also explores the relationship between self-reported knowledge, beliefs, and behavior. While knowledge alone is unlikely to change behavior, it is still often an important precursor to behavior change as it contributes to our attitudes and values, which in turn influence behavior (Kollmuss & Agyeman, 2002). For example, in work about sustainable food consumption, researchers have pointed out that consumers would first need to know about the existence of potential benefits of sustainable food consumption before forming beliefs related to those benefits (Sirieix, Delanchy, Remaud, Zepeda, & Gurviez, 2013). Consequently the fourth hypothesis is:

H2b: Self-reported knowledge will be associated with beliefs about the benefits of local food.

Furthermore, this chapter is concerned with understanding more about the

communication channels that serve as sources of knowledge about local food. This chapter explores the influence of news, entertainment, social media, and discussion. With news, it appears there has not been a content analysis focusing specifically on news and local food. But, other content analyses point to local food being covered in the news as part of organic food culture (Cahill, Morley, & Powell, 2010), the raw milk debate (Rahn, Gollust, & Tang, 2017), and the developing aquaculture industry (Rickard & Feldpausch-Parker, 2016). With entertainment programming, several examples of local food advocates in television exist, such as celebrity chef Jamie Oliver, Vivian Howard of *A Chef's Life*, or even *Top Chef* contestants. In Wisconsin, where this research took place, the show *Wisconsin Foodie* (on PBS) specifically focuses on local food and farmers.

In addition to news and entertainment programs, social sources of information are also considered, including discussion and social media. With social media, research has not specifically pinpointed if and how people use social media to communicate about local food. However, studies find that people do Tweet about what they eat, where they eat, and with whom (Vidal, Ares, Machín, & Jaeger, 2015) and also about concepts that could be related to local food like access to healthy food (Ghosh & Guha, 2013). Additionally, the social media platform Pinterest (2017) reports that "food and drink" are one of their most popular categories. Regarding discussion and local food, researchers found that communication with other customers is more likely at farmers' markets than at supermarkets (Cicatiello, Pancino, Pascucci, & Franco, 2015). Interpersonal discussion and/or social media may be especially important for promoting local food, as word of mouth communication is considered to be an extremely effective marketing channel, even in online environments (King, Racherla, & Bush, 2014). Considering all these potentially influential information sources, but the lack of clarity regarding

their relative importance in this context, the second research question is:

RQ4: Which communication channels are most strongly associated with self-reported knowledge about local food?

In addition to examining which communication channels may be relatively more influential when it comes to self-reported knowledge about local food, this chapter considers if selective exposure is occurring through particular communication channels, and if selective exposure occurs based on political ideology, being a member of an issue public, or both, as discussed below.

Selective exposure

There is evidence that selective exposure occurs among issue publics in terms of issue publics seeking out information about their issue in the news (Bolsen & Leeper, 2013; Iyengar et al., 2008; Kim, 2009; Peralta et al., 2017). In other words, individuals in an issue public are attracted to content based on the issue or issues most personally interesting to them. This likely occurs because people do not have the resources to be informed about all issues, and instead become specialists in a particular domain (Kim, 2009). While there are not many studies about the degree to which selectivity occurs, or what kind of information issue publics are attracted to regarding their issue, one experimental study did find that members of issue publics were more attracted to balanced content than non-balanced content about their issue (Peralta et al., 2017).

In that experiment (Peralta et al., 2017), individuals were to select content about two issues, climate change and health care. For each issue, headlines either contained information obviously promoting one-side of an argument, or balanced arguments. Health care and climate

change issue public members (identified based on attitude-importance and attitude-strength questions) were more likely to choose the balanced content than the non-balanced content.

There is also evidence from literature focused on political consumers, the issue public of interest to this chapter, which finds that they seek out information about products. Through interviews, Atkinson (2012) found that for some political consumers, information seeking is an integral part of consumption behavior. Consequently, it can be surmised that political consumers of food would pay more attention to food-related information in general. In contrast, people of any particular political ideology (the other means by which selective exposure is explored in this chapter) would not necessarily pay more attention to food-related information, as there is not a basis by which to assume political ideology is associated with concern about food-related issues. These leads to the next hypothesis and research question:

H3: Increased engagement with different communication channels will be associated with membership in an issue public (being a political consumer of food).

RQ5: Will increased engagement with different communication channels be associated with political ideology?

Selective-exposure is not just an issue of seeking out information that is related to what one cares about, however, as much research suggests that selective exposure occurs based on political ideology or partisanship. Trends in news consumption confirm that liberals and conservatives rely on different news sources. A report from the Pew Research Center finds that almost 50% of "consistently conservative" individuals rely on Fox News as their primary news source, while "consistently liberal" individuals relied on a number of different sources (e.g., CNN, NPR, MSNBC), but not Fox News (Mitchell, Gottfriend, Kiley, & Matsa, 2014).

Relatedly, a separate Pew report found that about three quarters of Americans consistently turn to the same sources for news, which suggests that the norm is not to examine the perspective of various news sources about the same issue (Mitchell, Gottfriend, Barthel, & Shearer, 2016).

Several reasons explain why partisans might selectively expose themselves to media that is compatible with their ideologies. These are outlined in Chapter 1 and will be briefly revisited here. For one, as people seek to reduce cognitive dissonance, they may favor information that they perceive to agree with their beliefs (Festinger, 1957) by relying on news outlets known to match their political ideologies. As information that is consistent with one's beliefs is easier to process (Yeo et al., 2015), people may also rely on partisan news sources to more generally reduce cognitive effort. Some evidence for this comes from research by Messing & Westwood (2014), which found that participants relied on source cues along partisan lines when selecting stories to read in an experimental setting. However, when social endorsement cues (the number of recommendations for articles) were also present, participants were less likely to click on stories affiliated with news sources typically perceived to be congruent with their political ideology. In other words, ideology as a mental short cut may matter in some situations, but less so when other relevant cues are available.

In sum, it can be assumed that liberals and conservatives are paying more attention to media outlets that ostensibly align with their political views, at least to some degree. Lacking content analysis studies about local food, however, it is unknown if liberal and conservative media outlets do indeed cover the topic of local food differently. Therefore a research question is posed related to political ideology and knowledge about local food:

RQ6: Will political ideology moderate the relationship between engagement with different communication channels and self-reported knowledge about local food?

If political ideology does moderate the relationship between attention to food in different communication channels and knowledge about local food, this would indicate that selective exposure may be occurring. For example, if conservative media cover local food issues more often or with more depth than liberal media, paying more attention to related information in the news could lead to greater knowledge among conservatives. However, as mentioned previously, it remains unknown if liberal and conservative media outlets cover local food issues differently.

With issue public members, who are expected to generally pay more attention to their issue (as addressed in H3), there is reason to believe that customizable information formats may be especially important for knowledge gains. Kim (2009) found web usage to be associated with a greater degree of domain-specific knowledge among issue public members, apparently because online information environments allow access to specialized information compared to information prepared for a more general audience. Social media use, in particular, may be attractive to political consumers (the issue public of concern for this analysis) as evidence finds that being a political consumer is positively associated with social media use (Gil de Zúñiga, Copeland, & Bimber 2014).

So while political consumers are likely to pay attention to food-related information in general, information about food from a more customizable information source could lead to differential gains in knowledge. In this analysis, four different communication channels were examined, but the level of customization is not specified. The channels considered were the news, entertainment programs, social media, and discussion. The degree to which these communication channels are customized depends on an individual's media habits, as any of these channels has the potential to provide customized information. Given that limitation, a research question rather than a hypothesis addresses the relationships between issue public membership

(being a political food consumer), communication channels, and knowledge:

> RQ7: Will issue public membership (being a political food consumer) moderate the relationship between self-reported knowledge and attention to food in different communication channels?

Significant interactions in this case would demonstrate that a particular communication channel leads to differential gains among issue publics. If this is the case, it may be that some communication channels offer greater potential for political consumers to gain knowledge, as particular channels may contain more relevant information, or information in a format that is easier for political consumers to evaluate (e.g., information available through a social network).

Motivated Reasoning

The previous research question addressed how information through different communication channels may influence knowledge about local food, but it cannot be assumed that all individuals seek balanced information for which to base their decisions. Some individuals will selectively avoid or seek information, a tendency rooted in motivated reasoning.

Motivated reasoning describes how individuals can have accuracy or directional goals in mind when they approach information (Kunda, 1990). If motivated directionally, or motivated by a desire to reach particular conclusions, individuals tend to consider information supportive of their views as more valid (Kunda, 1990). This could potentially lead to selective exposure as such individuals may view content that is consistent with their beliefs as seemingly more valid and seek it out via communication sources that support their pre-existing belief systems. When motivated with directional goals, individuals also tend to process information in a way that

emphasizes stored information that is more consistent with their beliefs (Kunda, 1990). So as people selectively choose media content that aligns with their pre-existing beliefs, motivated reasoning may also influence them, as information reinforcing their beliefs is disproportionately available to them.

Motivated reasoning can take place without selective exposure, however. If partisan individuals with opposing views see the same information, for example, they may still interpret it differently and in a way that supports their own point of view. In a biased way, individuals can favor arguments that support their position as stronger, or individuals can put more effort into countering information that opposes their point of view (Yeo et al., 2015).

As motivated reasoning can occur without selective exposure, motivated reasoning and selective exposure can potentially become confounded in research. If people with opposing political ideologies selectively engage with media, their opinions or beliefs might become more divergent because partisan news outlets cover information differently, regardless of motivated reasoning. Research has investigated a number of topics and found partisan outlets to cover issues differently (Ahern & Formentin, 2016; Farnsworh & Lichter, 2011; Feldman, Maibach, Roser-Renouf, & Leiserowitz, 2012). However, some partisans might consume media that is ideologically neutral, or they may consume media representing multiple viewpoints, but partisan opinions could still diverge if partisans interpret the information differently due to biased processing. This means it would not be possible for researchers to explain a differential change in partisan belief as engagement with media increases without tracking how individuals use specific media sources. Even then, it would still be difficult to disentangle the processes of motivated reasoning and selective exposure, as the two phenomena can reinforce each other.

It appears much research on this subject does not attempt to separate selective exposure

from motivated reasoning, but instead emphasizes the outcome – that as partisans increasingly engage with media, their perspectives change differentially. Correspondingly, some of the work on this subject uses the terms "belief gap" (Hindman, 2009, 2012) or "communication gap" (Nisbet, Cooper, & Ellithorpe, 2015), the implication being that media can intensify political polarization.

Scholars take several different approaches when they study how political ideology appears to be influenced by increased engagement with media. Specifically, three tactics are to 1) examine differences in liberal and conservative belief on topics as media coverage of those topics increases, 2) examine differences in conservative and liberal belief as their self-reported media usage with partisan media outlets varies, and 3) examine differences in conservative and liberal belief as their self-reported media use varies in general, but not with specific sources. Findings from each approach will be discussed.

Work that looked at differences among liberals and conservatives on topics during times of increased media coverage of those topics found that beliefs among liberals and conservatives diverged regarding climate change (Hindman, 2009), as did beliefs about healthcare reform among Democrats and Republicans (Hindman, 2012). This work is compelling in its portrayal of a broad trend — that partisan beliefs diverged over time as media coverage of an issue increased during that same time period. A limitation of this strategy, however, is that there is not a direct connection between the individuals surveyed and their personal media exposure.

In contrast, other researchers drew connections between usage of specific partisan media outlets and partisanship or political ideology, and then made connections between media use and beliefs (Dierks & Landreville, 2017; Veenstra, Hossain, & Lyons, 2014; Veenstra, Lyons, & Fowler-Dawson, 2016). For example, in one study about beliefs and fracking, political ideology

was associated with partisan media usage, which was in turn associated with different beliefs about risks of fracking (Veenstra et al., 2016). Conservative media use was associated with perceiving fewer health and environmental risks of fracking, while liberal media use was associated with the belief that there were more health risks (Veenstra et al., 2016). Partisanship was also directly associated with beliefs about fracking risks, with Republicans perceiving fracking to be less risky. Overall, this suggests that people with differing ideologies pay attention to different partisan media sources, and in turn, attention to partisan media contributes to the divergent beliefs of partisans (on top of differences that partisanship alone accounted for).

A limitation of this approach, however, is that individuals would need to accurately note their usage of media outlets, which could be challenging for individuals with diverse media diets. Alternatively, participants could self-identify their media use as partisan more broadly (e.g., use of liberal or conservative news outlets). This would require participants to acknowledge their choices as partisan, however, and they may not realize or agree with that characterization of their choices.

Other studies examine the moderating role of political ideology (or partisanship) as self-reported media usage in general varies. For example, using data from a phone survey of people in Wisconsin, interactions were found between political party affiliation and increased attention to politics on television regarding attitudes about the benefits and risks of biofuels in three domains: political, economic, and ethical/social (Cacciatore, Binder, Scheufele, & Shaw, 2012). Interactions were also found between political party affiliation and attention to politics in newspapers regarding attitudes about the benefits and risks of biofuels in two of the domains: political and economic. Attention to science in newspapers and television were not part of any significant interactions, and no interactions were found regarding a fourth domain, the

environment. A limitation of this strategy is that it is difficult to pinpoint whether or not individuals are using partisan media, or if individuals are looking at neutral or diverse content but still engaging in motivated reasoning. It is more likely that individuals are looking at media that favors their beliefs, however, as experimental work points toward a tendency for individuals to favor media that aligns with their beliefs, and to avoid media that counters their beliefs or is less overtly partisan (Yeo, Xenos, Brossard, & Scheufele, 2015).

Consequently, this chapter uses such a strategy. If motivated reasoning were occurring in the context of local food, one would expect knowledge or attention to information from different communication channels to influence liberal and conservative beliefs about local food differentially. In this analysis, beliefs about local food quality and benefits to the environment are both examined. Liberals, who are generally more concerned with environmental protection (Anderson, 2017; Funk & Kennedy, 2017; Stokes et al., 2015), may seek out information that supports the idea that local food has environmental benefits, while avoiding information that suggests it does not, or interpret information they encounter in such a way that leads them to believe local food is better for the environment. In other words, knowledge about local food (or information encountered through various communication channels) could lead liberals to believe that local food has environmental benefits to a greater degree than such knowledge or information would for conservatives. In contrast, for beliefs about local food and quality, such a trend would be questionable as there is not evidence to suggest that liberals or conservatives would have a particular stake in the quality of local food. Consequently the next hypothesis and research question are as follows:

H4a: Political ideology will moderate the relationship between beliefs about the environmental benefits of local food and self-reported knowledge.

RQ8: Will political ideology moderate the relationship between beliefs about local food quality and self-reported knowledge?

Relatedly, as information from different communication channels might influence beliefs directly rather than through knowledge, it is hypothesized that:

H4b: Political ideology will moderate the relationship between beliefs about the environmental benefits of local food and engagement with different communication channels.

It is less clear whether or not media would influence people of different political ideologies differentially when it comes to beliefs about quality of local food, which is less overtly political. Therefore the next research question is:

RQ9: Will political ideology moderate the relationship between beliefs about local food quality and different communication channels?

If there is a significant interaction between political ideology, belief about the environmental benefits of local food, and communication channels, this would imply that motivated reasoning is occurring. It would suggest that as people of different political ideologies gain information or knowledge, they interpret it in a way that supports their beliefs.

For an issue public, motivated reasoning may also occur. An issue public could, hypothetically, select information likely to support their beliefs about their issue. Such information would not necessarily be found in media with a particular partisan slant, however, if the issue of concern is not one that clearly falls along party lines. As noted previously, research

about issue publics and motivated reasoning is conflicting. One study found that issue publics prefer balanced information, suggesting that they may not be engaging in motivated reasoning (Peralta et al., 2017). It may be the case that issue publics, who show greater concern about a particular issue, are motivated by accuracy and seek balanced, informative content. On the other hand, Kim (2009) found that as issue public members sought more information about their issue, they held more extreme beliefs about their issue. Thus it could be the case that as issue public members become more informed about their issue, their initial beliefs about that issue are strengthened. Given this ambiguity, the next research questions are:

RQ10: Will issue public membership (being a political food consumer) moderate the relationship between self-reported knowledge and beliefs about local food?

RQ11: Will issue public membership (being a political food consumer) moderate the relationship between engagement with different communication channels and beliefs about local food?

Beliefs and Behavior

A final component of this analysis is the relationship between the beliefs examined and behavior. Beliefs are an important predictor of behavior (Armitage & Conner, 2001; Kollmuss & Agyeman, 2002). While the focus of this chapter is not to describe the best predicators of local food purchasing (this would involve looking at many other components of behavior), confirming whether or not the beliefs examined are associated with behavior is important to ensuring that these findings have relevance to those who promote local food. As mentioned previously, researchers found that both perceptions related to the environment and food quality are related to local food purchasing (Byker et al., 2012; Dodds et al., 2014; Feldmann & Hamm, 2015; Kumar

& Smith, 2018). Therefore, it is predicted that:

H5: Beliefs about the benefits of local food will be associated with local food purchasing.

It is less clear whether political ideology, issue public membership, or both, would moderate the relationship between beliefs and behavior. It could be that beliefs in the benefits of local food might be related to behavior for some groups, but not others. For example, conservatives may acknowledge that local food has environmental benefits, but this would not necessarily motivate them to purchase local food if environmental benefits are not as important to them.

Along those lines, it is also worth exploring whether or not interactions exist between the moderators (political ideology or issue public membership), behavior, and knowledge or engagement with different communication channels. Significant interactions would suggest that for some groups, having more knowledge (or paying attention to information about food through different communication channels) could differentially impact behavior. As this is exploratory, a research question addresses these ideas:

RQ12: Will political ideology, or issue public membership (being a political consumer of food), moderate the relationships between behavior and 1) belief, 2) self-reported knowledge, or 3) engagement with different communication channels?

Methods

Survey development and dissemination are described in detail in Chapter 2. This section describes how respondents were classified based on political ideology and issue public

membership, the analysis strategy, and variable construction.

Political ideology and issue public membership

For this chapter, individuals were classified as liberals, conservatives, or moderates through two 5-point scale questions about ideology. One item asked participants to rate themselves in terms of social issues, the other economic issues. The scale options were "Very conservative," "Somewhat conservative," "Moderate," "Somewhat liberal," and "Very liberal." Responses to these two questions were highly correlated, $r = .76$, $p < .001$. In order to avoid multicollinearity, these two survey items were not placed together in a regression model. Instead, regression models were repeated, with one set using the economic ideology question and the other using the social ideology question. In each case, the 5-point scale was collapsed into a 3-point scale with respondents classified as conservative (a "1" or "2" on the scale, which corresponded to "Very conservative" and "Somewhat conservative"), moderate (a "3" on the scale, which corresponded to "Moderate"), or liberal (a "4" or "5" on the scale, which corresponded to "Somewhat liberal" and "Very liberal").

Individuals were also classified according to being members of an issue public (political consumers of food). Three survey items were averaged into a single variable for this classification. The items were, "Do you take political and/or ethical issues into consideration with the food you buy," "In the last year, how often did you avoid buying food grown or made by certain businesses as a way to boycott them," and, "In the last year, how often did you seek out food grown or made by certain businesses as a way to support them." Cronbach's alpha coefficient for the three measures was .78. The coefficient measures internal consistency of an index where a value of .70 or higher is considered acceptable (Rovai, Baker, & Ponton, 2013).

Individuals that averaged at the scale midpoint or above (n = 127) were counted as members of the issue public, and members who averaged lower than the scale midpoint (n = 510) were treated as not being members of the issue public.

Analysis

To address the hypotheses and research questions, several regression models were run with the dependent variable being behavior (local food purchasing), beliefs (either about the benefits of local food in terms of quality or for the environment), self-reported knowledge, or the communication-related variables. In the full model (where the dependent variable was local food purchasing), Block 1 included demographic variables plus political ideology (either economic or social) and status as member of the issue public. Block 2 included communication variables. Block 3 was self-reported knowledge about local food. Block 4 included beliefs about local food quality and environmental benefits. Block 5 included the interaction terms. Respondents were excluded pairwise from analysis to minimize cases lost, with 575 cases remaining out of 642 respondents (49 respondents were removed from the initial 691 respondents as they did not do at least half of their household food shopping, as described in Chapter 2) for the regression model with economic ideology, and 572 cases remaining the model with social ideology. Variable construction is described below.

Local food purchasing

To measure self-reported local food purchasing, which was treated as the dependent variable, four items were used. The items were all on a 5-point scale. Two items were part of the same question series, where one item asked how often (during the summer) the respondent

bought local fruit and the other item asked how often (during the summer) the respondent bought local vegetables, where a 1 meant "Never" and a 5 meant "Always." There was also a "Not sure" option, which if selected, was treated as a missing data point. Another item in this index was based on a question that asked how much local fruit and vegetable purchasing the respondent did, with 1 meaning "None" and 5 meaning "Very much." The last item in this index asked respondents during an average week in the summer, what percent of the fruits and vegetables the respondent purchased were local with 1 meaning "None" and 5 meaning "76% to 100%." Cronbach's alpha coefficient for the four measures was .81.

Beliefs about local food

Beliefs related to the environment and food quality were measured. These beliefs were measured on a 5-point scale and came from two different question series. Beliefs about the environment were measured with a question series that began, "In your opinion, does buying local fruits and vegetables result in more of the following things when compared to buying non-local fruits and vegetables?" In the series, a 1 meant "Not at all" and a 5 meant "Very much." Two items were indexed for beliefs related to the environment. They were "Smaller carbon footprint" and "Reduces pollution more." On two-item scales, it is recommended that the Spearman-Brown statistic be used for reliability (Eisinga, Grotenhuis, & Pelzer, 2013). For the two environmental items, the coefficient was .94.

Beliefs related to quality were part of a different question series, but with the same scale, that began, "In your opinion, do local fruits and vegetables have the following qualities more than non-local fruits and vegetables?" Two items were indexed. These were "Fresher" and "Better tasting." The Spearman-Brown coefficient was .85.

Self-reported knowledge about local food

Self-reported knowledge about local food was measured with two survey items. The questions were "Are you knowledgeable about local fruits and vegetables?" and, "Are you aware of issues that affect the supply of local fruits and vegetables (e.g. weather, retail options, distribution, etc.)." For these items, a 1 meant "Not at all" and a 5 meant "A great deal." The Spearman-Brown coefficient for the two self-reported knowledge items was .77.

Attention to information about food in different communication channels

Communication through four channels was measured — news, entertainment, social media, and interpersonal discussion. Three items were part of the same question series. The question asked, "In the last year, how much attention did you pay to information about food from these sources?" The items were "The news," "Entertainment shows or movies," and "Social media (e.g., Facebook, Twitter, Instagram, Pinterest)." For this series, a 1 meant "None" and a 5 meant "A great deal."

For interpersonal discussion, two items were indexed. These related specifically to local food. The items were the frequency of talking to a family member about local food and talking to friends about local food. These items were part of the same question series as each other, which was a 5-point scale. A 1 meant "Never" and a 5 meant "Daily." The Spearman-Brown coefficient was .87.

Background variables/demographics

Respondents reported about their age, gender, income, education, ethnicity, number of children, and convenience of purchasing local food. Gender was coded so a 2 meant female, and 1 meant male. For age, the question included eight options, ranging from "18 to 24" to "85 or

more." An index for socioeconomic status (SES) was created with responses to the income and education items. The index was a Z-score because education had seven options while income had eight. The first option for income was "Under 15,000" and the eighth was "150,000 or more." For education, the first option was "Some high school or less," and the last was "Graduate or professional degree." There were several options for ethnicity, however, this item was ultimately not included in the regression model due to lack of variation (the sample was overwhelmingly White). For number of children, respondents were asked how many people in their household were younger than 18, with seven response choices ranging from 0 to "6 or more." For convenience of purchasing local food, respondents were asked "Is buying local fruits and vegetables more time consuming than buying non-local fruits and vegetables (e.g. extra shopping trips or reading product labels more carefully)?" with five response choices ranging from "Never" to "Always."

