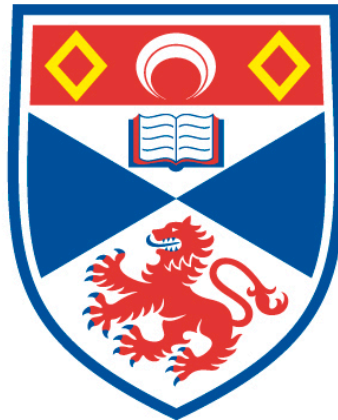


CONCEPTS OF PLACE IN NON-METROPOLITAN USA: EVIDENCE
FROM SELECTED DISCOURSES ON PROPOSED PASSENGER
HIGH-SPEED RAIL

Mark Patrick Boyle

A Thesis Submitted for the Degree of PhD
at the
University of St Andrews



2017

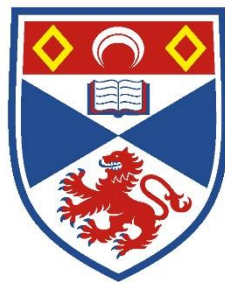
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Concepts of Place in Non-Metropolitan USA:
Evidence from selected discourses on proposed passenger
high-speed rail

Mark Patrick Boyle



University of
St Andrews

A Thesis Submitted for the Degree of PhD

at the

University of St Andrews

10 OCT 2017

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ABSTRACT

This research deepens the understanding of “sense of place” in nonmetropolitan areas in the context of the possible development of high-speed passenger-rail services in relation to three geographical dimensions: economic space, environmental concerns, and human mobility. Specifically, this qualitative research project examines how proposed passenger high-speed rail to nonmetropolitan geographies in the Midwest region of the United States affects conceptions of sense of place and space and how changes to nonmetropolitan dimensions of economics, environment, and mobility affect the sense of place and space.

The United States has renewed interest in advancing passenger high-speed rail. Most research about proposed passenger high-speed rail networks in the United States have centered on the impact on major metropolitan areas of the country, but little is known about what the impact might be on smaller, nonurban and rural places along the proposed lines, much less on what they might think of it. This dissertation is intended to remedy this lack of understanding about rural place and space and how they are affected by planning for a new transportation mode such as high-speed passenger rail. The results show that a high-speed-rail network does not have to be constructed but only planned to drive changes in the conceptions of nonmetropolitan place and space.

The implications affect local understandings of distribution of economic resources, social and political power, and the environment. Despite optimism about improved opportunities for accessibility and what Knowles et al. called “shrinkage of space,” concerns also include ways in which segments of the nonurban population may be further distanced and isolated. This research shows that people living in small

towns and cities outside of the large metropolitan area have a continually evolving sense of themselves and their sense of place and space.

Keywords: high-speed rail, planning, population geography, nonmetropolitan, rural, micropolitan, space, sense of place, social segmentation

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Slainte

Mark Patrick Boyle

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CHAPTER 1: INTRODUCTION

In the United States, the shifting economic and political environment of continuing changes in presidents/governors or legislative bodies resulted in new directions and priorities in transportation projects. Policy planning for high-speed passenger rail in the United States was first discussed in 1965 by the Federal Railroad Administration (FRA) of the U.S. Department of Transportation (USDOT) and continued over the next few decades. In 2009, a renewed interest emerged in advancing passenger high-speed rail (HSR) under the Obama administration (Obama, 2009). In 2017, the Trump administration has stated that infrastructure improvements would be of a high priority (Trump, 2017).

Currently, the only operating passenger-rail service in the United States is a creation of a federally subsidized national rail program called Amtrak, created in the 1970s, and has been only a minor part of federal transportation policy (USDOT, 2000). In the U.S. federal transportation policy focuses primarily on highways and air travel. Nonetheless, there have been calls for a federal high speed rail system and some resources were allocated by private and federal bodies for planning. In 2008, Congress passed the Passenger Rail Investment and Improvement Act to establish an initial framework for the development of the HSR corridors.

Renewed interest in advancing passenger high-speed rail in the US has mostly centered on the impact on major metropolitan areas of the country, but little is known about what the impact might be on smaller, nonurban and rural places along the proposed lines, much less on what they might think of it. This dissertation is intended to remedy this lack of understanding about rural place and space and how they are affected by

planning for a new transportation mode such as high-speed passenger rail. The results show that a high-speed-rail network does not have to be constructed but only planned to drive changes in the conceptions of nonmetropolitan place and space.

The proposed High-Speed Rail Strategic Plan identified several regions in the United States to invest in high-speed passenger rail, including the Northeast, Midwest, Pacific Northwest, and the Southeast (see Figure 1). In this study, I examine the geographical understanding of “sense of place” in the Midwestern nonmetropolitan area of the United States in the context of the possible development of high-speed passenger-rail services in relation to three geographical dimensions: economic, environmental concerns, and human mobility.

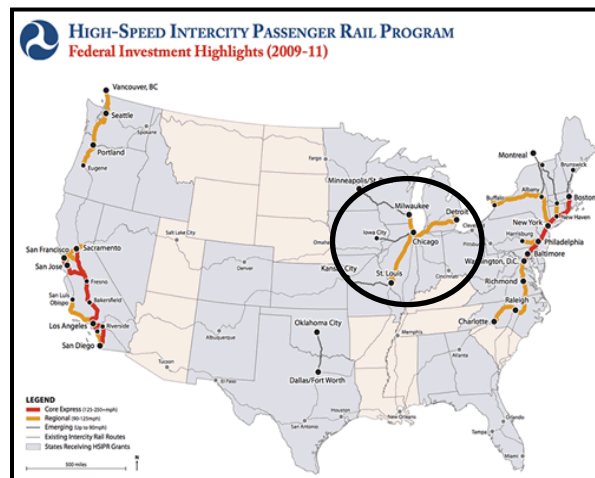


Figure 1. High-speed intercity passenger-rail program.

Source: *The Changing Face of Transportation* (BTS00-007), by U.S. Department of Transportation, Bureau of Transportation Statistics, 2000, Washington, DC.

The implications affect local understandings of distribution of economic resources, social and political power, and the environment. Despite optimism about improved opportunities for accessibility, and what Knowles et al. have called “shrinkage of space,” concerns include ways in which segments of the nonurban population may be

further distanced and isolated. This research will examine the continually evolving sense of themselves and their sense of place and space of people living in small towns and cities outside of the large metropolitan when confronting the possibility of the impact of HSR on their communities.

Background

Most studies relating to the proposed passenger-high-speed-rail network of the United States center on the major metropolitan areas of these regions of the country. Researchers focused on the dominant large metropolitan areas at the ends of potential HSR lines, but very little research on smaller nonurban and rural places along the proposed lines has been carried out. For example, the Chicago area has an approximate population of 10 million people and the St Louis area has approximately 3 million people. These are major metropolitan geographies at either end of one of the proposed passenger-high-speed-rail lines, and much is known about these two cities. The nonmajor metropolitan geographies between these major metropolitan areas have an estimated population total of over 750,000 yet very little is known about this nonmetropolitan geography. Because the major metropolitan populations are approximately 20 times bigger, planning interest has centered on them. However, little understanding exists of rural place and space and how they might be affected when government introduces a new transportation mode such as high-speed passenger rail.

For this study, I selected the Midwestern nonmetropolitan region that was impacted by planning for passenger high-speed rail. The intention was to limit analysis of how HSR plans affect sense of place by focusing the research on an area affected by a single federal project. I selected this nonmetropolitan region of the United States for its

centrality in the “bread basket” of the country, as well as because this area has proposal for both 110mph and 220mph trains. I explore the logic behind the choice of the research site in more detail in Chapter 3.

Understanding how U.S. nonmetropolitan populations in the Midwestern United States perceive themselves and the areas in which they live is the starting point for this research. As with urban dwellers, people living in small towns and cities outside of large metropolitan areas have a continually evolving sense of themselves and their *place* in U.S. society. Although no new passenger HSR has yet been constructed, transportation planning at the federal and state levels introduces the possibility of passenger HSR being added to the transportation mix in nonmetropolitan areas in the near future. The idea of passenger HSR has already begun to change the landscape of the rural Midwest, as well as other nonmetropolitan areas. A physical rail network clearly does not have to be constructed, only planned, to drive changes in the conceptions of nonmetropolitan place and space.

Scholarly discourse about sense of place in U.S. nonmetropolitan communities is limited in contrast to a more developed literature about the geography of place in the United Kingdom and other parts the world. In the United States, studies on nonmetropolitan *sense of place* tend to focus on western geographies that involve large expanses of federal land, integrated into ideas about natural-resource management or discussed as part of folklore. By contrast, several UK geographers have led the field in researching the meanings of place and how people develop a sense of place; these will be addressed in Chapter 2.

The history of different modes of transportation has not only had an impact on U.S. nonmetropolitan places, it created them. Many towns and cities in the Midwest and West were first established to anchor and serve the intercontinental railroad. Passenger rail was the major transportation force impacting nonmetropolitan places from the mid-1800s until World War II. From the 1940s on, the growth of the automotive industry and the interstate highway system led to an automobile-centric society and relegated use of rail primarily to freight. Passenger rail declined in importance as the use of automobiles increased in nonmetropolitan communities and once prominent towns linked by railroads declined as the interstate highways bypassed them. The FRA investment in a new HSR vision through the High Speed Intercity Passenger Rail Program in 2008 now reintroduces the idea of passenger rail to the U.S. Midwest. However, stakeholders involved in planning have no robust understanding of how the nonmetropolitan communities involved might perceive the effect of new rail systems on their sense of those places. In this thesis, I examine the potential addition of a passenger HSR system that is a key external force; a catalyst to deepen understanding of the sense of place associated with nonmetropolitan U.S. geographies.

Research Aim and Research Perspective

This qualitative research project examines how adding proposed passenger HSR to the geographies in the nonmetropolitan Midwest affects conceptions of sense of place and space and how changes to nonmetropolitan conceptions of economics, environment, and mobility affect the sense of place and space. It aims to deepen understanding of sense of place in the Midwestern nonmetropolitan area of the United States in the context of the possible development of high-speed passenger-rail services in relation to three

geographical dimensions: the economy, the environment, and human mobility. (The rationale behind these three dimensions emerges from a review of the research literature Chapter 2 Specifically, this dissertation focuses on the case of a proposed high-speed passenger rail in the U.S. Midwest that will link three metropolitan regions: St. Louis, Missouri, to the south, and Chicago, Illinois, and Minneapolis, Minnesota, to the north. Two principal themes were explored to identify nonmetropolitan sense of place:

- Perceptions about spatial relationship between nonmetropolitan geographies and large metropolitan areas; and
- Perceptions (aspirations and expectations) of economic, mobility/accessibility, and environmental changes that could occur with the addition of a passenger HSR system and how they disturb and challenge individuals' sense of place.

This research will give us a way to understand the relation between geography and sense of place in the nonmetropolitan Midwest of the United States. It will illustrate how potential changes in the asymmetries of power in social relations (class and mobility) affect the sense of place. It will reveal how different interpretations of the planned project and the local economy reveal representations of place. It will uncover understandings and concerns about environmental change. Thick and robust qualitative analysis of the research findings will contribute to an understanding of how the introduction of HSR affects the sense of place. The proposed passenger HSR is the catalyst that provides a reference to analyze the conceptions of sense of place and space in nonmetropolitan geographies.

The following research questions are designed to uncover these conceptions:

1. What does planning for an imminent high-speed passenger rail reveal about sense of place and the economy in the nonmetropolitan United States?
2. What does planning for an imminent high-speed passenger rail reveal about sense of place and the environment in the nonmetropolitan United States?
3. What does planning for an imminent high-speed passenger rail reveal about sense of place and mobility/accessibility?

Despite limited research about the impact of transportation innovations on sense of place in urban areas of the United States, very little research has considered the potential impact on nonmetropolitan regions, despite the notion that 60 million (20%) people in the U.S. population live in rural rather than urban geographies. Passenger HSR will change the mobility of the rural population as well as the urban population. The accessibility of place will change with the advent of a high-speed passenger-rail line as they connect people to more places. The advent of HSR will alter the internal economies of the rural Midwest and the economic relationships between these nonurban geographies and the large cities of the region. Because discussion of the project has introduced the macro issues of changing the federal carbon footprint, discussion ensues around the micro issue of local-environment impacts. Analysis of perceptions around these proposed changes to transportation in under researched nonmetropolitan areas will offer deeper understanding of both the existing conception of sense of place and the evolving sense of place.

Conceptions of Place

I undertake this research from the perspective that place and spaces are meaningful conceptions. Space is not only a stage on which economic, political, and social processes imprint structures, but is also imbued with meanings arising from people's emotions, beliefs, and feelings (Tuan, 1974). Therefore, when the addition of passenger HSR impacts the sense of place, it is important to understand the changes to people's emotions, beliefs, and feelings. Tuan (1974) used people's emotions, beliefs, and feelings to define place. Experiences create and structure how people perceive place and space. Tuan argued that the concept of place includes emotions such as the security of rootedness, as well as other concepts, such as a longing for freedom (Tuan, 2001). The nonmetropolitan geographies examined in this research are created and self-defined by nebulous perceptions of how such emotions arise from and create a sense of place.

A sense of place develops because human experiences generate feelings and perceptions. This research project is not a psychological or sociological review of the sense of place; rather, it is a study of the human geography of the conception of sense of place and how a change in transportation impacts this conception. Individuals can be drawn "to a place" or "from a place." Although both are important, this research addresses the *pushing* of the nonmetropolitan individual to other senses of place and not the *pulling* interest of metropolitan individuals into the nonmetropolitan senses of place. Hannam, Sheller, and Urry (2006, p. 13) described the fundamental differences as follows:

A clear distinction is often drawn between places and those travelling to such places. Places have frequently been seen as pushing or pulling people to visit.

Places are often presumed to be relatively fixed, given, and separate from those visiting.

The Hannam et al. theory links to Relph's (1976) distinction between insideness and outsideness. How does the drawing to and from a place influence one's sense of insideness and outsideness?

Certainly, there is an increasing commonality in how people eat, shop, live, and die that impacts the imaginations of nonmetropolitan communities. The differentiation between metropolitan geographies and nonmetropolitan geographies in national retail chains locations and the relative accessibility to global products is shrinking. Augé (1995) defined place that has this commonality, has no history, and no creation of social life as nonplace; places with no human uniqueness. Because these places have no meaning, they become the antithesis of place, dubbed *nonplace*. They all look and act the same. Supermodernity is the excess without the history and social living (Augé, 1995).

If a place can be defined as relational, historical and concerned with identity, then space which cannot be defined as relational, or historical, or concerned with identity will be a non-place. The hypothesis advanced here is that supermodernity produces non-places, meaning spaces which are not themselves anthropological places. (Augé, 1995, p. 78)

Will the passenger HSR systems itself and the accompanying accoutrements, such as stations, produce nonplace, no matter where in the country they are situated? How would this nonplace impact nonmetropolitan communities? Would it provide the context for nonmetropolitan communities to understand their local sense of place and have perceptions about how passenger HSR could impact them? How will the addition of a

passenger HSR system to nonmetropolitan geographies modify or create senses of place and of nonplace? The sociological imagination concerning the impact of passenger HSR system on nonmetropolitan communities might be understood in part with the possible creation of this kind of non-place as part of the geographical imagination.

This project is a study of the human geography of the conception of sense of place and how a potential change in transportation impacts this evolving conception of nonmetropolitan sense of place that began with the first arrival of railroads and rail transportation in the early decades of the nineteenth century through its possible resurgence in twenty-first century High Speed Rail transportation.

Cresswell (2004b), one of a number of scholars studying the idea of sense of place, described it as the *where of place*, the *looks of place*, and the *sense of place*.

Place is a meaningful site that combines location, locale, and sense of place.

Location refers to an absolute point in space with a specific set of coordinates and measurable distances from other locations. Location refers to the where of place.

Locale refers to the material setting for social relations the way a place looks.

Locale includes the buildings, streets, parks, and other visible and tangible aspects of a place. Sense of place refers to the more nebulous meanings associated with a place: the feelings and emotions a place evokes. These meanings can be individual and based on personal biography or they can be shared. (Cresswell, 2004a, p. 1)

It is the feelings and emotions of place that create the sense of place (Cresswell, 2004b). The location or where of place is fixed and the locale of place does usually

transform quickly. It is the sense of place created by human feelings and emotions, that is always evolving, impacted by internal and external forces.

Geographical imagination has been one of the central themes of human geography defined by geographer S. Daniels (2011, p. 182) as follows:

In geography, as in other fields of enquiry, the place and status of imagination is shaped by the position and pressure of an array of contrapuntal concepts such as reason, experience, reality, objectivity, morality and materiality; the imagination has conventionally taken up a location somewhere between the domains of the factual and fictional, the subjective and objective, the real and representational.

One could argue that little difference emerges in the definition of place when viewed from Cresswell's (2004b) sense of place or from S. Daniels's (2011) geographical imagination of place. Whether the approach is classified as "human geography," "sense of place," or "geographical imagination," the commonality is obtained by the constructs of social and spatial interpretation of the population's perceptions, opinions, ideas, and thoughts. A social construction is involved, relating and shaping the meanings of place. In this thesis, the focus is on how these social constructs have changed as a result of the possibility of the changes that might be brought by HSR.

Summary

This mixed-methods research includes quantitative descriptive statistics about observable community economic and environmental characteristics of the sampled nonmetropolitan communities in the Midwest as well as phenomenological analysis of ideas about place, as imagined from the ideas of economic, environment, and mobility, through analysis of primary interviews with nonmetropolitan residents. Given the

research goal outlined in this introductory chapter, the remainder of the thesis is structured as follows: In Chapter 2, I present a literature review that identifies the key concepts in research about transportation innovations and changes in the places they impact. Chapter 3 describes the rationale for the qualitative methodology used to address the research problem. An empirical presentation of key demographic and economic indicators of the Midwest emerge in Chapter 4.

Results from the inductive method of analyzing interviews to identify key social segments appear in Chapter 5. In Chapter 6, results of further iterative interviewing for social diversity identifies the social dimensions of power (gender, class, and mobility), presented as a representation of the local sense of place in nonmetropolitan geography. I present the conclusions in Chapter 7.

The qualitative research identified emerging concepts and themes and allowed a subjective categorization of attitudes and perceptions of the studied population. The findings from this inductive process revealed the social segments presented in Chapter 5. The social segments, arrayed along dimensions of economy, mobility, and accessibility, and environmental issues, provided the basis for a second round of interviews that further explored the issue of local sense of place.

This work advances understanding of population and social geography because it addresses how the impact of a proposed addition of passenger HSR changes the concept of place in nonmetropolitan geographies in relationship to dimensions of the economy, the environment, and mobility culture. This study provides one of the first analyses of nonmetropolitan sense of place and space in the United States and will be a fundamental contribution against which similar studies of nonmetropolitan spaces in other regions of

the United States can be contrasted. This study also contributes to the larger literature on nonmetropolitan social geographies in other parts of the world.

The phenomena being studied relates to the possibility, and not necessarily the actuality, of new transport opportunities 'serving' non-metropolitan places. Whether those transport opportunities are ever built is not the issue but rather the issue is the planning and discussion of building the new transport opportunities.

The focus is on how non-metropolitan geographies have conversations, thoughts, and perceptions on its perspective of its sense of self-place. Additionally, relationships with other-places and spaces, metropolitan and non-metropolitan geographies, are also explored. Self-space and other-space are both explored in regards to change that could be driven with the announcement of a possible new transport system and the not the actual execution and development of said system.

CHAPTER 2: LITERATURE REVIEW

Introduction

This chapter focuses on key elements of the research literature relating to sense of place for rural and small settlements in the U.S. Midwest and the implications of plans for transport innovations plans have had on this. This goal is undertaken in seven main sections. First, the chapter considers conceptual issues in population geography examining the relationship between people and place. Second, this chapter presents a review of literature in geography and social sciences on transportation. Third, in order to situate the research I review literature describing historical developments in transportation policies in the United States to explain the larger context in which HSR is being considered. This is important to understand because in the United States, in contrast to Western Europe and Japan, railroads are privately owned. Regional and national transportation systems developed primarily by investment from the private sector in the United States, with very little or no involvement of the federal government until the construction of the interstate highway system under Eisenhower in the 1950s. In 2008 the administration at the federal level proposed the passenger HSR system initiative, but commitment and approval for the system must be negotiated at the state and municipal levels.

The chapter turns to offer a brief review of a number of other key concepts relevant to the research. The fourth section offers a review of the experience of HSR in a range of countries, whereas section five offers an evaluation of concerns about environmental stewardship in relation to transport technologies. Section six gives an

account of key debates around the introduction of HSR in the UK, and the final section provides a review of aspects of transportation planning policy for rural areas.

This chapter introduces key topics relevant to how nonmajor metropolitan (rural) urban development has evolved. I present research about how technological changes in nonmajor metropolitan geographies affect nonurban and rural life and concepts about the environment—and environmental stewardship—and social issues. It also includes the perspective of transportation and urban planning, which play a role in the impact of passenger HSR in place and space. This section may explain, to some degree, the lack of much social scientific literature, theorizing about the passenger HSR project in the United States.

People, Place, and Space

Tuan (1979) described place and space as the result of human emotions and thoughts. Social experiences create and structure how people perceive place and space. The concept of place is the emotion of security and the concept of space is the longing for freedom (Tuan, 2001). Tuan's (1974, 1977) research on sense of place was undertaken from a humanistic perspective. Many others, such as Ley and Samuels (1978) and Seamon and Sowers (2008), built on Tuan's work to show the value of this perspective in studying place identity. Tuan (1974) used the humanistic approach to define place through the lived experiences of people as they engaged with their environment.

Cresswell (2004b) described place in terms of the concepts of sense of place, where of place, looks of place, and the feelings and emotions of place. Thus, Cresswell's goal was to present a multifaceted approach to defining and understanding place, implicit in a conceptual framing of place. Cresswell (2004b) also offered hints at a methodology

that goes beyond the thick description implicit in Tuan's humanistic perspective. Therefore, an implicit structure exists in Cresswell's identification of the where of place, the looks of place, and the sense of place. The location or where of place is fixed, whereas the locale of place can transform quickly. Internal and external forces impact the sense of place, created by human feelings and emotions that are always evolving.

Neither Tuan nor Cresswell offered much insight, however, as to how structural forces impact perceptions of place. Many geographers have analyzed structural economic forces while assuming place is passive. Examples include Marxist geographers such as Peet and Thrift (2014), Harvey (2006), and Smith and O'Keefe (1980). Their work illustrates how social and economic forces produce space, but failed to grasp the socially constructed meanings of place, or removing human agency from the geographical stage. Following the cultural turn in geography, support for such perspectives has waned somewhat (Clark, Feldman, & Gertler, 2003; MacKinnon & Cumbers, 2007; Sheppard & Barnes, 2002), whereas social theory has grown in importance. Researchers following the social theoretical perspective have had much to offer about sense of place, yet remarkably little effort has been made to interweave this literature with insights from transport geography, describing the complex ways advances in transport technologies have impacted peoples' feelings about place and space.

Bailey (2014) offered a helpful conceptual framing that provided one way forward. Bailey suggested a triad of knowledge, power, and context as a basis for thinking about place and space in the context of how population knowledges have evolved and changed in human geography. From this perspective, place can be conceived

as either passive or active, social spaces are either powerful or weak, and knowledge of space and place is mapped as either absolute or relational.

This perspective on understanding the making of geography could lead to deeper reflections on a range of ontological matters. However, from the perspective of researching transport change and sense of place, Bailey's (2014) conceptual framing provides a useful starting point for research, seeking to move away from a naïve treatment of space and place.

Conceptual Issues in Researching the Relationship Between People and Place in Population Geography

. Over time, the knowledge of *geography* has had as an anchor the concepts of place and space. However, over the years, the ways geographers understand or know about place and space have varied widely according to different schools of thought, ranging from positivism and quantitative empirical approaches (which Aitken (2014) described through paradigms, hypotheses, laws, and verifiability to qualitative approaches that assume knowledge can be understood through social inquiry. Aitken summarized the broad range of epistemologies of geographic knowledge: "Geographical research comprising a cloudy web of methodologies, theories, philosophies and practices ultimately elaborates geographical knowledge" (2014, p. 2).

The first tenet of research must acknowledge the relationship between the inquirer, the architect of the research, and the subject of the research. This depends on the theoretical stance of the inquirer. A positivist would argue that empirical facts and history, observed from sensory experience, allow for the interpretation of findings to create knowledge. Another approach to research is from the realist perspective. The

realist believes the observation is the observation and the inquirer does not interpret, but rather reports on outcomes determined by social structures and mechanisms (McKendrick, 1999). A social interpretivist would contend that within the social dominion, they can interpret what they observe. Validity is not driven by quantifiable objective facts, but by convergence in social meaning. Other philosophical approaches speak to how the inquirer looks, addresses, interprets, and presents geographical knowledge. These approaches range from social constructivism to feminism (Massey, Allen, & Sarre, 1999), and from Relph's (2015) humanist geography to structuralists such as Giddens' (1988) approach to the relationships between the person and their institution. Bailey (2008) and McKendrick (1999) argued epistemology should inform the types of research traditions that can be used, instead of forcing data to fit in a specific methodology or tradition. Stated a different way, McKendrick believed epistemology should inform the types of research traditions that can be used without constraints on research methods. With that understanding, this research addresses the questions, what is known about sense of place and space with the possible addition of passenger HSR in a U.S. Midwestern environment?