Interaction terms

Several interaction terms were created between political ideology, the communication variables (news, entertainment, social media, and discussion), self-reported knowledge, and beliefs. The variables were first standardized to avoid multicollinearity. Then, ideology was multiplied by each of the other variables in turn. In this same fashion, interactions terms were created with issue public membership (being a political consumer of food), rather than political ideology.

Results

Regression results where the political ideology question asked about economic issues are

displayed in Table 3.1, with results where the political ideology question asked about social issues in Table 3.2. Results were very similar between the two tables. Therefore, for ease of interpretation, the numbers presented in the text of this section refer to numbers in Table 3.1, unless otherwise noted.

Background variables/demographics (H1, RQ1, RQ2)

H1a put forward that being female would be associated with local food purchasing, and H1b put forward that being older would be associated with local food purchasing. Older age was associated with more local food purchasing ($\beta = .16$, $p < .001$) but gender was not significantly associated with purchasing local food directly. Nevertheless, being female was indirectly related to more local food purchasing, through knowledge and beliefs. Also of note, while older age was associated with more local food purchasing and more knowledge ($\beta = .17$, $p < .001$), it was negatively associated with beliefs that local food is of superior quality ($\beta = -.12$, $p = .012$) and better for the environment ($\beta = -.12$, $p = .014$).

Several other background variables were not significant. H1c, which predicted that finding local food inconvenient to purchase would be negatively associated with purchasing local food, was not supported. RQ1 considered whether number of children or SES would be significantly associated with local food purchasing, and neither relationship was significant.

Political ideology was also not directly associated with local food purchasing, as

Table 3.1. Regression results predicting self-reported knowledge, beliefs, and behavior related to local food purchasing (N = 575) when economic issues are used for the political ideology measure.

	DV = Knowledge		DV = Quality		DV = Environment		DV = Purchasing	
Variables	B (SE)	β	B (SE)	β	B (SE)	β	B (SE)	β
Block 1 - Background predictors								
Age	.09 (.03)	.17***	−.08 (.03)	−.12*	−.09 (.04)	−.12*	.09 (.02)	.16***
Gender	.15 (.07)	.09*	.23 (.08)	.11**	.32 (.10)	.12**	.09 (.06)	.05
SES	−.08 (.04)	−.08*	.06 (.05)	.05	−.03 (.06)	−.02	−.03 (.03)	−.03
Number of children	.05 (.04)	.05	−.08 (.05)	−.08	.06 (.06)	.05	−.02 (.03)	−.02
Convenience	.03 (.03)	.03	.07 (.04)	.07	.08 (.05)	.06	−.05 (.03)	−.05
Ideology (economic)	.00 (.04)	.00	−.06 (.05)	−.04	.31 (.06)	.19***	.03 (.04)	.02
Issue public (political consumer)	.21 (.09)	.10*	.19 (.10)	.08	.39 (.12)	.13**	.09 (.08)	.05
Incremental adjusted R^2 (%):		7.9***		6.7***		16.2***		.09***
Block 2 - Communication channels								
Attention to food in social media	−.02 (.03)	−.02	.04 (.04)	.05	.04 (.05)	.03	.00 (.03)	.00
Attention to food in entertainment	−.02 (.04)	−.02	−.07 (.05)	−.06	−.01 (.06)	−.01	.12 (.04)	.12**
Attention to food in news	.08 (.03)	.09*	−.03 (.04)	−.03	.07 (.05)	.06	.05 (.03)	.07
Discussion about local food	.42 (.04)	.40***	.21 (.06)	.17***	.27 (.07)	.18***	.16 (.04)	.15***
Incremental adjusted R^2 (%):		15.2***		5.8***		4.8***		13.6***
Block 3 - Self reported knowledge about local food								
Self-reported knowledge			.29 (.05)	.24***	.13 (.06)	.09*	.25 (.04)	.26***
Incremental adjusted R^2 (%):				4.5***		.40*		7.4***
Block 4 - Beliefs								
Beliefs about quality							.17 (.03)	.21***
Beliefs about environment							.04 (.03)	.06
Incremental adjusted R^2 (%):								4.6***
Block 5 - Interactions								
Ideology x food social media	.02 (.03)	.03	.01 (.04)	.01	.00 (.04)	.01	−.02 (.03)	−.02
Ideology x food entertainment	.02 (.03)	.02	.02 (.04)	.02	−.08 (.05)	−.06	−.02 (.03)	−.03
Ideology x food news	.00 (.03)	.00	−.07 (.04)	−.06	−.01 (.05)	−.01	−.03 (.03)	−.03
Ideology x local food discussion	.02 (.03)	.02	−.03 (.04)	−.03	−.11 (.05)	−.10*	−.04 (.03)	−.05
Issue public x food social media	.02 (.03)	.03	−.07 (.04)	−.07	.01 (.04)	.01	−.08 (.03)	−.11**
Issue public x food entertainment	.02 (.03)	.02	−.02 (.04)	−.02	−.05 (.04)	−.04	−.02 (.03)	−.02
Issue public x food news	.00 (.03)	.00	−.05 (.04)	−.05	−.10 (.05)	−.08*	−.01 (.03)	−.01
Issue public x local food discussion	.01 (.03)	.02	−.03 (.04)	−.03	−.05 (.04)	−.05	−.07 (.03)	−.11**
Ideology x knowledge			.01 (.04)	.01	−.08 (.05)	−.07	−.01 (.03)	−.02
Issue public x knowledge			−.03 (.04)	−.03	−.02 (.05)	−.02	−.05 (.03)	−.06
Ideology x quality belief							−.03 (.03)	−.04
Ideology x environmental belief							−.05 (.03)	−.06
Issue public x quality belief							.00 (.03)	.01
Issue public x environmental belief							−.02 (.03)	−.03
Incremental adjusted R^2 (%):		−.90		−.20		.70		.90
Total adjusted R^2 (%):		22.2***		16.8***		22.1***		35.5***

Note: B is the unstandardized regression coefficient and β is a standardized regression coefficient (final) for all blocks except for the interactions in Block 5 which are before-entry standardized coefficients. Items comprising the variables were measured on a 1 to 5 scale expect for some of the demographic variables. SES = socioeconomic status. DV = dependent variable.

*$p < .05$. **$p < .01$. ***$p < .001$.

Table 3.2. Regression results predicting self-reported knowledge, beliefs, and behavior related to local food purchasing (N = 572) when social issues are used for the political ideology measure.

	DV = Knowledge		DV = Quality		DV = Environment		DV = Purchasing	
Variables	B (SE)	β	B (SE)	β	B (SE)	β	B (SE)	β
Block 1 - Background predictors								
Age	.09 (.03)	.17***	−.08 (.03)	−.12*	−.10 (.04)	−.13**	.08 (.02)	.16***
Gender	.15 (.07)	.09*	.22 (.08)	.11**	.36 (.10)	.14***	.09 (.06)	.06
SES	−.08 (.04)	−.08*	.06 (.05)	.06	−.05 (.06)	−.03	−.03 (.03)	−.03
Number of children	.05 (.04)	.05	−.08 (.05)	−.07	.05 (.06)	.04	−.02 (.03)	−.02
Convenience	.03 (.03)	.03	.07 (.04)	.07	.07 (.05)	.05	−.05 (.03)	−.06
Ideology (social)	.00 (.04)	.00	−.05 (.05)	−.04	.20 (.06)	.13**	.02 (.04)	.02
Issue public (political consumer)	.21 (.09)	.10*	.19 (.10)	.08	.43 (.13)	.14**	.10 (.08)	.05
Incremental adjusted R^2 (%):		7.9***		6.7***		14.4***		9.0***
Block 2 - Communication channels								
Attention to food in social media	−.02 (.03)	−.02	.04 (.04)	.05	.04 (.05)	.03	.00 (.03)	.00
Attention to food in entertainment	−.02 (.04)	−.02	−.07 (.05)	−.06	−.01 (.06)	−.01	.11 (.04)	.12**
Attention to food in news	.08 (.03)	.09*	−.03 (.04)	−.03	.08 (.05)	.07	.05 (.03)	.07
Discussion about local food	.42 (.04)	.40***	.21 (.06)	.17***	.28 (.07)	.18***	.16 (.04)	.15***
Incremental adjusted R^2 (%):		15.2***		5.8***		4.9***		13.5***
Block 3 - Self reported knowledge about local food								
Self-reported knowledge			.29 (.05)	.24***	.13 (.06)	.09*	.25 (.04)	.26***
Incremental adjusted R^2 (%):				4.4***		.40*		7.5***
Block 4 - Beliefs								
Beliefs about quality							.17 (.03)	.21***
Beliefs about environment							.04 (.03)	.06
Incremental adjusted R^2 (%):								4.5***
Block 5 - Interactions								
Ideology x food social media	.02 (.03)	.03	−.01 (.04)	−.01	.02 (.05)	.02	−.02 (.03)	−.02
Ideology x food entertainment	−.02 (.03)	−.02	−.03 (.04)	−.03	−.09 (.05)	−.07	−.05 (.03)	−.06
Ideology x food news	−.04 (.03)	−.04	−.07 (.04)	−.07	.01 (.05)	−.01	−.05 (.03)	−.05
Ideology x local food discussion	.06 (.03)	.08	.01 (.04)	.01	−.06 (.05)	−.05	−.04 (.03)	−.05
Issue public x food social media	.02 (.03)	.03	−.07 (.04)	−.07	.01 (.04)	.01	−.08 (.03)	−.11**
Issue public x food entertainment	.02 (.03)	.02	−.02 (.04)	−.02	−.06 (.04)	−.05	−.02 (.03)	−.03
Issue public x food news	.00 (.03)	.01	−.05 (.04)	−.05	−.09 (.05)	−.07	−.01 (.03)	−.01
Issue public x local food discussion	.01 (.03)	.02	−.03 (.04)	−.03	−.04 (.04)	−.04	−.07 (.03)	−.11**
Ideology x knowledge			.02 (.04)	.02	−.01 (.05)	−.01	−.03 (.03)	−.04
Issue public x knowledge			−.03 (.04)	−.03	−.02 (.05)	−.02	−.05 (.03)	−.06
Ideology x quality belief							−.02 (.03)	−.02
Ideology x environmental belief							−.01 (.03)	−.01
Issue public x quality belief							.00 (.03)	.01
Issue public x environmental belief							−.02 (.03)	−.03
Incremental adjusted R^2 (%):		.10		−.10		.20		.01
Total adjusted R^2 (%):		23.2***		16.8***		19.9***		35.4***

Note: B is the unstandardized regression coefficient and β is a standardized regression coefficient (final) for all blocks except for the interactions in Block 5 which are before-entry standardized coefficients. Items comprising the variables were measured on a 1 to 5 scale expect for some of the demographic variables. SES = socioeconomic status. DV = dependent variable.

*p < .05. **p < .01. ***p < .001.

considered in RQ2. H1d hypothesized that issue public membership (being a political food consumer) would be associated with more local food purchasing, but it was not. Nevertheless, some indirect relationships exist between local food purchasing and issue public membership, which will be discussed in the following sections.

Self-reported knowledge (H2, RQ3, RQ4)

H2a put forward that issue public membership (being a political consumer of food) would be associated with greater self-reported knowledge about local food. This was supported, as there was a significant relationship between issue public membership and greater self-reported knowledge about local food ($\beta = .10$, $p = .014$). There was not a significant relationship between political ideology and knowledge about local food, as explored in RQ3.

Next, H2b hypothesized that self-reported knowledge would be associated with stronger beliefs about the benefits of local food. This hypothesis was supported. More self-reported knowledge was associated with stronger beliefs about the benefits of local food in terms of local food quality ($\beta = .24$, $p < .001$) and the environment ($\beta = .09$, $p = .04$). Additionally, self-reported knowledge was a direct predictor of local food purchasing ($\beta = .26$, $p < .001$).

There were also several variables that predicted beliefs about local food other than self-reported knowledge that are noteworthy. Stronger belief that local food was of superior quality was associated with more discussion about local food ($\beta = .17$, $p = <. 001$). Stronger belief that local food has environmental benefits was associated with being a member of the issue public ($\beta = .13$, $p = .002$), being more liberal ($\beta = .19$, $p = <. 001$), and more discussion about local food ($\beta = .18$, $p < .001$).

RQ4 was concerned with exploring which communication channels would be most

strongly associated with self-reported knowledge about local food. Only attention to food-related information in the news (β = .09, p = .02) and discussion about local food (β = .40, p = <. 001) were significantly associated with more self-reported knowledge about local food.

Selective exposure (H3, RQ5, RQ6, RQ7)

H3 suggested that engagement with different communication channels would be associated with membership in an issue public (being a political consumer of food). This was supported. In regressions where background variables predicted each of the communication variables (not shown in Tables 3.1 or 3.2), being an issue public member was positively associated with attention to food-related information in the news (β = .15, p < .001) and discussion about local food membership (β = .26, p < .001). Similarly, RQ5 explored whether engagement with different communication channels would be associated with political ideology. Being more liberal was associated with more attention to food-related information in the news (β = .10, p = .017). Regardless of the ideology measure used in the regression, these results were nearly identical, with one exception. When the social measure of ideology was used, being more liberal was also associated with more attention to food-related information in social media (β = .11, p = .005).

RQ6 considered if political ideology would moderate the relationship between engagement with different communication channels and knowledge about local food. No interactions were significant.

Also related to selective exposure is RQ7, which explored whether issue public membership would moderate the relationship between self-reported knowledge and engagement in different communication channels. No interactions were significant.

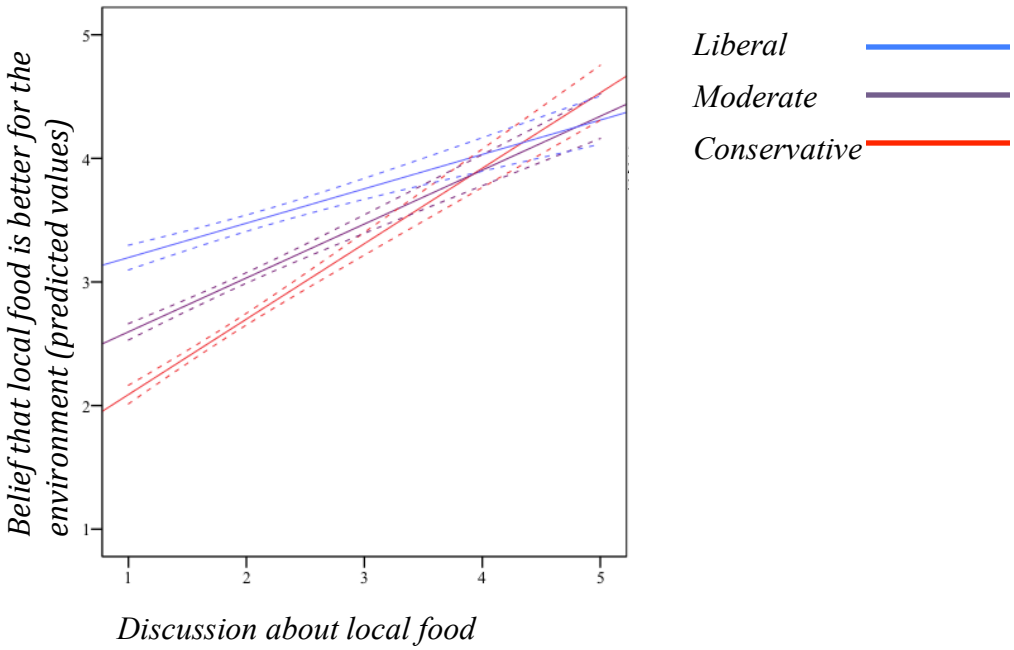
Motivated reasoning (H4, RQ8, RQ9, RQ10, RQ11)

There was little support for hypotheses related to motivated reasoning. H4a hypothesized that political ideology would moderate the relationship between beliefs about the environmental benefits of local food and self-reported knowledge. This was not supported, as the interaction was not significant. RQ8 considered whether or not political ideology would moderate the relationship between beliefs about local food quality and self-reported knowledge. That interaction was also not significant.

H4b hypothesized that political ideology would moderate the relationship between beliefs about the environmental benefits of local food and attention to food-related information from different communication channels. There was a significant interaction between political ideology, belief about the environmental benefits of local food, and discussion about local food ($\beta = -.10$, $p = .017$). This interaction was plotted (Figure 3.1) and finds that with increased discussion, conservative and moderate belief about environmental benefits of local food changes more rapidly than liberal belief. The interaction is only significant in the regression where economic ideology is used (Table 3.1). Political ideology did not moderate the relationship between beliefs about local food quality and attention to food-related information from different communication channels, however, as explored in RQ9.

Whether or not issue public membership (being a political food consumer) would moderate the relationship between knowledge and beliefs about local food was also explored (RQ10). There were no significant interactions between issue public membership, knowledge, and beliefs. Issue public membership also did not moderate the relationships between beliefs about local food and engagement with different communication channels, for the most part (RQ11). There was a significant interaction between issue public membership, attention to food-

Figure 3.1. Interaction between political ideology, discussion about local food, and belief that local food is better for the environment.

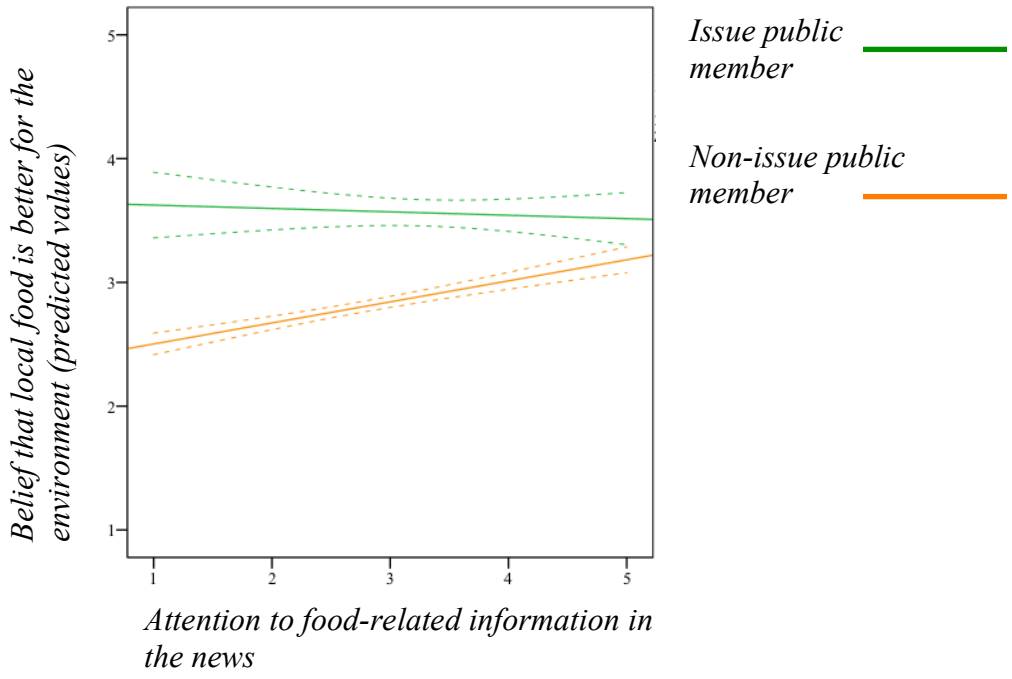


related information in the news, and belief that local food has environmental benefits (β = −.08, p = .044). The plot in Figure 3.2 shows that with increased attention to food-related news, belief about environmental benefits of local food increases more rapidly among non-issue publics. This interaction is only significant in the regression where economic ideology is used (Table 3.1).

Behavior (H5, RQ12)

It was hypothesized that stronger beliefs about the benefits of local food in terms of quality and the environment would be associated with local food purchasing (H5), however, only beliefs about local food being of superior quality were related to self-reported local food purchasing (β = .21, p < .001). The before entry beta for environmental benefits was significant,

Figure 3.2. Interaction between issue public membership, attention to food-related information in the news, and belief that local food is better for the environment.



however (β = .14, $p < .001$), suggesting that environmental beliefs may be related to local food purchasing, but to the extent that they heighten individuals' perceptions about quality. Also of note, unexpectedly, is that there were two communication variables directly associated with behavior. These were discussion about local food (β = .15, $p < .001$) and attention to food-related information in entertainment programs (β = .12, $p = .001$).

Several interactions related to behavior were considered in RQ12. These included whether or not political ideology and issue public membership would moderate the relationships between behavior and 1) belief, 2) knowledge, and 3) engagement with different communication channels. There were two significant interactions involving issue public membership and behavior, one with social media (β = −.11, $p = .002$), as shown in Figure 3.3, and one with discussion (β = −.11, $p = .004$), as shown in Figure 3.4. Figure 3.3 shows that for non-issue

publics, attention to food-related information in social media appears to translate to increased local food purchasing at a higher rate than for issue publics. Similarly, as Figure 3.4 shows, discussion about local food among non-issue publics is associated with increased local food purchasing at a rate higher than for issue publics.

Figure 3.3. Interaction between issue public membership, attention to food-related information in social media, and local food purchasing.

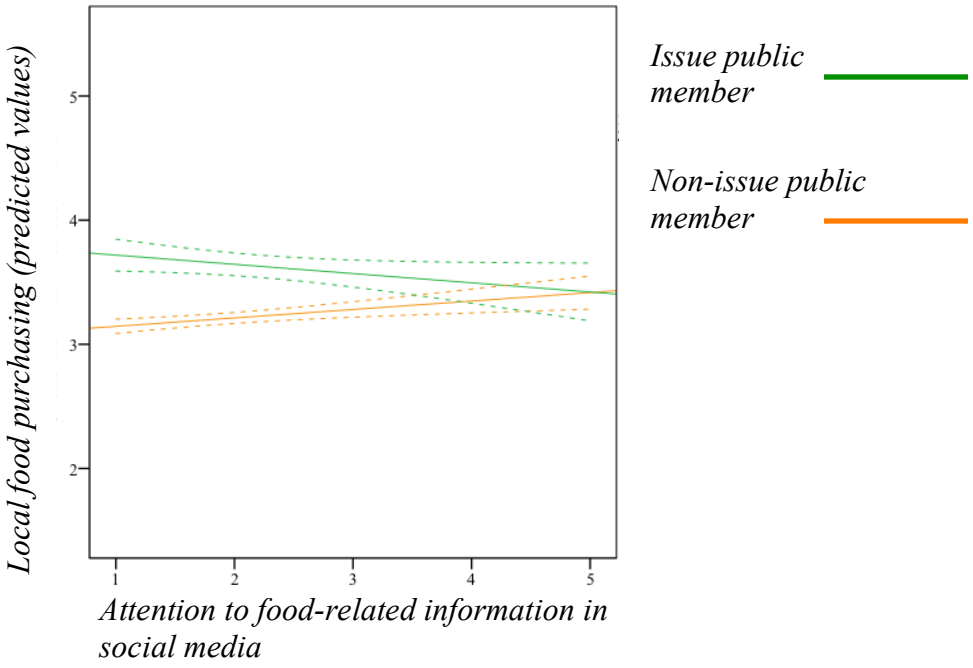
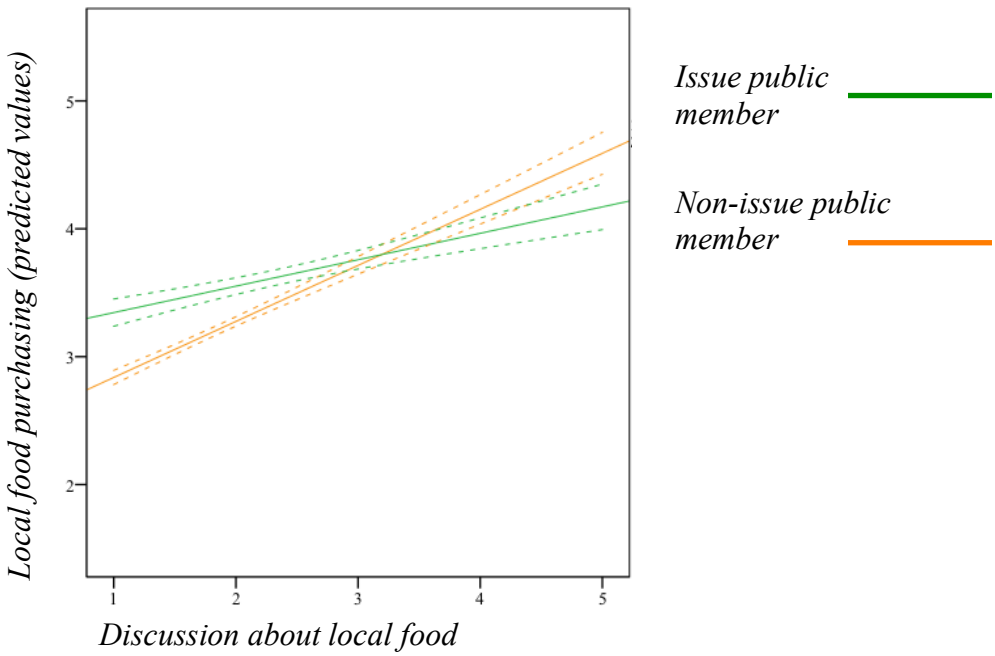


Figure 3.4. Interaction between issue public membership, discussion about local food, and local food purchasing.