Transport Geography with Reference to High-Speed Rail

The importance of transportation in shaping concepts of space and place has been increasingly recognized in recent decades as a key element of human geography. Knowles, Shaw, and Docherty (2008, p. 4) wrote, "The rising significance of transport flows and spaces within academia offers perhaps the most promising opportunity in recent years to reposition transport geography at the heart of the mainstream human

geography and endeavour.” Analysis of transport geography does not take place in a vacuum, and other complexities such as social, political, and economic circumstances help drive overall geographical direction

Transport is driven by spatial orientation (place and space). People developed different modes of transport to help move people and goods from place to place more quickly. Two cornerstone terms, mobility (the ability to move or be moved freely and easily) and accessibility (the capacity of a place being reached or entered) are critical to understanding transportation theory. *Mobility* is the capability for physical movement; the ability of people to move around. *Accessibility* is a characteristic of a place whereas *access* is characteristic of a person. Knowles et al. (2008) argued that the spatial arrangement of activities and households drive accessibility and can be defined as how easy a place is to “get at.”

The interdependency of economic history and geographical/transportation theory dictates that researchers require an understanding of both to study the changing relationships between people and place. Each new transport technology impacts not only relations between places but the social and economic powers that affect peoples’ capacity to access resources and engage with the opportunities presented to them by the space economies in which their lives are framed.

High-Speed Rail and Geography

Recently, geographers and economists have turned to look at the consequences or potential consequences of passenger HSR. In 2007, De Rus and Nombela asked. “Is investment in high speed rail socially profitable?” They spoke about how the development of HSR in Europe has been encouraged and financially supported by the

European Commission; an occurrence almost unthinkable in the context of the United States. In their research, De Rus and Nombela analyzed the social cost of adding passenger HSR as well as the economic costs. Although a traditional economist will address quantifiable costs versus benefits based on demand, they argued that a social science perspective can address the more abstract kinds of costs. De Rus and Nombela used the real cost of construction, maintenance, and other costs to create a demand estimate that could be considered profitable from a social perspective. The authors concluded that a minimal threshold of demand must be met for social profitability: “HSR projects require a high volume of demand with enough economic value to compensate the high cost involved in providing capacity and maintaining the line” (De Rus & Nombela, 2007, p. 24). In short, they cautioned that time savings alone cannot justify passenger HSR without also alleviating road and airport congestion.

Docherty, Guiliano, and Houston (2008) recognized the issue of congestion in relation to environmental pollution. Select factors pressure the function of key urban processes and reduce the attractiveness of the city for residents and business alike. They argued that the impact of transportation is not regulated in a vacuum and for that reason transport planning must understand the ongoing processes of city building and renewal. They cautioned that transportation policies directly affect urban planning, sustainability, and even demographic issues, as well as social fairness and economic development. (Docherty et al., 2008) and that consideration of new transportation systems should look beyond the variables of accessibility, mobility for sustainability.

Several geographers have published papers to make a case for passenger HSR, including Preston (2009), Preston, Armstrong, and Docherty (2009), and Hall (2009) to

some degree. In two papers Preston and Preston et al. pointed to clear economic advantages with benefit–cost ratios between 1.8 and 3.5. Preston identified the dominant benefits as “time savings to HSR users and the net revenue to the rail industry” (2009, p. 2). Hall conducted a case study of the Glasgow-Edinburgh line pointing to the advantages of passenger HSR primarily to main central cities with interesting opportunities for edge-city locations, which may assist local urban regeneration. However, Hall cautioned that by connecting the main cities, passenger HSR may “threaten the position of more peripheral cities” (Hall, 2009, p. 67). The Hall study also considered the differences in national geographies, lacking a seamless integration of national systems into a larger regional system.

Ureña, Menerault, and Garmendia (2009) looked more specifically at smaller peripheral cities in a study that looked at the cases of Cordoba and Zaragoza in Spain and Lille in France. The researchers analyzed the changes in time, distance, and accessibility for the intermediate cities and the consequences for not only urban but also territorial development. As expected, their findings show passenger HSR opens new opportunities by transforming time, distances, and accessibility. Common economic and social characteristics exist between small towns, small cities, and larger cities along the passenger HSR routes and their findings for large intermediate cities can also apply to small cities along the line. The commonalities can be applied across different size types of geography. Implications for passenger HSR’s impact range from the national level, to the regional level, and also to the local level. In summary, the multilevel implications of each level deepen understanding of the complexity of passenger HSR overall (Ureña et al., 2009).

Shortly after Preston's positive endorsement of passenger HSR, primarily on economic grounds of the gains in accessibility and mobility over greater distances, Banister (2011) pointed to limitations of the model. Growth would be unsustainable, especially when considering the carbon footprint and "transport geography should break away from the narrow 'economic' concerns over time and speed, and explore the richer issues of travel distance that can be firmly embedded in an understanding of behavior and culture." (Banister, 2011, p. 222). Banister advocated the importance of understanding more about the human social experience when defining what should drive passenger HSR development.

Chen and Hall, in 2011, conducted an even more focused analysis of the impact of passenger HSR on just one city. Like some previously cited authors, they found the benefits of time-space effects undeniable, but the spatial-economic benefits less persuasive. In a longitudinal retrospective analysis of the interregional effects of the upgraded British InterCity 125/225 on British economic geography, they identified three zones for generating economic development, but the effects were not guaranteed or complete (Chen & Hall, 2011). A national strategy would be to develop a hierarchical network with HSR between London and key regional hubs, well combined at these centers with intraregional transport rail. They said, "it is not speed itself that will prove important, but the effects of speed in shrinking crucial time-distances" (Chen & Hall, 2011, p. 703), and argued that attention to the points of interchange with the local and regional services must be addressed to maximize a new generation of passenger HSR. They concluded that this kind of attention to interchanges at the intraregional level can be an important agent of change in city-region development and will help drive success.

Transportation and communication in tandem impact the concepts of place and space. New wireless technology that allows opportunities for communication and collaborative work, regardless of location, have reshaped the ways that nonurban spaces are used.

Having reviewed some key features of the research literature on HSR, I turn now to considering in greater detail the impact of HSR on nonmetropolitan places. One country where considerable work has been done on the impact of transportation changes on rural space is The Netherlands. Van Dam, Heins, and Elbersen (2002) argued that traditional nonurban areas have changed in the postmodern era and that in The Netherlands, urban people prefer to live in rural areas, which has created demand for rural housing and services. Van Dam et al. wrote, "Rural areas have become marketable commodities themselves and the demand for rural space and rural amenities is large" (2002, p. 461). Van Dam and associates asked if the policy of the Dutch government should be to enable rural living and if so how? One such enabler in The Netherlands or elsewhere would be transportation systems. A postulation from their research is that passenger HSR could facilitate rural migration.

Cabus and Vanhaverbeke (2003) described periurban rural territories, which act like buffer zones between urban areas and rural areas. The periurban rural territories have agriculture but also have manufacturing and service industries, with a complexity of various types of economic activities. Cabus and Vanhaverbeke (2003) concluded, "Rural renewal should start from the interaction that has been determined, involving the introduction of an outward-orientated culture, in which an urban-rural partnership is developed, with respect to the territorial identity and cultural markers of both partners"

(p. 242). These regions of urban and rural zones in Flanders, along with a periurban zone between, can have transportation as one of the catalysts of connectivity between zones.

Garmendia, Ureña, Ribalaygua, Leal, and Coronado (2008) explored the impact of passenger HSR on smaller cities. The addition of passenger HSR has transformed numerous smaller cities—those that are within an hour’s travel time of large metropolitan areas—into being part of those larger metropolitan areas. Garmendia et al. proposed that these smaller cities are now acting like suburban metropolitan areas. Passenger HSR uses time and space in transforming and connecting these geographies. Garmendia et al. argued, “These cities are thus related to their non-urban region, for which they are a territorial pole, and to the distant metropolis, for which they start to play a suburban role” (2008, p. 250).

The meaning of the rural and nonmetropolitan is not simply a function of low population density or of land-use functions associated with activities in the primary sector. Rather, it is a specific geography and a state of mind. Richardson (2000, p. 54), wrote about “the rural,” arguing that to analyze the “contested nature of rurality,” one must also examine the effects of power on rural society. Salamon (2003) traced the evolution of rural U.S. Midwest towns from places whose identities were shaped by an agrarian and moderately immobile society to becoming very different kinds of places in postagrarian society. Population mobility and spatial interconnection became, in Salamon’s terms, a key defining feature of these places: “As residents from transformed post agrarian communities commute between small towns and the regional center for work, leisure, and services, their daily routines knit together the countryside and the city” (Salamon 2003, p. 9).

Salamon (2003) recognized that the degree of connectivity is the feature that differentiates one place from another and that this explains why rural towns vary significantly from one another. Salamon proposed a fourfold typology reflecting the sociodemographic results of relational spaces occupied by these settlements:

1. Agrarian: shrinking population, home values that are not rising, a declining local economy.
2. Affluent residential: wealthy bedroom communities that resemble large metropolitan suburban areas, bipolar community structures with old-timers and newcomers physically and psychologically separated.
3. Mixed economy: towns driven by a combination of industries including agriculture, manufacturing, service, or residential.
4. Shabby residential: lower-income communities often hosting incomers living in older worn housing stock.

Travel and transport, tied to geographical inquiry, make for an increasing mobility want and need in this globalized world (Knowles & Hoyle, 1998). These rural town classifications illustrate the wider point that the impact they receive from transportation creates and defines rural space and place.

Self-definition of rural place relates to one's geographic neighbors. Commuting zones can tie rural places and small towns (micropolitan areas) to nearby metropolitan areas, and these small towns can act as neighborhoods of those metropolitan areas (Salamon, 2003). How policy is driven and created becomes a fundamental question in micropolitan and rural towns' planning. Wildavsky and Polsby (2004) asked, Who rules? Are the decision makers and policymakers the same for all component questions of a

municipality or do different factions have greater or lesser influence, depending on the issue? Different issues, including housing, zoning, economic development, parking, water and sewer, and transportation, to name a few, compete for resources. A pluralist society allows for all to engage in conversation, even though not all care to engage. According to Wildavsky and Polsby (2004, p. 332),

We seek to explain the structure of leadership, power, influence, control (they are equivalent terms) over community decisions. In its most general aspect, we conceive of control over decisions within a democratic context as the result of low but (as among people) highly disparate amounts of interest in public affairs; the high cost and comparatively low returns from activity in public affairs; the unequal but the dispersed distribution of resources; and the independent, conflicting relationships among leaders.

In this way, the role of planners becomes part of the rural–urban geography in its many dimensions. I return to the issue of transport planning for rural areas at the end of this chapter.

People, Place, and Transportation in North America

To understand how proposed changes in transportation impact the geography of place and space in nonmetropolitan areas in the United States, it is important to understand the history of transportation in the United States and the major elements of contemporary transportation systems. In this thesis, the historical review of transportation systems in the United States starts with the freight and passenger railroad networks in the 19th and early 20th centuries. It includes a discussion of the creation of the interstate highway system and the air-transport industry. These two industries have emerged in the

mid-20th century and now dominate transportation systems in the United States. This subsection of the chapter concludes with a description of the proposed HSR system in the United States, an initiative of the Obama administration (2008–2016).

In the United States, the nature of accessibility to place is fundamentally different from that in Europe and many other parts of the world. The United States' size and distance between places (space) create challenges in accessing place. The parameters of accessibility to places (distance between places) is and was influenced by the modes of transportation that would develop, grow, and be successful.

In the United States, especially in the Midwest and West, where vast expanses of territory are relatively unpopulated, geography is not necessarily perceived as physical distance but is understood in terms of travel time. For example, the distance between Chicago and St. Louis today is not perceived as the distance in miles (295 miles) but rather as time (5 hours travel time by car). In the 1850s, the time between these two cities was 7 days by horse. In the 1920s the time had shrunk to 10 hours by train. Currently, it takes approximately 5 hours by car and 45 minutes by plane. These dramatic changes in the relation between places as a result of transportation improvements reflect the wider process that Abler, Adams, and Gould (1971) described as time–space convergence, bringing places closer together, but also differentially favoring rapid convergence between the most populated and powerful locations, whereas smaller and more peripheral places have converged more slowly, often placing them at a relative disadvantage. This relational disempowerment of smaller, nonmetropolitan areas has been part of what has shaped the perceptions of place in these communities. Currently, travel (mobility) in the

United States is inexpensive and fast, but that was not always the case (Davidson & Sweeney, 2003).

Rail Transportation: 20th-Century Creation, Evolution, Impacts, and Displacement in the United States.

In most of the central and western United States, the development of places in relation to other places through geographic space was driven by the development of the railroad system in the last half of the 19th century. The construction of railroads was the principal component of a concerted effort to connect the economic and social infrastructure of the U.S. West to the East. Indeed, the railroads provided the impetus for settlement of what are now primary and secondary metropolitan cities throughout the Midwest, including Chicago, St. Louis, Minneapolis–St. Paul, and so on.

The U.S. federal government promoted the growth of the railroad industry to stimulate economic growth across the United States and its North American territories. Railroads were the tools the federal government used to grow and develop the “West.” As Garrison and Levinson described:

In the early days ... the government role was largely enabling (chartering firms, e.g.) and, by default, doing things in the interest of the railroads that, for one reason or another, the railroads couldn't build a consensus for action (e.g., Board of Trade intervention when railroads couldn't agree on running rights). (Garrison & Levinson, 2006, p. 168)

The policies the federal government implemented did not always directly relate to railroad transportation itself but also to the economic growth and opportunity the railroad generated. One early policy the federal government used granted rights of way to

railroads on newly claimed federal territory to support the industry (which impacted the development of place). This policy put the federal government and the large railroad interests in place to referee any property disputes (Garrison & Levinson, 2006). During the second half of the 19th century and for the first 4 decades of the 20th century, the primary transportation creating intercontinental accessibility for economic activity as well as place in the “heartlands” was the railroads. In fact the railroads, in part, actually created places. The U.S. government allotted alternate sections of newly claimed territories to the railroads, following the removal of native tribes to reservations. The railroad companies then sent scouts to Eastern Europe to offer land as incentives to populate the territories (and provide the water and fuel for the trains) in the high plains regions that became the states of Minnesota, North and South Dakota, and Montana.

The railroads allowed the population to access places that had not been easily accessible. With the railroad industry as the primary transportation mode for the cross-country movement of goods and a major mover of people to the new expanding West, the railroad industry in the United States in the latter half of the 19th century was large. In 1877, the debt of the nation’s railroads stood at \$2.26 billion whereas the overall debt of the nation was lower, at \$2.1 billion. The railroad industry was so important to the national economy that railroad industries’ financial needs helped establish Wall Street as the nation’s center of finance. The railroads had to go through recession, labor strife, battles with the Native American population, economic contraction of business in select places, and stiff competition in the 19th century, but the railroad industry continued to grow larger and its importance in the movement of goods and the mobility of people continued to grow. The ever-increasing size and importance of the railroads forced the

nation's political powers to continue to increase government regulation on the operations and responsibilities of the railroads (Davidson & Sweeney, 2003).

Garrison and Levinson (2006) argued that the growth of the railroad industry resulted in the evolution of a number of different styles in government transportation strategy. Beginning in the mid-1800s, the U.S. Congress drove the growth of railroad development. In 1887, Congress changed strategy by appointing the Interstate Commerce Commission to oversee and regulate railroad development. As the railroad industry matured and consolidated regional rail services, a corporate strategy emerged. The impetus for national transportation decision making was what was best for the corporation. Passenger rail service peaked in the late 1920s. As Goddard stated,

Railroads changed the way people thought about the natural order. No longer does life have to be lived in one's hometown. A person could go down to the depot, climb aboard a train, travel 50 miles to visit another city, and still be home for supper' (1996, p. 143)

That new mobility, because of the railroads, allowed the United States to interact with new geographic places and allowed the population to further tie together their local economies. Following the depression, railroad travel rebounded during World War II, then declined for the next 50 years. The railroads have a lifecycle of growth and decline that has moved to a current state of stagnation. Growth has moved into the automobile-transport sector. In the United States, the automobile allowed passengers to complete their trips quickly, pay less than when using other transportation modes (unless traveling a very long distance), and allows passengers easy access (unlimited accessibility) to most

places. These reasons helped drive the 20th-century U.S. transportation psyche that became centered on the automobile.

Road building in the United States started with the introduction of bicycle mobility in the 1880s and evolved and grew with the introduction of automobiles starting at the end of the 19th century (Goddard, 1996). Passenger-rail travel continued its strong growth for the first 2 decades of the 20th century at the same time public interest turned to technological developments in the automobile industry. Fordism created the mass of mobility products and the buying power of a population to expand their spatial interaction. The production techniques transformed the cost structure, allowing many to be able to afford an automobile. With the start of the production of the Ford Model T early in the 20th century, and in 1929 the addition of the Ford Model A, the U.S. public very quickly embraced this new form of mobility. Public transit peaked in the 1920s. The automobile allowed for a financially inexpensive mode of transportation that also increased the user's freedom of movement, allowing new personal mobilities to emerge (Zelinsky, 1971).

The residents of some towns did not realize that the passenger-rail system was leaving their municipality and did not plan for it.

Revenues dropped due to the construction of interstate expressways, the expansion of trucking, the collapse of the residential anthracite coal business, and other developments, while operating costs, especially labour, continued to climb. By the late 1950s the nation's railroad mileage was again falling at a brisk rate. (Schwieterman, 2004, p. 88)

Other towns had residents who endorsed the closing of the passenger-rail station because they thought the new interstate system would stimulate economic development. The changing realities of the U.S. freight- and passenger-rail lines led to the abandonment of passenger rail in many towns. The mobility generated from the railroad industry was not as viable as other transportation modes.

One reality of this transport mode was that, in addition to the automobile, motor roads also became part of the landscape. What was once a communication network for horse and wagon travel was transformed and evolved into a road network for the automobile (Knowles et al., 2008). The government was happy to help support the new economic engine of automobile manufacturing. Eventually, more than 15% of the U.S. public was employed in either the road-building industry or the automobile industry. Opportunities for employment, along with increasing mobility and a disdain for the corruption of the railroad industry, encouraged the U.S. public to support and embrace road building and automobiles.

Railroads had become the butt for much that Americans found wanting in life, so exaggerated portraits of unshackling the beholden rail traveler were common in the popular press. Many who stood to gain from the success of the automobile industry took pains to paint contrasting images of the railroads as archaic and the automobile as embodying the “new freedom” (Goddard, 1996, p. 55). The expansion of better roads for automobiles also led to the introduction of trucks for local shipping. A trucking industry soon developed because of the inefficiencies of the railroad-shipping industry, especially during World War I. With the United States producing massive amounts of goods for the

war effort, the rail industry was incapable of transporting all those goods and U.S. military men to east-coast ports.

Mass production in the automobile industry in the late 1920s and the first U.S. federal system of highways led to increased use of automobiles. At the same time, the commercialization of passenger aviation opened alternative modes of transportation. Trains ran on a timetable, and even though the U.S. public had become a nation of train users, they resisted the way time constraints and limitations of railroad services impacted their lives. The introduction of the automobile allowed them greater accessibility in time and space (Knowles et al., 2008; Paterson, 2007) Schwieterman (2004) showed that, although at one time almost all towns (place) of any size that mattered had passenger-rail service, abandonment of passenger rail started in the 1930s and accelerated into the 1970s. Davidson and Sweeney (2003) presented strong evidence that as mobility standards of the car increased significantly, making automobile travel cheaper and faster, the economic demand for passenger-rail travel declined. As automobile production increased, the federal government also shift subsidies from railroad to highway improvements, especially in the 1950s with Eisenhower's interstate-highway system. The government also stepped in to regulate and facilitate air traffic. The railroad industry now had to compete for business with the automobile and aviation industries, as well as for federal support, which led to the steep decline of U.S. passenger rail.

The politics of funding resources at the level of federal transportation policy created, and continues to create, an adversarial role between the lobbying groups of different transportation sectors. The highway lobby was born to support those businesses that profited from the automobile industry: road builders, automakers, oil companies,

service stations and mechanics, insurance, and others. These groups and others have effectively crafted an automobilecentric mentality in North American industry and North American society. Analysing USDOT data shows that interest in and support for passenger railroad has declined to a minor level in importance. The change of public policy focus from rail to automotive interests started in the 1920s and has continued and been reinforced until the present day.

At the national and global levels, the predominant form of mobility is currently the automobile (Paterson, 2007). Mobility fixates on and derives from automobile-centered development strategies. This centering on the automobile makes “movement” the force of the political economy, the cultural politics, and the environmental politics (Paterson, 2007). All policies driven in this automobile centric direction are biased, with automobile realities having the advantage over other forms of transportation.

The commercialization of aviation in the 1930s and the introduction of passenger flights also expanded intercity mobility. The jet age (beginning in approximately 1960) transformed aviation because of time–space advantages (high level of service) over rail. The Airline Deregulation Act of 1978 transformed the pricing structure of aviation and allowed for a plethora of new airline entrants (USDOT, 2000). These two changes—jets and deregulation—resulted in the expansion of this transportation mode. By the beginning of the 1970s the era of passenger rail, from operational to equipment, and passenger perspectives, came to an inglorious end. Corporate bankruptcies of railroads requested termination of passenger service and led to the realization that passenger rail would not exist if the federal government did not develop a program to ensure its continuation. Amtrak assured that continuation. Starting in the 1970s, the establishment

of the federal Conrail/Amtrak (National Passenger Railroad Corporation) relieved railroads of their obligations for passenger service. Conrail and Amtrak were quasigovernment entities that allowed for freight rail (Conrail) and passenger rail (Amtrak) to continue with government subsidies and support (Garrison & Levinson, 2006). Although some argued that Amtrak was never designed to succeed, results indicated a small growth in traffic and a modest redevelopment of its rolling stock and operating structure over time. Financial self-sufficiency was always stated as a political goal of Amtrak, but studies showed that subsidies were the only viable approach for continuation of the passenger-rail system (USDOT, 2000). The rail industry in the United States has undergone a lifecycle of birth, growth, maturity, and decline. Monopoly and regulation have rendered the rail industry's lifecycle disjointed and not without artificial barriers, growth, and continuances; however, even with government policy support, the industry can still be viewed from a lifecycle perspective.

The growth of the automobile industry and U.S. federal system of highways, beginning with Route 66 in 1926, and U.S. aviation-system growth, opened alternative transportation. Although at one time almost all towns (place) of any size that mattered had passenger-rail service, abandonment of passenger rail started in the 1930s and accelerated into the 1970s (Schwieterman, 2004). As mobility standards of the car increased significantly, time and monetary considerations impacted the economic demand for passenger-rail travel, which led to the strong decline of U.S. passenger rail (Davidson & Sweeney, 2003). This decline resulted from railroads competing with the large growth of the automobile industry (from the manufacturing gains of automobile production to the strong betterment of the road networks).

The U.S. public's interest in accessibility and geographical inquiry over time has created a number of different modes of mobility. These modes were discovered, enhanced, and promoted by the private sector (railroads, automobile manufactures, and airline companies), with public-sector (federal and state governments) policies established through lobbying, stimulating economic growth. The different lifecycles of each mode of transportation were driven by the population's demands and expectations, private industries' creation of products, and government's directional policies. In all three cases, private investment financed the creation of each industry (rail, automobile, and aviation). Lobbying on the part of the industries led to government subsidization, *not* a sense of social good initiated by government planners.

High-Speed Rail in the New Millennium: Accessibility and Demand

In contrast to earlier eras, when the United States tended to lead in transportation innovations, introduction of passenger HSR in the United States is much less developed than in other parts of the world. In Japan, the technological innovation of an HSR system became a reality in 1964 when the Shinkansen system was put into service, followed by the ICE-1 in Germany in 1990; the TGV Reseau in France in 1992; the AVE in Spain in 1992; and the ETR 500 in Italy in 1996 (Campos & De Rus, 2009). Korea has been developing HSR with the Hanvit 350/400. China became operational with HSR in 2007 and as of 2011, has the longest system length in the world. In many different international locations, place has been impacted by passenger HSR. That is not the case in the United States. U.S. residents can look abroad and see and experience the impact but in the United States, passenger HSR systems are only in the planning stage or at the 110mph stage.

Gutierrez, Gonzalez, and Gómez (1996) looked at HSR in Europe and predicted that accessibility patterns would change with the development of additional passenger HSR lines. Their conclusion was that accessibility increases for those geographies directly along the lines, and may not stay even but decrease for those geographies that are not tied to the new network. Gutierrez et al. (1996, p. 1) hypothesized: “that the high-speed train will certainly bring the peripheral regions closer to the central ones, but will also increase imbalances between the main cities and their hinterlands.” Additionally, they stated,

Stations on the high-speed lines are at hundreds of kilometres distance from each other, thus creating ‘islands’ of greater accessibility and, in fact, a space that is becoming more and more discontinuous. ... Within this new situation, there is no doubt that a decisive role is to be played by improvements in the regional transport infrastructures that link the high-speed stations to the rest of the region. Thus, spaces that are situated outside the high-speed network but efficiently linked up to it, could benefit from the diffusive effects that will arise in the chief urban agglomerations. (Gutierrez et al., 1996, p. 238)

In Sweden, accessibility questions arose. Fröidh (2005) completed a pre- and postreview of the economic impacts of the addition of HSR between Stockholm and Mälaren, concluding that although the Svealand HSR line was successful in moving additional people because of an increase in accessibility, the scope of the new catchment geographies for the individual stations was limited due to limitations in feeder networks to the new HSR stations.

Campos and De Rus (2009) reviewed 166 HSR projects around the world. Their research showed that HSR is strongly competitive in social costs (pollution, energy consumption, and safety) and can be competitive from an economic perspective (costs of planning, land costs, infrastructure building costs, and superstructure costs) if the population density of place is sufficient to generate appropriate demand. Additionally, demand during the initial opening of a network can increase quickly over the near term but sustained-demand growth, while continuing, will take place at a much slower rate.

The results show that the demand growth rates are promising for this transport technology when the population density is high enough. On the supply side, the structure and the cost level show that this is a very expensive and risky alternative method of transport that requires a careful case-by-case socio-economic appraisal.

(Campos & De Rus, 2009, p. 28)

Four of the five busiest airline hubs in Europe (with Heathrow being the lone exception) have had passenger HSR lines built to them. These airline hubs have seen an increase in international travel along with a decrease in domestic travel. Domestic travelers would rather take HSR to connect to a flight than take a connecting domestic flight. Learning gained from these European scenarios show that HSR increases demand for international air travel.

Environmental Stewardship

A sector of the population considers environmental stewardship and sustainability one of their more important responsibilities. According to the World Wide Fund for Nature (World Wildlife Foundation; Whitelegg 1997), decision making on how transport

policy should be structured is not equitable. Engineers and architects, along with politicians who do not understand local responsibilities, are making decisions on policy.

There is a danger that the new environmental agenda of sustainability will simply apply new constraints on mobility regardless of social consequences, where, for example, mobility is rationed by ability to pay, as in the case of road tolls in fuel price rises. This approach can only be acceptable if it provides an alternative that is efficient, attractive, affordable and safe, and is designed to reflect and meet the needs of its users, not just the more powerful groups in society. (Whitelegg, 1997, p. 146)

One could argue that passenger HSR is environmentally responsible for limiting environmental pollution because the carbon footprint of rail travel is much less than the carbon footprint of automobile travel (which is currently the normal mode of choice). The counterargument is that the addition of HSR to nonurban and rural areas will generate unneeded, unwanted, and for some, unaffordable travel.

The need for HSR is driven by some not from a mobility or accessibility need only, but first and foremost from an ecological-responsibility need. Energy systems and their relationships with transportation modes can be driven by environmental responsibility. As Friedman stated,

We need a clean energy system that is always trying to optimize three things at once—innovation and generation of the cleanest and cheapest electrons, the most efficient and productive use of those electrons and other natural resources, and constant attention to protecting and conserving our natural systems and educating people about their material, spiritual, and aesthetic value. (2008, p. 195)

The degree to which environmental stewardship influences stakeholders' support for HSR varies by individual. Indisputably, environmental stewardship is part of the larger equation of why HSR should or should not be brought to the nonurban and rural small-town Midwest. The discourse of environmental responsibility is taking place at the national level. Public support for environmental stewardship and sustainability was one of the important policy issues that ensured the success of the Obama election in 2008. With a new administration in place, questions abound about whether the support will continue, at least in its current form.

Framing the debates about passenger high-speed rail in the United States. In the United States, even though the technology is available, adoption of this new mode of transportation has been slow. Three major reasons account for this slow adoption: (a) Transportation systems in the United States are primarily nongovernmental competitive enterprises, each with their own agenda. (b) Highly regulated transportation policies (as well as subsidies) balance interests of different sectors (railroads, automobiles, and aviation). (c) Creation of passenger HSR requires governmental input to the project at local, state, and national levels, which inhibits capital investment that might otherwise be available.

Transportation policy in the United States regarding the railroad industry is fundamentally different from that of Europe. Railroad policy has been in place for well over 100 years. With this history comes the encumbrances that built over time. Some railroads started before any state governments existed. The development of the railroads and their historic growth developed in tandem with the development of individual states. Policy encumbrances for the railroad industry are not driven only by transportation

issues. Economics, finance, land-use planning, taxes, state policies, rolling-stock ownership, and rail ownership all play a part in creating the overall policy in existence today (Perl, 2002).

Regions of high population density in the United States and proximity between cities might be comparable to those in Europe, such as the Northeast, the Midwest, possibly the “New South” around Atlanta, and the West Coast corridor between San Diego and San Francisco.

The structure of railroad ownership is also different in the United States from the rest of the world. In the United States, private corporations own rail beds and freight-rail cars. The private rail corporations in the United States are profit driven, rather than driven by public need, and freight takes precedence over passenger rail. In contrast, in many other parts of the world, the national government owns the rail beds and passenger rail has priority over freight rail. This fundamental financial difference resulted in a stronger passenger-rail industry in Europe than in the United States, and freight rail is stronger in the United States than in Europe.

During the 1950s, the share of freight carried by railroads was similar and declining in both the United States and Europe. ... In the United States, the decline slowed during the 1960s and 1970s, and railroads’ share of freight actually increased during the 1980s and 1990s. In contrast, European rail freight share steadily declined throughout this period. By 2000, the railroads’ share of freight (measured in tonne–kilometers) had increased to 38 percent in the United States while it fell to 8 percent in Europe. (Vassallo & Fagan, 2007, p. 177)

How rail is used differs between the United States and Europe. Geography (i.e., distance and capitalcentric networks), natural features (i.e., water networks), and financial considerations drive part of the difference, and policy direction also shapes the current rail systems. This is important because the current perceptions about rail in the United States, in general, is one of freight use only. Freight rail's impact on nonmetropolitan place is limited to small disruptions of vehicular traffic rather than to concerns of accessibility of the place and residents' mobility.

Despite obstacles, however, benefits accrue from the creation of HSR that would link major metropolitan areas as well as nonmetropolitan places in certain regions of the United States. Feasibility studies and planning proposals have identified the Northeast and the Midwest as potential sites for new passenger HSR, aiding a changed climate of telecommunications advances. Trains are not replacing planes, but are augmenting the feed into the air network. The Jevons paradox of economics states that increased technological advancements grow efficiencies but then raise consumption and demand. The Jevons paradox of the interrelationship between passenger HSR travel and air travel can be considered a success because it gives humans increased mobility; in contrast, it can also be described as a negative factor because it increases the carbon footprint aligned with air travel (Kasarda & Lindsay, 2011). European HSR has generated its own demand that ends beyond the end of its track structure.

In the United States, changes in telecommunications and the Internet have created opportunities for people to reinvent where they live to satisfy their diverse work/home needs. HSR could allow more people the opportunity to live in rural areas and work in a home office, visiting an urban-based public physical office space only 1 or 2 days a

week. This transport technology, along with telecommunications and other enabling infrastructures, would allow people to live much farther from large metropolitan areas. With the possible advent of high-speed commuter rail, a rural town that used to be a 2- to 3-hour commute from a major city could now be a 1-hour commute. In short, the information age and transportation revolution could lead to the real possibility of the transformation of rural America into an extended geography of metro-America. The nonurban landscape has historically been agrarian only, but these new technologies could allow nonagrarian lifestyles to be lived in the rural sphere (Lewis, 1995). Proponents of HSR use the argument that information technology and HSR collectively can serve as the future drivers that allow the development of a more closely connected rural United States with the metropolitan/urban United States.

The measurement of the economic and social benefits of HSR in the United States has been and currently is being debated. Questions pondered include, What is the current value versus the future value from economic and social perspectives? (Martin, 1997); Why have studies shown inconclusive results that HSR creates economic benefit? (Bernknopf, 2009); Is HSR a local, regional, or national issue in economic generation and social impact?; and Are economic synergies achieved when geographies can be grouped (the relationship of space) because of HSR?

With the creation of policy for large infrastructure projects, cost overruns and benefit shortfalls are a major problem. Reasons for these problems are that cost and benefit forecasts at the planning stage may be wrong; cost overruns typically lead to delays because securing additional funding to cover overruns often takes time; large cost overruns and benefit shortfalls tend to destabilize policy-planning implementation and

operations; and as projects grow bigger, problems get bigger. The results of project cost overruns and benefit shortfalls results in lawmakers, investors, and the public having serious reservations about a project and any future projects (Flyvbjerg, 2005).

Transportation planning can be of two types: performance-based planning and customer-based planning and partnerships. Local political entities and the public are demanding that transportation-planning agencies develop goals that are measurable at the system level, the agency level, and in performance-based planning. Customer-based planning and partnerships bring the public directly into the planning process. Instead of being passive participants, the customers—the general public (the traveling public)—identify and drive the transportation-planning process. “Through the partnership of professional transportation planners and the engaged general public, new policy emerges. Of concern is that biases and agenda-driven players can hijack a planning process and drive it down an unrealistic path” (Pederson, 1999, p. 2).

One major driver in the creation of transportation policy is financing. Traditionally, transportation financing was driven from the federal level, later reverting to the state level. With the increased costs of redeveloping an aging infrastructure, traditional types of financing are no longer viable. Local metropolitan-government agencies are now becoming involved in financing. Bond issuances, sales, and leaseback arrangements; new user fees; and tax-increment financing are now being used to creatively finance transportation and other government projects (Carbonell & Yaro 2005).

Transportation development in nonmetropolitan places. The idea and possibility of a proposed HSR introduced to nonmetropolitan places through local-

governmental involvement and market-research studies carried out by planners throws into question what was once a set definition of urban, suburban, and fringe planning areas. Fringe planning areas have been, by definition, those areas that lie physically between suburban and rural areas (T. L. Daniels 1999). Fringe areas are no longer physically linked to the suburban/countryside boundary with the change in time/distance using passenger HSR. Areas that are completely removed from metropolitan areas can act like and be planned for as fringe areas. Distance-removed rural, small town, and micropolitan areas can all be impacted by fringe-like area dynamics.

As described by Anas, American cities have evolved from monocentric cities to polycentric cities that have a number of 'edge cities' as part of the metropolitan area. (Anas, Arnott et al. 1998) The economic development and activity that takes place in metropolitan areas influences the economic activity beyond it. Beyond these edge cities there are non-metropolitan cities (micropolitan) and rural landscapes that are spatially tied to and economically part of the primary metropolitan areas. The combination of the metropolitan, micropolitan, and rural areas tie together the geographies to create a larger geography that is termed a megalopolis. These interactions between geographies foster commonality of economic development activity within the geographies. (MacKinnon and Cumbers 2007) Interactions and relationships do not end at a regional level. Geographies are also linked at the national and international levels. Economics (information technology, production, and trade) as well as social (migration and ethnic) considerations all drive relationships between geographies. Carbonell and Yaro argued that the United States competitiveness is threatened by the weakening of rural America and the ineffective urban forms currently in place.

While the development of economic place and urban structure is well documented, what is sometimes overlooked are the evolutionary stages that have taken place over time. For example the definition and realities of what a city is/are is different today than what it was in the 1960s versus what it was in the 1930s versus what it was a millennium ago. The boundaries of the city, what makes up the city, how a city interacts with its environs; all change over time.

Kostoff, in his work *The City Assembled*, concluded that the modern suburb, in the sense of a residential settlement for commuters, was from the very start the child of fast transportation. (Kostof, Castillo et al. 1992) The automobile was the driver that built suburban America.

The blending of urban workers into nonurban environments is well documented in Europe. As Nutley defined in his article in the *Journal of Transport Geography : Rural transport problems and non-car populations in the USA- A UK perspective*: “Especially in lowland England, rural population densities are relatively high, and most small settlements have their quotas of middleclass commuters. These trends are reflected in transport resources and travel patterns.” (Nutley, 1996)

The evolution of the United States is one of continuation. Suburbs emerged out of city centers, grew, and matured. ‘Edge city’ was a term introduced by Joel Garreau of the Washington Post Newspaper. He described the suburbs as cities unto their own right which did not necessarily interact with or tie to the old city core. This evolution of ‘edge cities’ is not completed. With the advent of the information technology age and the addition of high-speed rail transportation age those areas that were previously thought of being rural and not tied to the regional city would become an extension of the cities and

‘edge cities’. As an example, one group that is expected to be a net gain to the rural places is that of aging baby boomers. This group is not looking for employment opportunities as much as they are looking for amenities to live a comfortable rural life..

Changing transportation modes change place and the relationship of place to other geographies thru space. Mobility of the population, through the use of different transportation modes, drives the distribution of the population. This distribution of population by place and through space is both created by and changed by societal and economic motivations. How people distribute themselves across a landscape is fundamentally different, depending on different transport modes. A rail-centric distribution of population is different than an auto-centric population which is different than an aviation-centric population.

The term *transit oriented development* (TOD), usually associated with urban and suburban areas, brings together the marriage of appropriate development with transit (light rail, bus rapid transit, bus, and traditional rail). TOD can apply to nonmetropolitan areas as well. In the book, *The New Transit Town Best Practices in Transit-Orientated Development*, discussions centered on how to create successful TODs by understanding the change in U.S. demographics and the shift in housing and neighborhood preferences (Dittmar & Ohland, 2004). Results from these same understandings can be applied to TOD in nonmetropolitan and rural areas. Passenger HSR changes the time/distance of nonmetropolitan and rural areas so they can act like suburban areas in transit-orientated development. This change would directly impact the sense of place of those living in nonmetropolitan areas.

Multistate HSR projects face the realities of not having a subnational government system in place in the United States. Authorities can be created across states but the conflicts between those states on the direction, vision, and policy of HSR creation can result in marked challenges. Agreements on planning, design, construction, and taxation need to be corroborated within and between states. The serving of multiple masters can work but does create another layer of challenges. Even if policy is to be driven at the state level, federal policies, such as tax and labor policies, can cause states to slow in the ability to create policy quickly. Federal permits and approvals are parts of the process (Thompson, 1994).

The following three sections address three important dimensions that interface with place and space in the context of the changes that would follow from building HSR connections. The economy, environment, and social mobility and accessibility will be used as the dimensions of change in the methodology of the research.

The Economy as a Dimension of Change

The economic impacts of such a large project as adding a passenger HSR network are important. One fundamental building block of the development of societal place is the creation of business and commerce. In this study, I analyzed the discourse about the economy when a passenger HSR network could interact with the sense of place.

Chandra and Thompson (2000) asked if public infrastructure affects economic activity. Although their research centered on large-infrastructure projects such as interstate-highway construction, interpretation of their findings can be directionally applied to a large-infrastructure project such as building a passenger HSR system. Historical data show that these projects affect the geographical distribution of economic

activity: counties that have these infrastructure additions have increased economic activity and counties that do not have decreased activity. Additionally, a new transportation mode drives relocations: some industries have increases in business whereas other industries shrink (Chandra & Thompson, 2000). Data analysis quantitatively addresses the impact of economy on local geography. This thesis builds on these conclusions to address whether any discourse in local nonmetropolitan geographies arises concerning the impact of passenger HSR on the sense of these places.

Lakshmanan (2011) claimed that wider economic benefits ensue with transportation-infrastructure improvements and that a quantifiable cost–benefit analysis is only one approach. Linking transport with economic growth drives market expansion, trade improvements, technological advances, innovation, and other economic benefits.

Lakshmanan (2011, p. 12) stated,

Transport improvements open up markets and create conditions, in the context of spatial agglomerations and technical change and diffusion, which influence economic structure and performance. A broad variety of interactions take place within firms and between firms, within sectors and between sectors and more broadly within and between households and organizations.

Others who have analyzed the economic impact of rail on geographies include Banister and Thurstain-Goodwin (2011). They argued that three approaches can be used to measure rail impact: macroeconomic effects—impacts on economic growth; mesoeconomic effects—impacts on agglomeration economies, labor markets, and the development of new network economies; and microeconomic effects—impacts on land and property values (Banister & Thurstain-Goodwin, 2011). In this research, I mix and

match these same perspectives of respondents with the scale of geography being used differently by different respondents. Some respondents considered the economy from a federal perspective; others used a regional viewpoint, whereas others defined the economy in the local geography. This thesis explores whether these same impacts/improvements are part of the discourse of the economic impact of passenger HSR?

Environmental Dimensions of Transport Change

Banister and Thurstain-Goodwin (2011) defined the environmental aspects of transportation use by using energy as the composite measure. The measure of energy consumed combines the mode of transportation used, the trip frequency, and the distance travelled. This means that the growth in travel distance needs to be reassessed with a view to reducing it, as shorter distances and slower travel have positive cobenefits for the environment (including safety), energy (and carbon), social inclusion, well-being (including health), and the economy. It is quality of the travel experience that needs to be addressed, as well as the means of travel (Banister & Thurstain-Goodwin, 2011).

The degree that environmental stewardship influences stakeholders' support for HSR varies with the individual. The discourse of environmental responsibility is taking place at the local level and is involved in sense of place, but the questions being addressed are part of federal, regional, and local geographies.

Proposed Change and the Dimension of Human Mobility

As geographical-research theory evolved during the last century, the significance of transportation in understanding population and social-geography analysis evolved with

it. Transportation geography includes the full range of social, political, and economic complexities of human geography. Knowles et al. (2008, p. 4) argued, “The rising significance of transport flows and spaces within academia offers perhaps the most promising opportunity in recent years to reposition transport geography at the heart of the mainstream human geography and endeavour.”

In his concept of central-place development in a time–space framework, Janelle (1966) argued that distance and velocity, in combination, define location and not a location point alone. This definition of place is one of the fundamental tenets argued when discussing the benefits of a passenger HSR system. Janelle (1966, p. 1) defined the place–space paradigm:

Geographers, as physicists, have traditionally been concerned with the positions of points (places) in space and with the directions of movements between them. However, geographers have not employed the concept of “velocity” in studying spatial relationships. Yet it might be of value and not too far-fetched for the geographer to ask “at what ‘velocities’ are settlements approaching one another in time-space?

Mobility includes the dimension and scale of the wide-ranging movements of people and of things across the globe and the local-level movements of people and things through local public space. Mobility and movement can be debated as being too little or too much. Hannam et al. (2006) believed mobility can be thought of as physical, informational, virtual, or imaginative. The discourses from communities of place confronting the possibility of the addition of passenger HSR also debate whether the mobilities that results from the addition are too much.

Hannam et al. (2006) used airports as a microcosm example of the complexity of mobility. Concerning aviation and airports,

The system of airports links together places, forming networks that bring connected places closer together, while distancing those places that are not so connected. ... Airport systems are part of the process through which time and space are dramatically bent. (Hannam et al., 2006, pp. 6–7)

That statement can also be applied to a passenger HSR system when that system is being added to nonmetropolitan areas. A passenger HSR system will link places—metropolitan and nonmetropolitan—together and bring those places closer to each other. It will also distance those places that are not attached to the system. A rail system will bend time and space for those places that are part of the system.

Summary

This literature review commenced by summarizing conceptual perspectives on place and space. I summarized approaches to spatial understanding of place and space with the economic, social/transportation, and environmental attributes that impact society when a new transportation mode is added to the nonmetropolitan geographical community in North America. The review linked conceptions of place and space to understanding the role of transportation systems in shaping perceptions of place and space. I then identified key moments in the history of transportation change in the United States in general and the Midwest in particular, before turning to consider a range of debates relating to the introduction of HSR.

The review of the literature highlights how little is known about the sense of place and space in relation to transportation in nonurban and rural U.S. geographies. Most transportation research has centered on dominant large metropolitan areas and little research has addressed smaller nonurban and rural geographies. The gaps in the research literature provide a basis for the primary research reported later in this thesis. In particular, I used the literature review to identify a series of research questions (listed in Chapter 1). To answer these research questions, I first had to define the best methodological approach to addressing these issues. Methodology is therefore the focus of the next chapter.

CHAPTER 3 METHODS

Introduction

While there is limited research about concepts of space and place in the US (Tuan, 1974, 1977, 2001), most of it addresses urban areas, leaving a lacuna of research about conceptions of space and place in nonurban areas (Salamon, 2003). The lack of research about how nonurban areas understand place and space suggests a need to provide a more in-depth understanding of how people in one nonmetropolitan area conceive of place and space.

The purpose of this research is to identify how sense of place in the nonmetropolitan United States was revealed in the context of planning for proposed passenger HSR services. Specifically, the study focuses on the nonmetropolitan Midwest, which was one of five regions targeted for passenger HSR. Nonmetropolitan regions that would be linked by passenger HSR are in states commonly known as the “breadbasket” of the United States, because in general the region is characterized by large expanses of mostly flat land with deep topsoil that was traditionally worked by family farms, but is now increasingly farmed by large agribusinesses. This dissertation focuses specifically on the case of a proposed high-speed passenger rail in the U.S. Midwest that will link three metropolitan regions: St. Louis, Missouri, to the south, and Chicago, Illinois, and Minneapolis, Minnesota, to the north. Two principal themes were explored to identify nonmetropolitan sense of place:

- Perceptions about spatial relationship between nonmetropolitan geographies and large metropolitan areas; and

- Perceptions (aspirations and expectations) of economic, mobility/accessibility, and environmental changes that could occur with the addition of a passenger HSR system and how they disturb and challenge individuals' sense of place.

Three research questions addressed in this research follow:

1. What does planning for an imminent high-speed passenger rail reveal about sense of place and the economy in the nonmetropolitan United States?
2. What does planning for an imminent high-speed passenger rail reveal about sense of place and the environment in the nonmetropolitan United States?
3. What does planning for an imminent high-speed passenger rail reveal about sense of place and mobility/accessibility?

Concepts such as sense of place can be methodologically difficult to capture. On one hand, statistical metrics can capture some dimensions of space and place (such as travel time measures of accessibility to key services) that may contribute in a reductionist fashion to partitioning space into categories such as “well connected” and “isolated.” On the other hand, people’s feelings about the essence of place are much harder to represent for a variety of reasons, not least of which is the fundamental epistemological issue of what it means to be human and to have human feelings about place.

In this research we begin with the epistemological position that changing representations of place and space are a reflection of the social construction of lived reality. However, to dig deeper into understanding nonmetropolitan sense of place, this research used a variety of methods including (a) archival research, (b) descriptive statistics, (c) qualitative survey work for segmentation analysis, and (d) a follow up series

of case-study interviews for a phenomenological understanding of respondents' lived experiences concerning space and place. The tension the chapter explores is how these very different types of information can be brought together methodologically to address the core topic of the thesis. In Chapter 2 I examined how other qualitative researchers, using a mixed-methods approach, have succeeded in advancing the understanding of space and place using very different types of methods and reflect on that research and how it shaped methodology of this project. I explain how and why I selected the Midwest segment of the proposed national HSR system as a case study for researching the topic. Following is a description of the details of the specific methods I used to gather evidence about changes to the sense of place that emerged in the context of the proposals for HSR links in the Midwest. A discussion of research ethics precedes and explanations of the steps taken for informed consent and confidentiality are presented. Finally, the chapter concludes with a consideration of what is knowable from the work I undertook and the problems and limitations of the study.

Epistemology

This research begins with the epistemological position that changing representations of place and space are a reflection of the social construction of lived reality, although an array of methodologies are employed to understand that lived reality. Philosophies of knowledge (epistemology) are central to how a researcher seeks to know the world and related to that philosophy as a valid way of knowing the world requires an associated methodology.

In human geography, a key moment in its disciplinary development was an embracing of positivism in the 1950s and 1960s as an epistemological frame (Thrift,

1996) that endorsed scientific methodologies built on the assumption that evidence could be observed and objectified.. Scientific methodologies rely on measuring observable events and processes and testing hypotheses using quantitative methods (Aitken & Valentine, 2014) to search for causal relationships. One example of this type of geographical research from this era of spatial science are works by Abler et al. (1971). The authors argued, for example, that space–time convergence was just one dimension of how improved transport technologies changed the spatial organization of the human landscape.

Over time, those who favored other epistemologies challenged this positivist vision of human geography, advocating critical realism, humanistic perspectives including phenomenology, social constructivism and poststructuralism (Graham, 2005). For example, humanistic perspectives in human geography in part encouraged researchers to see the goal of their research as the rediscovery of the theories people held about themselves and the world they occupied. This philosophical perspective led to a methodological emphasis on the meanings given to human social practices as revealed by analysis of words and social actions. The questions asked led to adoption of new methodologies in geography like ethnography (Herbert, 2000) to capture the qualitative dimensions of people’s experiences and imaginations (Ley & Samuels, 1978). By the end of the 1980s, philosophical pluralism was firmly established in the field human geography (Johnston, 1997), allowing individual researchers to select different epistemologies and methodologies, depending on the nature of their research topic. A single epistemology and its associated methodology was not the norm. The plurality of epistemologies ultimately led to geographical research being defined as a much more

uncertain venture, but one whose purpose remains focused on advancing a particular kind of knowledge. As Aitken and Valentine (2014) commented in relation to contemporary research: “Geographical research, comprising a cloudy web of methodologies, theories, philosophies and practices, ultimately elaborates geographical knowledge” (Aitken & Valentine, 2014, p. 2).