Discussion

This chapter explored whether selective exposure and motivated reasoning were occurring on the basis of both political ideology and issue public membership within a new context, local food purchasing. This context made an interesting choice as the purported environmental benefits of local food have the potential to be politically polarizing, while other benefits of local food, like food quality, may be less overtly political. Study variables included background variables/demographics, communication channels (news, entertainment, social media, and discussion), self-reported knowledge about local food, beliefs related to the quality of local food and its benefits for the environment, and behavior (local food purchasing).

The first hypotheses and research questions related to background variables. Few of these variables significantly predicted local food purchasing, which corroborates other research that

suggests variables other than demographics are needed to explain purchasing of local food (Byker et al., 2012; Feldmann & Hamm, 2015). The one demographic variable that significantly predicted more local food purchasing was older age. At the same time, younger age was associated with stronger beliefs about local food. More investigation of potential generational differences in local food shoppers is warranted. Also of note is that while being female was not directly associated with local food purchasing, it was indirectly associated with local food purchasing through belief and self-reported knowledge.

Two other important background variables for this analysis were political ideology and issue public membership (being a political consumer of food). Political ideology was not directly related to local food purchasing, which helps clarify that local food purchasing is not an overtly political behavior. Issue public membership was predicted to be associated with more local food purchasing but was not. Being an issue public member was conceived of as being a political consumer of food in this analysis. The lack of association between issue public membership and local food purchasing may be because political consumers of food are not specifically concerned with local food. They may be buycotting or boycotting food businesses for a number of reasons, not solely because products are local or not.

Nevertheless, issue public membership was significantly associated with greater self-reported knowledge about local food, while political ideology was not. So even though members of the issue public in this analysis were not necessarily buying more local food, they perceived themselves to be more informed about local food. This matches the definition of issue public being more knowledgeable about their issue (Iyengar et al., 2008; Kim, 2009).

The connection between greater self-reported knowledge and local food beliefs was also confirmed, as more self-reported knowledge about local food was related to stronger beliefs

about local food being of superior quality and better for the environment. This is consistent with the conception of knowledge as a precursor to behavior change (Kollmuss & Agyeman, 2002) and in particular to sustainable food consumption (Sirieix et al., 2013). However, as mentioned previously, one important limitation to acknowledge is that this analysis used a measure of self-reported knowledge, which is not the same as objective knowledge.

In addition to self-reported knowledge, discussion about local food was directly related to beliefs about local food—it is likely that people reinforce their beliefs through discussion, as there is evidence that at increased levels of discussion, individuals' opinions are amplified (Binder, Scheufele, Brossard, & Gunther, 2011). Consequently, it may be that stronger beliefs and more discussion are associated because people who feel more strongly about local food discuss it more. Or through increased discussion, individuals come to hold stronger beliefs. This is also in line with research suggesting word of mouth communication strongly impacts consumption choices (Berger, 2014).

This analysis also explored which communication channels were associated with knowledge, and found that only discussion and news were related to greater self-reported knowledge about local food. It may be that there is less information about local food in entertainment programs or in social media, thus as people report paying more attention to food-related information via those channels they are not necessarily seeing more information about local food. For promoters of local food, this indicates social media may be underutilized.

In addition to the connection between knowledge and communication channels, a connection between communication channels and issue public membership considered whether or not issue-based selective exposure was occurring. It was hypothesized that increased attention to food-related information would be associated with membership in an issue public (being a

political consumer of food). Issue public membership was positively associated with increased engagement with several communication channels – social media, news, and discussion. This finding supports other work that suggests issue-based selective exposure occurs for issue public members with news content (Bolsen & Leeper, 2013; Iyengar et al., 2008; Kim, 2009; Peralta et al., 2017).

No evidence was found, however, that particular communication channels translated to more knowledge for issue public members via offering a more efficient means of selective exposure. Previous work suggests that media with a higher degree of customization could lead to issue publics gaining disproportionally more information (Kim, 2009), but this analysis was unable to support that, possibly due to the broad way in which communication channels were operationalized in the analysis (e.g., "attention to food-related information in the news" could mean someone reads a traditional newspaper or accesses news through a personalized online news stream).

There was also some evidence for ideology-based selective exposure, but not as predicted. Being liberal was associated with increased attention to food-related information in social media and the news. Consequently, it may be the case that there are some food-related issues that are more interesting or important to liberals. Future research using more refined measures of media use might tease out such differences among partisans.

In contrast, no evidence was found to suggest that individuals of different political ideologies were differentially gaining knowledge about local food as they increased engagement with different communication channels. While research suggests liberals and conservatives are likely focused on news outlets that generally support their ideologies (Mitchell et al., 2016; Mitchell et al., 2014), it may be that such outlets simply do not cover local food differently in

terms of the amount of factual information they offer about local food.

There was little support for the occurrence of motivated reasoning. Political ideology did not moderate the relationship between beliefs about the environmental benefits of local food and knowledge, or the relationship between beliefs about the environmental benefits of local food most communication channels. This means that regardless of an individual being liberal or conservative, as they gain knowledge about local food, they similarly hold stronger beliefs about environmental benefits of local food. Likewise, regardless of an individual being liberal or conservative, as they engage more with different communication channels, they similarly hold stronger beliefs about environmental benefits of local food. This finding is encouraging in that it suggests that at least on some issues, media use is not contributing to political polarization.

There was a significant interaction involving these variables, however, it did not support the occurrence of motivated reasoning. As conservatives and moderates discuss local food more, there is a steeper increase in belief about environmental benefits of local food compared to liberals. This runs counter to what might be expected given that conservatives are typically less supportive of environmental issues (Anderson, 2017; Funk & Kennedy, 2017; Stokes et al., 2015), and adds support for motivated reasoning not occurring in this context.

There was no evidence that motivated reasoning was occurring based on issue public membership. Issue public membership (being a political food consumer) did not moderate the relationship between knowledge and beliefs about local food or the relationship between attention to food-related information from different communication channels, and beliefs about local food. The one significant interaction between issue public membership and attention to food-related information in the news actually found that for non-issue publics, increased attention to food-related news was linked to stronger beliefs that local food has environmental

benefits. This suggests that issue publics are not consuming information in the news and disproportionally coming to the conclusion that local food has more environmental benefits in order to support their prior convictions. What may be happening is that issue public members have more stable opinions, and/or they use specific, trusted sources for information about food, so news has less of an impact on them and/or they do not trust news coverage of their issue.

It should be noted that this interaction (between issue public membership, news, and beliefs about local foods' environmental benefits) and the interaction discussed previously (between political ideology, discussion, and beliefs about local foods' environmental benefits) were not stable across the two sets of regression models. Thus these interactions should be interpreted with caution.

Lastly, a hypothesis and research question focused on behavior and local food purchasing. It was predicted that both beliefs related to the environment and food quality would be related to local food purchasing, as previous research connects these beliefs to purchasing. With both beliefs in the model, only belief about local food quality was a direct predictor of local food purchasing. This has implications for those promoting local food, in that only appeals to quality appear to be linked to action in this case. However, as the before-entry beta for environmental beliefs was significantly related to purchasing, it may be the case that environmental beliefs matter in as much as holding these beliefs is related to positive perceptions of the quality of local food.

Interestingly, self-reported knowledge was also a direct predictor of local food purchasing. It may be that if additional beliefs had been included in the model, knowledge would have only had a role as a mediator. Or, it may be that knowledge about local food enables purchasing, as individuals may be more aware of when or how to buy local produce. Discussion

about local food and attention to food-related information in entertainment programs were also unexpectedly directly associated with purchasing. It may be that information in entertainment programs (like cooking shows) or discussion about food focused on shopping or recipes facilitate one's ability to cook and purchase local food outside of beliefs or factual knowledge about local food issues.

Most of the interactions involving behavior were not significant, with two exceptions. For individuals not part of an issue public, attention to food-related information in social media and discussion about local food resulted in more gains in local food purchasing. This echoes the significant interaction described earlier where increased attention to food-related information in the news was associated with stronger beliefs that local food has environmental benefits for non-issue public members. Again, it may be that issue public members only trust specific information sources regarding their issue, and are less persuaded by information encountered elsewhere.

Broadly speaking, this work sought to add knowledge about selective exposure by considering whether or not selective exposure occurred in this context, via two separate means. Evidence for ideologically based selective exposure was not found, though that does not mean that people of different ideologies are selecting similar news channels. It may simply mean that partisan news outlets cover local food similarly. Consequently, one important limitation of this work is a lack of understanding regarding patterns in how local food information is covered in the news. Content analysis in this context could help clarify the degree to which partisan-leaning news outlets cover food issues differently.

There was evidence for issue-based selective exposure, however, with issue public members paying more attention to food-related information across several communication channels compared to non-issue publics. This aligns with other research that suggests issue

publics engage in this kind of selective exposure for news content, and confirms this also occurs with social media and discussion. Future work should examine more granularly how selective exposure among issue public members occurs (e.g., the use personalized news feeds or the degree to which their online social networks include other issue public members).

Regarding motivated reasoning, this analysis did not find evidence for its occurrence among people of different political ideologies. Perhaps for an issue like local food, which is apparently not overtly political, motivated reasoning is less likely to occur, even when beliefs are related to something seemingly partisan such as the environment. It could be also be that if content related to a subject like local food appears in media largely outside of a political news context, there is less content that might provoke motivated reasoning based on ideology.

For issue publics, there was also not evidence for motivated reasoning, which is supported by Peralta et al. (2017) but differs from Kim (2009). More research is needed to continue to clarify under which conditions motivated reasoning may occur among issue publics, or if issue publics focused on certain issues are less likely to experience motivated reasoning.

Future research should also examine how trust in information sources differs among issue public members and non-members. This analysis found that non-issue public members appeared to respond more strongly (in terms of changes in beliefs or behavior) than issue public members to the news, discussion, and social media. At the same time, issue public members report engaging more with these communication channels. Perhaps issue publics pay more attention to information about their issue, but because they consume more information and are more knowledgeable about their issue, they are more difficult to persuade or they only trust specific sources for information about their issue.

In sum, this chapter did not find evidence for ideological selective exposure or motivated

reasoning regarding local food beliefs and behavior, but did find evidence of issue-based selective exposure. While political ideology receives much deserved attention when it comes to selective exposure, it is only one lens through which individuals seek and filter media, and it is important to consider other means by which selective exposure occurs. In that spirit, the next chapter considers how experience in an important physical environment, the farmers' market, may or may not relate to selective exposure.

CHAPTER 4: FARMERS' MARKETS, MEDIA, AND FRIENDS: HOW MULTIPLE COMMUNICATION PATHWAYS INFORM NORMATIVE PERCEPTIONS ABOUT BUYING LOCAL FOOD

As Chapter 3 found, discussion about local food and attention to food-related entertainment programming were direct predictors of self-reported local food purchasing, in addition to discussion being an indirect predictor (through beliefs). The direct connection between those communication variables and purchasing might have been present because such variables are actually related to purchasing via perceptions about social norms. Such perceptions reference ideas about what others do or approve of, which in turn can influence behavior (Armitage & Conner, 2001). Scholars have pointed out a need for more communication research that focuses on how norms are developed (Shulman, et al., 2017).

The analysis in this chapter adds to growing scholarship about the development of normative perceptions through examining if such perceptions appear to be influenced by different communication channels. This chapter also draws a connection to Chapter 3 and selective exposure. It's possible that the media's influence on normative perceptions may be limited if people selectively expose themselves to content that aligns with their pre-existing interests. To examine this, this chapter considers if status as a farmers' market shopper moderates the influence of media on normative perceptions. It may be that for farmers' market shoppers, media might strengthen or reinforce beliefs that local food purchasing is the norm.

In particular, this chapter is guided by the social exposure framework. The social exposure framework articulates how information from social, symbolic, and physical environments contribute to our normative perceptions (Mead et al., 2014). While many studies have examined a connection between normative perceptions and a specific source of

information, this analysis endeavors to examine multiple information sources together with the social exposure framework in mind. And through exploring the potentially moderating role of farmers' markets, this analysis speaks to the need to clarify how information from different sources interacts to influence behavior (Mead et al., 2014). The social exposure framework will be discussed in more depth, following a review of concepts related to social norms.

Perceptions of social norms

Perceptions about social norms are ideas that individuals have about what others do or believe. Meta-analysis finds that if measured with multi-item scales, there is a strong correlation between perceptions of norms and behavioral intention (Armitage & Conner, 2001). In a review of norms-based interventions, Miller & Prentice (2016) highlight a number of cases where providing individuals information related to social norms has moved those individuals to alter their behavior in pro-environmental ways, such as reducing energy consumption. While many studies are concerned with norms and sustainable behavior in general, there are fewer studies focusing on consumption specifically. In a content analysis of norms-related studies, the authors found that consumer-related studies accounted for just 2.2% of all norms studies retrieved (Shulman et al., 2017).

Descriptive and injunctive norms are two common measures of normative perceptions that are frequently included in research about promoting pro-social behaviors. The roots of this typology can be traced to Deutsch and Gerard (1955), who suggested that "social influence" could be separated into "normative influence" and "informational influence." Normative influence is about pressure to conform, while informational influence is about considering information gleaned from others as "evidence about reality" (Deutsch & Gerard, 1955).

These concepts have been adapted in more recent literature related to persuasion and behavior change. Cialdini, Reno, and Kallgren (1990) suggested individuals can be influenced by injunctive norms, or beliefs an individual has about what others think he or she ought to do, which aligns with Deutsch and Gerard's concept of normative influence. They also suggested individuals can be influenced by descriptive norms, which are beliefs an individual has about what others are actually doing. Descriptive norms align with Deutsch and Gerard's concept of informational influence.

The concepts of injunctive and descriptive norms are part of several theories, and are especially used in the theory of planned behavior (TPB), where a construct called "subjective norms" predicts behavior (Ajzen & Fishbein, 2005). Indeed, in the previously mentioned review of studies involving norms, the majority did so under a TPB framework, or using the related theory of reasoned action (Shulman et al., 2017). Some scholars treat subjective norms as injunctive norms, while others use a composite of injunctive and descriptive norms for a subjective norms construct (Yzer, 2013). Ajzen and Fishbein (2005) suggest that addressing both descriptive and injunctive concepts is best, as survey "items designed to tap both types of norms are needed in order to obtain a complete measure of subjective norm."

Different mechanisms describe why norms influence behavior. One mechanism is reducing uncertainty. In ambiguous situations, descriptive norms should elicit a larger behavioral response as individuals would have a greater need to look to others to guide their behavior (Gelfand & Harrington, 2015). Empirical research supports this. White and Simpson (2013) manipulated the degree of ambiguity in messages about "grasscycling," or the practice of leaving grass clippings on lawns as mulch or fertilizer, and also altered the use of appeals to injunctive norms, descriptive norms, and self-benefit. In unambiguous situations, self-benefit appeals

worked best. In the ambiguous condition, however, the self-benefit appeals and descriptive norms similarly outperformed the injunctive norm condition.

Another mechanism behind the connection of descriptive norms and behavior could be that copying others' behavior is related to wanting approval from them. Indeed, experiments find that individuals made inferences about injunctive norms from descriptive norms, and also confused injunctive and descriptive norms conceptually (Eriksson, Strimling, & Coultas, 2015). However, descriptive norms can be influential without the presence of explicit social pressure. For example, research confirms that people select food based on cues related to others' choices, such as the presence of food wrappers that indicate what food choices others made, even when no one else is present to exert social pressure (Prinsen, de Ridder, & de Vet, 2013).

A last mechanism, also related to approval, is that people wish to identify with groups. Following group norms is one way to do this and can influence shopping behavior. For example, in focus groups, individuals noted that they had environmental concerns but did not want to be associated with individuals who bought sustainable products, whom they perceived to be outside of the mainstream (Johnstone & Tan, 2015).

When it comes to local food specifically, however, a systematic literature review of local food studies focused on consumer perspectives (these studies examined consumer knowledge and attitudes about local food, definitions of local food, and willingness to pay for local food) found that relatively few studies included measures of normative perceptions relative to the large number of studies looking at other kinds of variables (Feldmann & Hamm, 2015).

However, injunctive norms have been a part of at least five local food-related studies. In three of the studies, a norms construct related to approval (labeled as either injunctive or subjective norms in the following studies) was a significant predictor of local food purchasing or

intent to purchase local food (Campbell, 2013; Nurse Rainbolt, Onozaka, & Thilmany McFadden, 2012; Robinson & Smith, 2002). In two other studies, the injunctive norms variable had only a weak effect on purchasing (Dowd & Burke, 2013) or only mattered among a select group — farmers' market shoppers (Onozaka, Nurse, & Thilmany McFadden, 2010).

Looking more broadly at research involving sustainable food, as opposed to specifically local food, there is more evidence that injunctive norms influence sustainable food purchasing. Norms related to approval (labeled as either injunctive or subjective norms in the following studies) were associated with intention to purchase sustainable seafood among UK residents (Honkanen & Young, 2015), intention to patronize sustainable food services in South Korea (Kim, Yoon, & Choi, 2016), and intention to purchase sustainable food products in Italy (Vassallo, Scalvedi, & Saba, 2016). These studies did not measure descriptive norms, however.

Generally speaking, studies involving descriptive norms are fewer than those examining injunctive norms (Shulman et al., 2017). However, there are a few studies related to sustainable foods that examine both variables. Both descriptive and injunctive norms were significant predictors of intention to limit meat consumption among a Norwegian sample (Zur & Klöckner, 2014). In a study that included a variable made of injunctive and descriptive norms together, the variable was significantly related to intention to purchase organic products (Arvola et al., 2008). Because the variable combined descriptive and injunctive normative concepts, however, it's not possible to say whether both types of normative perceptions would influence behavior. Lastly, in China, neither injunctive nor descriptive norms predicted intention to purchase organic food, but the researchers felt that may be because organic food is relatively new to Chinese consumers (Thøgersen & Zhou, 2012).

Although there is more evidence that injunctive norms relate to local or sustainable food

purchasing, there is at least initial evidence that descriptive norms do as well. This leads to the first hypotheses:

H1a: Injunctive norms will be significantly and positively related to local food purchasing.

H1b: Descriptive norms will be significantly and positively related to local food purchasing.

The social exposure framework

This analysis is also concerned with the information that individuals use to form normative perceptions. A few scholars have put forward different ideas about norm formation. Miller and Prentice (1996) suggest that to develop norms, individuals observe others, communicate with others, and use self-knowledge. Self-knowledge is relevant to normative perceptions as our "egocentric bias" can lead us to believe other people behave like we do.

Other researchers have conceptualized sources of normative information differently. Tankard & Paluck (2016) broaden the ideas of Miller and Prentice (1996) to suggest information about norms comes not only from communication with other individuals, but also via institutions and summary information. Their concept of summary information includes factual information people might see in reports or signage, or statistics like voting tallies. Institutional signals come from the government or mass media, and such signals ostensibly convey what behaviors are desirable.

While both the ideas of Tankard & Paluck (2016) and Miller and Prentice (1996) are helpful in conceptualizing how individuals form normative perceptions, the social exposure framework put forward by Mead et al. (2014) may be most inclusive of potential sources of normative information as the framework factors in cues from our physical surroundings, in

addition to information we might receive from social sources or "symbolic" sources such as information in the media. Each of the three main domains will be discussed in turn.

With the social environment, one might see others do something, and accordingly, believe their behavior is acceptable or prevalent (Mead et al., 2014). Discussion logically falls under this umbrella, as well, with research in a number of contexts exploring this connection. For example, small group discussion has historically been a part of normative interventions for college drinking (Berkowitz, 2005). In research about adopting podcasting technology, researchers theorized that the reason norms and discussion are linked is that as people communicate more with others in their social network, the norm is learned through discussion (Mou & Lin, 2015). In their study, discussion with others in one's social network was related to descriptive and injunctive normative perceptions, which in turn were related to intention to use podcast technology (Mou & Lin, 2015). In another context, discussion with others (such as a partner or relative) about health check-ups was positively related to descriptive norms, and ultimately to healthy behavior, among women in Bangladesh (Frank, Jodrell, & Smethurst, 2017).

Communication via social media could also plausibly also fall under the umbrella of the social environment. When individuals post, share, or like something in social media platforms, their actions may contribute to others' normative perceptions. There are several examples in research to support this notion. For example, the number of views a YouTube video had may have acted as a cue for descriptive norms (Spartz, Su, Griffin, Brossard, & Dunwoody, 2017). Specifically, when people saw a video with a greater numbers of views, they perceived the issue at hand (climate change) to be more important to most Americans (Spartz et al., 2017). In another context, researchers used a combination of "likes" and "shares" on Facebook to signal a

norm for alcohol consumption (Alhabash, McAlister, Taylor Quilliam, Richards, & Lou, 2015). In their experiment, participants exposed to ads with higher numbers of "likes" and "shares" reported more intention to engage in "viral" behavior themselves (i.e., being more likely to like, share, or comment on the ad). In another experiment related to alcohol consumption, youths who observed Facebook pages with older adolescents drinking reported higher descriptive norms for drinking, and reported greater willingness to drink (Litt & Stock, 2011). Given these studies that connect social media use and discussion to normative perceptions, the second hypotheses are:

H2a: Information from the social environment (measured as discussion about local food) will be positively associated with injunctive norms for local food purchasing.

H2b: Information from the social environment (measured as discussion about local food) will be positively associated with descriptive norms for local food purchasing.

H2c: Information from the social environment (measured as attention to food-related information in social media) will be positively associated with injunctive norms for local food purchasing.

H2d: Information from the social environment (measured as attention to food-related information in social media) will be positively associated with descriptive norms for local food purchasing.

Information about norms can also be gleaned from the symbolic environment, which includes mediated communication such as news, ads, entertainment programs, or campaigns (Berkowitz, 2005; Green & Peloza, 2014). For example, attention to advertisements for unhealthy food was associated with descriptive norms regarding others' consumption of such food, indicating that descriptive norms may have been learned from the ads (Beaudoin, 2014).

Another study highlighted how the connection between normative information in an ad and behavior can be more complex—perceptions of peers' attention to pro-drinking messages were related to normative perceptions, which in turn were related to intention to drink (Ho, Poorisat, Neo, & Detenber, 2014). In other words, individuals may not assume that a behavior they see portrayed in an ad is accepted or common, but rather, individuals may assume that others will see such an ad and be influenced, rendering the behavior more common or accepted.