Here, I do not rehearse once again how each epistemology has been applied in geographical research, nor to extend the history of geographical thought (Johnston, 1997) to cover other “isms” such as structurationism and postcolonialism. The purpose in this presentation has been the following:

- First, to establish the lineage of philosophical pluralism that informed the research reported in this thesis.
- Second, to provide a platform for establishing two key points that help explain the author’s methodological stance and selection of methods.

These two points are, first, the way that, from the 1990s onwards, researchers questioned the *essentialist* nature of the relation between epistemology and knowledge. Second (and related to the first point), the development of critical thinking in social science has led to a recognition that knowledge is *socially constructed* and *relational*. I now address each of these points in turn.

An essentialist perspective argues that each epistemology defines a structured and fixed relationship between the researcher (the architect of the research) and the subject of the research. Thus, a positivist would argue that the researcher can be independent in studying empirical detail, observing specific events and places using sensory experience, and testing for relationships using neutral methodologies that have the potential to reveal

causal relationships, thereby allowing the emergence of new knowledge, either inductively or deductively. By contrast, the realist (one of many other positions one could select to illustrate the point) believes that observed outcomes are determined by social structures and also that the structures that are central to producing historically and geographically contingent circumstances cannot be observed. Therefore, one cannot test critical realist ideas using positivist methods. Consequently structuralists (e.g., from a Marxist or a feminist perspective) have argued for different methodologies to be used to establish what is knowable about a particular geographical environment (Graham, 2005). Others such as Gregory (2002) argued, however, that the dominant epistemologies adopted in research in human geography in the 1970s and 1980s should not be treated as foundational positions in determining methodologies for researching geographical knowledge and that other research positions were possible.

By the 1990s, many geographers had moved away from an essentialist reading of methodologies as aligned to particular epistemologies and favored instead adoption of mixed methods, illustrated, for example, by McKendrick (1999) in relation to research in population geography. Regardless of the epistemological frame of knowing, it is possible to draw on a wide range of methodologies (for example a positivist hypothesis-led research design could use qualitative data derived from interviews, as well as using other quantitative methodologies), but more fundamentally, that philosophical pluralism might also be accompanied by methodological pluralism. This latter point allows knowledge of a topic to be triangulated by seeking to integrate different ways of knowing in a research project.

A second key epistemological point, introduced above, recognizes the relational nature of knowledge. This major epistemological departure rejected totalizing accounts not only of how the world can be known but also of how knowledge can be constructed (i.e., Methodology with a capital “M”). Constructivism and poststructuralism, for example, rejected the labels assigned to people and places and called for deconstruction as a way of understanding and analyzing “texts.” In research in human geography, social constructionist research showed how certain representations of the world (Bailey, 2005) had been produced by those with power to structure the world in relation to constructs such as class and gender. This understanding allocated to the researcher the challenges of deconstructing categories (of people and places) and problematizing “research” by recognizing the relational embeddedness of the researcher among the “researched.” The epistemological significance of this is immense in thinking about how methodologically to treat data, how to conduct research, how to interpret findings, and how to consider the use of new research knowledges (Findlay & Cranston, 2015).

In the same spirit of this literature in human geography, my research seeks to implement a philosophically pluralistic approach to inform geographical knowledge. Rather than starting from a fixed epistemological stance, this research addresses questions of what is knowable about the sense of place and space in the nonurban U.S. Midwest in an era of changing transport technologies from a nonessentialist mixed-methods perspective. It seeks to triangulate different knowledges using different methodologies. It also disarticulates relational embeddedness of the researcher as “planner” as distinct from the researcher as ethnographer interviewing individuals as experts in the phenomenon of sense of place.

Methodology

Methodological Explorations

Adopting a mixed-methods approach from a pluralistic epistemological perspective is never easy. It becomes more difficult when the researcher recognizes the challenges of seeking to advance relational understandings that give voice not only to those that are most powerful in a given context, but also to those whose knowledges are often overlooked. This research was sensitive to gathering as many types of voices as possible.

Methodologically, I decided, therefore, to map the contours of the U.S. Midwest landscape represented by what might be considered as ‘State knowledges’ of people and place redacted from state level sources of primary and secondary data.. These contours were revealed, for example, by evidence taken from the census and other secondary data for the Midwest. Chapter 4 presents a description of the social and economic characteristics of the areas where research could be undertaken based on quantitative census and economic data. This element of my inquiry was far from positivist, even though it involved use of quantitative data. Instead this element of the work might be thought of as empiricist, deployed by me, as a researcher, to identify how state knowledges of the Midwest revealed certain uneven geographies in relation to a small number of measurable indicators.

A second methodological strand in my pluralistic approach was to seek to reduce the diversity of the population I interviewed to identifiable social segments. This reductionist approach comes from the academic research of business marketing and has

been widely used in geodemographics largely as a device of value in categorizing populations. The details of the way the tool was used are described in greater detail later in Chapter 5, but from the perspective of evaluating my methodological perspective, the purpose of constructing this type of knowledge was to preexisting social categories such as those ones that one might be used in much transport-policy literature. Such an approach, albeit valuable and often used by policymakers, often upholds the situated knowledges of those with power (Haraway, 1991) and fails to allow meaning to emerge from the textual material reported in comprehensive qualitative interviews (Crang, 2002). The approach, although methodologically dissonant from the social-constructivist perspectives used later in the thesis to deconstruct interviewee materials, remained of value in providing a matrix of contrasting representations of the changing landscapes of the Midwest. Triangulating knowledges from this methodological position with those achieved from textual deconstruction thus became a key aspect of following a multimethod approach (McKendrick, 1999).

In most of the thesis, I used social constructivist and poststructuralist insights as epistemologies framing my methodological perspective. The fundamental tenet of these positions is that knowledge is relational, always relating to its social setting. Adopting this view helped open new understandings of the meanings given by interviewees to their lived experience of a changing sense of place in nonurban Midwest United States. The approach extended my understandings of how people represented their positions relative to others and to the meanings ascribed by them to the changing transportation geographies of their region. The research literature shows a plethora of qualitative tools (methods) available to those believing that knowledge can be constructed and

deconstructed from social inquiry of this kind (Jackson, 2014; Pratt, 2001; Valentine, 2005). Each nonmetropolitan individual interviewed in this study conceived of place and space from different perspectives and I interpreted their concepts from multiple perspectives. The broadness of the pluralistic theoretical stance shapes the methodologies and allows for a multimethod qualitative approach.

In four different phases of this multimethod approach, I used four different approaches. In the first phase I used secondary literature and government data to generate a description of the case and select specific sites to research. In the second phase of the research I analyzed economic and demographic data specific to the region to provide a snapshot of the economic and demographic characteristics of the region. In the third phase I carried out a set of personal interviews to develop a segmentation analysis along the axes of the economy, environment, and social mobility. In the fourth-phase, based on the findings of the first two phases, I carried out another set of personal interviews to further explore the phenomenon of sense of place in related to the economy, environment, and social mobility of residents of the non-metropolitan space. The fourth phase involved interpretivist analysis that resulted in a nuanced and richly described understanding of the conceptions of sense of place in Midwestern U.S.

This “expansive model of scholarship” was “cross-fertilized by different methods” (McKendrick, 1999, p. 42) rooted in an interpretivist paradigm. I consulted a variety of sources about methodology (Neuman 2002; Pew Research Center, 2017; Bryman 2015) to ensure validity and later used the same sources in questionnaire design. McKendrick (1999) argued that multimethod research has multiple goals. These goals include the need to address weaknesses in existing data resources for breadth of

understanding, to gain confidence in results, to give a general overview, and the need for triangulation and confirmation. The use of secondary and primary economic and demographic data, along with a survey for segmentation analysis, as well as more intensive one-on-one interviews drives confidence in the results on the part of the reader. The general overview this approach provides validity through triangulation.

In summary, my methodological approach might therefore be described (to use McKendrick's words) as adopting an "expansive model of scholarship ... cross-fertilized by different methods" (McKendrick, 1999, p. 42). I offer more detail on the strengths and weaknesses of specific tools later in the chapter; but first, I turn to consider the logic of selecting the Midwest as a research site, before evaluating the methodological issues involved in each step of the research process.

Logic for Researching a Midwest Case Study

It is important to recognize that researching proposed passenger HSR in the nonmetropolitan U.S. Midwest represents one case in a larger U.S. push for HSR in several regions in the country. Other large federal passenger HSR projects, noted in Chapter 1, exist in the Northeast, Southwest, and West coast regions of the United States. I could achieve a more comprehensive analysis of the discourse of nonmetropolitan sense of place by confining the study to one region of the federal project. I decided to focus on the Midwest because it was the only region that was implementing a new 110mph system and is planning for 220mph HSR. In contrast, a 110mph system serving nine states already exists in the Northeast, and under the aegis of the federal program, only updating and improving the current system was considered. In California, a 220mph system was designed and construction has begun, but there was no interest in a 110mph system. In

the Southeast (Florida and Texas) political opposition to the federally funded project led state legislatures to decline funding. Only the Midwest region included states that accepted federal funding and cooperated with the federal project as well a state that declined federal funding (Wisconsin).

Importantly, due to major regional differences in population density and scale, this case study cannot necessarily be generalized to represent the full diversity of nonmetropolitan areas in the United States. It does, however, represent the diversity of the *kinds* of nonmetropolitan areas in the United States, ranging from large expanses of agricultural areas with low population density to small towns of 2,000–10,000, to micropolitan places. The federally funded passenger HSR project called for the involvement of four Midwest states (Illinois, Indiana, Michigan, and Wisconsin). All these states, at the time when this research project began, had plans for a 110mph HSR network, with each state also anticipating longer term plans for high-speed connections at 220mph. The Midwest was also interesting as a site for research because, unlike the northeast of the United States, with its megalopolitan Boston–Washington conurbation, the major metropolitan areas in the Midwest were separated by large areas of low-population density and significant numbers of small and medium-sized settlements. The region therefore offered an opportunity to explore a diversity of types of nonmetropolitan geographies.

Illinois, Indiana, Michigan, and Wisconsin provide a cross section of Midwestern states currently moving forward in the near term with HSR planning (Illinois and Michigan at 110mph [177 kph]) and states that have suspended projects (Wisconsin

cancelling the 220mph [354 kph] between Milwaukee and Madison). Eventually, Illinois and Michigan are also planning a 220mph (354 kph) system.

I selected a sample of specific communities in the Midwest from which to recruit participants for in-person interviews according to size (3,000 and 300,000 people) and other nonmajor metropolitan characteristics. I chose the following cities: Dwight, Decatur, Kankakee, Bloomington/Normal, Springfield, and Urbana/Champaign in Illinois; Kalamazoo and Battle Creek for Michigan; and Kenosha, Racine, Madison, and exurban Milwaukee for Wisconsin. Final geographical distribution of completed interviews was indiscriminate. See Figure 2 for locations.

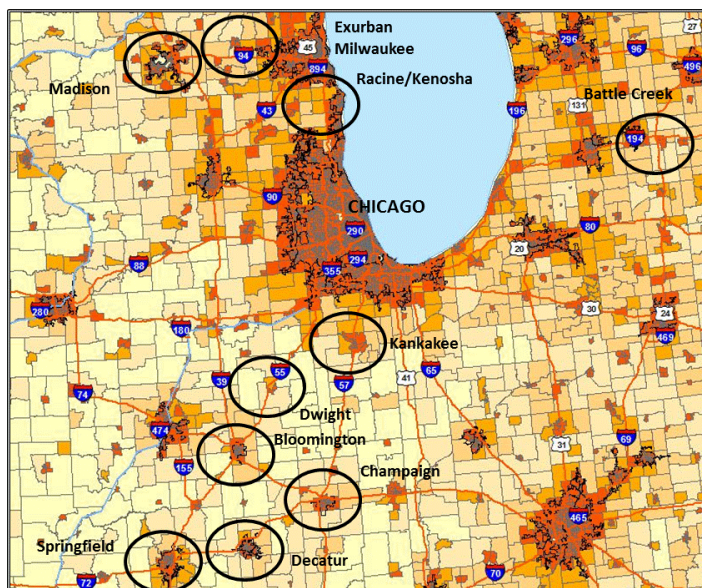


Figure 2. Sampling map.

Note. Source: *American Community Survey 1-Year Estimates, Table GCT0101*, by U.S. Census Bureau, 2014, accessed 15 August 2014 from <http://factfinder2.census.gov>

Analyzing Secondary-Data Sources

The starting point for the research was to collate relevant secondary data on the Midwest at county-level to better describe specific socioeconomic characteristics unique to local communities. Secondary sources included material obtained from the USDOT

(see Exhibit 1 in Appendix) about planned HSR projects (2000–2010) and the U.S. Census Bureau (see Exhibit 2) for demographic and economic vital-statistics data (2010 with official projected estimates through 2013). These important primary sources provided accurate figures about demographics and transport usage. U.S. Census data is the backbone for all policy planning requiring demographic data, and USDOT is the official source for data about transport modes and usage. In addition to these statistical sources, I examined national and local news websites to track national dialogue about high-speed rail. I also researched local newspapers for the period 2009–2011 to track coverage of proposed HSR locally (see Exhibit 3). Specifically, I reviewed information about the economic, social, and environmental impact of HSR on the local geography. Municipal websites and Chamber of Commerce information provided specific detail about the small towns and micropolitan areas selected for this study (see Exhibit 3). Analysis of this secondary data allowed me to better distinguish differences in the economic and social environment of places in the Midwest. I modeled this approach on another study of small towns in the Midwest by Salamon (2003). By analyzing the primary data on transportation usage and demographics, I was able to establish a baseline description of population size and density, economic structure, and size of places in the counties that had the potential to have passenger HSR added to their geography.

Population statistics, ethnicity, income profile, age distribution, business profile, manufacturing size, and retail sales provided a snapshot of the socioeconomic status of individual municipalities (micropolitan areas and towns). Knowledge of the business-climate (manufacturing, retail, etc.) also informed sensitivity to the interests of local inhabitants. The socioeconomic organization as well as the issues revealed in local media

indicated and shaped local conversations. Ethnicity, age, and income all helped to understand the demographics of individual municipalities and areas. Analysis of this detailed information provided an understanding of who and what organizes the local communities and allowed for a more robust and insightful questionnaire design and targeted sampling plan. Based on this detailed knowledge, I then designed questionnaires to be relevant to site-specific small metropolitan towns and micropolitan areas.

I developed a sociodemographic typology to group-selected Midwest counties by population growth rate and business sales per capital, based on U.S. Census data for each county and county business data. This allowed relative comparison of demographic size and economic and business activities. Using this typology, I selected 13 representative municipalities in different counties for deeper primary fieldwork involving in-depth interviews.

Questionnaire Design

The review of secondary data, current conversation media topics, and socioeconomic data also helped shape the design of the questionnaires used in Phase 2, described below and further in Chapter 5. Using the information developed from secondary sources, I developed a questionnaire for a first round of interviews to determine the diversity in ways of looking at the pending passenger HSR from environmental, economic, and social perspectives. A second round of interviews, specifically focused on eliciting individual lived experiences of space and place, structured so that learning from one interview could be applied to future interviews in an iterative process. For both rounds of interviews, I piloted and structured the questionnaire

so that learning from one interview could be applied to future interviews. Following the work of Yin (2013), I conceived the interviewing process for this phase as a number of case studies (interviews) used to build a continuing base of knowledge.

In the first phase of interviewing, I designed a questionnaire for segmentation analysis (Weiss 2000) to elicit responses related to the following:

- Participant perceptions (aspirations and expectations) about economic, social, and environmental changes that could occur with the addition of a passenger HSR system.
- Participant perceptions about spatial relationships between nonmetropolitan geographies and large metropolitan areas.

The two sets of interviews used a combination of Likert-type-scale questions to assess demographics and opinions, as well as semistructured open-ended questions designed to allow individual nuances of thoughts, opinions, and perceptions to emerge from each participant. I consulted a variety of sources about questionnaire design (Neuman 2002; Pew Research Center, 2017; Wyman, 2015) to ensure the questionnaire did avoid leading questions, and was structured correctly.

These questions framed and directed the focus of the research as well as allowed the emergence of authentic responses and reflections about the passenger HSR project. The initial statement/paragraph framed the discussion to focus participant responses on the specific topic: how proposing to add a passenger HSR network to the nonmetropolitan US Midwest affects the specificity of place and space. The first question used a Likert-type scale to identify respondents' awareness (from not aware to slightly aware to very aware) about the planned passenger HSR project. The following four open-

ended questions framed the discussion. Questions 6–9 probed for the individual’s understanding of the decision-making process involving the federal, state, county, local, and corporate stakeholders with a combination of Likert-type scales and open-ended questions. Open-ended and Likert-type-scale Questions 10–18 tested participants’ knowledge of local actors and perceptions about the project. These questions provided a foundation to begin questions about participants’ perceptions about the overall projects (19–21), and the subsequent questions focused more specifically on the potential value to the local economy (22–25), environment (26–27) and social conditions (28–29). The subsequent questions (30–32) requested respondents’ opinions about the need for passenger HSR, taking into account issues of speed, prices, and frequency of service. The next questions (33–36) used Likert--type-scale questions to poll respondents about their travel habits, followed by questions designed to collect demographic statistics (37–45). The final open-ended questions allowed respondents to reflect further and to add any comments or feedback that may have occurred to them in the course of the interview. Chapter 5, Segmentation Analysis, provides greater detail about the rationale and specific organization of the questions. The goal was not to produce quantifiable measurable results. Rather, the questionnaire was designed to allow subjective categorizations of people’s attitudes and perceptions and to allow an inductive interpretive process, leading to the establishment of differentiated social segments.

The questionnaire was designed to be administered face-to-face by an interviewer or completed independently online by a participant. I piloted the questionnaire in an iterative process in three stages with three different individuals, and it then remained unchanged for in-person and online interviews.

I planned in-person interviews with location, introduction of interview, and gender, class, or race issues for each interview brought into consideration. I administered the first questionnaire to 32 respondents (between the ages of 20 and 80) living in 13 communities across the Midwest. Participants who could not be interviewed in person responded to an online version of the questionnaire. Responses from this round of interviews provided the data for the segmentation analysis (see Chapter 5). The average age of respondents was 46 years. Seven interviewees were younger than 35 (the youngest being 22) and seven were older than 55 (the oldest being 76). Eighteen respondents were between the ages of 35 and 55. Educational attainment of respondents varied from a high school diploma to three with doctorate degrees (PhD and MD).

The time and place of the interviews was negotiated between the research participants and me. Total interview duration was approximately 60 minutes, including a preliminary discussion and postdiscussion of approximately 5 minutes. Interviews took place in a multitude of locations including private business offices, quick-service restaurants (i.e., McDonalds), fast casual restaurants (i.e., Panera Bread), the lobby of a hotel, government business offices, homes, pubs/bars, university business offices, rail-transportation centers, coffee shops, outside in front of the old Illinois Statehouse, and in a military museum.

Some physical locations presented challenges, with background noise being a central challenge. Additional challenges included time constraints of interview candidates; passers-by listening to the interview process; and interview candidates wanting to continue the discussion with minutia far beyond the scope of the research and within the time constraints of the interview process.

In addition to the 32 Round 1 interviews, an additional 27 individuals completed an online survey, responding to the same open-ended questions asked in the in-person interviews, to validate in-person interviews. Because the original reason for the addition of the online surveys was for validation purposes only, the completion rate is unknown. Recruitment for the online survey included the use of e-mail address lists in the public domain as well as contacts generated from in-person respondents. If any additional categories or codes emerged in the online responses, I could have scheduled in-person interviews for further exploration. The online survey, designed as a validation tool, used the identical questionnaire. However, the online questionnaire was self-executed, and although the questions were open-ended, there was no opportunity to probe further, as with in-person interviews.

After conducting the first round of interviews and completing a segmentation analysis, I determined the need to further explore themes and categories about the conceptions of place and space in the material that emerged from the initial questionnaire. I completed a second set of interviews specifically focused on eliciting individual lived experiences of space and place. This questionnaire was structured so that learning from one interview could be applied to future interviews. For this round of interviews, the questionnaire was structured and piloted so that learning from one interview could be applied to future interviews.

For the second set of interviews, I interviewed 25 people. I interviewed fewer participants because I used an iterative approach to explore concepts specific to space and place. Yin (2013) argued that the need for a specific sample size is not important because, by using a case-study logic approach, knowledge is constructed from each case

(interview). The body of knowledge can be known when it reaches a saturation point in which no new information emerges (Yin, 2013). In this instance, my analysis of the interviews showed I had exhausted the range of concepts about place and space in this specific nonmetropolitan Midwestern geography.

Sampling

I used purposive sampling for both sets of interviews. The purposive sample of the first set of 32 face-to-face interviews were taken from the 12 selected communities. The online survey of 27 persons were taken from the subset of nonmetropolitan communities across Illinois, Michigan, and Wisconsin. For recruitment, I sought cross-sectional representation based on demographic and economic community profiles from the 12 identified nonmetropolitan communities in Illinois, Michigan, and Wisconsin. Community participants and key informants came to the study through snowball techniques. The participant sample met the following criteria.

- Residence in identified communities in each selected state
- Proximity to the new rail line
- Age between 19 and 80 and gender (to achieve a relative representation)
- Representative employment categories to achieve representation of the socioeconomic profile of each community.

The sample targeted a relatively even age distribution (between the ages of 18 and 80) as well as five transportation-planning participants as key informants as part of the respondent pool. Sampling was not meant to be generalizable, though an attempt was made to achieve broad representativeness.

In recruiting participants for both sets of face-to-face interviews, I sought a cross-section of employment categories reflecting community profiles. Employment of respondents included one employed in the federal government; three in state government (including two retired state employees); three in private universities; four in the nonprofit or union sectors; six in local municipal governments; and 15 in private industry/business. This cross section of employment helped develop a clear understanding of the broad distribution of knowledge and perceptions of HSR.

Figure 3 shows the research subgroup that included selected populations (see profiles below) of municipal officials and planners and local business leaders in nonmajor metropolitan (micropolitan and rural) geographies.

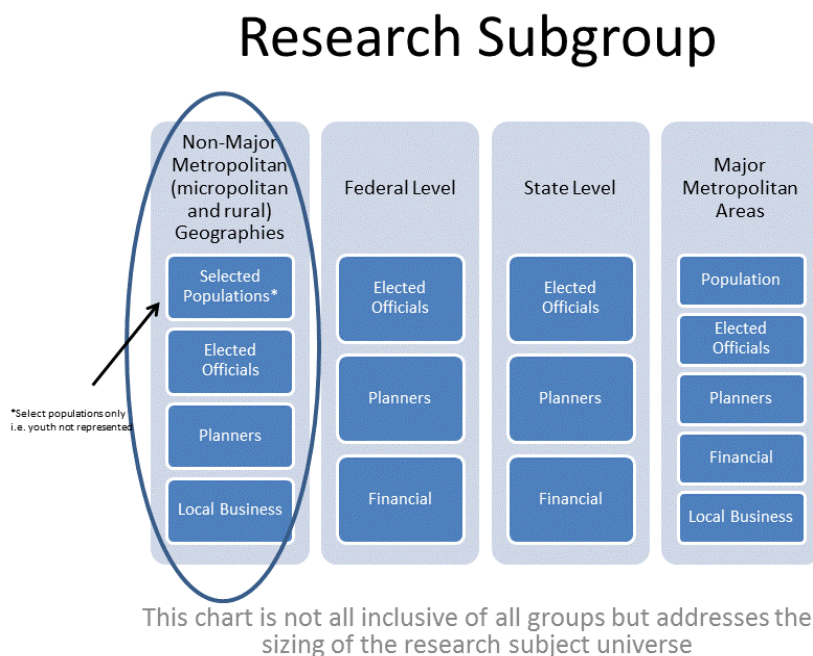


Figure 3. Research subgroup.

For both rounds of sampling, I used the snowball method to recruit participants (Marshall, 1996), beginning by recruiting participants from business acquaintances and

friends and expanding to others unknown to me until the targeted sample categories were filled. (See Exhibit 7 for the recruitment letter.) This process sometimes included referrals from participants completing an interview. Prior to the interview, I personally knew only one participant. Selected participants reflected a relatively even age distribution of individuals between the ages of 18 and 80 across age requirements (18 years and over). I also included five transportation-planning key informants as part of the respondent pool.

During the interviewing process, an invitation to attend a municipal clerks' meeting opened the opportunity to identify and recruit some key informants. Municipal clerks are elected or appointed government officials responsible for the administration of municipal records and the functioning of local government processes. I was allowed to review the attendee list and identify five possible candidates for interviews from the 46 clerks who attended a 2-day meeting. I chose the five possible candidates based on their home geography in relation to the planned passenger HSR networks (110mph and 220mph). From the five identified municipal clerk candidates, I completed three interviews successfully.

Methods of Data Analysis

Transcription and coding. I audio recorded and transcribed 32 interviews from the first-round survey and 25 from the second round of interviews. Description of approaches are discussed more fully in Chapters 5 and 6.

I used an ethnographic approach described by Spradley (2016) as researching from the perspective of the society in which the research is taking place. I transcribed all completed interviews into Word documents. The questionnaire structure included

questions about transport, place, space, discourse, economic, urban, development, planning, direction, changes, accessibility, towns, geography, social, issues, policy, perceptions, and wants. Although I asked 45 questions, they all related to one of these 18 categories. I anonymized personal information and assigned individuals a number. I tabulated the Likert-type-scale questions and, using NVivo, I coded the open-ended questions, numbering the questions. In the iterative process of transcription, additional codes emerged from participants' responses. I established a taxonomic structure incorporating the research questions about issues of Place, Space, and Time, and categorized respondents according to one of two segments under each of the three themes.

Segmentation analysis. Weiss (2000) argued that the major demographic developments of the 1990s account for the renewed interest in the rural United States, and researchers are using social-marketing approaches and studies of market segmentation to understand and influence the market. Social science and business methodologies are intertwined with social marketing. Kotler stated:

Social marketing is a process that uses marketing principles and techniques to promote target-audience behaviors that will benefit society. Social marketers focus on influencing behavior on societal gain. Social marketing principles and techniques are most often used to improve public health, prevent injuries, protect the environment, increase involvement in the community. (Lee & Kotler, 2011, p. 26)

Marketing clustering is a tool developed in the 1980s that I used to help classify socioeconomic trends of populations in this thesis. Weiss argued:

Clustering explores the diversity of the way Americans really live; which issues concern us in local elections, how we define our dreams and aspirations. ... The cluster system reflects the roaring diversity of how we live. ... understanding the competing cluster viewpoints can help sort out and assess the complex issues that divide a community. (Weiss, 2000, p. 2)

Instead of using one of the standardized cluster systems (Weiss, 2000) to explore and define the different discourses taking place about passenger HSR and economic, social/transportation, and environmental issues, I created a hybrid proprietary cluster system, discussed further in Chapter 5. Using an inductive process, I coded each interview, built on the findings or previous interviews, leading to the emergence of clustered themes and segments centered on economic, social/transportation, and environmental issues; perceptions of the advantages and disadvantages of the addition of passenger HSR; and policy decision-maker perceptions. In the iterative process of transcription, additional codes emerged.

Socially-constructed meanings of place and space. Following a similar coding and iterative process, and building on codes that emerged in the first set of interviews, I analyzed the second round of qualitative survey results to elicit key meanings associated with conceptions of place and space. This analysis looked more closely at the relationship between the way people talk about the economy, social relations, the environment, and the context of their sense of place and space. This three-step interviewing process ensured the findings represent the lived experiences of place and space of individuals in the Midwest. This relationship helped identify key concepts about the sense of place in nonmetropolitan U.S. geography. I used an interview guide for these intense interviews.

All interviews were transcribed and coded. The interview process for all interviews allowed me to identify key themes, described in Chapter 6.

Ethics

I have read the research ethics statements of the University of St Andrews and have adapted all research ethics requirements to this work. I took an ethical approach during all aspects of this research including the following: accurate representation of literature cited; sensitivity to social and demographic issues; questionnaire design; data storage; data interpretation; and ethical dissemination of findings (Ritchie, Lewis, McNaughton Nicholls, & Ormston, 2013).

All in-person interviewees signed a Letter of Research Understanding (see Exhibit 6) before the start of the interview. The purpose of this document was to clearly communicate to interviewees the ethical parameters of the research. Included in the letter were the following statements: that the research was for an academic-dissertation project under the auspices of the University of St Andrews; participation was voluntary; the interviewee had the option of omitting questions they did not want to answer; the interviewee could withdraw from the research at any time and for any reason, without having to give an explanation; the conversation (interview) would be audio recorded; the conversation (interview) data would be digitally stored; the digitally stored data would be destroyed when no longer needed for academic-research purposes; the conversation (interview) would be treated with full confidentiality; and if published, the information would not be identifiable. All participants recruited voluntarily signed the form. All audio recordings and transcriptions of interviews and results were kept under lock and key and will be destroyed following completion of the dissertation.

Summary

The strength of the research methodology lies in the comprehensive findings gathered through the development of detailed structured interview questionnaires, based on analysis of secondary literature and demographic data. The first round of interviews applied methods of social marketing to analyze and develop a segmentation profile. The research methodology focused on the perceptions revealed in discourse on nonmetropolitan geographies about the possibilities of the addition of passenger HSR. The detailed questions exploring ideas about the impact on economic, social/transportation, and environmental issues resulted in tangible results that addressed the research aims. The second round of interviews built on these results to probe further into conceptions of place and space in the nonmetropolitan U.S. Midwest.

The results/findings from this study can be applied in the following future studies: a review of the decision-making processes that are currently in place; a study of local organized community activism or organized special-interest groups; an examination of local public policy on passenger HSR; and an analysis and determination of whether a passenger HSR system would be a benefit or detriment to the population.

Chapter 4 starts with defining the geography and reviewing socioeconomic features. Chapter 5 presents the results of the first round of questionnaires using a social-marketing methodology to create a segmentation analysis. Chapter 6 builds on these results and presents the results from the second round of questionnaires on perceptions about place.

CHAPTER 4: UNDERSTANDING MIDWEST COUNTIES

The purpose of Chapter 4 is to report on the emerging sense of space and to identify respondents' understandings, perspectives, expectations, ideas, or attitudes about passenger HSR. It first describes the analytical approach to selecting sites for study. It next presents the results of the qualitative interviews with community members of the nonmetropolitan region that would be impacted by the introduction of passenger HSR about their concepts of space, time, and place. Finally, it presents how these themes emerge in notions of a sense of place in the economy, social life, and the environment.

Approach to Site Selection

Developing a typology of the nonmetropolitan counties in the Midwest involved the following three steps:

1. Define geography. I analyzed all counties in the four-state region and identified those counties that have a potential to have a passenger high-speed network.
2. Review socioeconomic features. I used U.S. Census data and U.S. county-business-patterns data to analyze the sociological and economic context of each county and to compare and contrast counties.
3. Determine counties by population growth rate and per capita business sales. I created and used population growth and business sales as a measurement comparison tool of counties. The total number of counties by state is as follows: Illinois 102; Indiana 92; Michigan 83; and Wisconsin 72. I selected only the 35 counties that have potential passenger HSR from all 349 counties

by eliminating the counties containing the four metropolitan areas of Detroit, Chicago, St. Louis, and Minnesota, which left 29 counties.

Sociodemographic Typology

I used data from the 2010 U.S. Census and estimates for 2014 and county-business data from 2007 to determine the size of the counties from a population and business-sales perspective, as well as the interrelationships between counties. Calculation of per capita business-sales data derived from the ratio of economic data for 2007 to demographic data for 2010 (economic data were unavailable for 2010 at the county level). The 2010 U.S. Census provided data on a range of demographic, social, and economic indicators. Figures after 2010 are estimates created from U.S. Census modeling (U.S. Census Bureau, 2014). Table 1 shows the variables used for analysis.

Table 1

Sociodemographic and Economic Variables

Population, 2014 estimate based on 2010 Census
Population, 2010 (April 1)—Actual census figures
Population, percent change—2010–2014
Female persons, percent, 2013
White alone, percent, 2013
Black or African American alone, per cent
Asian alone, percent, 2013
Hispanic or Latino, percent, 2013
Bachelor’s degree or higher, percent, 2013
Median value of owner-occupied housing units, 2009–2013
Median household income, 2009–2013
Persons below poverty level, percent, 2009–2013
Manufacturers’ shipments, 2007 (\$1,000)
Merchant wholesaler sales, 2007 (\$1,000)
Retail sales, 2007 (\$1,000)
Accommodation and food services sales, 2007 (\$1,000)
Building permits, 2013
Land area in square miles, 2010
Population per square mile, 2010

I analyzed each variable to determine its fit to develop a comparison model of the counties. The model focused on population and economic growth and strength in relationship to surrounding counties. Exhibit 4 provides maps showing which counties have potential for a passenger HSR line.

Absent from the final analysis was manufacturers' shipments, 2007 (\$1,000). This variable, although it could help define economic activity, biased select counties' data and therefore was not used. For example, Boon County, Illinois, has a small population of 53,869 but it has a very large manufacturers' shipments, 2007 (\$1,000) of \$5,553,679. This resulted in the per capita value for this variable of \$103,096. The combined per capita generation for the other three variables (wholesale, retail, and food combined sales) was \$11,838. The generator of the manufacturing dollars was an automobile-production facility. This example repeated in other counties in Illinois and other states. Wholesale, retail, and accommodation/food-services sales are sufficient to show an economic activity comparison of counties.

Relationship Model

I analyzed all 349 counties in four Midwestern states (Illinois, Michigan, Minnesota and Wisconsin) to develop a typology of their relative demographic and economic characteristics. As seen in Table 1, I partitioned the ratio of population change (2010 to 2014) for each county into three groupings:

- *Declining*: those with a percent change of less than -1.0%;
- *Flat*: those with a percent change between -1.0% and 1.0%; and
- *Growth*: those with a percent change of greater than 1.0%.

Of all counties in the four states, 49% were declining; 30% were flat; and 21% were population growth counties. Of potential passenger HSR, 37% of counties were classified as growth population counties.

The sales variables used to measure the significance of relative economic strength between counties were merchant wholesaler sales, 2007 (\$1,000), retail sales, 2007 (\$1,000), and accommodation and food-services sales, 2007 (\$1,000), adjusted to a per capita number to normalize population differences. I partitioned the per capita wholesale, retail, and food-combined sales data for each county into three groupings:

- *Underproducing*: those with per capita sales of less than \$11,400;
- *Near Average*: those with per capita sales of between \$11,400 and \$18,200;
and
- *Regional Influencer*: those over \$18,200.

I partitioned the per capita sales data into three equal groupings (33.3%) but of those counties that are potential passenger HSR counties, 60% were Regional Influencers. A review of economic sales data per capita showed no natural breaks in the data. For that reason, I defined equal categories.

Table 1 shows the empirical outcomes from the cross-tabulation of the demographic and sales data for all 349 counties. Figure 4 gives a visual representation of this same information. Despite drawing no statistical conclusions because of the fundamental nature of the analysis, I observed that the positive movement of one variable shows positive movement of the other. Table 2 shows the empirical outcomes for population and economic sales data of the 35 counties that have the potential for passenger HSR.

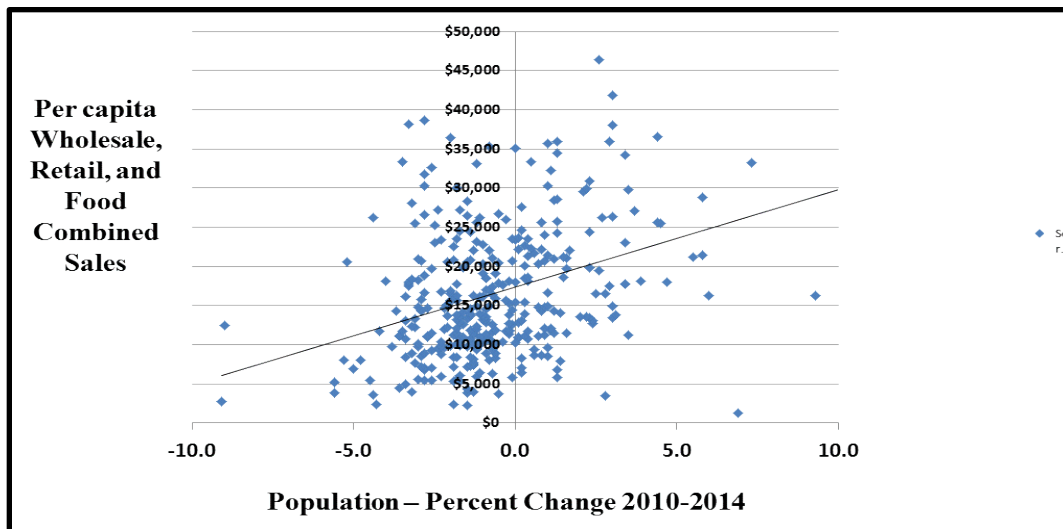


Figure 4. Population growth 2010–2014 and per capita wholesale, retail, and food-combined sales by county (349 counties in Illinois, Indiana, Michigan, and Wisconsin).

Based on this analysis and resulting typology, I next turned to identify the 35 counties in three states likely to be impacted by HSR for analysis, using the typology established in Step 1 to identify the relative status of each (underproducing, near average, and regional influencer). Eliminating the counties of the four major metropolitan areas linking the HSR system (Chicago, Detroit, St. Louis, and Milwaukee) further narrowed the focus to those specifically nonmetropolitan places in 29 counties. In contrast to the population that would include the major metropolitan areas, the population of the remaining 29 counties was 4.3 million people, or 30% of the total population that will be linked by the proposed passenger HSR lines. This is a significant part of the population to overlook when planning for a major HSR project. Furthermore, it argues for a more comprehensive look at how people living in nonmetropolitan places understand their sense of space.

Table 2

Detail Population and Economic Characteristics for the 35 Counties That Will be Directly Impacted by High-Speed Rail

	Population growth 2010–2014	Wholesale, retail, and food combined sales generation	Population, 2014 estimate
Ford County, IL	Contraction	Regional Influencer	13,688
Livingston County, IL	Contraction	Under Producing	37,903
Macoupin County, IL	Contraction	Near Average	46,453
Macon County, IL	Contraction	Near Average	108,350
Logan County, IL	Contraction	Under Producing	29,746
Kankakee County, IL	Contraction	Under Producing	111,375
Piatt County, IL	Contraction	Regional Influencer	16,431
Madison County, IL	Flat	Regional Influencer	266,560
Lake County, IL	Flat	Regional Influencer	705,186
Grundy County, IL	Flat	Regional Influencer	50,425
Sangamon County, IL	Flat	Regional Influencer	198,997
Cook County, IL	Growth	Regional Influencer	5,246,456
Will County, IL	Growth	Regional Influencer	685,419
McLean County, IL	Growth	Regional Influencer	174,061
Champaign County, IL	Growth	Regional Influencer	207,133
Wayne County, MI	Contraction	Regional Influencer	1,764,804
Van Buren County, MI	Contraction	Under Producing	75,199
Berrien County, MI	Flat	Near Average	155,233
Calhoun County, MI	Flat	Near Average	134,878
Jackson County, MI	Flat	Near Average	159,741
Kalamazoo County, MI	Growth	Near Average	258,818
Washtenaw County, MI	Growth	Regional Influencer	356,874
Juneau County, WI	Flat	Near Average	26,395
Racine County, WI	Flat	Near Average	195,163
Jefferson County, WI	Flat	Under Producing	84,395
Milwaukee County, WI	Flat	Regional Influencer	956,406
Kenosha County, WI	Growth	Regional Influencer	168,068
Waukesha County, WI	Growth	Regional Influencer	395,118
Monroe County, WI	Growth	Regional Influencer	45,379

	Population growth 2010–2014	Wholesale, retail, and food combined sales generation	Population, 2014 estimate
Sauk County, WI	Growth	Regional Influencer	63,379
La Crosse County, WI	Growth	Near Average	118,011
Dane County, WI	Growth	Regional Influencer	516,284
Lake County, IN	Contraction	Regional Influencer	490,228
LaPorte County, IN	Flat	Regional Influencer	111,444
Porter County, IN	Growth	Regional Influencer	167,076
TOTAL			14,141,076

Qualitative-Survey Analysis

The next step of the research involved interviewing residents in these states, following the sampling and interviewing research methods described in Chapter 3. The qualitative surveys (see Appendix 10 for sample transcript) were analyzed with the software program NVivo. The process of analysis involved the following:

- Coding began according to a thematic hierarchy of three major domains: space, place, and time.
- Further coding ensued according to class segmentation of economic, social, and environmental.

Further coding revealed latent segmentation of concepts of sense of place. The results of these interviews intended to elicit respondents' understandings, perspectives, expectations, ideas, or attitudes about passenger HSR, are presented below.

Domain Analysis: Space, Place, and Time

The initial step of the analysis was to create a domain analysis for the concepts of place space, and time. Research respondents displayed a wide breadth of understandings and perceptions in their definitions and perceptions of passenger HSR, which varied

according to their personal knowledge and life experiences. Individuals' histories of rail-services use, proximity to the existing rail-line structure, proximity to the new proposed passenger HSR line, the time frame on the expected completion of a new HSR line that would service their needs, and their perceptions of HSR as a local or nonlocal (state or federal) issue, colored respondents' perceptions and definitions of HSR. Respondents' knowledge of world affairs and how HSR projects are created and used in other countries also colored their perceptions. General interest about passenger HSR also varied according to each individual's needs and perceptions.

Although concepts of place, space, and time underlay the analysis of conversations about proposed passenger HSR in the study area, these concepts are not mutually exclusive or all-inclusive; rather, they involve each individual's perceptions. However, these three concepts became fundamental building blocks used to analyze, develop, and identify the themes that emerged.

Initial analysis of responses focused on the themes of place, the concept of distance between places, and the concepts of interaction between those places. I analyzed the transcripts of respondents directionally to structure the interpretive review of the interviews, while recognizing that each was interacting with and between the other. Research respondents' knowledge about proposed projects could be limited, fully informed, or somewhere between the two. It became clear through the analysis that the array of thinking about these issues could be categorized into countervailing tendencies or understandings. For place, individual responses fell into either a category identified as those oriented to local geography or those more oriented to a greater linked geography. For space, some had perceptions related mostly to local issues, whereas others'

perceptions were more likely to involve local issues or issues related to national (federal) concerns. Finally, for time, some respondents responded from a perception of the current status quo, whereas others gave consideration to what could be different in the future. I describe the emerging six themes below, identified as local geography, linked geography, local perceivers, federal thinkers, current time, and future time. Figure 5 presents conceptions of place, space, and time and how the array of responses varied along a scale.

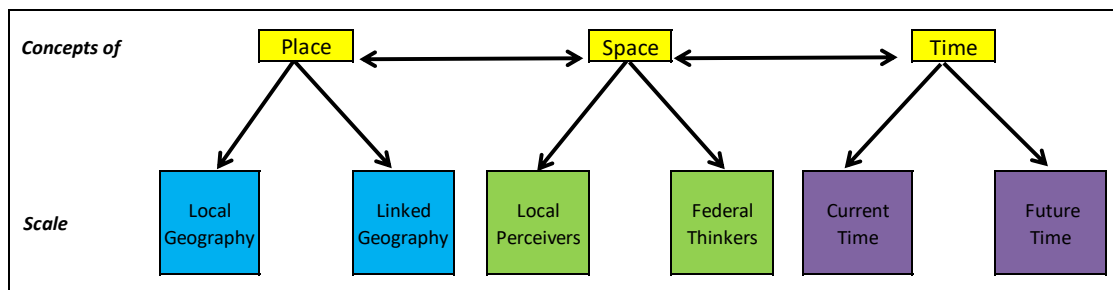


Figure 5. Conceptions of place, space, and time.

Place: Local Geography Versus Linked Geography

Perceived distances between major metropolitan areas and nonurban areas, distances between the nonurban areas, and distances between urban areas all are a function of place and space.

Space: Local Perceivers Versus Federal Thinkers

The conception of space in the analysis helped me discern whether research respondents thought about HSR as a local issue or an issue that has federal ramifications. A local perceiver looked at economic, social/transportation, and environmental issues, discerning how they impact and could change the local environs in which they live and work. A federal thinker (nonlocal thinker) considered how economic, social/transportation, and environmental issues impact overall health and the nation as a whole. A federal thinker has sequestered local benefits from detriments, focused on the

advantages and disadvantages to federal needs (transportation, social, and environmental policy). A federal thinker understands local benefits and detriments but also understands how local needs can be circumvented to buoy larger national needs.

Concepts of Time: Current Time or Future

The concept of time, particularly current versus future time, was a benchmark in examining concepts based on immediacy versus long-term goals, aspirations, and expectations. Viewpoints often differed when a proposed project (HSR) was perceived as imminent, rather than as a long-term conceptual idea.

Componential Analysis: Economic, Social, and Environmental

Above, I presented the results of analysis according to initial domain categories of discourse/class segmentation/themes that emerged when talking about passenger HSR: place geography, space, and time. Interviews with respondents also probed concepts of economics, the environment, and social conditions when thinking about proposed HSR. A range of components emerged from these perspectives that shape perceptions in the nonmetropolitan Midwest about passenger HSR. These three categories—economic, social, and environmental—driven from the conceptions of place, space, and time, were the fundamental building blocks that created componential analysis.

The categories of the domain analysis allowed a further and deeper componential coding/latent segmentation of transcripts. Respondents' knowledge about the proposed HSR project ranged from limited to fully informed. A directionality emerged in this componential analysis, presented in Figure 6.

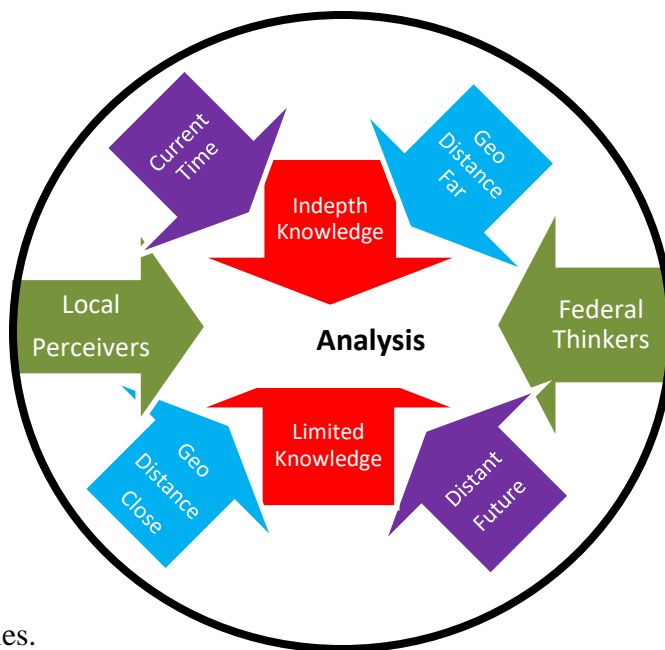


Figure 6. Categories.

Analysis of the interviews did not result in a single understanding of how respondents perceived HSR, but rather allowed emerging views, ideas, and perceptions about how the proposed line would change sense of place according to each individual's learnings and experiences. Questioning probed understanding of economic, social/travel, and environmental issues as influenced by the conceptions of place, space, and time. Six major discourse categories emerged: economic believers, economic skeptics, social/travel advocates, social/travel challengers, environmental allies, and environmental naysayers. The geographical range of concepts of place fall between geography local and geography nonlocal. The time scales are future time and current time. The conception of space ranges between nonlocal thinkers and local thinkers. In all cases, the range of knowledge runs between in-depth knowledge and limited knowledge. The richness of the range of responses can be seen in the ways participants described and defined their understandings of passenger HSR and what it means in relationship to place, space, and time, impacting the economy, social life, and environment, as illustrated below.

What is passenger high-speed rail?—Respondent defined.

Speed. Respondents' perceptions of travel speed affected their concepts of place and space. They understood that HSR would limit the number of stops, which would increase the speed of the rail system as a whole. "It gets you from point A to point B, not a lot of stops, so it gets you there significantly faster than, you know, a stop every couple miles" [Male, 20s, private industry; lives/works in a small town with commuter-rail service].

Participants also understood that passenger HSR would increase the speed of the train. The majority of respondents defined HSR as anything over 100mph. "I would say anything approaching 100 miles an hour" [Male, 50s, not for profit industry; lived/worked in a small city, recently moved to a large metropolitan area]. "I believe it's a rail system that travels at a particular mile per hour or above, maybe like 125 miles an hour or something crazy like that" [Female, 30s, private industry; grew up suburban metro, lives/works in a small city].

At the high end of the respondent's definition of passenger HSR speed was 300mph.

OK, great, I love this. A train that goes like 300 miles an hour, is what I'm thinking, something like that. And I'm thinking of these slick trains that you see on TV or in Europe and stuff, so. Yeah. [Female, 30s, academic instructor; lives/works in a small city]

No research respondent defined passenger HSR as anything faster, nor did they define it in kilometers per hour, as is used in other parts of the world, even though a minority of participants defined HSR in comparison to European and Asian passenger HSR systems. They understood that the European and Asian trains were fast but the

majority who mentioned other systems did not state how fast; only that they are high speed. “To me, it seems like one of those European high-speed trains, that go a lot faster than the regular trains that we have come through here” [Female, 30s, private industry; lives/works in a small city].

A minority of respondents knew that there was a European model to passenger HSR and that trains in Europe can have speeds of up to 220mph. A minority of respondents also understood that a partial reason for the slower trains in the United States was that the rail lines in the United States are owned by the freight companies, not by governments, as in Europe and Asia. This minority of respondents stated that the “slow” U.S. passenger-rail system is mainly a result of track issues. Some respondents mentioned specific passenger HSR systems.

Yeah. I would define high-speed passenger rail as being the same as that which is available in countries like France and China, real high speed. 220 plus. Above what’s being proposed here. Well, obviously, if it works as it’s intended, you can travel faster and easier, that’s the big selling point. [Male, 60s, retired government administrator; lives/works in a university town]

International experiences influenced perceptions of passenger HSR. Respondents who had travelled to Europe or Asia and experienced passenger HSR responded in interviews with that context. A respondent who had ridden the Eurostar between London’s St. Pancras Station and Paris’s Gare du Nord included that experience as a part of the response. Another respondent mentioned the Train à Grande Vitesse in France and the Japanese and Chinese passenger HSR systems.