Other work focuses on the influence of informing individuals directly about the prevalence of a behavior. For example, in an office setting, those who received an email that contained information about their coworkers' exercise habits increased their own physical activity, but those who received an email about exercise but without the normative information did not increase their own physical activity (Priebe & Spink, 2012). Similarly, in an experiment focused on sustainable consumption, participants who viewed ads that contained statistics about the frequency that others purchased sustainable products in turn spent more on sustainable products themselves (Demarque, Charalambides, Hilton, & Waroquier, 2015). In should be noted that another study found contradictory results. In that experiment, individuals who viewed ads containing information about how many others bought locally produced food reported less intention to purchase local food themselves, presumably because they became aware of a persuasion attempt (Raska, Nichols, & Shaw, 2015). Nevertheless, in sum, research does show a connection between normative information in the symbolic environment and either heightened perceptions of norms or behavior change. This leads to the third hypotheses:

> H3a: Increased attention to information in the symbolic environment (measured as attention to food-related information in the news) will be positively associated with injunctive norms for local food purchasing.

H3b: Increased attention to information in the symbolic environment (measured as attention to food-related information in the news) will be positively associated with descriptive norms for local food purchasing.

H3c: Increased attention to information in the symbolic environment (measured as attention to food-related information in entertainment programs) will be positively associated with injunctive norms for local food purchasing.

H3d: Increased attention to information in the symbolic environment (measured as attention to food-related information in entertainment programs) will be positively associated with descriptive norms for local food purchasing.

This chapter places special emphasis on the connection between norms and the physical environment. Normative perceptions could be informed by experience in a physical environment through observing others' behavior (Cialdini et al., 1990; Payne & Niculescu, 2012), or by observing objects in the physical environment like garbage or wrappers that indicate how others behaved (Cialdini et al., 1990; Prinsen et al., 2013). Relevant to local food purchasing is the fact that even the availability of products can cue the belief that using the product is acceptable (Mead et al., 2014). Signage in a physical environment has also been associated with normative perceptions (Cialdini et al., 2006; Mollen, Rimal, Ruiter, & Kok, 2013; Payne & Niculescu, 2012; Witzling, Shaw, & Amato, 2015). In a food context, for example, Mollen et al. (2013) found that posters placed in a college cafeteria influenced food choice when the posters engaged norms. Posters emphasizing descriptive norms related to healthy eating (e.g., information about how many students chose to eat a salad) were the most successful at increasing selection of healthy foods.

The environment of a farmers' market, which this chapter is concerned with, is likely rich in normative cues. Farmers' markets can be places that foster more involved social interactions than supermarkets, as observational research finds more social interactions occur in farmers' markets compared to some supermarkets, as shopping in a more compact space like a market leads people to converse (Cicatiello, et al., 2015; Sommer, Herrick, & Sommer, 1981). Attendees of farmers' markets may also view a more condensed array of locally produced products, and accompanying signage, which could contribute to normative perceptions. And lastly, farmers' market shoppers have access to opinion leaders or experts on local food — local farmers — that grocery store shoppers generally don't. Given the abundance of normative information potentially present at farmers' markets, the third hypothesis is:

H4a: Being a farmers' market shopper will be positively associated with injunctive norms for local food purchasing.

H4b: Being a farmers' market shopper will be positively associated with descriptive norms for local food purchasing.

Farmers' market shoppers may also represent a group especially dedicated to local food, as they are choosing to buy local food in a way that may be less convenient than shopping at a supermarket. Instead, they are purchasing food in an environment where local food is in abundance, social interaction regarding local food occurs, and they have access to opinion leaders (farmers). With this more dedicated group, it is possible that they would selectively view or seek out media that portrays local food favorably, or have people in their social network with like-minded views about local food. Thus, among farmers' market shoppers, engagement with different communication channels may have an amplified influence on normative perceptions.

On the other hand, it is possible that because the physical environment of the farmers' market supplies an abundance of high quality information, other sources of information be may less impactful among farmers' market shoppers in terms of informing normative perceptions. To tease out the potentially special influence of the physical environment in this case, the research question is:

> RQ1: Will status as a farmers' market shopper moderate how frequency of discussing local food with friends and family, or attention to food-related information about food in the media (news, entertainment, or social media), influence normative perceptions about local food?

As described in the following methods section, the moderating effect of farmers' market shopper status is investigated in two ways in this analysis—through interaction terms (between farmers' market shopper status and the variables related to the different communication channels) in a regression analysis, and by running regressions separately for farmers' market and non-farmers' market shoppers without farmers' market shopper status in the model.

Methods

The data informing this chapter were collected through the previously described survey, with methods detailed in Chapter 2. Variables were constructed as follows.

Local food purchasing

The dependent variable was self-reported local food purchasing. This variable was constructed following Chapter 3, with four items from a 5-point scale being indexed.

Injunctive norms

This construct was made by averaging two items that were measured with a 5-point scale. One item asked how much people "who are important to you think that you should buy local fruits and vegetables," with a 1 meaning "Not at all" and a 5 meaning "A great deal." The other item asked if there was agreement that buying local fruits and vegetables is a good thing to do among people important to the respondent, with a 1 meaning "Not at all" and a 5 meaning "A great deal." The Spearman-Brown coefficient was .79.

Descriptive norms

Descriptive norms were measured with items addressing two reference groups. The two items were measured with a 5-point scale and averaged. The items were how much local fruit and vegetable purchasing a respondent's family does, and how much their friends do, with a 1 meaning "None" and 5 meaning "Very much." The Spearman-Brown coefficient was .68. Though .68 falls below the .70 threshold, .70 is within the 95% CI (.63, .73).

Social environment

For the social environment, both discussion about local food and attention to food-related information in social media were considered. These variables were constructed following Chapter 3.

Symbolic environment

Items about attention to food-related information in the news and entertainment programs were used to represent the symbolic environment. These variables were constructed following Chapter 3.

Physical environment

The physical environment was incorporated into the analysis with a measure related to farmers' markets. Visiting farmers' market was measured on a 5-point scale, with respondents being divided into two groups. Respondents who indicated they "Never" or "Rarely" shopped at farmers' markets were put into one group. Respondents indicating they shop at farmers' markets "Sometimes," "Often," or "Always," were put into the other group.

Self-reported knowledge about local food

A variable for self-reported knowledge about local food was included in the model and constructed as described in Chapter 3. While not central to this chapter's focus on norms, this variable was included in the model as it was found to be a direct predictor of local food purchasing in the previous chapter and is thus important to explaining local food purchasing.

Background predictors and demographics

Background and demographic measures in the model included gender, age, SES, convenience of buying local food, and number of children in a household. These variables were the same as those described in Chapter 3.

Interaction terms

Interaction terms were created between farmers' market shopper status and the variables for discussion about local food and attention to information about food in the news, entertainment programs, and social media. These variables were first standardized to avoid multicollinearity. Then, farmers' market shopper status was multiplied by each of the other variables (news, entertainment, social media, and interpersonal discussion) to create the interaction terms.

Analysis

A series of regression models were run to determine if descriptive and injunctive norms predict local food purchasing (H1), and how descriptive and injunctive norms are influenced by information from the social environment (H2), symbolic environment (H3), and physical environment (H4). In addition, interaction terms between farmers' market shopper status and the communication variables were included to determine the moderating effect of being a farmers' market shopper (RQ1).

Block 1 included background and demographics variables. Block 2 included variables related to social exposure, including two variables related to the symbolic environment (attention to information about food in the news and entertainment programs) and two variables related to the social environment (attention to information about food in social media and discussion about local food). Farmers' market shopper status was also in this block, as a measure of the influence of the physical environment. Block 3 was self-reported knowledge. Block 4 included the measures of descriptive norms and injunctive norms. Block 5 included the interaction terms. The final dependent variable was self-reported purchasing of local food.

To more clearly see which communication channels influence norms, a regression was subsequently run with the dependent variable as descriptive norms, and another regression with the dependent variable as injunctive norms. In those regressions, Blocks 1, 2, and 3 remained the same, and a final block included the interaction terms.

Alternatively, another way to investigate RQ1 (the moderating effect of being a farmers' market shopper) was explored. Farmers' market shopper status was removed from the regression, and instead, separate models were run for farmers' market and non-farmers' market shoppers. As shopping at a farmers' market is conceptually quite similar to buying local food itself (as local food is a main feature at farmers' markets), the variable of farmers' market shopper status may be accounting for variation in the model in a way that obscures relationships between normative perceptions and local food purchasing.

On the other hand, a limitation of this second strategy is that it may introduce endogeneity bias. Farmers' market shopper status is likely correlated with both the dependent variable (local food purchasing) and the independent variables of normative perceptions. Without farmers' market shopper status in the model, the error term may then be correlated with local food purchasing and normative perceptions as the explanatory power of farmers' market shopper status is then captured by the error term. This problem could result in biased coefficients for the normative perception variables.

In addition, another limitation of this second strategy is that each group (farmers' market shoppers and non-farmers' market shoppers) is smaller, limiting statistical power. To help account for this, a *p*-value of .10 was considered significant in order to reduce the possibility of a Type 2 error. This does increase the possibility of a Type 1 error, however. These regressions

were similar to those described in the previous strategy, except that farmers' market shopper status and the interaction terms were removed.

In both analysis strategies, cases were removed pair-wise in order to minimize cases lost. There were 573 cases remaining in the complete regression. In the separate regressions, there were 288 cases in the non-farmers' market shopper group (they never or rarely shopped at farmers' markets) and 274 in the farmers' market shopper group (they shopped at farmers' markets sometimes or more).

Results

This chapter aimed to explore the connection between local food purchasing and normative perceptions. Before considering how results pertained to the research questions, demographics of the sample will be covered briefly. Regarding gender, 60% of the sample was female and the average age of respondents was closest to the category of "55 to 64." In terms of SES, the average household income was closest to the category of "$50,000 to $74,999" with the average education being more than a high school degree, but less than a 4-year college degree.

The first hypotheses put forward that descriptive and injunctive norms would be positively associated with local food purchasing. H1b was supported, as descriptive norms ($\beta = .34$, $p < .001$) were significantly and positively related to local food purchasing. While injunctive norms (H1a) were not significantly related to local food purchasing, the before entry beta for injunctive norms was significant ($\beta = .12$, $p = .004$), suggesting that injunctive norms may influence behavior but this is mediated through descriptive norms. Also of note, other direct predictors of local purchasing in this model were consistent with results from Chapter 3 and included older age ($\beta = .13$, $p < .001$), more attention to food-related information in

entertainment programs (β = .09, p = .01), and self-reported knowledge about local food (β = .20, p < .001), in addition to farmers' market shopper status (β = .22, p < .001). Discussion, which was a direct predictor of local food purchasing in the models in Chapter 3, was no longer a direct predicator, as farmers' market shopper status mediated its influence on purchasing.

The second hypotheses predicted that information from the social environment (measured as discussion about local food and attention to food-related information in social media) would be positively associated with descriptive and injunctive norms for local food purchasing. As shown in Table 4.1, H2a and H2b were supported, as discussion about local food was positively associated with both descriptive norms (β = .27, p < .001) and injunctive norms (β = .33, p < .001). However, attention to food-related information in social media was not associated with either normative perception (H2c and H2d).

The third hypotheses predicted that increased attention to information in the symbolic environment (measured as attention to food-related information in the news and entertainment programs) would be positively associated with descriptive and injunctive norms for local food purchasing. Descriptive norms were related to increased attention to food-related information in the news (β = .08, p = .042), as predicted in H3b. News was not significantly associated with injunctive norms (H3a), nor was attention to food-related information in entertainment programs associated with either norm variable (H3c, H3d).

Next, H4 put forward that being a farmers' market shopper would be positively associated with descriptive and injunctive norms for local food purchasing. Being a farmers' market shopper was positively associated with descriptive norms (β = .12, p = .003), as predicted in H4b, but not injunctive norms (H4a).

Table 4.1. Regression predicting self-reported purchasing, descriptive norms, and injunctive norms (N = 573).

	DV = Descriptive norm		DV = Injunctive norm		DV = Purchasing	
Variables	B (SE)	β	B (SE)	β	B (SE)	β
Block 1 - Background predictors						
Age	.00 (.02)	.00	−.03 (.03)	−.06	.07 (.02)	.13***
Gender	.04 (.07)	.03	.20 (.07)	.10**	.09 (.06)	.06
SES	.01 (.04)	.01	.05 (.04)	.05	−.03 (.03)	−.03
Convenience	−.05 (.03)	−.06	.03 (.04)	.03	−.03 (.03)	−.04
Incremental adjusted R^2 (%):		.30		4.2***		4.4***
Block 2 - Communication channels						
Attention to food in social media	.02 (.03)	.02	.03 (.04)	.04	.01 (.03)	.01
Attention to food in entertainment	.04 (.04)	.04	.01 (.04)	.01	.09 (.03)	.09*
Attention to food in news	.07 (.03)	.08*	.06 (.04)	.07	.05 (.03)	.06
Discussion about local food	.28 (.05)	.27***	.39 (.05)	.33***	.06 (.04)	.06
Farmers' market shopper status	.20 (.07)	.12**	.13 (.07)	.07	.35 (.06)	.22***
Incremental adjusted R^2 (%):		20.2***		21.2***		25.4***
Block 3 - Self reported knowledge about local food						
Self-reported knowledge	.20 (.04)	.20***	.22 (.05)	.20***	.20 (.04)	.20***
Incremental adjusted R^2 (%):		2.9***		2.8***		5.6***
Block 4 - Normative perceptions						
Descriptive norm					.33 (.04)	.34***
Injunctive norm					.02 (.03)	.03
Incremental adjusted R^2 (%):						8.8***
Block 5 - Interactions						
Market x food social media	.02 (.03)	.02	−.07 (.04)	−.08*	−.06 (.03)	−.07*
Market x food entertainment	−.02 (.03)	−.02	−.02 (.04)	−.02	−.05 (.03)	−.05
Market x food news	.00 (.03)	−.01	.04 (.04)	.04	−.06 (.03)	−.07*
Market x local food discussion	.01 (.04)	.01	−.09 (.04)	−.09*	−.07 (.03)	−.08*
Incremental adjusted R^2 (%):		−.40		1.1*		.70*
Total adjusted R^2 (%):		23.0***		29.3***		44.9***

Note: B is the unstandardized regression coefficient and β is a standardized regression coefficient (final) for all blocks except for the interactions in Block 5 which are before-entry standardized coefficients. Items comprising the variables were measured on a 1 to 5 scale expect for some of the demographic variables. SES = socioeconomic status. DV = dependent variable.

*p < .05. **p < .01. ***p < .001.

The research question considered the moderating role of being a farmers' market shopper, and explored this with two separate analysis strategies. The first was through interaction terms, as shown in Block 5 of Table 4.1. When behavior is the dependent variable, interaction terms are significant between farmers' market shopper status and local food discussion ($\beta = -.08$, $p = .013$), attention to food-related information in the news ($\beta = -.07$, $p = .027$), and attention to food-related information in social media ($\beta = -.07$, $p = .032$). These relationships are shown in Figures 4.1, 4.2, and 4.3. In each case, the general pattern is that the slope for the non-farmers' market shoppers is steeper, suggesting that the communication-related variables have a relatively greater impact on purchasing for the non-farmers' market shopper group.

With injunctive norms, there were significant and negative interactions between farmers' market shopper status and attention to food-related information in social media ($\beta = -.08$, $p = .032$) and local food discussion ($\beta = -.09$, $p = .02$), as shown in Figures 4.4 and 4.5. In each plot, for both farmers' market shoppers and non-shoppers, injunctive norms increase as attention to food-related information in social media or local food discussion increase. However, the slope for the non-farmers' market shoppers is steeper, suggesting that discussion and social media are having a relatively greater impact on injunctive norms for the non-farmers' market shopper group. No interactions are significant when the dependent variable is descriptive norms. This means that for farmers' market shoppers and non-farmers' market shoppers, descriptive norms are influenced similarly by engagement with food-related information in the media or discussion about local food.

Figure 4.1 Interaction between farmers' market shopper status, local food discussion, and purchasing local food.

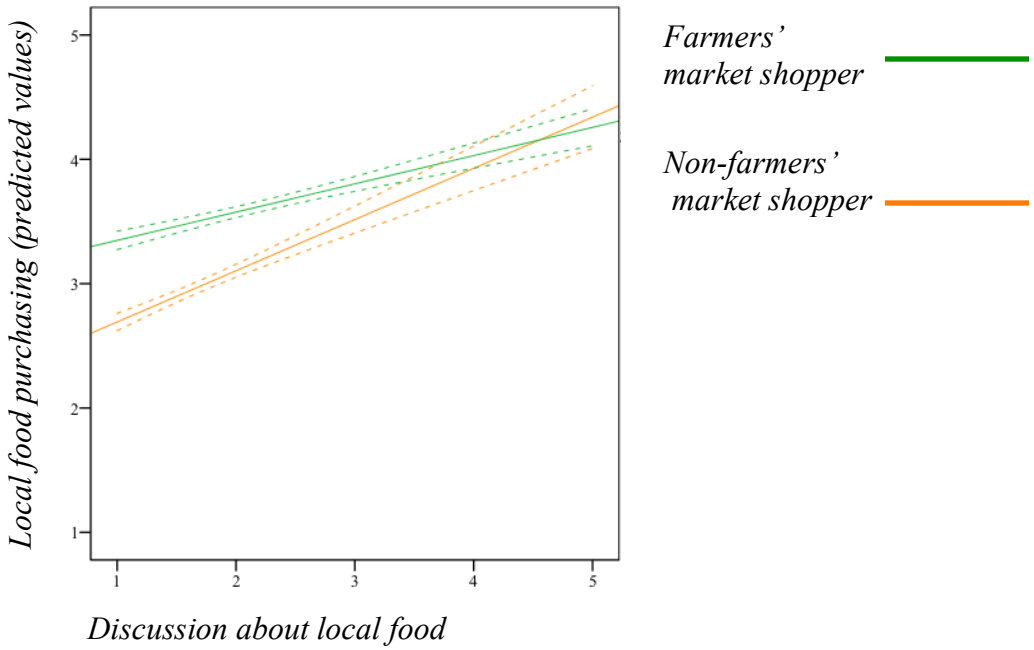


Figure 4.2 Interaction between farmers' market shopper status, attention to food-related information in the news, and purchasing local food.

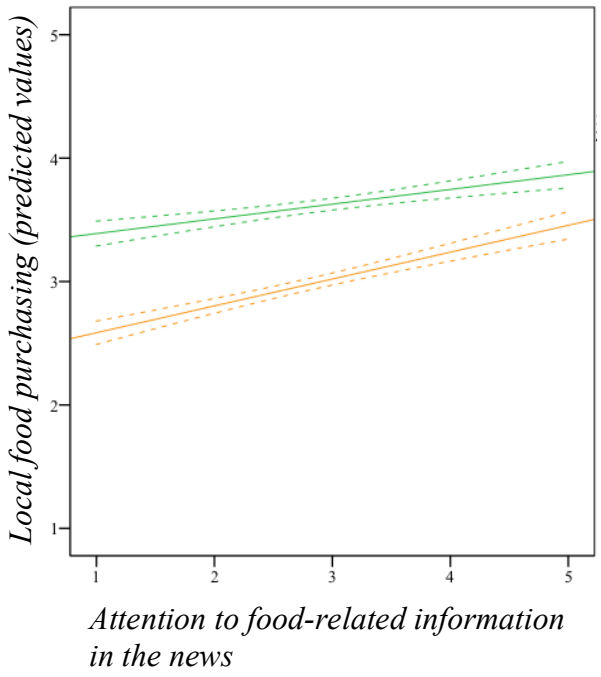


Figure 4.3 Interaction between farmers' market shopper status, attention to food-related information in social media, and purchasing local food.

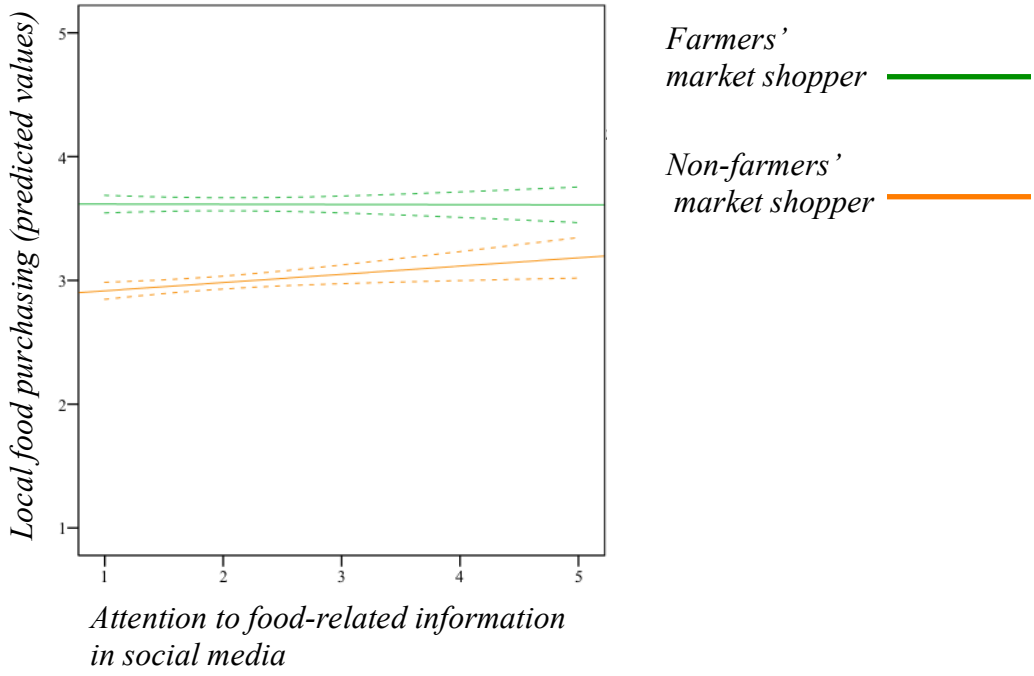


Figure 4.4 Interaction between farmers' market shopper status, discussion about local food, and injunctive norms.

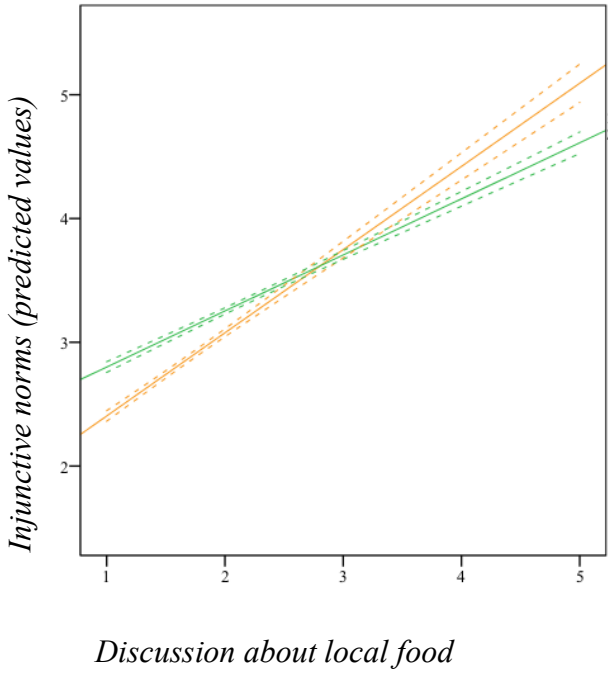
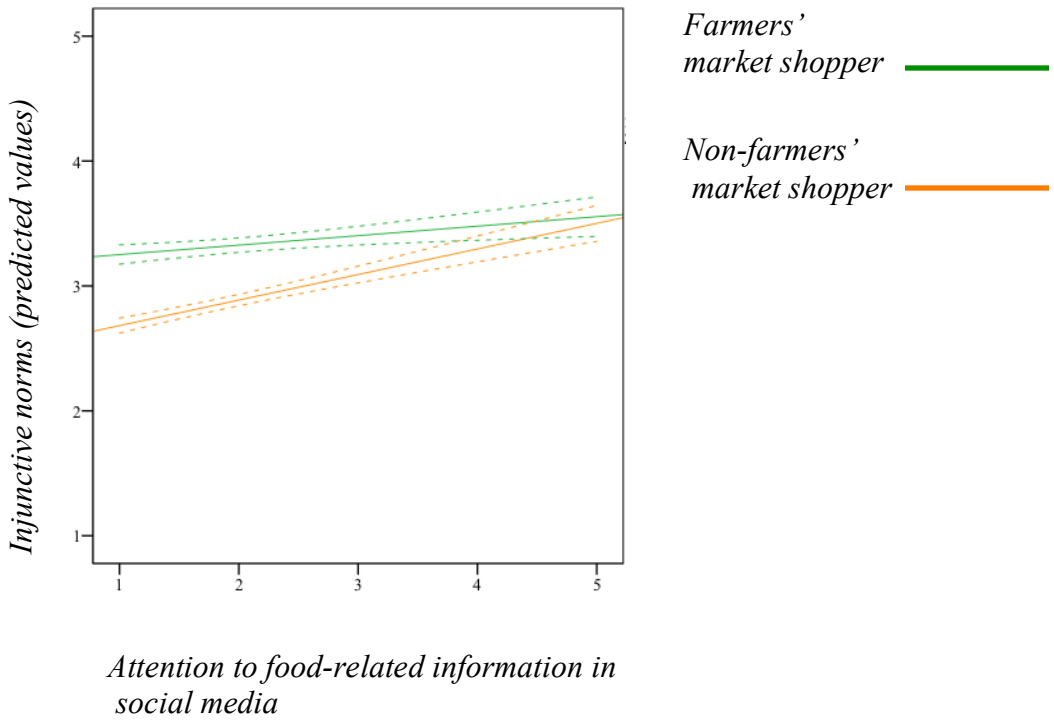


Figure 4.5 Interaction between farmers' market shopper status, attention to food-related information in social media, and injunctive norms.



Another way to examine the moderating influence of farmers' markets was considered, where separate regressions were conducted for farmers' market shoppers (Table 4.2) and non-farmers' market shoppers (Table 4.3). From the interactions in Table 4.1, one would expect attention to information about food in social media and local food discussion to be significant predictors of injunctive norms for the farmers' market and non-farmers' groups, with a larger coefficient for the non-farmers' market shopper group. Instead, the influence of discussion appears to be similar for both farmers' market shoppers ($\beta = .37$, $p < .001$) and non-farmers' market shoppers ($\beta = .34$, $p = .001$), while attention to food-related information in social media was not a significant predictor of injunctive norms for either group. News was also associated with injunctive norms in the in the farmers' market shopper group only ($\beta = .17$, $p = .005$).

Table 4.2 Regression results for the farmers' market shopper group (N = 274).

	DV = Descriptive norm		DV = Injunctive norm		DV = Purchasing	
Variables	B (SE)	β	B (SE)	β	B (SE)	β
Block 1 - Background predictors						
Age	.02 (.03)	.04	−.01 (.04)	−.02	.06 (.03)	.13*
Gender	.03 (.10)	.02	−.02 (.11)	−.01	.10 (.08)	.07
SES	.02 (.05)	.02	.00 (.06)	.00	−.05 (.04)	−.06
Convenience	−.14 (.05)	−.15**	−.03 (.06)	−.02	−.06 (.04)	−.08
Incremental adjusted R^2 (%):		.40		−1.1		5.3**
Block 2 - Communication channels						
Attention to food in social media	.04 (.05)	.06	−.03 (.06)	−.03	−.02 (.04)	−.03
Attention to food in entertainment	.03 (.06)	.03	.05 (.07)	.05	.05 (.05)	.07
Attention to food in news	.08 (.05)	.11#	.15 (.05)	.17**	.00 (.04)	.01
Discussion about local food	.32 (.06)	.34***	.39 (.07)	.37***	.02 (.05)	.03
Incremental adjusted R^2 (%):		19.4***		20.5***		11.4***
Block 3 - Self reported knowledge about local food						
Self-reported knowledge	.11 (.07)	.10	.06 (.08)	.05	.20 (.05)	.23***
Incremental adjusted R^2 (%):		.50		−.10		5.1***
Block 4 - Normative perceptions						
Descriptive norm					.31 (.05)	.36***
Injunctive norm					.04 (.04)	.05
Incremental adjusted R^2 (%):						10.7***
Total adjusted R^2 (%):		20.3***		19.3***		32.4***

Note: B is the unstandardized regression coefficient and β is a standardized regression coefficient (final) for all blocks. Items comprising the variables were measured on a 1 to 5 scale expect for some of the demographic variables. SES = socioeconomic status. DV = dependent variable.

# $p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

Table 4.3 Regression results for the non-farmers' market shopper group (N = 288).

	DV = Descriptive norm		DV = Injunctive norm		DV = Purchasing	
Variables	B (SE)	β	B (SE)	β	B (SE)	β
Block 1 - Background predictors						
Age	.00 (.03)	−.01	−.06 (.04)	−.10#	.09 (.03)	.17**
Gender	.05 (.09)	.03	.37 (.10)	.19***	.09 (.08)	.06
SES	−.01 (.05)	−.01	.06 (.06)	.06	−.01 (.05)	−.02
Convenience	.00 (.05)	.00	.04 (.05)	.04	.00 (.04)	.00
Incremental adjusted R^2 (%):		−1.1		7.0***		2.7*
Block 2 - Communication channels						
Attention to food in social media	−.02 (.05)	−.02	.06 (.05)	.07	.06 (.04)	.08
Attention to food in entertainment	.09 (.06)	.09	.04 (.06)	.04	.08 (.05)	.09#
Attention to food in news	.08 (.05)	.10#	−.01 (.05)	−.10	.05 (.04)	.07
Discussion about local food	.27 (.08)	.21**	.51 (.08)	.34***	.15 (.07)	.12*
Incremental adjusted R^2 (%):		10.7***		17.8***		14.5***
Block 3 - Self reported knowledge about local food						
Self-reported knowledge	.23 (.06)	.23***	.29 (.06)	.25***	.21 (.05)	.21***
Incremental adjusted R^2 (%):		4.5***		5.4***		7.8***
Block 4 - Normative perceptions						
Descriptive norm					.39 (.05)	.40***
Injunctive norm					−.02 (.05)	−.02
Incremental adjusted R^2 (%):						12.7***
Total adjusted R^2 (%):		14.1***		30.2***		37.7***

Note: B is the unstandardized regression coefficient and β is a standardized regression coefficient (final) for all blocks. Items comprising the variables were measured on a 1 to 5 scale expect for some of the demographic variables. SES = socioeconomic status. DV = dependent variable.

#$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

Additionally, as interactions between farmers' market shopper status, local food purchasing, and several communication variables (news, social media, and discussion) were significant in Table 4.1, one would expect some differences when examining the two groups separately. More specifically, to match results in Table 4.1, one would except those communication variables (news, social media, and discussion) to be significant in Table 4.3 for the non-farmers' market shopper group, and either not significant for the farmers' market shopper group, or with that group having smaller coefficients. This held true with local food discussion, as it was a direct and significant predictor of local food purchasing for the non-farmers' market shoppers only ($\beta = .12$, $p = .031$), but this was not the case with social media or news. Instead, local food purchasing was also directly associated with information in entertainment ($\beta = .09$, $p = .087$) for the non-farmers' market shoppers.

A last difference was that knowledge was significantly associated with descriptive ($\beta = .23$, $p < .001$) and injunctive ($\beta = .25$, $p < .001$) norms for the non-farmers' market shoppers (Table 4.3), but for the farmers' market shoppers these associations were not significant. The interaction between farmers' market shopper status, norms, and knowledge was not tested in the model in Table 4.1 as it was not predicted that such a relationship would exist. However, after rerunning the model with these interactions included it was found that there was a significant interaction between knowledge, farmers' market shopper status, and injunctive norms ($\beta = -.09$, $p = .017$), though there was not a significant interaction between knowledge, farmers' market shopper status, and descriptive norms. A plot of the interaction reveals a similar pattern as the other interactions, with a steeper slope for non-farmers' market shoppers. This suggests that for non-farmers' market shoppers, knowledge is related to injunctive norms in a more impactful way. This could be the case for descriptive norms as well, though the evidence is less

compelling.

The differences between the two strategies (the interaction terms and the separate regressions) could be due to the limitations of the second strategy as previously described. Differences may also have been because with the separate regressions, interactions are essentially occurring between farmers' market shopper status and all study variables, not just those related to communication. Overall, the models without farmers' market shopper status explained less variation, resulting in greater error, and pointing toward the model with the interaction terms (Table 4.1) as the better choice.

Despite inconsistencies in the two strategies, overall there is evidence for farmers' market shopper status as a moderator for how information from different environments influences normative perceptions about local food and behavior. Results point toward knowledge and communication-related variables being relatively more impactful to the non-farmers' market shoppers.

Discussion

This chapter aimed to explore the influence of perceptions about social norms on local food purchasing (H1) and how information in different environments influences norms, including information in the social environment (H2), the symbolic environment (H3), and physical environment (H4). This chapter also considered if farmers' markets played a moderating role in the influence of communication-related variables on normative perceptions about local food (RQ1).

The first hypotheses predicted both descriptive and injunctive normative perceptions would influence behavior. Descriptive norms were a strong predictor of purchasing local food,

but only the before entry beta for injunctive norms were significant, suggesting the influence of injunctive norms is mediated by descriptive norms in this context. This is somewhat surprising given there are handful of studies that found injunctive norms to be a significant predictor of local food purchasing (Dowd and Burke, 2013; Nurse Rainbolt et al., 2012; Onozaka, et al., 2010; Robinson & Smith, 2002). But those studies did not also take into account descriptive norms, which may have made injunctive norms appear more influential in those studies.

Considering the mechanisms underlying norms, this suggests people are not only purchasing local food in order to gain approval from others. Instead, perceptions of what friends and family actually do are influential in terms of guiding behavior. As descriptive norms should bring about a stronger response in ambiguous situations (Gelfand and Harrington, 2015), it may be the case that there is ambiguity related to food choices (as there are so many food choices), making stored information about the behavior of others influential at the time of purchase as a mental shortcut.

In terms of marketing local food, these findings suggest strategies focusing on descriptive norms may be needed in addition to highlighting others' approval. Marketing strategies that rely on norms might emphasize the large number of people doing the desired behavior or offer testimonials from a group with which the target audience will identify (McKenzie-Mohr & Schultz, 2014). For local food, this might mean emphasizing the aggregate number of local food consumers or percentage of growth in customers who are opting to buy local food.

Several hypotheses concerned predictions about communication channels contributing to normative perceptions, with a focus on the three domains described by the social exposure framework. Regarding social sources of information, the regressions found discussion about local food was related to injunctive and descriptive norms. Social media was not. This suggests

that encouraging local food consumers to share experiences with family and friends should be a priority for those interested in growing the local food customer base.

Logically, a way for individuals to endorse farms or products would be to share their experiences or other content about local food on social media. However, the fact that social media was not predictive of descriptive norms suggests that social media may have limited impact when it comes to local food promotion. In this case, the reason social media was not a significant predictor of descriptive norms may be that the sample in this analysis trended older (the average age was between 55 and 64). Connections between social media and norms might only become apparent in a younger sample or among people who are more active social media users. Future research should investigate if social media could play a more dominant role in normative perceptions among younger adults or more active social media users.

Hypotheses also addressed information in the symbolic environment, with variables related to news and entertainment. Attention to food-related news was associated with descriptive norms as predicted, though not to injunctive norms in the main model (Table 4.1). However, attention to food-related entertainment was a direct predictor of local food purchasing, but not through norms. As mentioned in Chapter 3, cooking shows may stimulate more local food purchasing because they help individuals learn how to use or buy local food or create cultural interest in local food.

The physical environment, represented by being a farmers' market shopper, contributed both to a sense of descriptive and injunctive norms. This aligns well with the social exposure framework. To bring more clarity to the role of farmers' markets, the research question further explored if being a farmers' market shopper moderated the influence of information from different communication channels on normative perceptions.

Findings indicated that for non-farmers' market shoppers, certain communication channels were relatively more influential regarding normative perceptions about local food and local food purchasing. In particular, discussion with friends and family and attention to food-related information in social media was linked to injunctive norms and purchasing behavior for the non-farmers' market shoppers at a greater rate compared to the farmers' market shoppers. Along those lines, more self-reported knowledge was also linked to injunctive norms among the non-farmers' market shopper group at a greater rate, as was news relative to purchasing. Without first-hand experiences, mediated information may be more impactful for the non-farmers' market shopper group. For social exposure, this finding suggests that information from different sources shouldn't be thought of as additive necessarily when it comes to contributing to an individual's normative perceptions, but that information in some domains might partially substitute for other information, or that information from some domains gets prioritized.

Interactions involving behavior might be explained for an additional reason. It may be that for farmers' market shoppers, going to the market is habitual, and having reminders about local food purchasing may be unnecessary to prompt them to engage in the behavior because they are already committed to practicing it. However, reminders about local food may be influential for non-farmers' market shoppers. As individuals who are not farmers' market shoppers increasingly pay attention to food-related information in the media, such information is relatively more impactful on their behavior compared to famers' market shoppers who do not need such a prompt, because buying local food at the farmers' market is already a habit for them.

One limitation of this analysis was the measure of the physical environment, which in this case was based on attending farmers' markets. The measure lacked detail about availability of or access to local food. Future research should expand upon measures of the physical

environment as they relate to norms. For example, research participants might report how often they see local food items at the places they shop, or how often they see signage about such products.

Nevertheless, by considering how different information environments influence norms, it was found that not all information environments equally influence descriptive and injunctive normative perceptions, where news and discussion mattered more. In addition, self-reported knowledge and several communication channels were relatively more impactful for non-farmers' market shoppers. Future work concerning the social exposure framework should continue to explore how physical environments can mediate the role of other information, and how people prioritize information from different channels or sources. It appears that people who "select" into the environment of farmers' markets are not also selectively exposing themselves to media that affirms their normative perceptions about local food. Rather, people who attend farmers' markets may be exposed to a rich array of first-hand normative information, rendering mediated information relatively less impactful. Future work concerning the social exposure framework should also continue to tease out how best to categorize sources of information that influence norms in order to better understand what types of information are influencing normative perceptions.

CHAPTER 5: LIFESTYLE AS A BASIS FOR TAILORED MESSAGES

This chapter links a marketing framework, the food-related lifestyle (FRL), to factors pertinent to identifying specific audience segments in the context of local food. These other factors include communication-related variables, perceptions regarding local food, self-reported local food purchasing, political ideology, and demographics. Identifying such groups is a first step in being able to create tailored messages related to local food, and is the main objective of this chapter. Creating tailored messages may be key in order to reach individuals online, given how the fragmented media environment generally limits media effects.

The FRL framework has been used extensively in different European countries, and is increasingly used in non-European countries such as Taiwan (Fang & Lee 2009), Singapore (Reid, Li, Bruwer, & Grunert, 2001), China (Grunert et al., 2011; Huang, Grunert, Lu, & Zhou, 2015), and Australia (Reid et al., 2001). It has only been used to explain local food purchasing behavior in the U.S., however, in a few analyses, with two analyses having the same data set and segmentation strategy (Jang et al., 2011; Kumar & Smith, 2018; Nie & Zepeda, 2011; Zepeda & Nie, 2012).

The U.S. studies all investigated issues related to local food in some way, and in finding that certain segments align with local food purchasing, these studies show promise in applying the FRL framework to audience segments in the U.S. for the purpose of creating tailored messages related to local food. This is important considering that demographics are inconsistent predictors of local food behavior and interest (Byker, et al., 2012; Feldmann & Hamm, 2015), suggesting a need for a more relevant framework to identify and describe consumers.

Because so few studies have applied the FRL framework to people in the U.S., however, and those studies were not completely consistent with each other, more investigation is

warranted into the identification of segments among U.S. consumers when using the FRL instrument in the context of local food. Such an investigation could ultimately lead to improved application of the FRL framework for U.S. consumers. Clearly, differences between European and U.S. consumers would be expected. Research points to many differences in food-related behaviors between Europe and the U.S., suggesting different patterns in segmentation will be observed.

For example, obesity rates are higher in the U.S. than in Western European countries (Ng et al., 2014), indicating that E.U. consumers may have healthier diets on average. Indeed, research comparing U.S. and French consumers found that French consumers ate more fruits and vegetables on average (Tamers, Agurs-Collins, Dodd, & Nebeling, 2009). At the same time, U.S. consumers may be more concerned about nutritional information, as research finds that they had greater nutritional knowledge than French consumers did (Saulais, Doyon, Ruffieux, & Kaiser, 2012). Along those lines, claims about food on the front of food packages in the U.S. and Europe were found to be different, with U.S. products displaying more information about cholesterol, fat, and calories (Salnikova, Stanton, & Hooker, 2014). Presumably, this indicates that different kinds of claims appeal to Europeans or Americans, as the claims analyzed were on the front of packages (which are voluntary, as opposed to required information which typically appears on the back of packages).

Policy related to food is also different in the E.U. and the U.S. For example, with functional food claims, there are more relaxed regulations in the U.S. on making such claims than in the E.U. (Lalor & Wall, 2011). In the U.S., claims not supported by scientific evidence may be presented as "qualified" claims, unlike in the E.U. (Lalor & Wall, 2011). Furthermore, in the E.U., regulations related to genetically modified food have been stricter than in the U.S.

(Hochman, Rausser, & Zilberman, 2011), while policy has been more supportive of organic agriculture (Winickoff & Klein, 2011). Such policy differences have implications for the availability of food products, or the prevalence of information about such food products (in the case of functional claims).

Tailored messages

This chapter is concerned with how the FRL framework might inform tailored messaging. Some scholars refer to tailoring messages to target groups (Luca & Suggs, 2010), while others suggest tailoring refers specifically to messages aimed at individuals (Noar, Benac, & Harris, 2007). This dissertation is more focused on identifying groups that would align well with different messages. However, the identification of message strategies for such groups could ultimately provide a platform for further personalization of messages in order to gear messages toward individuals.

In his conception of targeting audience segments, Grunig (1989) relates the idea of communicating on an individual level to communicating to audience groups by proposing individuals as the smallest audience segment, with increasingly broader conceptions (publics, communities, lifestyles, demographics, etc.). Grunig (1989) references John Dewey's concept of publics from the 1920s in describing this segmentation scheme, and this underscores that audience segmentation is not a new concept. Dewey described publics as people that share "similar values or interests with respect to a given issue" (Slater, 1996). Furthermore, marketers have been concerned with identifying audience segments since the 1950s (Grunig, 1989). Segmentation became the "core marketing concept" for selling products since then (Hine et al., 2014).

Tailoring toward individuals, rather than a larger audience segment, appears to be the trend now. Research suggests tailoring messages to individuals is effective. In a meta-analysis of 57 studies focused on health communication, researchers found individually tailored communication to perform better than generic messages or messages targeted to groups (Noar et al., 2007). The researchers suggested that benefits of the personalized messages were that, as they were more personally relevant, the messages could be better understood, recalled, and perceived as credible. They also noted the importance of including theoretical constructs in the tailoring process, as studies including theoretical constructs had larger effect sizes. While that meta-analysis was focused on studies that involved print campaigns, the findings align with research focused on social media and tailored messages. In one study, when participants in an experiment perceived Facebook ads to be more personalized, they perceived the ads to be more relevant and this made their attitude toward the brands in the ads more favorable and increased their intention to click on the ads (De Keyzer, Dens, & De Pelsmacker, 2015).

The food-related lifestyle

In order to identify and describe how messages might be tailored in the context of local food, this chapter relies on the FRL framework in addition to political ideology. Broadly speaking, the FRL framework puts forward that individuals' abstract values are linked to food product choices based on their knowledge and behavior related to food (Grunert et al., 2001). Political ideology is not specifically a part of the FRL instrument, but has been added in this analysis as a segmentation variable. This was done because the inclusion of political ideology could lead to more meaningful audience segments, as segments associated with different political ideologies might be reached through different media or through different strategies. Political

ideology impacts media choices (Mitchell et al., 2014) that in turn can influence beliefs or knowledge (Cacciatore, et al., 2012; Dierks & Landreville, 2017; Hindman, 2009, 2012; Nisbet et al., 2015; Veenstra et al., 2014; Veenstra et al., 2016).

The FRL framework was designed in part to confirm if similar lifestyle groups existed in different European countries, so products could be marketed to the same lifestyle group but in a new location (Grunert et al., 2001). The FRL framework contends that consumer behavior is linked to values through one's lifestyle (Brunsø et al., 2004). Thinking hierarchically in terms of abstraction, values represent abstract cognitive categories, "lifestyle" plays an intermediary role, and perceptions about specific products are more concrete thoughts (Brunsø et al., 2004). Model testing examined this hierarchy and confirmed that the best model was one where abstract values influenced FRL variables, which in turn acted on product choices (Brunsø et al., 2004).

When the FRL framework was being developed, Brunsø & Grunert (1995) collected data from consumers in multiple European countries. Through factor analysis, they narrowed in on five dimensions of lifestyle related to food and developed an instrument with twenty-three scales (which can each be assigned to one the five dimensions) that are composed of several survey items each (Brunsø & Grunert, 1995; Grunert et al., 2001). The dimensions they described are ways of shopping (knowledge about how to shop), cooking methods (knowledge about how to cook), quality aspects (preferences for different product attributes), consumption situations (when and where food is eaten), and purchasing motives (expectations of meals).

Typical FRL consumer segments

Distinct patterns emerge in consumer groups when they are segmented with FRL variables in Europe. The typical pattern to European countries results in at least five categories of

consumers: Careless, Adventurous, Conservative, Uninvolved, and Rational (Grunert, et al., 2001; Wycherley, McCarthy, & Cowan, 2008). Adventurous consumers have a strong interest in cooking and shopping, they find self-fulfillment in food, they value food quality, they view cooking as social, and they are interested in organic products. The Rational group is also interested in food and cooking, but is characterized as having a strong interest in product information, prices, and meal planning.

In contrast, the Careless group only shops and cooks spontaneously, and places value on convenience and novelty items. The Conservative group is averse to novelty in food, price sensitive, and does not particularly value convenience. A similar group to, or perhaps a variation of, the Conservative group has also been described as Traditional. An identified difference between the Conservatives and Traditionals is that Traditionals enjoy cooking, and Conservatives do not (Grunert et al., 2001). Lastly, the Uninvolved consumers do not enjoy cooking or shopping, and are generally indifferent to food.

In the FRL studies done in the U.S., some of these same groups emerge. Adventurous, Rational, and Careless consumers were identified in a nationwide survey, with a fourth group, the Conservative Uninvolved, not clearly matching one of the five common European FRL segments (Nie & Zepeda, 2011; Zepeda & Nie, 2012). Another U.S. study identified Adventurous and Uninvolved consumers, plus two additional segments — Health-conscious and Convenience-oriented (Jang et al., 2011).

Furthermore, in one other study to apply the FRL to U.S. consumers, a typology of people who already identified as having purchased local food was created (Kumar & Smith, 2018). While the authors did not directly compare their identified groups to typical groups identified by the FRL, it does appear their four groups do show similarities to typical FRL

groups. Their "Involved Information Seeker" resembles the Rational group, the "Impromptu Novelty Explorer" resembles the Adventurous group, the "Uninvolved Connoisseur" resembles the Careless group, and the "Apathetic Local Food Consumer" resembles the Uninvolved group. Considering that the few studies to use the FRL framework in the U.S. did not find groups that were completely consistent with each other or with the most typical European segments, it is unclear what patterns will emerge among respondents in this analysis. This leads to the first research question:

> RQ1: When segmented based on adapted FRL variables plus political ideology, will patterns emerge among the identified groups that are consistent with findings from the other studies segmenting individuals in the U.S. based on FRL variables?

Examining the initial FRL segments that emerge from the data used in this dissertation, and how those groups correspond to what other research typically finds, is a necessary first step to consider other factors pertinent to tailored messages.