The influence of international travel and living experiences of research respondents was larger than emerged as an important and unexpected theme. Of in-person research respondents, 12% mentioned they had lived internationally some time during their life, without being directly asked. The number of respondents with international experience may have been larger. As described by a respondent, “And to do it, you know, living in Switzerland, I see high-speed rail and passenger rail in general as being very reliable and on time. As far as high speed, I assume somewhere over 100 miles an hour?” [Female, 30s, private industry; lives in a small town/works in a small city]. Although the concept of place is essentially local in nonmetropolitan geographies, respondents had considerable sophistication about global connections in the communities.

Time and life experiences. The conception of time can be applied in two ways: time equated with distance, or time equated with planning. Research respondents defined HSR in how it impacted the respondent’s life in time saved to get somewhere, in convenience, or in planning. As an example, a respondent defined passenger HSR that gets a person to a destination in shorter period of time. In this instance, the definition was measured by time, rather than miles per hour or kilometers per hour. A respondent made linkages between having reduced numbers of stops and the overall time efficiency of the rail system: “Obvious, the advantage is they’re moving people fast. The disadvantages are you are going to lose a lot of the stops, I think. You know the actual, physical stops” [Male, 30s, private business; works/lives in a small town with rail service].

The concept of time also came out when interviewees compared their current experiences with the possibility of future passenger HSR. In this way, the life experiences

of using the current rail system shapes expectation (current realities and future expectations).

I take the train from [a small rural city] to [a major metropolitan area] often, I know that it takes me 3 hours; I assume that high-speed rail means that it would take me substantially less time to do that. [Female, 30s, private industry; works/lives in a small city]

Some considered loss to the time advantage of immediate access to the current configuration, whereas others focused more on the time gained overall in a future scenario.

Local versus nonlocal perspective. Analysis of the responses showed that conceptions about HSR ranged from those more concerned and informed by local conditions to those more grounded in a national/federal perspective. Some respondents thought of passenger HSR in terms of local impact and others thought of it in terms of its impact on the nation. “I define it differently than I think the federal government’s. ... Especially if we would maintain where current Amtrak stops, so if we would maintain our current stops, I would certainly think it would be attractive” [Male, 50s, government administrator; works/lives in a small town with rail service].

Respondents who looked at passenger HSR from a nonlocal perspective understood people have multiple perspectives, ranging from local to national. Nonlocal thinkers mentioned items such as the Burlington Northern Santa Fe rail system and Amtrak’s federal system, but these same respondents also mentioned local impact and perspectives about passenger HSR. Respondents answered one of two ways: comments

on local issues only or comments on local and federal issues. No respondents commented only on federal issues. A research respondent talked about both:

What's in place right now is not a federal rail system, it's a private rail system. ... This is my understanding. And the rail, first of all, doesn't go to my small city, and it goes about 55, 60 miles an hour. And I think that high-speed rail goes considerably faster and I don't know what the upper end of it is. [Female, 30s, union representative; works/lives in a small city]

A minority acknowledged a larger federal role, but all focused primarily on local concerns.

Limited knowledge. A theme that emerged from the interviews was that interviewees disclosed they have very limited knowledge about passenger HSR or do not understand or did not listen to what was defined as passenger HSR. One respondent had an international-travel background, permanently living and traveling in Europe and the Far East when growing up. The respondent used and understood rail but when living in the U.S. Midwest, despite knowing a discourse was taking place about passenger HSR, did not participate or listen in. The respondent described passenger HSR: "It's a train, that's about all I know ... Ummm ... well, I would think it would beat taking a car. That's about it" [Female, 20s, physician; lives in a small town/works in a small city].

Another interviewee clearly stated being uninterested. When asked to describe HSR, the respondent stated, "Not really—I mean, just a train, I guess?" [Female, 20s, private industry; lives in a small town/works in a large metropolitan area].

What is high-speed rail?—Transportation experts. The definitions supplied by the interviewed transportation experts varied from a description of an integrated network

combining different types (speeds) of services to a description that mimicked the consensus of interviewees that HSR is 110mph with limited stops.

It's an integrated combination of services that link major cities within three hours if they're within 500 miles of each other. We need a big, robust network of different layers of service. So I will sometimes use the term "high-speed" to represent the entire network and other times I mean specifically trains that are linking major cities at speeds faster than 150 miles an hour. [Male, 50s, transportation expert]

Another transportation expert gave a short concise definition of passenger HSR as being over 80mph, faster than an automobile, and with limited stops [Female, 50s, transportation expert].

Another transportation expert defined it as a U.S. definition of 110mph, stating that the world standard for HSR is more than 200 kilometers per hour, and knew that the Indian DVG is stated as 186 kilometers per hour [Male, 50s, transportation expert]. Most transportation experts commented on the differences between the U.S. definition of passenger HSR and a global definition.

I'm thinking it's more than 80, more than 100, I think for the Midwest, we're not looking at the same kind of high-speed concepts that they are elsewhere in the world. So I don't necessarily think that our high-speed goals are as ... dynamic or even as visionary as elsewhere in the world. So it's the concept of something really fast, very much about point to point, it's not the 'stop everywhere between here and there', it's limited stops. [Female, 30s, transportation expert]

It is clear that the vision of transportation experts was not shared or even in the frame of reference of nonexperts, whether global or local perceivers.

Advantages of high-speed rail.

Respondents' perceptions. I asked respondents their thoughts about the advantages of HSR. A selection of respondents thought of the advantages from a personal perspective. Another recurring theme was a comparison between rail travel and other travel. The type of transportation used for personal mobility was compared and contrasted to HSR by respondents. Most-often mentioned among the research respondents was the comparison between automobile travel and passenger-rail travel. Most comparisons addressed the importance of time related to conceptions of place and space.

Well, advantages, on a personal basis for me, I travel to [a major metropolitan area] fairly regularly, and if it was a quicker means to get to downtown ... because I have the options of driving, which I don't like to drive. [Female, 40s, government administrator; works/lives in a small city]

Most respondents, in general, compared and contrasted automobile travel and passenger-rail travel. A richness of comments from respondents included the following ideas:

Well, the advantages I would see would be: it's faster than taking a car, you wouldn't have to deal with traffic, and I mean, having taken a lot of trains in my lifetime, when I've traveled and stuff. ... It's enjoyable in that it frees you up to do other things on your commute or your trip. ... I always loved going by train. And also, it frees you up, you know, at night, if you're travelling somewhere, you

don't have to drive in the dark, on your own, when you're tired, it gives you another option. [Female, 20s, physician; lives in a small town/works in a small city]

Participants also drew comparisons to the advantages of other modes of transportation. They compared air travel and train travel on the personal level and on the broader, nonlocal-thinker level. Respondents stated that HSR would make it easier to travel. Working and living in a small city does not make travel by plane convenient. Connections at hub airports and a limited number of flights to hub airports impact aviation travel. "Getting to a major hub airport would be advantageous" [Female, 30s, private industry; lives/works in a small city].

Working for major corporations that are international in scope, but located in small nonmetropolitan cities, demands accessibility to major hub airports. Respondents stated that passenger HSR would help in accessibility. Respondents used the words "linkage points" to describe transportation hubs.

Respondents described the economic impact of travel constraints. One respondent who worked for an international company located in a small nonmetropolitan city commented on the difficulty of travel between large metropolitan airports and small nonmetropolitan airports:

I mean, we ultimately were very seriously talking about having to relocate out of [the rural area] because of the major inconvenience that we had. When we got back to [a major metro airport], if it was already too late for all the flights going to [rural areas], you were screwed, you know. ... It's a big advantage to be able for business. [Male, 60s, private industry; lives in a small town/works in a small city]

Respondents also understood current differences in preboarding times needed between air travel and train travel. Security issues and flight-delay issues (dispatch issues) impact overall time when traveling by air. Although in-flight time itself might be significantly less than that of passenger high-speed-train travel, the time of a portal to portal trip could be the same because of these issues. “Advantages to me, when I think of advantages of high-speed rail, I think of ease of use as compared to an airport. Just going to train station and getting on, I’m thinking about it from a passenger perspective” [Male, 30s, private industry; lives in a small town/works in a small city].

Using rail allows a person to multitask. Productivity commentaries on the comparison of automobile travel to passenger HSR travel included the following: “Someone’s doing the driving for you. So the drive itself can be productive, you can get things done and not quite as intense” [Male, 60s, not-for-profit industry; lives/works in a small city].

Environmental awareness and concern were also seen as advantages. The concept of horizon and whether respondents considered issues from a local perspective or from a national perspective emerged in discussion of environmental issues. The awareness and concern about the environment was part of the perspective of the federal thinker. The environmental impact to the country, and not just to the respondent’s specific geography, was the norm. Comments about the environment included discussion on the following: “Green jobs, green technology, freeing us from the oil economy, and connecting communities together” [Female, 30s, academic instructor; works/lives in a small city].

One respondent, in describing environmental issues, brought together the concept of horizon as well as the concept of time from a nonlocal-thinker perspective. Comments

centered on destruction of passenger-train service many years ago and how it needs to be brought back to solve energy problems: One respondent described concerns:

Well, I am absolutely for it, because I like to travel by train, and I think – my understanding that it was the rubber lobby years ago that kind of destroyed our train service, and I don't want to see train service disappear from this country.

And I think one saving way is to have this high-speed rail. I would like to take it to [a major metropolitan area], if it were available, to see my grandchild. I have a sister in [a major metropolitan area], so that's—[a major metropolitan area] to [a major metropolitan area], high speed, I thought was great. I would hope it would get more people out of their cars; Americans love their cars, but if they had an efficient, reasonably priced system for them to go. I think that would maybe help with our whole energy problems here. [Female, 70s, retired, political activist; lives/works in a small town]

Respondents thought passenger HSR service is favorable to the environment and also can impact human productivity. Human productivity and efficiency were perceived as an environmental issue.

I see it as very ecofriendly, if you don't have each person driving a single car, I don't know anything for sure, but I assume it's more energy efficient to transport people all together in that way, mass transit. ... Yeah. I think the most important part is that it's more efficient and I think we waste a lot of human hours driving a car that could be put towards productivity. That's what I think is the most important part. [Female, 30s, private industry; works/lives in a small city]

The perspective of federal thinkers (nonlocal thinkers) also included employment issues. They touched on issues of employment in building the rail bed, employment in building rail cars for the system, and employment in the operations of the rail system. They also mentioned local perspectives about potential changes in employment opportunities with the advent of passenger HSR. They understood that communities along the route of the HSR system that have stops would have increased employment and communities where the train passes through without a stop would have negative employment implications.

Well, like I said before, just making the commute easier, making it easier to get around to different parts of the state. I know there was a lot of controversy around [a manufacturer of rail cars] and the jobs that they would have brought to the [state] that were eliminated when the contract fell through because of the governor. So I think employment and portability would be the two big advantages. [Female, 30s, union representative; works/lives in a small city]

A few respondents thought of the advantages of the introduction of HSR in relationship to current rail systems and the perceived problems with them. Freight-train scheduling priorities, rail-siding problems, and freight-company ownership were mentioned:

I think an advantage would be is that it would not have all these sidebars, side tracks you'd have to go off, it'd have a long that would be all the way through, otherwise you wouldn't be able to make the time. So to me, that would be an advantage. [Male, 60s, retired professor and elected official; lives in a small town/works in a university town]

Transportation experts. Transportation experts did not look at the advantages of HSR from a personal perspective; rather, they considered transportation more from the perspective of a federal thinker (nonlocal thinker). They identified advantages of HSR that included the economics of the mobility of people and the accessibility of place (federal transportation policy) as well as the idea of HSR as a generator of economic activity. Transportation experts questioned cost, productivity, speed, and benefit per tax dollar expended when comparing HSR to other potential investments. Transportation experts understood that passenger HSR can move large numbers of people and can impact other modes of transportation, such as air travel and automobile travel.

I actually think it would be, it is far superior to airline travel for distances of, I'll say like in the 500 mile range, because for people, the time they take to travel to the airport, the security hassles of getting into the actual gate area, the typical delays with air travel, I think rail travel can offer some incredible enhancements over that in terms of both efficiency and passenger comfort and convenience.

[Female, 50s, transportation expert]

A transportation expert listed the following as advantages of passenger HSR: its enormous transportation capacity, it diverts a great deal of air travel, it helps with airport congestion, it is fast enough to divert a great deal of highway traffic, and it can be a city-building tool to enhance downtowns. This expert did not discuss the environmental arguments for passenger HSR. [Male, 50s, transportation expert]. Another transportation expert saw the advantages of connecting people quickly to large population centers with economic opportunity. The expert was not a proponent of long-distance public transit but rather a proponent of local-area mass transit. This participant believed that success begets

success and that intercity success can lead to intracity success. The respondent's interest and passion lies at the local level [Female, 50s, transportation expert].

In summary, advantages include the primacy of the automobile in most people's responses, the idea of convenience versus using multiple means of transportation, especially getting to airports or major metropolitan areas, and freeing time for other activities while traveling, ecosensitivity, etc.

Disadvantages of high-speed rail.

Respondent's perceptions. Some respondents perceived limited or no advantages to the addition of passenger HSR: "For me, personally, there wouldn't be any advantage for me. I don't think I would ever use it. I have to drive either way" [Male, 20s, private industry; lives in a small town/works in a metropolitan area]. This respondent considered the issues of passenger HSR from a personal perspective only, and did not make any comments on how passenger HSR could impact the community or nation as a whole.

The perspectives of federal thinkers on the disadvantages of creating a HSR network centered on the monies needed for implementation of the network, including the cost to build, the cost to operate, and the cost impact on other modes of transportation, "Because I think a lot of people would have to pay for it here that aren't going to use it" [Male, 20s, private industry; lives in a small town/works in a metropolitan area]. "I think disadvantages—the up-front costs associated with building it, the number of at-grade crossings, overpasses, to me those are disadvantages, money that could be spent on other things, so to speak, roads particularly" [Male, 60s, retired professor and elected official; lives in a small town/works in a university town].

A self-described liberal political thinker described the conservative political thinker's perception of passenger HSR: "Said about it by people on the right, which is this a boondoggle and this is a waste of taxpayer's money" [Female, 30s, union representative; lives/works in a small city].

A respondent with a nonlocal perspective stated that because of the current ownership of the rail lines by freight companies, until ownership changed, rail lines would have a permanent reliability problem.

Passenger service in this country will never work at any speed as long as the lines are owned by freight companies. Passenger service gets second treatment. ... It's totally unreliable. So, I would say that, irrespective of the speed of trains, the reliability of service is the most important. [Male, 60s, retired government administrator; lives/works in a university town]

In contrast, respondents with perspectives focused locally listed disadvantages such as not having a large enough local market, property issues and grade-crossing issues, crime introduction, loss of the train stop, and the impact on local economic development. Some respondents did not have the expertise to quantify the demand impact of adding passenger HSR but others subjectively thought that demand would not materialize. The life experience of using a passenger-rail system could be positive but the economic realities of using a passenger-rail system from a federal-thinker perspective were pessimistic. "From a local perspective, respondents cited the impact on farming as a disadvantage: Reduction in farmland" [Female, 30s, academic instructor; lives/works in a small city]. "The striking of animals along the tracks, and the impact of a passenger HSR network on a farmer's ability to access fields easily. Farmers would have to change their

operating procedures to access property bisected by the railroad” [Male, 60s, private industry; lives in a small town/works in a small city].

At the local-perceivers level, one disadvantage described centered on convenience. Convenience of mobility at the end of the train travel portion of a trip and the overall convenience of time in relationship to travel by other modes of transportation were listed as disadvantages.

The disadvantages of any rail system are that if you have to go somewhere far afield or be somewhere, I think, at a particular time, not close to a station, then that could be problematic. ... Well, obviously, there are the physical limitations of the line itself. [Male, 40s, union representative; lives/works in a small city]

A trip may not use only one mode of transportation, but can require multiple modes to reach a destination. Coordination with buses, taxicabs, and automobiles are part of the trip experience. Respondents questioned whether the linkages between these modes of transportation would be easy enough to make for a positive travel experience. “But if you’ve got to take a car and then a train and then something else at the other end, it can be kind of ... not a lot of fun” [Male, 50s, private industry; lives/ works in a small city].
Convenience for the traveller drives the decision to take the train or to drive:

It’s not worth even considering using the train. The drive is just the savings in money and time because of that extra trip. So where there is rail, it may not be quite as convenient. So there’s a convenience that’s not quite as personal, you don’t truly get to go where you want to go at your time and effort. [Male, 60s, non-for-profit industry; lives small town/works small city]

Transportation experts. Transportation experts had a clear perception that one of the disadvantages is the financial cost involved in bringing HSR into the marketplace. These key informants also described problems with competing forms of transportation and the ability to create a large enough customer base to support and sustain an HSR network. Another transportation expert suggested that HSR creates social inequality between those who can and do travel and those who cannot. Transportation experts described the disadvantages as follows: “At this point, we haven’t done rail yet, so it’s a huge start-off investment instead of an add-on to something else” [Male, 50s, transportation expert].

One specialist explained the following problems with competing forms of transportation:

In truth, the only disadvantage I see to that is being able to attract critical mass (because of the limited stops). So that is potentially an issue that will just have to be balanced out. It’s a matter of how can you create a competitive market. So when I’m looking at it, I would think the biggest competition is the automobile and airline travel. So in terms of being able to compete with both of those, [the issue is] to get a critical mass, because that is the thing that allows rail travel to be efficient. [Female, 50s, transportation expert]

When asked about the disadvantages of passenger HSR, a transportation expert brought the technological question into the discourse:

Well, the disadvantage with the technology [of high-speed rail], in that you need high, high densities to make it viable, especially when you have dedicated track for 220. You can’t do high-speed rail on the cheap. You either do it or you don’t.

And it's enormously costly. So, it doesn't work in thinly travelled markets.

Another disadvantage you're seeing in Europe is that it can actually promote long-distance commuting and sprawl-type patterns, but that's a more unproven point. [Male, 50s, transportation expert]

And you know, it's costly not just in terms of the dollars, but in terms of the process. It's going to be a very expensive process to facilitate what that high-speed rail line is supposed to look like. When you start working on smaller scale projects and you realize, "Ah, that's not going to fly," if you have to stop, the investment is much smaller. And you don't necessarily kick yourself as much as if you start on a huge venture and you fail, you've failed in a very huge way.

[Female, 50s, transportation expert]

Another specialist echoed the concern about expense:

The disadvantage is it's just so expensive. I think that you're at your, if you're talking about something that's point to point, you've got to pick those points really carefully, so that you're connecting markets. You've got to understand, OK, this is going to be a successful market, it isn't. And the ... ultimate advantage is for who's on the line, who has the stops. The disadvantage is that those who aren't on the line or who are passed through are left behind, and it's not necessarily understood or appreciated what the benefits would be for anyone or any stakeholder that isn't riding on the train. [Female, 50s, transportation expert]

Disadvantages were primarily of costs: cost to individuals and cost of project, and also lack of flexibility to go when where you want.

Summary: Componential Analysis/Latent/Coding

The six identified major categories are not mutually exclusive, and all respondents shared elements of multiple categories. This qualitative survey involved 32 participants who responded to questions face to face as well as an additional 27 who responded to the same questions. Although the sample cannot be considered statistically representative, it was purposeful in reaching out to enough representative sectors so that the identification of six major categories and three overlapping concepts ensured confidence that saturation was reached to discern conclusions about the commonalities and differences in discourse on passenger HSR.

Figure 7 shows how the categories in discourse about time, space, and place relate to discourse about the economy, the environment, and the social environment. Figure 8 illustrates the components of the discourses.

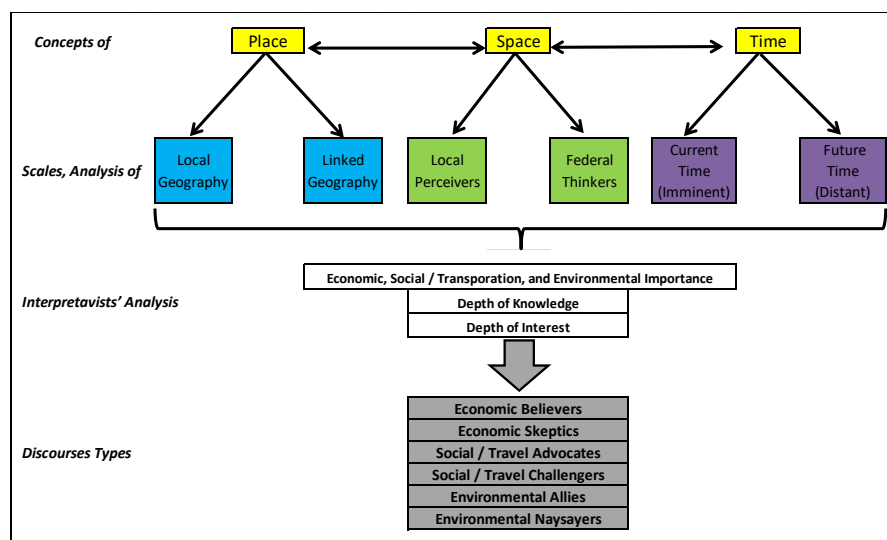


Figure 7. Categories of place, space, and time relate to the economy, environment, and social environments.

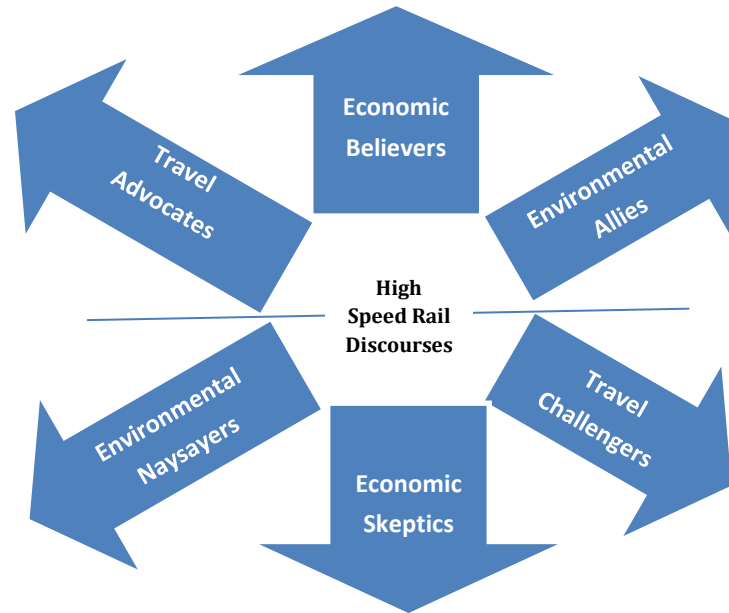


Figure 8. High-speed-rail segments.

Summary

Chapter 4 reported on the emerging sense of place and space and its connections of understandings, perspectives, expectations, ideas, or attitudes about passenger HSR. I first described the analytical approach to selecting sites for the study. Analysis led to sociodemographic typology applied to 29 nonmetropolitan counties most likely to be directly affected by HSR. I next presented the results of qualitative interviews with community members of the nonmetropolitan region that would be impacted by the introduction of passenger HSR about their concepts of space, time, and place. Finally, I presented how those themes emerged in notions of a sense of place insofar as HSR impacts the economy, social life, and environment. The next chapter brings in latent-segmentation analysis and the resulting six segments.

CHAPTER 5. SEGMENTATION ANALYSIS

The previous chapter presented the results of the first two steps of analysis of the findings, identifying thematic categories along an axis for six categories: space, place, and time, with economic, social, and environmental thinking. This chapter more closely assesses the ways of thinking in these categories and how they lead to a notion of a sense of place. Whether the term categories, segments, or other descriptions are used, the overall goal was the methodological grouping of common thoughts and ideas.

I used class cluster analysis to group respondents based on attitudinal and preferential perspectives on passenger HSR impacting towns, villages, and small cities. I added the demographic and economic understandings garnered from Chapter 4. Results identify the profile segments. Analysis encapsulate a large number of attitudes and perceptions on the impact of passenger HSR into summary clusters.

The survey questions centered on economic, social, and environmental perceptions and attitudes. I used a structure open-ended questionnaire (see example in Appendix 10 for sample transcript) to explore passenger HSR impact. Using these survey questions, along with demographics, I formulated the segments. The purpose of the methodology was to systematically group respondents, based on their attitudes and perceptions and thereby to uncover previously unobserved clusters based on economic, social, and environmental classifications. Individuals in each cluster share common attitudes and perceptions, resulting in six segments.

I created the category segments using the qualitative-analysis tool, NVivo. I converted all transcripts from face-to-face interviews and online responses into text format using NVivo to analyze by structured ideas and thoughts. The analytical

groupings included the following: definition of passenger HSR; advantages of passenger HSR; disadvantages of passenger HSR; definition of speed; life experiences; local versus nonlocal perspective; knowledge level of economic issues; knowledge level of social-mobility issues; and knowledge level of environmental issues. These groupings for analysis were at the local, regional, and national levels. The analysis identified trends, thoughts, and ideas. Results using NVivo categorized the unstructured text-rich data into the following segments/categories.