Local food and segmentation

In the studies where the FRL framework was used to examine U.S. consumers, variables related to local food were considered. One focused on patronizing sustainable restaurants (Jang et al., 2011), and the other work used farmers' market shopping as a measure for local food purchasing (Nie & Zepeda, 2011; Zepeda & Nie, 2012). Adventurous and Rational consumers shop at farmers' markets more, but Careless and Conservative Uninvolved are unlikely to do so (Nie & Zepeda, 2011; Zepeda & Nie, 2012). Findings from research that does not rely on the FRL framework, but still characterizes local food consumers, is also relevant to this work.

Some of these other studies that characterize local food shoppers focused on demographics. While there is a trend for older females to be more likely to buy local food, other demographic factors tend to be inconsistent (Byker et al., 2012; Feldmann & Hamm, 2015). In a review of 73 local food studies from a consumer perspective, the authors noted that in some studies, demographics could not predict interest in local food (Feldmann & Hamm, 2015). Older, wealthier, rural women had higher interest in local food in many of the reviewed studies, though research with conflicting findings was also presented (Feldmann & Hamm, 2015).

Conflicting results were also noted in a review of 22 studies about farmers' market shoppers (Byker et al., 2012). While the review suggested the most typical farmers' market shoppers were women over the age of 40 who live near farmers' markets, there was not consensus among the reviewed studies regarding income, education, and ethnicity. The authors suggested that one reason for this could be that the farmers' market customer base is diversifying. Overall, the authors recommended considering factors beyond demographics (in particular, lifestyle factors) to characterize farmers' market shoppers.

Alternatively, other work segmented local food consumers based on behavior, some of which also considered communication-related variables (Cholette, Özlük, Özşen, & Ungson, 2013; Keeling Bond, Thilmany, & Bond, 2009; Stanton et al., 2012). In one study, consumers who preferred to always buy local food directly from farmers (e.g., at a farmers' market) placed more importance on the product being superior (the parameters of superiority were not defined) than those who preferred to buy directly from farmers only sometimes (Keeling Bond et al., 2009). This study also examined communication differences and found that groups that preferred to always or sometimes buy directly from farmers preferred to get food information from magazines, radio, and information booths at farmers' markets as opposed to television, which

was preferred by the group that never preferred to buy direct. This speaks to the possibility of selectivity, in that more regular farmers' market shoppers preferred to get information from different sources.

In another study, researchers compared respondents that they classified as "locavores" to those they classified as non-locavores (Stanton et al., 2012). Demographically, the locavores had more income and larger households. They also found that locavores appeared more interested in food-related information. They read food labels more, and were more likely to report that media helped them make decisions about purchases. This also speaks to the idea of selectivity, as the locavores sought out more food-related information**.** Local food buyers were also more likely to shop at more than one store. That finding is consistent with FRL work suggesting Adventurous consumers, who are more likely to purchase at specialty stores, also patronize farmers' markets more often (Nie & Zepeda, 2011; Zepeda & Nie, 2012).

Ultimately, however, segmenting consumers based on behavior might not be the best strategy for identifying appropriate groups for which to tailor messages in this context. If farmers' market shoppers are in fact diversifying, as Byker et al. (2012) suggest, they may be too broad a segment to direct messages toward. This may have played a role in why some of the interactions involving farmers' market shopper status were not significant in Chapter 4. If farmers' market shoppers are diverse, they may not be seeing the same media or interpreting it similarly.

Alternately, if local food shoppers are composed of multiple subgroups, segmenting individuals based on more nuanced criteria could be a better strategy in which to inform tailored messages. Consequently, this chapter takes the approach of segmenting individuals based on FRL variables in addition to political ideology, and then examines differences in local food

perceptions and behaviors among those groups. This leads to the second research question:

> RQ2: Will particular segments, identified through FRL variables and political ideology, show distinct patterns when it comes to local food purchasing and perceptions, communication behaviors, and demographics?

If identified groups show distinction based on those factors, recommendations can be made in terms of what messages or strategies might be most effective for tailoring to each audience.

Methods

The data for this chapter were collected with the survey described in Chapter 2. Respondents were clustered based on 20 survey items adapted from the FRL instrument in addition to political ideology. Items related to each of the previously described FRL domains were included, with five items each representing the domains of cooking methods, ways of shopping, and quality aspects. Three items represented the domains of purchasing motives, and two items represented consumption situations. Using 20 FRL items, rather than all of the original 69 items, was done to reduce respondent burden. It is not uncommon for researchers adapt or reduce the number of FRL items (e.g., Huang et al., 2015; Jang et al., 2011; Kumar & Smith, 2018; Nie & Zepeda, 2011; Sorenson et al., 2011; Wycherley et al., 2008; Zepeda & Nie, 2012).

To segment the respondents, the k-means clustering method in SPSS was used. K-means is a partitioning method that is recommended for sample sizes above 500 (Mooi & Sarstedt, 2011). The method prioritizes minimizing variation within clusters, and has advantages such as being more buffered against “irrelevant” variables than hierarchical methods (Mooi & Sarstedt,

2011). With the k-means procedure, the number of clusters must be specified in advance. To make the decision about the number of clusters, a dendrogram was first created through a hierarchical clustering method, as this method does not require researchers to pre-specify the number of clusters (Mooi & Sarstedt, 2011). Results from the dendrogram were suggestive of three to six clusters being appropriate. However, theory and interpretability are also important considerations when it comes to selecting the numbers of clusters to use (Mooi & Sarstedt, 2011). For that reason, the k-means clustering was conducted with four, five, and six clusters to check for interpretability and a five-cluster solution was ultimately selected[1].

After clusters were formed, multiple one-way ANOVA tests were conducted to compare the means of the five groups based on both the segmenting and profiling variables. The profiling variables are from additional survey items of interest and relate to venues for food shopping, local food, communication, and demographics. This was done with SPSS, with a Bonferroni correction applied to *p*-values in order to control for the family-wise error rate, on account of conducting multiple ANOVA tests. Multiple ANOVA tests, rather than a MANOVA test, were conducted because multiple ANOVA tests are appropriate when the research goal is to determine which outcome variables are different for the different groups, with outcome variables being conceptually independent (Huberty & Morris, 1989). Tukey post hoc analyses were subsequently conducted on variables that the ANOVA tests determined were significant.

Cases were excluded listwise from the segmentation variables, leaving 577 cases for the analysis. In other words, to be included in analysis, respondents needed to provide responses to

[1] When clustering with four groups, it appeared that some groups (Adventurous, Traditional, and Rational) remained in tact. However, the Convenience/Careless and Uninvolved groups were combined, resulting in the loss of the distinction between those groups. With three clusters, it appeared that the Convenience/Careless and Uninvolved groups again clustered together, and the Traditional and Rational groups were combined. With fewer clusters, each cluster had a greater sample size. This allowed for greater statistical power. However, the loss of distinct groups made interpretation more difficult.

all the survey items that were used for segmentation (the FRL items and political ideology). Cases were excluded from the profiling variables by analysis, however.

Segmentation variables

Twenty survey items adapted from the FRL instrument were used to segment respondents in addition to political ideology. Political ideology was measured with two items, each on a five-point scale, as described in Chapter 3. The 20 FRL items related to different FRL domains, and they are categorized as such in Table 5.1.

Four items were part of a question series that asked how often respondents did certain activities in the last year. These items were "Cooked or prepared fresh food," "Made a new dish or recipe," "Prepared convenience food (i.e. microwave meal, frozen pizza, can soup), and "Ate at a restaurant or cafeteria." Response choices ranged from "Less than monthly" to "More than once a day" on a 5-point scale.

A separate question series asked respondents how much they enjoyed certain things, with response choices ranging from "Not at all" to "A great deal" on a 5-point scale. These were "Food shopping," "Cooking," "Trying new kinds of food," and "Eating out with others." A third question series began with the stem, "For the fruits and vegetables you buy, to what extent do these characteristics affect your purchasing decisions?" with the same response choices as the previously described series. The items were "Convenient place to buy," "Low price," and "Comes pre-cut and/or pre-washed."

An additional five items in that question series were included as two indices. One was a measure of quality and averaged the responses to items of "Taste," "Appearance," and "Freshness." The other index was a measure of naturalness, and averaged the response choices of

"Organic" and "Grown without chemicals." For naturalness, the Spearman-Brown coefficient was .84.

Next, there were two items that were part of a question series asking respondents about the frequency that they did activities, with response choices ranging from "Never" to "Always" on a 5-point scale. The items were "Made a list for food shopping" and "Read nutrition labels while food shopping." Lastly, there were two items not part of a question series. One of these items asked, "Do you give or prepare food to show you care for others?" Responses choices ranged from "Not at all" to "A great deal." The other item asked, "For you, is eating meals one of the highlights of your day?" Response choices ranged from "Never" to "Always."

Profiling variables

For profiling variables related to local food, the same self-reported index of local purchasing used in Chapter 3 and Chapter 4 was included. The two belief variables from Chapter 3 were included (regarding quality and environmental benefits of local food) in addition to variables about benefits of local food for health, safety, and the economy. For those items, a 1 meant "Not at all" and a 5 meant "Very much." The two norms variables from Chapter 4 (injunctive and descriptive norms) were also included, as was the variable about local produce being inconvenient to purchase.

Three additional local food-related variables were included. A survey item examined the premium respondents were willing to pay for local produce. The survey item asked how much respondents were wiling to pay for a bag of potatoes from Wisconsin, given that a bag labeled "USA" cost $2.00. Eight response choices ranged from "less than $2.00" to "$5.00." Another item asked about whether local produce was more expensive, with five response choices ranging

form “Not at all” to “Very much.” Lastly, an index of three items to represent local food awareness was included. These items, all measured on 5-point scales, asked “Are you knowledgeable about local fruits and vegetables,” “Are you aware of issues that affect the supply of local fruits and vegetables (e.g. weather, retail options, distribution, etc.)?” and “Can you tell which fruits and vegetables are local at the store?” Response choices were on 5-point scales and ranged from “Not at all” to “A great deal.” Cronbach’s alpha coefficient was .79.

Next, respondents were profiled based on the frequency of shopping at different venues, including a convenience store or gas station, grocery store, supermarket, superstore, natural food store or cooperative, and farmers’ market. Response choices ranged from “Never” to “Always” on a 5-point scale. Doing so allowed for contextualizing the frequency respondents shop at a venue where local food is predominantly sold (e.g., the farmers’ market or natural food stores) compared to other locations.

Four communication variables were examined, the same as used in Chapter 3 and Chapter 4. Three were single-item variables and these included attention to information about food in the news, entertainment programs, and social media. One item related to interpersonal discussion was about local food specifically and was an index of two items — talking to friends about local food and talking to family about local food.

With demographics, age, gender, number of children, and SES were included, as they were in Chapter 3 and Chapter 4. In addition, a variable related to weekly food budget was added. On this item, 7 response options ranged from “Less than $50” to “Over $300.” Four binary variables related to community type were also included. These were metropolitan, micropolitan, small town, or rural. In order to categorize respondents as belonging (or not belonging) to each community type, zip codes that were initially collected with the surveys were

cross-referenced with rural-urban commuting area codes used by the USDA (2016b).

Results

This chapter aimed to segment and describe groups of survey respondents as a first step in determining how to best reach audiences in the context of local food. After forming five clusters of respondents with the FRL variables and political ideology, respondents were further profiled based on other important factors, with differences among groups confirmed with ANOVA tests.

The first research question considered if patterns would emerge among the identified groups, after segmenting them based on the FRL survey items and political ideology, that are consistent with patterns found in the other FRL work from the U.S. The groups that emerged were relatively similar to the five groups commonly found in previous FRL European research (Grunert et al., 2001) and have been named here correspondingly. These include the Adventurous (n = 99), Rational (n = 146), Traditional (n = 90), Convenience/Careless (n = 126), and Uninvolved (n = 116). These groups are also somewhat consistent with FRL groups identified in the U.S., as research using a national sample found Adventurous, Rational, and Careless groups (Nie and Zepeda, 2011; Zepeda & Nie, 2012) while Jang et al. (2011) found Adventurous, Convenience-oriented (apparently similar to the Careless group), and Uninvolved groups. A major difference was that a Traditional group was identified in this chapter, but not in other U.S. studies.

The ANOVA tests found the groups to be significantly different for the two political ideology variables and all of the FRL variables except for frequency of eating out ($p < .05$).

Means and standard deviations for the can be found in Table 5.1. Different letters signify particular group differences identified through Tukey post-hoc analysis.

Overall, the groups were distinct in terms of food behaviors, food preferences, and political ideology. Adventurous (liberal) and Rational (conservative) groups were the most interested in cooking and shopping. They also valued food beyond consumption (as they reported that food is a way they show care for others, and a highlight of their day). The Adventurous group stood out in terms of their interest in trying new food, and showing relatively more interest in natural or organic food. In contrast, the Rational group was more concerned with price and convenience.

The Traditional (moderate) group showed less interest in cooking than the Rational and Adventurous groups, but still more than the Convenience/Careless and Uninvolved groups. The Traditional group was not price sensitive, showed some interested in trying new food, and was the least interested in convenience among any of the groups (they favored convenient location less than any other group).

The Convenience/Careless (moderate) group, in contrast, showed the strongest preferences for convenience. They favored convenient location more than any other group, and they favored convenience food and pre-cut and /or pre-washed produce more than most other groups. They also valued low price, and reported enjoying eating out with others more than most other groups (they averaged similarly to the Adventurous group, however, on this item).

The Uninvolved group (conservative) was similar to the Convenience/Careless groups. Both of these groups showed little interest in cooking and shopping. The Convenience/Careless group averaged especially low when it comes frequency of cooking, enjoying trying new food, and interest in natural or organic in food. They did show a preference for convenience, however.

Table 5.1. Means for segmenting (FRL and political ideology) variables by group.

		Sample *M (SD)*	Rational *M (SD)*	Convenience/ Careless *M (SD)*	Uninvolved *M (SD)*	Adventurous *M (SD)*	Traditional *M (SD)*
	Survey item	n = 577	n = 146 (25%)	n = 126 (22%)	n = 116 (20%)	n = 99 (17%)	n = 90 (16%)
Ideology	Social	3.0 (1.2)	1.9 (.81)e	3.6 (.83)b	2.4 (.94)d	4.3 (.76)a	3.1 (.70)c
	Economic	2.7 (1.1)	1.8 (.72)e	3.4 (.74)b	2.2 (.79)d	3.8 (.99)a	2.9 (.60)c
FRL domain							
Cooking methods	Cooked or prepared fresh food	3.3 (1.0)	3.7 (.91)b	2.9 (.82)c	2.6 (.86)d	4.2 (.81)a	3.5 (.97)b
	Enjoy cooking	3.6 (.97)	4.2 (.74)a	3.0 (.87)c	2.9 (.85)c	4.3 (.70)a	3.7 (.68)b
	Made a new dish or recipe	1.7 (.73)	1.8 (.71)b	1.3 (.51)c	1.3 (.56)c	2.2 (.81)a	1.9 (.61)b
	Prepared convenience food	2.3 (.84)	2.2 (.80)bc	2.6 (.83)a	2.4 (.86)ab	2.0 (.84)c	2.0 (.75)c
	Pre-cut and /or pre-washed produce	2.4 (.99)	2.5 (1.0)ab	2.7 (1.0)a	2.5 (.97)ab	2.2 (.91)bc	2.0 (.81)c
Ways of shopping	Enjoy shopping	3.1 (.97)	3.5 (.91)ab	2.6 (.99)c	2.7 (.79)c	3.6 (.94)a	3.2 (.72)b
	Made a list for food shopping	4.2 (.96)	4.4 (.76)a	4.3 (.88)a	3.8 (1.1)b	4.5 (.76)a	3.8 (1.1)b
	Read nutrition labels	3.4 (1.1)	3.6 (.92)b	3.5 (.90)b	2.4 (.99)c	4.0 (.84)a	3.7 (.83)ab
	Low price	3.7 (.99)	4.0 (.82)a	4.0 (.92)a	3.5 (1.0)b	3.4 (1.1)b	3.1 (.82)c
	Convenient place to buy	3.7 (.94)	4.0 (.84)ab	4.1 (.70)a	3.6 (.96)c	3.7 (.89)bc	3.0 (.95)d
Consumption situations	Enjoy trying new kinds of food	3.5 (.95)	3.8 (.85)b	3.2 (.80)c	2.7 (.77)d	4.3 (.73)a	3.5 (.77)bc
	Enjoy eating out with others	3.5 (1.0)	3.4 (1.0)b	3.8 (.92)a	3.0 (.94)c	4.1 (.98)a	3.0 (.99)c
	Ate at a restaurant or cafeteria	2.0 (.75)	1.9 (.69)a	2.2 (.78)a	2.0 (.83)a	2.0 (.65)a	1.9 (.74)a
Purchasing motives	Give or prepare food to show you care for others	3.3 (1.1)	3.8 (.92)a	3.0 (.87)b	2.5 (.93)c	3.9 (.85)a	3.1 (.92)b
	Eating meals is a highlight of the day	3.3 (.89)	3.8 (.74)a	2.9 (.75)bc	2.7 (.76)c	3.8 (.78)a	3.2 (.74)b
Quality aspects	Quality	4.4 (.57)	4.5 (.52)a	4.4 (.55)a	4.1 (.63)b	4.5 (.48)a	4.2 (.52)b
	Natural	2.5 (1.1)	2.4 (1.1)b	2.5 (.93)b	1.6 (.70)c	3.3 (1.0)a	2.8 (.99)b

Note: Items comprising the variables were measured on a 1 to 5 scale. Groups with similar superscript letters did not differ ($p > .05$).

These broad differences are summarized in Table 5.2, along with differences based on the profiling variables. The following sections describe these differences in more detail, with FRL items organized by FRL domain.[2]

Political ideology – segmentation variables

As shown in Table 5.1, on average, the sample was moderate both in terms of social issues (M = 3.0, SD = 1.2) and economic issues (M = 2.7, SD = 1.1). The Adventurous group averaged significantly more liberal any other group in terms of social issues (M = 4.3, SD = .76) and economic issues (M = 3.8, SD = .99). On social issues, the Rational (M = 1.9, SD = .81) and Uninvolved (M = 2.4, SD = .94) groups averaged significantly more conservative than other groups. In terms of economic issues, the Rational (M = 1.8, SD = .72) and Uninvolved (M = 2.2, SD = .79) groups also averaged more conservative. The Traditional (M = 2.9, SD = .60) and Convenience/Careless groups (M = 3.4, SD = .74) were closest to the response choice of moderate for economic issues, though the Convenience/Careless group did average significantly more liberal than the Traditional group. Similarly, with social issues, the Traditional group averaged closest to moderate (M = 3.1, SD = .70) with the Convenience/Careless group averaging significantly higher (M = 3.6, SD = .83). Table 5.3 displays results relating to political ideology in percentages, for ease of interpretation, rather than the means shown in Table 5.1.

[2] Segmentation was also tried with including only one political ideology variable, as these two variables were strongly correlated. While their correlation was below the suggested cut off of .90 for clustering, having these two correlated variables together as segmenting variables could mean that ideology would have more influence in the formation of clusters overall. When segmenting only with social ideology, however, because more respondents identified as more socially liberal, the Rational group trended moderate (instead of conservative) and the Careless group trended liberal (instead of moderate). This made the most difference on items such as frequency of shopping at an organic or natural food store or cooperative, placing value on chemicals, and assigning a premium to local food. Thus the emphasis on liberal ideology was inflated. When only segmenting on economic ideology, results were very similar to when segmenting with both ideology variables included. This suggests that including both economic and social ideology in the original segmentation strategy was not problematic in terms of inflating the influence of ideology in general. Consequently, it was determined best to use both economic and social ideology as segmentation variables in order to have the most balanced results.

Table 5.2. Broad characterization of the identified groups based on segmentation and profiling variables.

Rational
Ideologically conservative
Enjoy cooking
Involved shoppers
Value convenience
Price sensitive
Show some interest in trying new food
See eating meals as a highlight of the day
Value food as a way to show care for others
Buy some local food
Believe local food is superior in terms of quality
Less willing to give local food a premium

Convenience/Careless
Ideologically moderate
Not interested in cooking
Not interested in shopping
Place more value on convenience than other groups
Price sensitive
Not interested in trying new food
Enjoy eating out with others
Not interested in natural/organic food
Buy some local food
Believe local food is superior in terms of quality
Less willing to give local food a premium
Discuss local food less
Shop less at farmers' markets
Shop less at natural food stores

Uninvolved
Ideologically conservative
Show the least interest in cooking
Show the least interest in shopping
Show the least interest in trying new food
Show the least interest in natural/organic food
Show the least interest in local food
Less willing to give local food a premium
Pay less attention to food-related information in the news or social media
Discuss local food less
Shop less at farmers' markets

Shop less at natural food stores
Less likely to be female
Have lower socioeconomic status

Adventurous
Ideologically liberal
Enjoy cooking
Involved shoppers
Cook more than other groups
Do not value convenience
Less price sensitive
Interested trying new food
See eating meals as a highlight of the day
Value food as a way to show care for others
Enjoy eating out with others
Show relatively more interest in natural/organic food
Buy more local food than most other groups
Believe local food is superior in terms of quality and has other benefits
Willing to give local food a premium
Pay more attention to food-related information in social media
Discuss local food more
Shop less at superstores
Shop more at farmers' markets
Shop more at natural food stores
More likely to be female
Have higher socioeconomic status
Younger

Traditional
Ideologically moderate
Enjoy cooking somewhat
Somewhat involved shoppers
Do not value convenience
Less price sensitive
Show some interest in trying new food
Buy local food
Believe local food is superior in terms of quality
Willing to give local food a premium
Discuss local food more
Shop more at farmers' markets

Table 5.3. Political ideology by group (%).

	Conservative		Moderate		Liberal	
	Economic	*Social*	*Economic*	*Social*	*Economic*	*Social*
Rational	82	75	19	23	0	1
Convenience/Careless	6	6	56	44	38	50
Uninvolved	60	49	38	42	2	9
Adventurous	9	1	29	14	62	85
Traditional	22	18	69	57	9	26

Note: Ideology was measured on a 1 to 5 scale for both economic and social issues but has been collapsed into three categories for this table. Individuals selecting "Very conservative" or "Somewhat conservative" are collapsed into the "conservative" category here, and likewise for the liberal category. "Moderate" was a stand-alone response choice for each item, however.

Cooking methods – segmentation variables

On average, the sample reported cooking or preparing food with fresh ingredients "A few times per week" ($M = 3.3$, $SD = 1.0$). Adventurous consumers showed more interest in cooking, however, averaging closer to reporting that they cook "About once a day" ($M = 4.2$, $SD = .81$). This was significantly more than any other group. Not only did the Adventurous consumers report cooking more, but they also reported that they try making new dishes significantly more often than any other group, doing so on average "A few times a month" ($M = 2.2$, $SD = .81$). Rational consumers also showed a strong interest in cooking. Although they do not cook as often as the Adventurous consumers, the Rational group reported enjoying cooking significantly more than three other groups ($M = 4.2$, $SD = .74$), and the same amount as the Adventurous group ($M = 4.3$, $SD = .70$).

When it comes to items related to convenience, it is the Convenience/Careless and Uninvolved groups that stood out. They reported preparing convenience food significantly more than the Adventurous or Traditional groups, with the Convenience/Careless also doing so significantly more than the Rational group. The Convenience/Careless and Uninvolved groups

also showed less of a preference for making new dishes or recipes, rating the frequency of doing this significantly less than any other group.

Ways of shopping – segmentation variables

With shopping, overall, the sample reported enjoying shopping "Somewhat." The Adventurous, Rational, and Traditional groups reported enjoying shopping significantly more than the Convenience/Careless or Uninvolved groups, however. Among the three groups who appeared to enjoy shopping more, the Adventurous group ($M = 3.6$, $SD = .94$) averaged closest to enjoying shopping "Quite a bit," and was significantly higher than the Traditional group ($M = 3.2$, $SD = .72$), who averaged closest to "Somewhat."