- Economic Believers
- Economic Skeptics
- Social-Travel Advocates
- Social-Travel Challengers
- Environmental Allies
- Environmental Naysayers

Figure 9 displays the divisions of all respondents into categories. Although the relative weights are not intended to be statistically representative of the community, they are suggestive of the segmented range of views in nonmetropolitan areas. Although the purposeful sampling sought representativeness, the categorization does not necessarily represent the community; however, it does increase confidence in the saturation that led to the emerging categories. However, this qualitative analysis provides the categories for future statistical testing to confirm or test conclusions. Descriptions of the six categories/segments created through analysis follow.

Segmentation Matrix		Total= 59			
		Environmental Allies	Environmental Neutral	Environmental Naysayers	TTL
Economic Believers	Social / Travel Advocates	20	5	2	27
	Social / Travel Neutral	1	5		6
	Social / Travel Challengers		1		1
Economic Neutrals	Social / Travel Advocates		1		1
	Social / Travel Neutral	2	3		5
	Social / Travel Challengers		2	2	4
Economic Skeptics	Social / Travel Advocates		2		2
	Social / Travel Neutral	2	2	3	7
	Social / Travel Challengers	2		4	6
TTL		27	21	11	59

Figure 9. Segmentation matrix.

Economic-Believer Segment

An Economic Believer is one who considers the creation of HSR or its continued execution/operation to be a positive economic driver. At a national and local level, the addition of HSR into the economy will benefit the citizenry. These benefits accrue from the addition of economic activity during the development and construction of the HSR-system and during its continued operation. These benefits range from local economies to the federal economy. At the individual level, the Economic Believer perceives HSR will be economically advantageous. Rising gas prices, road congestion, costs of maintaining an automobile, costs of air travel, time consumption of airport security, and other facets drive perspectives that result in the perception that an HSR network would be advantageous from a personal economic perspective. HSR can drive local economic development, which in turn drives economic development at the federal level. Possible

local impact on the retail economy, the commercial and industrial economy, and the housing economy influences state and federal economies.

An Economic Believer can credit the development of an HSR system with a positive impact on federal energy policy and federal transportation policy. How local economies would be impacted was debated among interview respondents. Respondents also clearly understood the interdependencies between these economic segments and social and environmental segments. Respondents typically used an informal cost-benefit analysis between economic segments and other segments.

Economic-Skeptic Segment

An Economic Skeptic for HSR perceives that creating/developing an HSR network, either at the national level or at the regional level, carries excessive costs and that an HSR network is not an economic generator for the economy. Large government economic subsidies would be needed to make HSR viable. At the local rural level, an Economic Skeptic believes the HSR line creates economic hardship by displacing economic generators. They also believe that through a rural community can take place without creating any economic benefit. A “few trains” moving through the rural landscape do not change the fundamentals of the economy at the individual level and at the state and federal levels.

Social/Travel-Advocate Segment

A Social/Travel Advocate for HSR perceives that the mobility of people and the accessibility of new venues at the national level and at local levels is an overall improvement for the societies directly and indirectly impacted. The shrinking of distance, the shrinking of time, and the inclusion of new and different people result with the

development of an HSR network. The ability for people to travel where they could not easily travel before creates an improvement in social justice. Tourism travel from rural areas to metropolitan areas and from metropolitan areas to rural areas and more readily available access to medical services and cultural diversity come into play in the perceptions of the Social/Travel Advocate. The Social/Travel Advocate also perceives that when the travel and social dynamics of local rural communities change, physical health (people walking) of the citizenry improves and the sense of community changes with a vibrant downtown. The Social/Travel Advocate believes that with mobility of people and access to and from place, relationships grow.

Social/Travel-Challenger Segment

A Social/Travel Challenger of HSR identifies with the belief that at the local level, the creation of an HSR network would have negative effect or very small social payback to the public and could be a disadvantage to the social interests of rural populations. Travel to and from rural communities is perceived to be a nonevent. Social injustice is seen as a threat because, with the addition of an HSR network, only those with the means will have the ability to continue to travel; people with monetary constraints will continue to be unable to travel, creating a wider gap between those who are affluent and those who are poor. A Social/Travel Challenger can believe that monies/services could be better served in metropolitan areas in that cities have a high demand to move people (i.e., bus transport) at the local level. They may perceive rail as elitist and a very exclusive type of transportation mode. A Social/Travel Challenger believes cultural/social change that can result from an HSR station added to a rural community will have a negative impact. Because of geographic accessibility, crime could spread

from cities. A Social/Travel Challenger can believe that change should not take place because change is not necessarily good. A Social/Travel Challenger can believe that an HSR network can have negative social impact locally because the network would have relatively few stops (stations) and that local geographies without a station could decline.

Environmental-Ally Segment

An Environmental Ally of HSR is a broad-based segment driven by the common notion that HSR is an asset to the environmental stewardship of the land at a federal (nonlocal) and local level. The reduction in the carbon footprint of the traveling public is achieved with the use of rail over other environmentally unfriendly modes of transportation. The knowledge base of the Environmental Ally varies; some respondents with very limited knowledge understand that rail is environmentally friendly; other respondents have a detailed understanding of pollution particulate matter and fuel efficiencies of different modes of transportation. Support for HSR can be embraced as part of the environmental agenda without necessarily requiring strong knowledge of the issues and realities. The knowledge-based Environmental Ally considers the interrelationships of the economic, social, and environmental impacts of an HSR network. Some Environmental Allies embrace the environmental agenda exclusively, but more Environmental Allies critique the environmental question in regard to social and economic goals and realities that need to be addressed.

Environmental-Naysayer Segment

An Environmental Naysayer does not believe or does not understand the possible positive environmental impact of the addition of an HSR network. As with Environmental Allies, the individual knowledge base of the naysayer spans a wide

spectrum. At the local level, the Environmental Naysayer perceives that the addition of an HSR network into the local rural geography would or could cause environmental harm. The Environmental Naysayer does not perceive any direct benefits to the environment by using HSR to move people. In this segment is an overall lack of environmental awareness about the efficiencies of different transportation modes. The perceived negative impacts on the environment include noise pollution, air pollution from small-particulate generation, and loss of land-use productivity in shifting from the way land is used from farm to rail. Naysayers expressed an overall distrust in the environmental sustainability of HSR. Environmental Naysayers think that the long-term increase in citizenry mobility and accessibility would offset any reduction in the carbon footprint and that the addition of an HSR network would generate an increasingly larger carbon footprint.

Economic-Impact Findings

The cost of individual transportation modes impacts people's attitudes about HSR. As a research respondent stated about the automobile-transportation mode in relationship to the HSR mode,

You've got to be kidding me. Passenger high-speed rail is going to cost how much? And I thought [commuting by car] is becoming unaffordable, and if we want to move people and do it efficiently and economically and if we really care.

[Economic Skeptic, Social Neutral, Environmental Naysayer]

Discourse around economics revealed a range of concepts at the individual level. Knowledge of specific travel costs (economics) incurred by a traveller to drive, which is currently the dominant mode of transportation (current and future impact) shape that

individual's concept of the economic viability of HSR. Individuals considered their conception of this personal economic impact along with other parameters such as safety, time convenience, and environmental stewardship to form overall perceptions of the economics of HSR.

An Economic Believer favoring HSR perceived that, at national and local levels, the addition of HSR into the economy will benefit the public. Benefits will accrue from the addition of economic activity during the construction of the HSR network and during its continued operation. These benefits are driven by the local economies to impact nonlocal economies at the national level.

An Economic Skeptic of HSR perceives that, at the federal level, the cost of constructing an HSR network would be cost prohibitive and the continued operation of an HSR network would be an economic drain on the economy. Subsidization of the HSR network would be so great that any benefits would be nullified. At the local rural level, in the nonmetropolitan region, an Economic Skeptic believes the local placement of an HSR line would create economic hardship by disrupting current economic generators. The Economic Skeptic also believe that travel through a rural community could take place without creating any economic benefits. Economic Believer and the Economic Skeptic are generalized categories, and research respondents usually had some characteristics of each segment.

How Respondents Understood National/Regional Impacts

The Economic Believer recognizes a monetary driver/component in a national transportation plan. If the economics of HSR are to be discussed and debated at the level

of a national transportation plan, then it needs to be compared and benchmarked against other modes of transportation that comprise the portfolio.

Because I think the economics are somewhat challenging and require a tremendous amount of subsidy at this point in time, and some of those things just don't exist ... would I like to see those kinds of things happen? I think it should be at least explored. I do think there is the economic argument. ... Can it really stand on its own two feet? But I preface that by saying, let's not kid ourselves: automobiles, road transportation is subsidized in all kinds of ways. People just don't want to think about it that way, they don't think about it that way.

[Economic Skeptic, Social Neutral, Environmental Naysayer]

When comparing different components about what should drive the decision-making process about whether HSR should be built, the Economic Believer believes that economic success will result if it is implemented. They believe the national economy will benefit. Research respondents believed that the United States needs to think in grand terms to have grand economic success. HSR would be part of grand thinking.

But I think to be a competitive economy, it's [the government] subsidized the air, it's subsidized a lot of businesses, unbeknownst to most people. I think it needs to subsidize travel. I think that is a definite mission of government. Education, transportation, that's definitely, yeah, I agree with that. [Economic Neutral, Social Neutral, Environmental Ally]

Economic Skeptics look at the source of monies to build and operate an HSR line and cannot fathom how a complete project can be funded. As one of the research respondents declared,

The millions and millions and millions of dollars, according to their studies, I don't know where that money is going to come from, because local government, county government is not going to be able to chip in, even if it was 80/20 or 90/10 in terms of the reimbursement, they just can't do it. [Economic Skeptic, Social Neutral, Environmental Naysayer]

The economic costs of building HSR are significant. Research respondents suggested a need to develop creative approaches in design and construction to help minimize costs. The government should also explore redevelopment of current rail assets/infrastructure.

How Respondents Understood the Political Process of High-Speed Rail

Economic Believers and Economic Skeptics linked their ideas about HSR with the political conversation. Some saw the economic viability of HSR as a local, state, federal, or composite of all three campaign issue. Opinions ranged from more liberal views of the government as one that provides social services on one side of the argument to economic conservative/libertarian perspectives about government on the other. One respondent reflected,

It's unfortunate that we've seen the political process that we've seen, which, from my perspective, it seems to be, or seemed to be, in 2010, a direct response to the election ... and the kind of paranoia about government and about ... what people refer to as socialism or whatever, is standing in the way of the United States being a truly modernized economic nation. [Economic Believer, Social Advocate, Environmental Ally]

Assumptions about the kinds of government support for the major modes of transportation shaped respondents' discourse. Each mode had its supporters, and some recognized the significance of special-interest groups and lobbyists on where funding is directed.

[Some forget that] the automotive and road gets [government support], and therefore they assume that, you know, Amtrak and etc. can't stand on its own. You know, roads and cars don't stand on their own, either. They get a tremendous, tremendous kiss from elsewhere in the economy and the overall system. Which is not to say that it means redirect that—it just means ... it's the politics of the various constituencies have interests and are going to defend those.

[Economic Skeptic, Social Neutral, Environmental Naysayer]

Other respondents looked at political compromise because they understood that economic constraints will also be part of the future reality, though they were either confused or did not care about the source of the funds. They had concern/interest in how government dollars are spent but they did not understand how the funding for construction would be structured. However, they did have concerns about how the funds would be administered. They questioned the source of the funding and the political implications: Would funding from the federal government drive the decision-making process unilaterally?; Would state funding mean the state government would unilaterally drive the decision-making?; Would federal money funneled through the state mean that state government would unilaterally drive the decision making, or would a combination of federal funds and state funds implicate both in bilateral decision making? In

respondents' minds, these questions linked to political concepts about the proper role of the federal government in individual state affairs.

A transportation-expert research respondent stated that the depth of the economic recession is going to make it challenging for the next 5 years, but as the economy recovers, along with a demand to correct congestion, the "public will" is going to support public funding: As one interviewee responded to a question asking about the timing of passenger HSR being built,

Oh, I do think within the next 15 years. I think the next 5 years will be the real struggle, as the economy continues to rebuild. But I think as it builds and there are greater issues with airlines and there's greater congestion over longer distance, that the demand for something to ease that kind of congestion, the demand will start growing, and so much of this is going to depend on public will. So public funding, so, in the next 5 years, I mean my hope is that finally the economy will right itself, that we won't be always putting band-aids on things. ... So I think the next 5 years will be very rocky, but then there will be the situations that will drive the need for high-speed rail will become so apparent that they will need to move forward. So then it's a matter of getting the funding in place. I think that enough of the studying has been done to determine feasibility that it's really a matter of moving forward, getting local buy in along the routes. [Economic Believer, Social Advocate, Environmental Ally]

How Respondents Understood the Impact of High-Speed Rail and Economics on Spatial Geography

The economics of geography can change because of HSR. Distance and time would shrink because of HSR, creating new economic relationships. What was once a distant major city could now become an additional economic partner with the hinterland geography (nonurban and rural communities).

It ... in effect, reduces distance, opens avenues. ... [Town A] has a [Major City A] orbit, being that we're 50 miles on the north side of the metropolitan area. ... But all of a sudden, it opens up kind of [a Major City B] option, as well, on some of those things, you know, without a lot of work and effort. [Economic Skeptic, Social Neutral, Environmental Naysayer]

The economic relationships of retail shopping, healthcare, and other economic subsets would grow beyond original boundaries and encompass new geography and new economic types.

Nationally, respondents considered job creation in a number of ways. From the environmental perspective of a research respondent, HSR would help in the creation of environmentally sustainable jobs. These jobs would change the dynamics of the oil economy. HSR has the possibility of being that paradigm shift of the transportation industry that allows the energy economy to fundamentally change.

Currently in the United States, both forms of rail—110mph or 220mph—are described and marketed as HSR. The type of HSR—110mph or 220mph—creates different attitudes about the possibilities of rail helping the economic environment.

There is a huge difference between 110mph and 220mph. They are not even really the same mode of transportation. 110 makes it easier to travel for occasional meetings, commerce, recreation, etc. 220 mph makes daily commuting an option and has the potential to substantially change development patterns. [Economic Believer, Social Advocate, Environmental Ally]

Professional experts in transportation held similar views concerning specific economic subjects, yet quite divergent opinions on related but dissimilar economic subjects. One research respondent believed the current economic structure/model is unsustainable, leading to a fundamental change in the spatial economic relationship between rural areas and major metropolitan areas. This respondent believed the life cycle of rural communities has reached its low point and that, in the future, more people will work in the farming industry. Rural communities will gain more economic vibrancy from more people. This surprising statement by a respondent shows the full range of beliefs and ideas on the subject.

How Respondents Understood the Impact of High-Speed Rail on Local Economies

Research respondents stated that the addition of HSR would create a positive local economic impact, but when HSR projects are first announced, planners are vague about the actual route structure. This lack of detail of where the HSR network will run produces competitive concerns with other local geographic entities (at county or municipal levels). Regional economic-development boards and local municipal economic-development commissions reserve judgment on the possibility of economic success for HSR. Unless impact is direct, regional and local boards do not perceive success. A municipal employee who has direct involvement with economic-development boards, stated,

I guess the initial reaction is “Oh, boy, that would be great.” ... I guess when you initially first hear it ... I guess some of the issues I have is, what’s the route going to be? ... If a rail line comes, is it really going to come through [Town A], as opposed to, for example, go down through [Town B], which is the current path.

[Economic Skeptic, Social Advocate, Environmental Neutral]

Competition is real and drives support.

The U.S. transportation infrastructure is in strong need of refurbishment/updating. HSR-design creation and construction can be one major catalyst in the upgrading.

Infrastructural improvements are going to take time.

Well, yeah, again, when you start talking high-speed rail, you’re talking far more substantial structures and interfering with smaller roads, there may be roads closed off, there will be railroad crossings, if not overpasses because of safety concerns. So I see that being an impact. And just the length of time to get the high speed rail. ... It’s a 5- or 10-year project, it’s not going to happen next year. And so all those things and the economics to build it will be years getting paid for. Long term, I think it’s beneficial. But there’s going to be definite economic obstruction in the construction process. [Economic Believer, Social Advocate, Environmental Ally]

The addition of HSR can be a detriment to the local economy. Some research respondents in smaller rural communities perceived that HSR can have a restricting effect on the local economy. Opponents put forth three major arguments to support this idea. First, the physical infrastructure of bringing HSR to an area can result in a permanent disruption of the spatial flow of goods and services. Bringing HSR to the area may result

in the closing of grade crossings in a rural municipality, thereby disrupting commerce. The second concern is that the announcement of HSR coming to a community may, at first, be considered an economic engine, but after review by the operation-governing authorities, HSR service may be abandoned at a particular station. The only result a small rural town may experience is a high-speed train moving through their municipality, but not stopping. They would receive none of the benefits but have all of the costs. These concerns are amplified because the decision-making process on the changing of grade crossings is made at the state level and the decision-making process on station openings and closings would also be driven at the state level. Local input into the decision-making process would be perceived as quite limited. A third argument is that with the introduction of HSR, the economic benefits of commuting to the large metropolitan areas becomes attractive. The citizenry can reap the economic rewards of the “big cities” to the detriment of the rural market place.

Research interviewees understand that HSR affects the local economic habits of the area but how the effects take place can be the opposite of what is expected. HSR gives the local economic generator/individual the opportunity to get out of town.

I think it would be more beneficial to those of us that are here to go elsewhere, than it would really to bring people here. Unless they have family here or were coming to see someone that's here. But I don't—I mean economically or business-wise or—I don't really see it making. [Economic Skeptic, Social Neutral, Environmental Ally]

The results of a bad economy have caused many individuals to readjust how they work, how they live, and how they commute. The scarcity of employment has forced

many individuals to look farther afield for a job. Research respondents looked at HSR as possibly making a stressful scenario less stressful by making the commuting parameter more tolerable.

The interest by economic-development authorities at the regional and local levels is partially driven by the time proximity of HSR coming to an area. Findings show that if the expected introduction of any type of HSR (110mph or 220mph) is close in time, then interest in the project has a strong positive correlation. One scenario had HSR (110mph) being introduced within 18 months. The economic-development professionals had high interest in the project. Another scenario had HSR (220mph) possibly being introduced 15 years into the future. The interest in the project was quite tepid.

At a very local economic level, the construction of the new HSR infrastructure is designed and impacted by currently placed public assets. Although some assets may be modified or destroyed to “make way” for HSR, many will not be, and HSR designers will need to modify their plans in a manner that might not bring maximum economic benefit to either the HSR system or the local municipality. As an example, if physical constraints (buildings, roadways, and parking lots) in a current rural municipal’s downtown (Main Street area) dictates that an HSR depot is not possible, then the HSR depot may be forced to be constructed away from its most economically advantageous (for the HSR operations and for the municipalities) location. The opposite scenario could be that local economic engines of a rural municipal’s downtown (Main Street area) would be impacted, as roads are closed or parking spaces are reconfigured or their number reduced. More than one respondent had concerns about a reduction in the number of parking spaces.

Economic Skeptics believe the addition of HSR into a region will not generate any economic advantages and might be an economic detriment. This thought is apparent in smaller communities that perceive HSR has the ability to move people, and therefore the economies of the local area, away from the smaller communities.

110mph would have substantially less impact and might even hurt the local economy by making it more convenient for consumers to shop in the Chicago area rather than locally. [Economic Skeptic, Social Advocate, Environmental Neutral]

Another comment by Economic Skeptics is that when HSR is analyzed in its economic totality, the cost of government subsidies (tax support) will result in HSR draining local and state economies. Economic Skeptics also stated that the addition of a “few” trains going through an area is not going to impact the local economy. They perceived that the economies are too big to be affected by this transportation mode. Other components drive the economy; not rail. As perceived by one of the research interviewees, “It might curtail car traffic, which would affect gas stations, motels, restaurants, etc. I see no benefit to my town” [Economic Skeptic, Social Advocate, Environmental Neutral].

More than one research respondent perceived that current rail and future HSR are and might continue to be, a source of illegal economic activity. The spatial connection with major metropolitan areas allows the rail line to become a feeder network tool for the distribution of illegal narcotics. As described by one research respondent,

And people are getting on and off trains, and you should see the bizarre things that—and, I don’t mean to generalize, but when you see the sketchy people

jumping on and off and the bags and the weird stuff that—these aren't local people, you know, these are ... I think right now, it is source of drugs, be it in or out, I can't say whether they're coming in on the rail or going out on the rail, but I think it's active. [Economic Believer, Social Neutral, Environmental Neutral]

Economic Believers consider the positive economic benefits of HSR on a personal level. The work efficiency that an HSR commute has allows a traveller to create economic benefits. Completing work on a train, at the personal or professional level, allows for a form of multitasking. As defined by a respondent,

To be able to do it more efficiently so that person's time is so valuable, so that they get to where they need to be with less travel time. And even though, and I'm going to sound like I'm talking both sides of it, while they're on the train, if they've got Wi-Fi or they've got their own smart phone, they're conducting business, but to get them face to face with their clients or—I think that has advantages. It also potentially could broaden labor markets, so there's some advantages there. [Economic Believer, Social Advocate, Environmental Naysayer]

Research respondents believe that economics and the local psychology of a municipality tie together:

I think it will make us look like a “with it” community, like if you were a business and you have your employees and your business and the way you're going to act, access to faster travel or whatever. I think psychologically that would be good for this community. I think it would make people—energize a little bit, if they knew they were part of this. I just ... it's more psychological, maybe. But I think in

business, it would bring more business in. [Economic Believer, Social Advocate, Environmental Naysayer]

The construction of HSR creates jobs—period—is a belief held by some Economic Believers. Other economic drivers that the addition of HSR would bring to an area, as perceived by some research respondents, are that it would generate tourism, make local universities and colleges more attractive to potential students, people would go on day shopping trips to smaller rural municipalities and day shopping trips to large metropolitan areas, people would visit historic areas and participate in cultural activities, and people would visit (for meals, etc.) with family and friends.

Some research respondents believe that economics and the social impact tie together: “I think it would be a positive factor in the quality of life, which is a good thing for business growth” [Economic Believer, Social Advocate, Environmental Ally]. HSR threatens the relative advantage of local business and political interests, versus the advantage of tying communities together and facilitating greater access to other nonmetropolitan regions.

How Respondents Understood the Impact of High-Speed Rail on the Economics of Distance?

A transportation expert questioned whether the economics of moving people would be better served by spending economic resources on the microlevel of moving people (the local level such as buses and local mass-transit initiatives) rather than looking at the regional and national movement of people. This respondent believed that policy and the direction of monies spent should take on an intraregional (metropolitan) approach rather than an interregional methodology. Another local economic concern for small rural

municipalities of Economic Skeptics is that, despite construction of a new HSR depot in the town, the passengers arriving and departing from the station would move through the municipality to their final destination and never stop to impact the local economy. The geography will have trains and movement of people, but without any benefits.

Social-Impact Findings

The citizenry's perspectives on social issues at the local level and at the federal level affect their perceptions of the social benefits and social detriment of HSR. Social impact ranges from the macrolevel (how HSR affects the social well-being and mood of the nation) to the microlevel (how HSR impacts individuals' life experiences in the community). Interview respondents expressed a combined global perspective and very local perspective on how HSR can impact the individual. At the local level, the social impact of HSR train tracks being laid through a neighborhood is personal and direct in its impact. At the global level, the addition of HSR allows for accessibility of global place by individuals who otherwise would not have had that opportunity. A respondent described it as follows:

What I would like is that it would ... come through town in a way that benefitted the people who had to give anything up. So if people had to give up their homes for rail to be laid, that kind of thing, with the maximum benefit to individuals and the minimum upset to the community would be wonderful. And if it could bring jobs. And it could bring a sense of sort of a global, sort of a, you know, "[Major City A] is just down the road from us, other [Major City B] is just down the road from us," you know, more sense of community, if we could gather something like that. [Economic Believer, Social Advocate, Environmental Naysayer]

A Social/Travel Advocate for HSR perceived that, at a national and local level, the addition of HSR into the social fabric of the citizenry's everyday lives would be a benefit. These benefits will come from the addition of the mobility of individuals and the increased accessibility to new place. A Social/Travel Challenger for HSR perceived that the creation of an HSR network would have negligible social benefits to the citizenry at large and possibly be a detriment to rural communities.

As defined by a Social/Travel Advocate respondent, social relations between people are driven by proximity. The geography of humans' interactions with one another drives relationships. HSR changes the dynamics of the geographic interaction.

I'm going to address them broadly social and by that I don't mean delivery of basic services, I mean just social interaction, your friendships, your cultural access and all of that, and everything in life ... boils down to proximity. You make friends with who is closest to you geographically, and so by having high-speed rail, that expands that. You hire people, as a rule, who are closest geographically. ... High-speed rail broadens that geographic pool. So I think it does have a positive impact on relationships, whatever kind of relationships they are. In terms of access to social services, I think that it is nothing but a plus.