The Adventurous group also stood out for being more involved with food shopping, as they read nutrition labels significantly more than most other groups ($M = 4.0$, $SD = .84$), closest to the response choice of "Often." They were indistinguishable from the Traditional group on this point ($M = 3.7$, $SD = .83$), however. In contrast, the Uninvolved group read labels significantly less than any other group ($M = 2.4$, $SD = .99$), averaging closest to the response choice of "Rarely." The Uninvolved also averaged significantly less than all other groups except for the Traditional group regarding list making for shopping.

Two last items related to food shopping were convenient location and low price. Overall averages for the sample for both low price ($M = 3.7$, $SD = .99$) and convenience of location ($M = 3.7$ $SD = .94$) were closest to the response choice of "Quite a bit." The Rational and Convenience/Careless groups averaged similarly, and significantly higher, than the other groups regarding low price. The Convenience/Careless group also averaged significantly higher than the Traditional, Adventurous, or Uninvolved groups regarding convenient location.

Quality attributes – segmentation variables

Among all respondents, produce quality was rated highly in terms of how much it influenced their purchasing decisions, closest to the response choice of "Quite a bit" for the sample average ($M = 4.4$, $SD = .57$). It was significantly more important to the Rational ($M = 4.5$, $SD = .52$), Adventurous ($M = 4.5$, $SD = .48$), and Convenience/Careless ($M = 4.4$, $SD = .55$) groups. While the Uninvolved ($M = 4.1$, $SD = .63$) and Traditional ($M = 4.2$, $SD = .52$) groups rated produce quality as mattering significantly less, it was still rated fairly highly.

In contrast, the other quality examined, "Natural," was rated low by the sample on average ($M = 2.5$, $SD = 1.1$), closest to the response choice of "Somewhat." However, the Adventurous consumers showed more interest in naturalness as they rated it significantly higher than any other group ($M = 3.3$, $SD = 1.0$), but still closest to the response choice of "Somewhat."

Consumption situations – segmentation variables

The Adventurous consumers showed a preference for trying new food. They reported enjoying trying new food significantly more than any other group, closest to the response choice of "Quite a bit" ($M = 4.3$, $SD = .73$). New food was also important to the Rational group, who rated enjoyment in trying new food ($M = 3.8$, $SD = .85$) significantly more than the Convenience/Careless or Uninvolved groups. The Rational group was indistinguishable from the Traditional group on that point, however.

The Adventurous ($M = 4.1$, $SD = .98$) and Convenience/Careless ($M = 3.8$, $SD = .92$) groups enjoyed eating out with others significantly more than any other group, closest to "Quite a bit." In contrast, the Traditional ($M = 3.0$, $SD = .99$) and Uninvolved ($M = 3.0$, $SD = .94$) groups enjoyed eating out with others significantly less than other groups.

Purchasing motives – segmentation variables

Both the Adventurous and Rational group averaged significantly higher in terms of using food to show care for others. The Adventurous (M = 3.9, SD = .85) and Rational (M = 3.8, SD = .92) groups' averages were closest to the response choice of "Quite a bit." The Uninvolved group averaged significantly less than any other group on this item (M = 2.5, SD = .93), closest to the response choice of "Somewhat."

With meals being a highlight of one's day, the Rational (M = 3.8, SD = .74) and Adventurous (M = 3.8, SD = .78) groups averaged significantly higher than the other groups, closest to the response choice of "Often."

Local food – profiling variables

The second research question considered if the identified groups would show distinct patterns regarding local food purchasing and perceptions, communication behaviors, and demographics. The ANOVA tests found the groups differed for some items, but at all, of these factors. Results related to local food will be covered first.

Overall, the Adventurous, Rational, and Traditional groups showed the greatest interest in local food, with the Convenience/Careless and Uninvolved groups showing less interest. Means and standard deviations are shown in Table 5.4. With local food purchasing, on average, respondents bought local produce close to the scale mid-point (M = 3.3, SD = .80). The Adventurous group reported purchasing more than three other groups (M = 3.6, SD = .73), though their average was indistinguishable from the Traditional group (M = 3.5, SD = .75). The Adventurous group averaged higher than most other groups in terms of willingness to pay a premium for local food (M = 4.2, SD = 1.6) as well, though was again indistinguishable from the

Table 5.4. Differences among the groups for items related to local food.

Survey item	Sample *Mean (SD)* n = 577	Rational *Mean (SD)* n = 146 (25%)	Convenience/ Careless *Mean (SD)* n = 126 (22%)	Uninvolved *Mean (SD)* n = 116 (20%)	Adventurous *Mean (SD)* n = 99 (17%)	Traditional *Mean (SD)* n = 90 (16%)
Buy local produce	3.3 (.80)	3.3 (.78)b	3.2 (.78)b	2.9 (.80)c	3.6 (.73)a	3.5 (.75)ab
Wisconsin premium	3.4 (1.6)	3.0 (1.3)c	3.3 (1.4)bc	2.8 (1.6)c	4.2 (1.6)a	3.8 (1.5)ab
Injunctive norm	3.1 (.96)	3.1 (.89)b	3.1 (.91)b	2.6 (.92)c	3.6 (.91)a	3.3 (.90)b
Descriptive norm	2.8 (.82)	2.9 (.79)ab	2.8 (.79)bc	2.5 (.71)c	3.1 (.84)a	2.9 (.89)ab
Quality	3.6 (.98)	3.7 (.94)ab	3.5 (1.0)bc	3.3 (1.0)c	4.0 (.92)a	3.7 (.87)ab
Environment	2.9 (1.2)	2.8 (1.2)b	3.0 (1.2)b	2.2 (.98)c	3.8 (1.1)a	3.1 (1.1)b
Safer	2.9 (1.2)	3.0 (1.2)ab	2.8 (1.3)bc	2.5 (1.2)c	3.3 (1.2)a	3.1 (1.1)ab
Economy	3.3 (1.0)	3.3 (.98)b	3.4 (1.0)b	2.8 (1.0)c	3.8 (.97)a	3.2 (.94)b
Health	3.0 (1.2)	3.0 (1.2)b	3.0 (1.2)b	2.4 (1.1)c	3.7 (1.1)a	3.0 (1.2)b
Awareness	2.8 (.80)	2.9 (.79)bc	2.7 (.74)cd	2.5 (.69)d	3.3 (.84)a	3.0 (.74)ab
Convenience	2.9 (.92)	2.9 (.91)a	3.0 (.86)a	2.7 (.96)a	3.0 (1.0)a	3.0 (.79)a
More expensive	2.9 (1.1)	2.9 (.98)a	3.1 (1.1)a	2.5 (1.1)b	3.0 (1.1)a	2.8 (.93)ab
Natural food store/cooperative	1.8 (.97)	1.6 (.82)c	1.5 (.71)cd	1.3 (.61)d	2.6 (1.2)a	2.0 (1.0)b
Farmers' market	2.5 (1.0)	2.5 (1.0)bc	2.3 (.90)c	1.9 (.89)d	3.0 (.99)a	2.8 (1.0)ab
Convenience store or gas station	2.1 (.89)	2.3 (.94)a	2.2 (.84)a	2.1 (.99)a	1.9 (.75)a	2.0 (.79)a
Small grocery store	2.3 (1.2)	2.3 (1.1)a	2.4 (1.2)a	2.1 (1.2)a	2.5 (1.3)a	2.4 (1.1)a
Supermarket	4.0 (.85)	4.1 (.85)a	4.0 (.81)a	3.9 (.95)a	3.9 (.74)a	4.0 (.85)a
Superstore	3.0 (1.2)	3.3 (1.0)a	3.0 (1.1)a	3.0 (1.1)a	2.4 (1.2)b	2.9 (1.2)a

Note: Items comprising the variables were measured on a 1 to 5 scale, except for Wisconsin premium which ranged from 1 to 8. Groups with similar superscript letters did not differ ($p > .05$).

Traditional group on this point (*M* = 3.8, *SD* = 1.5). The sample at large, however, was amenable to giving local produce a premium. On average, the sample reported being willing to pay a premium of 50 cents more for five pounds of local produce (*M* = 3.4, *SD* = 1.6).

Perceptions about local food appear most favorable among the Adventurous group. Regarding beliefs related to local food and the environment, economy, and health, the Adventurous group averaged significantly higher than any other group, and the Uninvolved group averaged significantly lower. The Adventurous group reported stronger beliefs regarding the quality and safety of local food than the Uninvolved and Convenience/Careless groups but was indistinguishable from the Rational or Traditional groups for those items.

With normative perceptions and awareness, the Adventurous group averaged more highly any other group for injunctive norms (*M* = 3.6, *SD* = .91). With descriptive norms, the Adventurous group (*M* = 3.1, *SD* = .84) was indistinguishable from both the Traditional group (*M* = 2.9, *SD* = .89) and the Rational group (*M* = 2.9, *SD* = .79). Similarly with awareness, the Adventurous group was indistinguishable from the Traditional group, but their awareness was significantly higher than the other three groups.

With venues for shopping, the Adventurous group shopped significantly more at farmers' markets (*M* = 3.0, *SD* = .99), a typical venue for purchasing local produce, than any other group except the Traditional group. There were also differences with natural food stores, another place local food can often be purchased. In general, the sample shopped "Rarely" at natural food stores or cooperatives (*M* = 1.8, *SD* = .97). The Adventurous (*M* = 2.6, *SD* = 1.2) shopped there significantly more than any other group, averaging closest to "Sometimes."

The five groups shopped equally at most other venues. On average, respondents shopped for food at supermarkets "Often" (*M* = 4.0, *SD* = .85), superstores "Sometimes" (*M* = 3.0,

SD = 1.2), convenience stores or gas stations "Rarely" (*M* = 2.1, *SD* = .89), and small grocery stores "Rarely" (*M* = 2.3, *SD* = 1.2). ANOVA tests were not significant for supermarkets, convenience stores, or small grocery stores. With buying food at superstores, however, the Adventurous group (*M* = 2.4, *SD* = 1.2) did so significantly less than all other groups.

Communication – profiling variables

Overall, the Adventurous group showed more interest in communicating about food, and the Uninvolved showed less (Table 5.5). Adventurous consumers paid significantly more attention to food-related information in social media (*M* = 2.5, *SD* = 1.3) than any other group and had more discussion about local food (*M* = 2.4, *SD* = .98) than most groups, expect for the Traditional. The Uninvolved group averaged low on those items. Overall, respondents paid "Some" attention to food-related information in the news (*M* = 2.8, *SD* = 1.0). Of note is that the Uninvolved group averaged significantly less (*M* = 2.4, *SD* = 1.0) than the other groups on this item. With entertainment, there were no differences among the groups (*M* = 1.8, *SD* = .86).

Table 5.5 Differences among the groups for items related to communication.

Survey item	Sample *Mean (SD)* n = 577	Rational *Mean (SD)* n = 146 (25%)	Convenience/ Careless *Mean (SD)* n = 126 (22%)	Uninvolved *Mean (SD)* n = 116 (20%)	Adventurous *Mean (SD)* n = 99 (17%)	Traditional *Mean (SD)* n = 90 (16%)
Attention to food in news	2.8 (1.1)	2.8 (1.1)a	3.0 (.95)a	2.4 (1.0)b	3.2 (1.1)a	2.9 (.94)a
Attention to food in entertainment	1.8 (.86)	1.8 (.91)a	1.9 (.85)a	1.6 (.70)a	1.8 (.97)a	1.8 (.81)a
Attention to food in social media	1.9 (1.1)	1.8 (1.1)b	2.0 (1.1)b	1.5 (.74)c	2.5 (1.3)a	2.0 (1.0)b
Discussion about local food	1.9 (.79)	1.9 (.60)bc	1.8 (.67)cd	1.6 (.60)d	2.4 (.98)a	2.1 (.89)ab

Note: Items comprising the variables were measured on a 1 to 5 scale. Groups with similar superscript letters did not differ ($p > .05$).

Demographics – profiling variables

The ANOVA tests found significant differences with age, gender, and SES. Means and standard deviations by group are shown in Table 5.6. In general, demographics were similar to what is represented in Chapter 3 and Chapter 4. This is to be expected as the data were all from the same original collection, but is nevertheless reassuring as each chapter focuses on a slightly different subsample due to different cases being removed due to missing data.

With age, on average the sample is closest to the category of "55 to 64" ($M = 4.8$, $SD = 1.6$). One group stood out in terms of age, as the Adventurous group was significantly younger than the Uninvolved or Rational groups, and closest to the response choice of "45 to 54." Similarly, with gender, one group stood out. On average the sample was 63% female, but significantly fewer respondents in the Uninvolved group were female (44%) compared to all groups except the Traditional (53%).

The groups also differed in terms of SES. SES was measured as an index of income and education. Overall, the sample averaged a score similar to what was found in the other chapters. The averages translated to a household income of "$50,000 to $74,999" and in terms of education, more than a high school education, but less than a 4-year bachelor's degree. The Adventurous group had a significantly higher SES ($M = .41$, $SD = .82$) than the Uninvolved or Rational groups. The Uninvolved ($M = -.24$, $SD = .92$) group had a lower SES than the Adventurous and Convenience/Careless groups.

Table 5.6 Differences among the groups for demographics.

Survey item	Sample *Mean (SD)* n = 577	Rational *Mean (SD)* n = 146 (25%)	Convenience/ Careless *Mean (SD)* n = 126 (22%)	Uninvolved *Mean (SD)* n = 116 (20%)	Adventurous *Mean (SD)* n = 99 (17%)	Traditional *Mean (SD)* n = 90 (16%)
Age	4.8 (1.6)	4.8 (1.6)a	4.8 (1.6)ab	5.3 (1.5)a	4.3 (1.6)b	4.8 (1.4)ab
Gender	.63 (.48)	.67 (.47)ab	.70 (.46)ab	.44 (.50)c	.76 (.43)a	.53 (.50)bc
SES	.04 (.87)	−.09 (.85)bc	.13 (.84)ab	−.24 (.92)c	.41 (.82)a	.08 (.80)abc
Weekly food budget	2.7 (1.2)	2.6 (1.2)a	2.6 (1.2)a	2.4 (1.1)a	3.0 (1.5)a	2.8 (1.2)a
Number of children	.43 (.93)	.58 (1.1)a	.36 (.78)a	.31 (.83)a	.39 (.82)a	.50 (1.1)a
Metropolitan	.64 (.48)	.63 (.48)a	.66 (.47)a	.59 (.49)a	.62 (.49)a	.67 (.47)a
Micropolitan	.11 (.32)	.11 (.32)a	.13 (.34)a	.13 (.34)a	.11 (.32)a	.08 (.27)a
Small town	.12 (.33)	.12 (.32)a	.09 (.28)a	.10 (.31)a	.14 (.35)a	.17 (.38)a
Rural	.13 (.34)	.14 (.35)a	.12 (.33)a	.17 (.38)a	.12 (.33)a	.08 (.27)a

Note: Age was measured on a 1 to 8 scale, gender was treated as a binary variable (1 = female), SES was a z-score, and weekly food budget and number of children were measured on 1 to 7 scales. Metropolitan, micropolitan, small town, and rural were binary variables (1 = yes). Groups with similar superscript letters did not differ ($p > .05$).

Discussion

This chapter explored how variables related to local food, communication, and demographics differed among Wisconsin survey respondents after they were segmented based on survey items adapted from the FRL framework and political ideology. This chapter adds to knowledge about the compatibility of the FRL framework to a U.S. sample, as few studies have applied it to U.S. consumers (Jang, et al., 2011; Kumar & Smith, 2018; Nie & Zepeda, 2011; Zepeda & Nie, 2012).

This chapter also considers how the FRL framework is relevant to communication research in that the identification of these distinct groups is a first step in being able to create tailored messages for such groups or to further personalize messages to individuals. By including political ideology as a segmenting variable, this analysis also expands on previous work involving the FRL framework.

The first research question examined if segments based on adapted FRL variables and political ideology would be similar to those found in other FRL literature from the U.S. Overall, the groups were somewhat similar to those identified in other U.S. studies, but perhaps more similar to those identified in European studies. Three identified groups were consistent with European and U.S. literature. These groups were the Adventurous, Rational, and Uninvolved groups. In this chapter and in other studies, the Uninvolved group was indifferent toward food, the Adventurous group was especially interested in food and trying new food, and the Rational group was also engaged with food, but was more practical in that they considered cost and location as important factors (Grunert et al., 2001; Jang et al., 2011; Nie & Zepeda, 2011; Zepeda & Nie, 2012).

Additionally, a Convenience/Careless group was identified in this chapter. This group has characteristics of the Convenience-oriented group identified by Jang et al. (2011) in a study with U.S. participants, but also shared similarities to the Careless group identified in European literature. In this chapter and in other studies, these individuals were generally indifferent to shopping and favored convenience. However, novelty in food was not valued by the Convenience/Careless group in this chapter or in the other U.S. study that identified a similar group (Jang et al., 2011), in contrast to the European conception of Careless consumers (Grunert et al., 2001).

A Traditional group was also identified in this chapter. The other U.S. studies did not describe this group, but the group does match the European characterization (Grunert et al., 2001). A Traditional group may not have been identified in the other studies using a U.S. sample as variables related to the FRL were adapted differently, and particular aspects of the FRL framework may not have been emphasized enough in survey items to identify the group (Jang et

al., 2011; Nie & Zepeda, 2011; Zepeda & Nie, 2012). The inclusion of political ideology in this chapter may have also helped overall with forming cohesive groups. A last reason for differences is that Jang et al. (2011) focused on college students, Nie & Zepeda (2011) and Zepeda & Nie (2012) had a national sample, and this chapter used data from Wisconsin. It's plausible that a Traditional group would be less common with young people, and perhaps more common among a sample (like in this dissertation) that overall trended older.

The second research question examined if particular consumer segments showed distinct preferences or behaviors related to local food purchasing, communication, and demographics. The Adventurous group showed the strongest interest in local food, consistent with the work that found more people in the Adventurous group were farmers' market shoppers (Nie & Zepeda, 2011; Zepeda & Nie, 2012). This group also valued naturalness, and would be the only group for which appeals to produce that is both local and organic would make sense. They stood out in terms of communication as well, being more likely to discuss local food and they reported paying more attention to information about food in social media. Demographically, they were younger with a higher SES than some other groups. This partially aligns with the Stanton et al. (2012) findings in that their locavore group had a higher income. Higher SES may explain why this group stood out in terms of willingness to pay a price premium for local produce.

As the sole group to trend liberal, messages to this group could be concentrated in liberal-oriented media. Appeals to this group might focus on novelty (e.g., trying new recipes), using food to care for others, and social norms. This group appeared to be receptive to local food being beneficial for many reasons, including quality, the environment, the economy, and health.

The Traditional group purchases local produce and frequents farmers' markets as much as the Adventurous groups. However, this group does not perceive local food to be beneficial for

all of the reasons that the Adventurous group does. Instead, to reach the Traditional group, messages might focus local food being higher quality. Messages could also relate to some of the abstract values the FRL framework assigns to Conservative/Traditional consumers, in particular, food as a source of security and tradition (Grunert et al., 2001). For example, messages might invoke the idea that buying local food is a Wisconsin tradition.

The Rational group buys less local produce than the Adventurous group, and visits the farmers' market less than either the Adventurous or Traditional group, but they still regard local food as being high quality. As this group is sensitive to price and convenience of location, reaching this group may be more about showcasing how local food can be affordable and convenient. Focusing on conservative-oriented media and playing up the connection between quality and affordability (i.e., local produce is a value as it is fresher and lasts longer) may resonate the best with this group in terms of purchasing.

It remains unclear what messages or strategies might reach the Convenience/Careless and Uninvolved groups. In particular, the Uninvolved group is generally indifferent to all aspects of food and correspondingly pays less attention to food-related news than any other group, and comes out lower on social media and discussion than two other groups. The Convenience/Careless group might be the right consumer type for prepackaged, locally produced food that is sold in supermarkets, but they would be unlikely candidates for local produce.

Further distinctions among the groups may have been detected with a larger sample size, which is one limitation of this analysis. It's particularly surprising attention to food-related information in entertainment did not differ among the groups, as that was a direct predictor of local food purchasing in the other chapters. It seemed that food-related entertainment might be related to purchasing via knowledge about cooking, as neither beliefs about benefits of local food

nor normative perceptions mediated the relationship between purchasing local food and attention to information about food in entertainment.

Another limitation of this chapter is that suggestions about messages based on groups are tentative. Studies explicitly testing these empirically informed but speculative messaging recommendations are an important next step for future research. The chapter does take a step, however, in furthering a connection between the idea of tailored persuasion and marketing by demonstrating that segmenting individuals with the FRL survey items and political ideology resulted in distinct groups that lend themselves to tailored messages. Additionally, findings underscore the importance of thinking of local food audiences with nuance, as two identified groups were both conservative, but with vastly different food-related lifestyles. One group had characteristics that clearly translate to messaging (the Rational group) while the other did not at all (the Uninvolved). Moreover, two groups held differing ideologies but patronize farmers' markets often (the moderate Traditional group and liberal Adventurous group). Using lifestyle and political ideology together to segment consumers appears to result in the identification of more meaningful subgroups compared to broader categories related to local food shopping behavior or political ideology alone.

CHAPTER 6: CONCLUSIONS

The field of communication is increasingly concerned with selective exposure. Scholars have described the trend for media effects to be limited to strengthening or reinforcing perceptions, as individuals easily engage in selective exposure online (Cacciatore et al., 2016). In contrast, tailoring messages to individuals or specific audience segments offers a possibility for strong effects (Cacciatore et al., 2016). This dissertation aimed to add to understanding about selective exposure and tailored persuasion through three analyses that considered these themes in a new context, local food purchasing. Data were collected through a survey of randomly sampled Wisconsin households in the summer of 2015. In this chapter, the approach to each of the three analyses will be briefly reviewed, followed by a discussion of the limitations of this dissertation. Lastly, key findings and contributions related to communication and to local food will be summarized.

The first analysis, in Chapter 3, considered evidence of ideological selective exposure in the context of local food. As much literature related to selective exposure focuses on partisanship or political ideology, this was a fitting starting point for the dissertation. Often contexts chosen for examinations of ideological selective exposure are highly publicized public affairs issues, thus the topic of local food took a step in examining selective exposure differently, in a less overtly polarizing context. And as research about local food rarely considers political ideology as a study variable (e.g., Dukeshire et al., 2011; Feldmann & Hamm, 2015; Racine et al., 2013; Stanton et al., 2012; Zepeda & Nie, 2012), this examination was pertinent to better understanding this behavior. Additionally, this chapter considered whether or not selective exposure was occurring on the basis on issue public membership, with the issue public in this case being political consumers of food.

The second analysis, in Chapter 4, also searched for evidence of selective exposure and considered experience as a farmers' market shopper as a moderator. As evidence finds groups of people especially interested in particular topics tend to focus on media related to that topic (Kim, 2009), it's plausible that farmers' market shoppers seek out media that aligns with their pre-existing normative perceptions about local food. Consequently, one research question from this chapter was about whether being a farmers' market shopper would moderate the influence of communication-related variables on normative perceptions about local food. In one strategy, this was explored through an interaction between farmers' market shopper status and the different communication-related variables. In the other strategy, separate regressions were run for farmers' market and non-farmers' market shoppers.

This analysis also explored questions related to the social exposure framework, which describes how information from our social, symbolic, and physical environments contributes to our normative perceptions (Mead et al., 2014). While the scholars who described the framework did not take selective exposure into consideration, they did call for research to examine how information from different environments might interact (Mead et al., 2014), which this analysis began to address. This chapter also considered more generally whether information from the different domains of social exposure would influence normative perceptions, and the relative influence of descriptive and injunctive norms on the behavior of local food purchasing.

The third analysis, in Chapter 5, sought to identify distinctive audience groups based on factors related to the FRL framework and political ideology. This was intended to be a first step in the ability to tailor messages that would reach and resonate with such groups. Choosing to include political ideology as a segmenting variable allowed for political ideology to contribute to the grouping of respondents. With tailored messages in mind, one research question focused on

whether or not variables related to communication, local food, and demographics would differ among the identified groups. Another question focused on whether identified groups would align with findings from research in the U.S. that used the FRL framework. Respondents were segmented into five groups (Adventurous, Rational, Traditional, Convenience/Careless, and Uninvolved).

Limitations

Before key findings from these analyses are summarized, some of the limitations of this dissertation will be discussed. One important challenge in this dissertation was sample size. In Chapter 4, once the sample was divided into farmers' market and non-farmers' market shoppers, it was unclear whether or not particular variables were insignificant due to low power. In Chapter 5, a larger sample size (and consequently more respondents in each identified group) may have resulted in the identification of more differences among the groups.

In addition to a larger sample size, this dissertation could have benefited from a more diverse sample. The data primarily came from White Wisconsinites. A national sample would have made results more generalizable. Moreover, a sample more diverse in terms of age, ethnicity, and income would likely lead to additional insights. For example, with age in Chapter 4, it was not clear if social media use was not connected to normative perceptions because the sample trended older, and may have been less engaged with social media in general.

With ethnicity, respondents were primarily White. This is reflective of the Wisconsin population — the ACS data find that in Wisconsin, 88% of residents identify as White (Missouri Census Data Center, 2016). However, research finds ethnicity can play an important role in individuals' interest in, or access to, local food. For example, there is research suggesting in

some cases farmers' markets are exclusionary based on ethnicity. Research finds that at some farmers' markets, African American and Latino shoppers are underrepresented, relative to the community composition of where those farmers' markets are located (Alkon & McCullen, 2010; Rice, 2015). Additional research with a more diverse sample needs to explore the role of ethnicity and perceptions about local food, and lifestyle factors related to food, so recommendations for tailored messages can be more widely applicable.

Along those lines, while the average income of the sample in this dissertation reflects that of Wisconsin (Missouri Census Data Center, 2016), the dissertation does not speak to the experience of low-income individuals in particular. While logically the affordability of local food could limit access among low income individuals, a review of 31 studies on healthy food access found low income people also have reduced food choice because of fewer stores located in their communities, and limitations in terms of factors like transportation or time (Walker et al., 2010).

If more people with low income had taken the survey for this dissertation, income may have been more predicative of local food purchasing in the analyses from Chapter 3 or Chapter 4. Findings from Chapter 5 were suggestive of income playing a role, with the group with the highest SES (the Adventurous) being the most interested in local food. On the other hand, the analysis from Chapter 5 did not account for the fact that lifestyle factors related to food are not completely in one's control —someone may be an Adventurous eater at heart, but without the means to follow through. In sum, investigating some of the same questions from this dissertation on a larger scale is needed to make conclusions more generalizable and decisive.

There are other limitations to acknowledge related to this dissertation, as well. There are additional study variables that could have helped make the analyses stronger. For one, there were

several single-item variables. Consequently, future work might add variables for more robust indices on some items, particularly those related to media, and possibly broaden survey items related to media in order to contextualize attention to food-related media across other subjects, such as science and politics. In addition, survey items related to beliefs were all phrased positively, and additional work might find greater variation in the responses to these items if they were written as bipolar items.

A variable directly inquiring about individuals' access to farmers' markets would also have strengthened the analysis in Chapter 4. Alternatively, the inclusion of geographic data might achieve this. Zip codes were collected with the surveys, however, many zip codes in Wisconsin span up to four counties. This issue is slightly mitigated, however, considering that Wisconsin hosts many farmers' markets throughout the state. A USDA database finds all but eight of the 72 counties in the state as having at least one farmers' market (USDA, 2016a). Additional searching through the Wisconsin Farmers' Market Association directory, the Wisconsin Farm Fresh Atlases, and Google finds even more farmers' markets in the state, suggesting there are only three Wisconsin counties without any farmers' markets. With these limitations in mind, I will summarize key findings and research contributions of this dissertation for both communication and local food scholarship.

Key findings and contributions about local food consumption

In Chapter 3, this dissertation examined local food purchasing and political ideology. As political ideology is rarely included in local food studies, this investigation helped broaden the consideration of issues that could be important to understanding local food purchasing. While liberals and conservatives appear to purchase local food equally, perceptions about local food are

different among liberals and conservatives. This could have important implications for support of local food-related policy and marketing. Beliefs about local food and its benefits to the environment are associated with being liberal, though beliefs about local food and quality are not affiliated with a particular political ideology. And as found in Chapter 5, liberals and conservatives also have different lifestyles when it comes to purchasing and consuming food, with liberals tending to be Adventurous consumers and Conservatives tending to be either Rational or Uninvolved consumers.

Chapter 4 highlighted the previously overlooked importance of descriptive norms to local food. Although some studies have found injunctive norms to be a significant predictor of local food purchasing (Dowd and Burke, 2013; Nurse Rainbolt et al., 2012; Onozaka et al., 2010; Robinson & Smith, 2002), the influence of descriptive norms on local food purchasing has not been fully examined. The analysis in Chapter 4 found that descriptive norms, as opposed to injunctive norms, were highly predicative of local food purchasing. This suggests people may buy local food to gain approval from others, in part, but perceptions about what friends and family do influences purchasing behavior more strongly.

In Chapter 5, FRL groups were identified and some groups were found to show more interest in local food. Similar to other studies (Jang et al., 2011; Nie & Zepeda, 2011; Zepeda & Nie, 2012), the Adventurous group showed the most interest in local food, with the Rational group showing some interest as well. What was different about the results in this chapter, compared to other U.S. studies, was that a Traditional group (also highly interested in local food) was identified. Overall, the identified groups showed distinct preferences and behaviors, and messages about local food could be tailored to these groups with these lifestyle factors in mind.

Additionally, the identified segments highlight the importance of characterizing local food shoppers with nuance. Two of the identified groups were different in terms of political ideology (Adventurous and Traditional), but the groups were both likely to be farmers' market shoppers. And two of the identified groups trended conservative, but were at odds regarding interest in local food (Rational and Uninvolved).

Key findings and contributions for communication

In addition to better understanding local food purchasing, this dissertation sought to further scholarship related to communication. In Chapter 3, this dissertation examined ideological selective exposure in a new context—local food purchasing. Ideological selective was apparently not occurring in this context. As people of different political ideologies increasingly paid attention to information about food in the media, they did not differentially gain knowledge about local food. Furthermore, there was not evidence for motivated reasoning, as people of different political ideologies did not come to hold more extreme viewpoints about local food as they increasingly paid attention to information about food in the media. It may be that local food content appears more often in media in non-political contexts, thus fewer political signals are available to cue motivated reasoning based on ideology.

Future work might explore more about individuals' media habits and how much attention they pay to different news topics (e.g., politics, health, environmental issues, or food) rather than just food-related information in the news. It may be that ideological selective exposure or motivated reasoning would happen with less overtly political subjects like local food, but only among individuals that are very attuned to political news.

Additionally, the analysis in Chapter 3 found evidence that issue public members appeared to seek out information about food in the media (selective exposure), but they did not appear to have stronger beliefs about local food at higher levels of media consumption. This suggests they are an accuracy-motivated group, a finding in line with emerging research in this area. It may be that issue public members only trust very particular information sources, or are less persuaded by information encountered in the media (even if they generally pay more attention to information about their topic) because they have more stable beliefs or ideas about the topic. Future work regarding issue publics and selective exposure should probe whether or not issue publics are more or less trusting of media coverage of their issue. Future work might also consider which channels of information are most influential in shaping issue public members' opinion and behaviors, and whether or not issue public members use the opinions of their fellow issue public members as a heuristic.

Chapter 4 sought to examine selective exposure with a different kind of moderator, experience in farmers' markets. Experience in a physical environment, like the farmers' market, did appear to moderate effects of communication-related variables on injunctive norms and behavior. It appears that farmers' market shoppers were not selectively choosing media that aligns with their prior convictions. Rather, it is non-farmers' market shoppers that appear to be more influenced by information they encounter about food. It may be that for individuals with personal experiences or physical observations that contribute to their sense of norms, mediated information matters less as they have experiential information from which to draw their conclusions. This finding suggests that the social exposure framework should take into account that more information about norms does not necessarily result in stronger normative perceptions for a behavior, but that the source of the information matters, as some sources of information

might be prioritized over others.

While the analysis in Chapter 4 was concerned with the physical experience of attending a farmers' market, such an experience could also be conceived of more broadly as having first-hand knowledge with an issue. Future work might build off of this finding and investigate how farmers' market shoppers view media coverage of famers' markets in terms of its accuracy or helpfulness. Other recent work has begun to explore related themes. For example, trust in media was predicted by one's belief that media coverage of an event corresponded with one's personal experience of that same event among an Israeli sample (Livio & Cohen, 2016).

One might also conceive of farmers' markets as a place that generates or fosters the sharing of locally relevant information. Future work should investigate the degree to which farmers' markets act as information hubs. Informal learning may take place at farmers' markets as individuals discuss food and farming. Formal learning may also take place in the form of cooking demonstrations. Other information, available through podcasts, blogs, or on social media, may be generated at or because of farmers' markets. While previous research has apparently not investigated the degree to which farmers' markets play the role of information hub, there has been work that finds important places in neighborhoods (e.g., libraries, hair salons, or coffee shops) can serve as places of community-based digital news production (Boyles, 2017).

More investigation into how places like farmers' markets may (or may not) foster the sharing of relevant local information also relates to the broader question of how community attachment and local news are connected. While research finds community attachment and local news engagement are correlated, a longitudinal study found community attachment does not cause local news use, nor does local news use cause community attachment (Hoffman & Eveland, 2010). Perhaps the correlation between local news use and community attachment

could be, in part, explained by the existence of places in communities that foster community attachment (like farmers' markets) that also foster the creation or sharing of relevant local information.

The analysis in Chapter 4 also appears to be the first empirical investigation using the social exposure framework as a whole, though clearly other work has investigated how particular information channels or sources influence normative perceptions. Engagement with some communication channels was associated with heightened normative perceptions, which aligns with the assumptions of the social exposure framework. These variables included status as a farmers' market shopper (representing the physical environment), discussion about local food (representing the social environment), and news (representing the symbolic environment).

Going forward, a more granular typology should be developed for the social exposure framework in order for the framework to better advance understanding about which information sources will influence normative perceptions, and under which conditions. For example, news media might be categorized as part of the symbolic environment, yet online news often carriers social information with it (e.g., "likes," "shares," or comments). As researchers continue to work with this framework, perhaps first categorizing information as experiential or mediated, and then clarifying if information is social, symbolic, or both, would lead to more clarity.

Lastly, in Chapter 5, survey items related to the FRL framework were used to segment individuals as a first step to creating tailored messages for distinct audiences in order to promote local food. There were differences among groups of consumers regarding media, local food perceptions, and local food behaviors. Some groups clearly aligned with factors that could inform tailored messages while other groups may be unlikely to respond to any messages at all. Testing messages that are tailored to some of the identified groups, or possibly further

personalizing messages for individuals based on some of these factors, offers a next step in research bringing together ideas relevant to both local food and communication. Work continuing to explore communication and local food is needed as local food is an important consumer trend that impacts the environment, public health, and economy.

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APPENDIX

UW Extension Cooperative Extension

2015 Wisconsin Food Survey

If possible, please have the person who is the **primary grocery shopper** for your household complete the questionnaire.

Section 1: Food Shopping and Cooking

1. In the last year, how much of the food shopping did you do for your household? Check one.

None	A little	About half	Most	All
O	O	O	O	O

2. In the last year, how often did you purchase food from these places? Check one for each item.

	Never	Rarely	Sometimes	Often	Always
a. Convenience store or gas station	O	O	O	O	O
b. Small neighborhood grocery store	O	O	O	O	O
c. Supermarket (big grocery store)	O	O	O	O	O
d. Superstore like Wal-Mart or Target	O	O	O	O	O
e. Organic or natural food store or cooperative	O	O	O	O	O
f. Farmers' market, when in season	O	O	O	O	O
g. Roadside stand, when in season	O	O	O	O	O
h. A community supported agriculture (CSA) share*	O	O	O	O	O

**CSA is when customers buy a farm "share" and receive boxes of food during the harvest season.*

3. During the summer, what amount of the fruit and vegetables you eat come from your own garden or farm? Check one.

None	1% to 24%	25% to 50%	51% to 75%	76% to 100%
O	O	O	O	O

4. In the last year, which best describes how often you did the following things? Check one for each item.

	Less than monthly	A few times a month	A few times per week	About once a day	More than once a day
a. Made a new dish or recipe	O	O	O	O	O
b. Cooked or prepared fresh food	O	O	O	O	O
c. Prepared convenience food (i.e. microwave meal, frozen pizza, can soup)	O	O	O	O	O
d. Ate at a restaurant or cafeteria	O	O	O	O	O

5. In the last year, how often did you do the following things? Check one for each item.

	Never	Rarely	Sometimes	Often	Always
a. Made a list for food shopping	O	O	O	O	O
b. Read nutrition labels while food shopping	O	O	O	O	O

6. Do you enjoy the following things? Check one for each item.

	Not at all	Very little	Somewhat	Quite a bit	A great deal
a. Food shopping	O	O	O	O	O
b. Cooking	O	O	O	O	O
c. Trying new kinds of food	O	O	O	O	O
d. Eating out with others	O	O	O	O	O

7. For the fruits and vegetables you buy, to what extent do these characteristics affect your purchasing decisions? Check one for each item.

	Not at all	Very little	Somewhat	Quite a bit	A great deal
a. Taste	O	O	O	O	O
b. Appearance	O	O	O	O	O
c. Freshness	O	O	O	O	O
d. Convenient place to buy	O	O	O	O	O
e. Grown in Wisconsin	O	O	O	O	O
f. Certified organic	O	O	O	O	O
g. Grown without chemicals	O	O	O	O	O
h. Low price	O	O	O	O	O
i. Comes pre-cut and/or pre-washed	O	O	O	O	O

8. Do you give or prepare food to show you care for others? Check one.

Not at all	Very little	Somewhat	Quite a bit	A great deal
O	O	O	O	O

9. For you, is eating meals one of the highlights of your day?

Never	Rarely	Sometimes	Often	Always
O	O	O	O	O

10. Do you take political and/or ethical issues into consideration with the food you buy? Check one.

Not at all	Very little	Somewhat	Quite a bit	A great deal
O	O	O	O	O

11. In the last year, how often did you avoid buying food grown or made by certain businesses as a way to boycott them? Check one.

Never	Rarely	Sometimes	Often	Always
O	O	O	O	O

12. In the last year, how often did you seek out food grown or made by certain businesses as a way to support them? Check one.

Never	Rarely	Sometimes	Often	Always
O	O	O	O	O

13. People define "local food" in many ways. In terms of distance, do these mean "local food" to you? Check one for each item.

	No	Yes
a. Grown in my township, village, or city	O	O
b. Grown in my county	O	O
c. Grown in Wisconsin	O	O
d. Grown in Minnesota	O	O
e. Grown in Illinois	O	O
f. Grown in Iowa	O	O
g. Grown in Michigan	O	O
h. Grown 50 miles or less from me and/or within a one hour drive	O	O
i. Grown 100 miles or less from me and/or within a two hour drive	O	O

Section 2: Information and Food

14. In the last year, how much attention did you pay to information about food from these sources? Check one for each item.

	None	Very little	Some	Quite a bit	A great deal
a. The news	O	O	O	O	O
b. Entertainment shows or movies	O	O	O	O	O
c. Social media (e.g. Facebook, Twitter, Instagram, Pinterest)	O	O	O	O	O

15. In the last year, did you get information about food in these ways? Check one for each item.

	No	Yes	Not sure
a. Read signs at the grocery store	O	O	O
b. Scanned a product QR code with a Smartphone	O	O	O
c. Talked to grocery store staff	O	O	O
d. Talked to a farmer	O	O	O
e. Visited a food or cooking website	O	O	O
f. Visited a nonprofit or community group website	O	O	O
g. Read a cookbook	O	O	O
h. Read a book (not a cookbook)	O	O	O
i. Attended an event or class	O	O	O

16. In the last year, did you get information about food from these sources? Check one for each item.

	No	Yes	Not sure
a. University of Wisconsin-Extension	O	O	O
b. Wisconsin Department of Agriculture	O	O	O
c. Something Special from Wisconsin	O	O	O
d. Websites of Wisconsin farms (including farm Facebook pages)	O	O	O
e. FairShare CSA Coalition	O	O	O
f. Farm Fresh Atlas (from any Wisconsin region)	O	O	O
g. Wisconsin Foodie	O	O	O
h. Buy Fresh, Buy Local	O	O	O

Section 3: Local Food

There is no right or wrong way to define local food. But for these questions, local food refers to food sold within the state where it was grown, and/or within 100 miles of where it was grown.

17. During an average week in the summer, please estimate the amount of fruits and vegetables you buy that are local. Check one.

None	1% to 24%	25% to 50%	51% to 75%	76% to 100%
O	O	O	O	O

18. If a 5-pound bag of potatoes labeled "USA" costs $2.00, what is the most you would pay for a 5-pound bag of potatoes labeled as being from Wisconsin? Check one.

Less than $2.00	$2.00	$2.50	$3.00	$3.50	$4.00	$4.50	$5.00
O	O	O	O	O	O	O	O

19. Are you more likely to visit a restaurant if you know they serve local food? Check one.

Not at all	Very little	Somewhat	Quite a bit	A great deal
O	O	O	O	O

20. In the last year, how often did you buy the following items? Check one for each item.

	Never	Rarely	Sometimes	Often	Always	Not sure
a. Wisconsin beef	O	O	O	O	O	O
b. Wisconsin chicken	O	O	O	O	O	O
c. Wisconsin pork	O	O	O	O	O	O
d. Wisconsin eggs	O	O	O	O	O	O
e. Wisconsin dairy	O	O	O	O	O	O
f. Wisconsin fresh vegetables, in the summer	O	O	O	O	O	O
g. Wisconsin fresh fruits, in the summer	O	O	O	O	O	O
h. Wisconsin-made packaged food (e.g. syrup, jelly, honey)	O	O	O	O	O	O

21. Are you knowledgeable about local fruits and vegetables? Check one.

Not at all	Very little	Somewhat	Quite a bit	A great deal
O	O	O	O	O

22. Are you aware of issues that affect the supply of local fruits and vegetables (e.g. weather, retail options, distribution, etc.)? Check one.

Not at all	Very little	Somewhat	Quite a bit	A great deal
O	O	O	O	O

23. Can you tell which fruits and vegetables are local at the store? Check one.

Not at all	Very little	Somewhat	Quite a bit	A great deal
O	O	O	O	O

24. Is buying local fruits and vegetables more time consuming than buying non-local fruits and vegetables (e.g. extra shopping trips or reading product labels more carefully)? Check one.

Never	Rarely	Sometimes	Often	Always
O	O	O	O	O

25. In the last year, how often did you do the following? Check one for each item.

	Never	A few times	Monthly	Weekly	Daily
a. Talked to a family member about local food	O	O	O	O	O
b. Talked to friends about local food	O	O	O	O	O
c. Mentioned local food in an email	O	O	O	O	O
d. Posted about local food on social media (e.g. Facebook, Twitter, Instagram, Pinterest)	O	O	O	O	O
e. Recommended local food to someone	O	O	O	O	O

26. How much local fruit and vegetable purchasing do these people do? Please give your best estimate. Check one for each item.

	None	A little bit	Some	Quite a bit	Very much
a. Yourself	O	O	O	O	O
b. Your family	O	O	O	O	O
c. Your friends	O	O	O	O	O
d. People in your community	O	O	O	O	O
e. People in Wisconsin	O	O	O	O	O

27. How much do people who are important to you think that you should buy local fruits and vegetables? Check one.

Not at all	Very little	Somewhat	Quite a bit	A great deal
O	O	O	O	O

28. Among people who are important to you, is there agreement that buying local fruits and vegetables is a good thing to do? Check one.

Not at all	Very little	Somewhat	Quite a bit	A great deal
O	O	O	O	O

29. In your opinion, do local fruits and vegetables have the following qualities more than non-local fruits and vegetables? Check one for each item.

	Not at all	A little bit	Somewhat	Quite a bit	Very Much
a. Safer to eat	O	O	O	O	O
b. Fresher	O	O	O	O	O
c. Better tasting	O	O	O	O	O
d. Grown with fewer chemicals	O	O	O	O	O
e. Grown using conservation practices	O	O	O	O	O
f. More expensive	O	O	O	O	O
g. Less expensive	O	O	O	O	O

30. In your opinion, does buying local fruits and vegetables result in more of the following things when compared to buying non-local fruits and vegetables? Check one for each item.

	Not at all	A little bit	Some	Quite a bit	Very much
a. Creates more local jobs	O	O	O	O	O
b. Helps local farmers more	O	O	O	O	O
c. Reduces pollution more	O	O	O	O	O
d. Smaller carbon footprint	O	O	O	O	O
e. Makes people more healthy	O	O	O	O	O
f. Leads to fairer food production	O	O	O	O	O

31. Community supported agriculture (CSA) is when customers buy a farm "share" and receive boxes of food during the harvest season. Which is true for you? Check one for each item.

	True	False	Not Sure
a. I understand how CSA works	O	O	O
b. I am interested in learning more about CSA	O	O	O
c. I know how to find information about CSAs near me	O	O	O
d. CSA pick-up sites in my area are convenient	O	O	O
e. CSA could be financially beneficial to my family	O	O	O
f. I would buy a CSA share only from a certified organic farm	O	O	O
g. I (or someone I live with) got a CSA share this year	O	O	O
h. I (or someone I live with) got a CSA share in the past	O	O	O

Section 4: Your Background

32. Please answer yes or no to the following things. Check one for each item.

	No	Yes
a. Is your job related to agriculture?	O	O
b. Do you hunt and/or fish?	O	O
c. Are you a vegetarian?	O	O

33. What is your age?

18 to 24	25 to 34	35 to 44	45 to 54	55 to 64	65 to 74	75 to 84	85 or more
O	O	O	O	O	O	O	O

34. How do you describe your gender? Check one.

Male	Female	Other
O	O	O

35. How do you describe your race or ethnicity? Check all that apply.

O White
O Black or African American
O Hispanic or Latino(a)
O Asian
O Native American or American Indian
O Other

36. Which best describes the place that you live? Check one.

City	Small town	Suburb	Rural area
O	O	O	O

37. How many people live in your household, including yourself? Check one.

1 (just yourself)	2	3	4	5	6	7	8 or more
O	O	O	O	O	O	O	O

38. Of those people, how many are younger than 18? Check one.

NA (just yourself)	0	1	2	3	4	5	6 or more
O	O	O	O	O	O	O	O

39. How do you rate yourself in terms of these two groups of issues? Check one for each item.

	Very Conservative	Somewhat Conservative	Moderate	Somewhat liberal	Very liberal
a. Economic issues	O	O	O	O	O
b. Social issues	O	O	O	O	O

40. In an average week, what would you estimate your household's food shopping bill (excluding eating out) to be? If you receive food assistance, include those dollars. Check one.

Less than $50	$51 to $100	$101 to $150	$151 to $200	$201 to $250	$251 to $300	Over $301
O	O	O	O	O	O	O

41. What best describes your highest level of formal education? Check one.

O Some high school or less
O Completed high school or GED
O Some college, no degree
O Completed 2-year associate degree
O Completed 4-year bachelor's degree
O Some graduate or professional school, no degree
O Graduate or professional degree

42. What would you estimate your household income in 2014 to be, before taxes? Check one.

O Under $15,000
O $15,000 to $24,999
O $25,000 to $34,999
O $35,000 to $49,999
O $50,000 to $74,999
O $75,000 to $99,999
O $100,000 to $149,999
O $150,000 or more

Other Comments

Thank you for helping us understand more about how Wisconsin residents feel about food, cooking, and grocery shopping. We sincerely appreciate your time.

If there is anything else you would like us to know about your thoughts related to the issues in this survey, please use this space:

_____

_____

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Thank you, and please return your survey by July 17, 2015!