[Economic Believer, Social Advocate, Environmental Ally]

A Social/Travel Challenger's perception was that HSR can be viewed as having a negative social-justice result. Because HSR is moving only that part of the citizenry that would normally travel intercity, the citizenry that would only travel intracity are being ignored. This population base is large and to get the most from limited federal funds,

monies should be allocated to intracity bus improvements over intercity rail improvements. As described by a transportation professional in the interviewing process,

I think that a lot of kinds of rail investments are, they're a little elitist. And I think as a nation, if you really cared about changing the social and cultural, improving – making social-cultural improvements, you'd have as good a bus system that was as extensive as whatever high-minded rail project you had in mind. Whether it's high-speed rail to link two cities, or whether it's a nifty trolley that's going to connect two wealthy suburbs within the region itself. I mean, we like to talk about rail, but rail is a very exclusive type of transportation infrastructure. [Economic Skeptic, Social Challenger, Environmental Naysayer]

As similarly described in the economic-review section, I have described the Social/Travel Advocate and the Social/Travel Challenger in absolute terms. In practice, research respondents usually had some characteristics of each segment.

How Respondents Understood the Impact of Future Connectivity

The addition of HSR helps rural communities that have stations along the network by allowing accessibility to those tourist areas that would have been hard to access previously. Rural tourism sites are a growing industry and the addition of rail in helping with accessibility should further strengthen this rural asset. One respondent from an area that is economically depressed and is not being considered for HSR for at least another 10 years said,

I would love for it to come. If it did come, I could see an increase in tourism, which would also bring an increase in, just in general, in money to the community. And then also, that would uplift a lot of the attitude, right now. Our

community ... is very oppressed. Losing a lot of major businesses, losing a lot of employers. [Economic Believer, Social Advocate, Environmental Naysayer]

Of major concern for smaller current rail stops is the question of whether future HSR stops will include these smaller stations. Respondents had marked concern that in advancing rail as a whole, HSR creation can have specific negative results for small rural towns losing access to train systems. An interviewee from one of these smaller rural stops looked forward to the new HSR, but only if it directly helps the particular community:

Especially if we would maintain where current Amtrak stops, so if we would maintain our current stops, I would certainly think it would be attractive for area communities, we'd become more of maybe like a bedroom community, or a place where they would come and park their cars and catch the train, downtown. ...

You know, I can see the negatives, and people have negatives about everything, but I could see there could be a big benefit for a small community of less than 5,000 people to offer high-speed rail when I think, like I talked—it's the Philadelphias and the New Yorks and the Bostons, so how many communities are going to have that opportunity our size? We're the smallest one on this high-speed rail line from [Major City A] to [Major City B], we're the smallest community that currently has stops. Can't hurt us. Nothing else is, nothing else is happening. It can't hurt. [Economic Skeptic, Social Advocate, Environmental Neutral]

The social interaction of a small rural town can be changed with the addition of an HSR network. How people spatially use these small towns can be impacted by an HSR network, changing automobile and pedestrian grade crossings.

And boy, that's what they really want to eliminate, these two crossings. One of the disadvantages I see, if it stops or doesn't stop, is, we're really a small community and stupidly, I guess, a lot of these smaller communities built right along the railroad tracks, diagonally along the railroad tracks, so. [Economic Believer, Social Neutral, Environmental Neutral]

Optimism emerged for potential development of tourism and connectivity, balanced by concern for spatial reorganization that could literally physically separate communities and threaten community stability. A social question and concern is the impact of drugs on rural communities because of rail networks. Current rail and future HSR allow for the easy transfer of illegal drugs between large metropolitan areas and rural communities.

How Respondents Understood the Impact of High-Speed Rail on Cultural Diversity

HSR access to rural areas can change the ethnic interactions in that area. A rural area that has interaction, because of a HSR network, with the ethnic diversity of a large metropolitan area has the advantages of the diversity, even if the town has only a small permanent ethnic population. One respondent described the makeup of a community:

Well, our [rural city] has been such a homogeneous population, right now our biggest uptick is Indians being brought in on the big visas for a [private firm]), and so they want cricket fields, they put up a Hindu temple, that our community has a really—I mean, I call it the “Land of Milquetoast” where everyone's afraid to be a little too ethnic. I wait all year for our lone Jewish temple, they have a Jewish food fair and they come up here ... and buy the rye bread, and the Jewish

corned beef, and the big huge pickles. [Economic Skeptic, Social Neutral, Environmental Naysayer]

The interaction between the rural areas and the large metropolitan areas naturally brings interaction between ethnic groups.

The psychology of being a modern municipality (terminology implied by an interviewee) is enhanced with the addition of HSR to the transportation mix of the municipality. This psychological boost may cross between the economic gains attributed to increased accessibility to the region and the good feelings of being in a region that is modern in its thoughts and actions. As described by an interviewee,

I think it will make us look like a “with it” community, like if you were a business and you have your employees and your business and the way you’re going to act, access to faster travel or whatever. I think psychologically that would be good for this community. I think it would make people—energize a little bit, if they knew they were part of this. I just ... it’s more psychological, maybe. But I think in business, it would bring more business in. [Economic Believer, Social Advocate, Environmental Naysayer]

How Ideas About the Impact of High-Speed Rail Affect Political Discourse

Questions of social impact can be quite diverse, depending on a respondent’s perspective. With a family background in farming and a postgraduate degree, currently teaching in academia, one respondent has multiple perspectives to define perceptions:

Disadvantages. In this region in particular, my family’s all in farming. Is it going to take up our land? Are we going to recess our good rich Illinois dirt ... eating it up? But I’d have to say, I’d rather see it in a high-speed rail than I would see it in

subdivisions. So, OK, maybe there's some give and take there. So that could possibly be a disadvantage, it could certainly create dissent in [this state], because we're such a farming community. The other thing I would think would be where it runs, in terms of historical monuments and things, and is it an eyesore? Is it noise pollution? And I don't know, but that would be—all those things would concern me. [Economic Believer, Social Advocate, Environmental Ally]

For some interviewees, the social conversation about high-speed rail and its impact were dynamic and important. As one interviewee, who is politically active stated, Well, I first read about it a couple of years ago in our local newspaper, our state newspapers. I followed the news fairly closely because I consider myself pretty well informed. And then it became a big issue on the local level. It's something that actually would have impacted my family and my friends quite a bit, so there was a lot of discussion about it in my social circles. [Economic Believer, Social Advocate, Environmental Ally]

Social activism was part of the discourse on HSR in the State of Wisconsin. Because HSR development was made part of the gubernatorial-race election rhetoric, campaign dialogue included debate on whether the creation of an HSR network in Wisconsin was beneficial economically and socially. A respondent with a strong political opinion of the gubernatorial race tied the political philosophical debates with the HSR debates:

Oh, yeah. The Tea Party people in the state were basically, took the position that “this is just another big government project” and ... my personal opinion is that the level of paranoia associated with some of those groups is really scary. Like

riding on train is some form of socialism, right, because we're all going the same place at once and nobody has control except the guy who is driving. [Economic Believer, Social Advocate, Environmental Ally]

Additional comments from the interviewee showed a combination of sociopolitical thought and how it applies from the federal level to the possible local HSR project:

I just think that ... it's unfortunate that we've seen the political process that we've seen, which, from my perspective, it seems to be, or seemed to be, in 2010, a direct response to the election of Barak Obama and the kind of upsurge of the Tea Party and the kind of ... and I have friends who are in the Tea Party and the kind of paranoia about government and about ... what people refer to as socialism or whatever, is standing in the way of the United States being a truly modernized economic nation. [Economic Believer, Social Advocate, Environmental Ally]

Marxism, socialism, and other socioeconomic concepts were expressed as stereotypes of what HSR is or represents. As political-campaign rhetoric increased in the Wisconsin gubernatorial race of 2014, some noted attempts to demonize the project as a threat of liberalism and equating it to socialism, which is a highly charged accusation in the climate of U.S. politics. As a respondent described,

And here ... the train was part of that, like "Oh, you know, this train, trains—that's for socialist Europe." Like, get a grip! Jesus! I don't know, to me that part of the dialogue has been—I'm hoping that it just has been a very scary and short chapter of the political dialogue in this country and in this state. [Economic Believer, Social Advocate, Environmental Ally]

In general, no organized groups actively promoted or tried to stop the development of HSR, with the exception of specific political groups in the State of Wisconsin. It became a political campaign issue in Wisconsin. One respondent's perception follows:

Yeah, there were community groups in both Milwaukee and Madison that had supported it. I don't know the names of those. It was ... interesting. The whole city of Madison had really ... had the expectation that that was going to go forward. I mean, the previous governor had supported it fully, the planning had already started. ... Yeah, it was, because Doyle [the former governor] had supported it. We were expecting to get the funding and Madison was making plans to incorporate it into the community. Madison is one of these towns that's like—or can be —hyperfixated on development and the whole issue of development. Because they want to make sure that the city is. [Economic Believer, Social Advocate, Environmental Ally]

How Respondents Understood the Impact of High-Speed Rail on Ideas of Accessibility of Place

The addition of an HSR system to rural areas allows for greater mobility of the citizenry and with that greater mobility comes easier access to more cultural events, different parks, and different venues.

The kinds of public performances in [a larger rural town], they dwarfed our town. ... They had a couple things, but ... concerts, symphony, art, the arts stuff, when it happened in [the larger rural town] was phenomenal. [Economic Believer, Social Advocate, Environmental Ally]

Medical treatment accessibility would be enhanced with the addition of an HSR network through the rural areas. Accessibility to large metropolitan medical services becomes easier and quicker.

That's when I started seeing stories about how people couldn't get to the doctor anymore, because the price of gas was getting too high. And people were starting to make the decision "Well, I'm just not going to the doctor." So if there was this good network of trains coming into the city, then the medical community likes to talk about "Well, there's this specialist and you can't get this specialist ..., you get north ... quickly with the train." I think that's a huge impact that nobody's—I've never been able to communicate. [Economic Believer, Social Advocate, Environmental Neutral]

Life experiences of respondents drives their perceptions of the advantages of HSR. A respondent had a life medical event that demanded the patient be within a very short time period from a specific hospital in the large metropolitan area. Even after this life-threatening medical event, the respondent had to stay within a specific time travel parameter of the hospital for a number of years. This respondent understood that opportunities such as an HSR network would allow other people with the same medical ailments to come from a greater distance. HSR expands the medical-support shed, allowing care to be available to a larger population base.

Potential change to sense of place includes thinking about potentially quicker access to culture and medical care, both of which are currently limited, and increasingly so because of higher gas prices and fewer private medical practices.

How Respondents Understood the Impact of High-Speed Rail on Cultural Activities

Cultural experiences can be defined on a very wide pallet. One person would define auto racing as a cultural experience whereas another defines a cultural event as the opera. HSR can move the citizenry to rural areas to see auto racing (using a rural race track as an example) or HSR can move the citizenry to the center of the large metropolitan area to partake in an opera production or it can move the citizenry any place between for any type of cultural-enrichment event. A respondent described mobility of the citizenry:

They're so provincial in their thinking. And I'll say to them "I loved living in a town where Lyric Opera was there almost every night during the season, Chicago Symphony every night during season." I'm not saying that I would go every night, but the issue that I could go. That made it so desirable for me to live here. Now, if I needed to live in [Rural City A] for some other reason, being able to come into the city for a symphony or the opera, oh my god, so suddenly my cultural, or a special lecture, you know, I just ... yeah, the social side of it is phenomenal. [Economic Believer, Social Advocate, Environmental Ally]

Cultural connectivity is an important factor when businesses are trying to entice professionals (engineers, accountants, or bankers) to relocate to a small rural town or city. The most prominent complaint from professionals in evaluating whether to relocate is that it is "hours" to get to any of the major metropolitan areas to experience any of the cultural accoutrements they have to offer. Business people in smaller rural cities realize that conceptually the addition of a HSR network would "shrink distance" to cultural events in the city, which would make their recruitment efforts to attract highly trained

professionals easier. Also, job candidates themselves would be able to clearly see the advantages of an HSR link as part of the benefits when considering work with an employer in a nonmetropolitan region.

Employers and highly skilled professionals valued the ability to easily and quickly access cultural and performing-arts opportunities in cities linked by HSR, which would change sense of place of those in nonmetropolitan areas.

How Respondents Understood the Impact of High-Speed Rail on Social Benefits and Conveniences

The advantages of HSR can also be considered a social benefit. The citizenry's well-being can be enhanced when an atmosphere is created that endorses a lifestyle in which people get out of their automobiles and into a sense of community. As described by one transportation-planning professional interviewed,

Well, I don't know about social in the respect of social justice and whether the poor can get to jobs better and I don't know about that, but I do think ... moving to an environment where using trains and busses more has a lot of social benefits, where you've got more nonmotorized—people are walking more, people are feeling better sense of community. ... They come downtown more, you sort of create an urban, a lifestyle dynamic that's missing from a lot of cities. And it wouldn't create Europe overnight, but it would create vibrancy ... with your community. The downtown takes on a renewed meaning because the train station is again someplace to go and people are walking more, people are ... oriented more to downtown and I think there's a lot of good things that come with that.

[Economic Believer, Social Advocate, Environmental Ally]

The Social/Travel Advocate and Social/Travel Challenger recognized a social driver/component in a national transportation plan. If the social components of HSR are to be discussed and debated at the national transportation-plan level, then it needs to be compared and benchmarked against the other modes of transportation that comprise the portfolio. Social convenience drives the demand for HSR. Respondents stated that road congestion would drive support for an alternative transportation mode. Airline travel is becoming quite cumbersome with connection routings of airlines and security procedures increasing. Rail, at this time, does not have the security concerns. Some respondents believe, with the possibility that HSR would have less inconvenience, the citizenry would come to embrace this mode of transportation.

Respondents thought critical social needs would stifle the forward movement of planning an HSR network. For the next 5 years at least, because of a backlog of addressing social needs, HSR will not be the focus. Once those social needs are addressed, a respondent thinks HSR will be critically reviewed and monies found to plan and explore.

Oh, I do think within the next 15 years. I think the next 5 years will be the real struggle, as the economy continues to rebuild. But I think as it builds and there's greater issues with airlines and there's greater congestion over longer distance that the demand for something to ease that kind of congestion, the demand will start growing, and so much of this is going to depend on public will. So public funding, so, in the next 5 years, I mean my hope is that finally the economy will right itself, that we won't be always putting band-aids on things. I think that's the posture that we are in the country, if not worldwide, right now. It's constantly

putting a band-aid. So I think the next 5 years will be very rocky, but then there will be the situations that will drive the need for high speed rail will become so apparent that they will need to move forward. So then it's a matter of getting the funding in place. I think that enough of the studying has been done to determine feasibility that it's really a matter of moving forward, getting local buy-in along the routes. [Economic Believer, Social Advocate, Environmental Ally]

So, what does all this mean for sense of place? The current sense of place is understood as one that is problematic in terms of traffic and increasing inconveniences in moving about to do errands or get anywhere; even though a vision exists that HSR could potentially ease these inconveniences and even regenerate small-town downtowns, respondents also acknowledged that the current problems will intensify until the political will exists to do something.

How respondents understood the impact of high-speed rail on the environment.

Types of discourse about the impact of high-speed rail on the environment. The citizenry's perspectives and educational knowledge of environmental issues, at the local level and at the federal level, affect their perceptions of the environmental benefits and environmental detriments of HSR. The environmental impact ranges from the macrolevel (how HSR impacts the national carbon footprint of the nation) to the microlevel (how HSR impacts air and noise pollution in the local geography). Interview respondents had a combined global perspective and very local perspective on how an HSR system can or cannot impact the individual and their personal environmental footprint or the nation's footprint.

Environmental allies. Environmental Allies for HSR perceived that, at a national and local level, the addition of HSR helps in environmental stewardship and reduces the carbon footprint of the mobile citizenry. However, Environmental Allies encompassed a wide spectrum in how they understand the environment and how it might be impacted by the addition of HSR. Some have considerable knowledge of the environmental cost of different transportation modes (automobile, commercial air, traditional rail, and HSR); others embrace the idea of an environmentally sustainable agenda without a strong knowledge of the issues and realities. Both subsegments have an overall environmental perspective that is quite similar, but how they got to those perspectives and conclusions can be very different.

The knowledge-based Environmental Ally considers how the different economic, social, and environmental parameters interrelate with transportation systems and mobility of people. As one research respondent described, “So when they come out with an economical and safe, environmentally friendly form of transportation, I’ll have an interest” [Economic Skeptic, Social Neutral, Environmental Ally]. This respondent applied knowledge about other factors (economic and social) into the consideration of whether HSR should be constructed. This is an example of the segments being intertwined.

Environmental Allies have education about the environmental questions that do not end with rail transport. They embrace the concepts but critique all aspects of the environmental future. As an example of one of the Environmental Allies thought processes,

Efficiently and economically and if we really care about the environment and are we really going to run out of fossilized fuels, I don't know. I keep saying "After all these years, if we can put a man on the moon, if we can put probes on Mars, we still can't get beyond the gas combustion engine?" And they go, "We have these electric vehicles." ... You're still plugging them into a grid that's burning coal and if you can only go 50–90 miles, well, then you really can't plug it in and drive to Chicago, can you; you need about 130. That, I'm hoping that it's coming, people are going to start thinking out of the box about ... our population.

[Economic Believer, Social Advocate, Environmental Ally]

A research respondent with an academic background stated,

Just on the radio coming in, I was listening to a report of some academic researcher's study on the impact of health and environment on electric cars in China. Generally, people are promoting electric cars because it leaves a smaller carbon footprint, and it benefits the health of the environment. They've (scientists) concluded just the opposite. Primarily because (electric cars) they're putting out small particles, which is very injurious to human health, more so than gasses. [Economic Believer, Social Advocate, Environmental Ally]

The Environmental Ally will only embrace an environmental concept if the underlying principals behind it are sound and it fits with the economic direction and social benefits that it creates or impacts. As stated by one respondent:

Well, I guess for a closing comment I would say if there was, if this developed into something that was going to be an environmental improvement, a convenience improvement, and beneficial to the overall production of this

community, I would be supportive. [Economic Skeptic, Social Neutral, Environmental Ally]

In summary, the sense of place of environmental allies is viewed from a perspective that can envision improvements in the environment, conceived as a larger interconnected system.

Environmental naysayer. Some research respondents, the Environmental Naysayers, perceived that the addition of HSR would be an environmental detriment to local areas. This viewpoint was based on assumptions that the construction of the HSR infrastructure would or could be a disrupting force in local environs. As described by an Environmental Naysayer, “I would say somewhat disagree [that High Speed Rail would be an environmental asset to the local rural area]. ... I don’t think it would kill the environment, but I don’t know how it would help the environment” [Economic Believer, Social Advocate, Environmental Naysayer].

Additionally, Environmental Naysayers have limited general knowledge. They do not believe any direct environmental benefits ensue from using HSR to transport people. Overall those in this subsegment share an overall lack of environmental awareness on different transportation-mode efficiencies.

Environmental Naysayers questioned the efficacy of HSR at the local level. They questioned whether the addition of HSR would create noise pollution, whether HSR would take up valuable agricultural lands, whether the addition of HSR would be visually appealing, and whether HSR would impact cultural and historical settings. As to the concern about noise pollution, in general people did not know the sound generation of an HSR system. Because of the intensity and importance of the farming economy in the

study region, the general consensus was that agricultural land is one of the region's most valuable assets and the change of use of any of this land should be carefully evaluated.

One location in the research study area has a number of national and local historical places of interest (presidential library, state capital, and historical homes). Some shared a paternal attitude of respect and protection for these historical places, and although respondents did not directly question the impact of HSR, they held strong indirect concern. One respondent who lives and works in the area said,

In this region in particular, my family's all in farming. Is it going to take up our land? Are we going to recess our good rich Illinois dirt, eating it up? But I'd have to say, I'd rather see [the land] in a high-speed rail than I would see it in subdivisions. So, OK, maybe there's some give and take there. So that could possibly be a disadvantage, it could certainly create dissent in Illinois, because we're such a farming community. The other thing I would think would be where [the high-speed rail] runs, in terms of historical monuments and things, and is it an eyesore? Is it noise pollution? And I don't know, but that would be—all those things would concern me. [Economic Believer, Social Advocate, Environmental Ally]

In summary, Environmental Naysayers' sense of the environment is more rooted in place, rather than the systemic concept of Allies. In their sense of place, the environmental concern is local and limited (time?).

Transportation Experts—Understanding the impact

A transportation expert whose responses put him in the Environmental Naysayer category believed that the short-term negative environmental impacts of building an HSR

network would not be offset very quickly by the positive attributes of changing the citizenries' mode of transportation.

I think to build it could be pretty large. But I mean you're doing it banking on the fact that over the long term, once it's built, it's going to have a high enough ridership that over the long term, the carbon footprint is sort of equalized. Do I think that's going to happen? I don't think we'll see it in the next 15 years. So I think we're going to see environmental—negative impacts. [Economic Skeptic, Social Challenger, Environmental Naysayer]

A small a minority of respondents had a passionate response in the environmental discourse of HSR when asked about its impact on environmental stewardship. One transportation expert respondent, when discussing other respondents' reactions, said, "So you didn't get the usual Sierra Club thing?" [Economic Neutral, Social Advocate, Environmental Neutral].

Another expert respondent had a very strong opinion on environmental issues because of personal health issues. The interviewee showed a deep understanding of air pollutants, especially diesel exhaust, because of these health issues.

The positive [environmental impact] is as many cars as we can get off the road, I think it's fabulous. And the negative side of it is, while we're getting cars off the road, diesel is a terrible air pollutant, so those trains are going to run on diesel, unless there's some other formula in the mix. So the people that live along those corridors, they have a pollution level, their pollution level goes up. I honestly don't know of, I mean long-term, when you retire equipment, you have a disposal issue. So are you going to create another reef off the coast of some Third World

country, where their environmental laws aren't as rigid? So I can't speak to the long-term impact, but the day-to-day during operations that diesel is a pollutant.

[Economic Believer, Social Advocate, Environmental Ally]

Environmental Allies tended to perceive the benefits of environmental stewardship at a global level. These research respondents looked at the individual projects at the microlevel (local) but evaluated them from a macro perspective (global):

Whatever we can do for the planet is good by me and I'm willing to pay a premium for things that are more environmentally friendly. ... I guess when I imagine Earth 200 years from now, if everyone's trying to drive a car, there probably will be no Earth as the population increases. ... So I would agree that it's needed for environmental reasons. [Economic Believer, Social Advocate, Environmental Ally]

A transportation expert stated that advocacy groups address the environmental issues raised when discussing HSR as a potential addition to the Midwest environmental and economic landscape. One group described during the research interviews was the Environmental Law and Policy Center.

The Environmental Law & Policy Center is the Midwest's leading public-interest environmental legal advocacy and ecobusiness innovation organization. We develop and lead successful strategic environmental advocacy campaigns to improve environmental quality and protect our natural heritage. We are public-interest environmental entrepreneurs who engage in creative business dealmaking with diverse interests to put into practice our belief that environmental progress and economic development can be achieved together. ELPC's multidisciplinary

staff of talented and experienced public-interest attorneys, environmental business specialists, public-policy advocates, and communications specialists brings a strong and effective combination of skills to solve environmental problems and improve the quality of life in our Midwestern communities. [Economic Believer, Social Advocate, Environmental Ally]

Another transportation expert/key informant described how the addition of HSR to a nonurban downtown could change how the citizenry live in that community. The addition of a strong railroad station could be a catalyst to create an economic environment of shop, work, and play. If shop, work, and play are downtown-centered, then the use of driving will decline, thereby stimulating an environmentally sustainable initiative. One expert transportation research respondent pointed out,

So one thing that will happen if there is strong railroad station, it's a catalyst for creating an environment where you can walk, and because of that, and because driving's going to continue to decrease, I think having a dynamic railroad station in the middle of town will change the way people view housing dramatically.

[Economic Neutral, Social Advocate, Environmental Neutral]

An expert transportation research respondent had very good knowledge about the environmental issues in regard to governmental policy and regulatory hurdles. An example given by this transportation expert was that a new HSR line that has already been built and is currently undergoing testing will have the ability to have three trains per day run at the 110mph speed, but any additional trains will have to run at the current slower speed (79 mph) because the environmental-impact statement filed only included three trains. The process of developing an environmental-impact statement to submit to

the U.S. Environmental Protection Agency would have to be restarted for all five trains to get approval. This transportation expert expressed his frustration at this bureaucratic absurdity in regard to environmental questions. At times, special-interest groups use the bureaucratic process to try to stop any development of an HSR network, according to one respondent:

A good example is three trains, five trains a day. ... Only three will be able to be 110, because the environmental-impact statement only included three trains. So we're laying track for 110 ... and it's just absurd. And somebody needs to say "Time out, we better do more environmental impact statement, we'd better plead to extend it because it's going to be stupid to have two trains chug along at 79 after \$500 million." I've noticed you need watchdogs, but unfortunately the watchdogs have tended to be "kill it altogether" people as opposed to "let's work with something that, you know." [Economic Neutral, Social Advocate, Environmental Neutral]

When considering environmental issues associated with HSR, one fundamental question that can be asked is, Should the citizenry have the luxury of having greater mobility? HSR changes accessibility to place but should the citizenry be restricted in their mobility? One respondent answered,

I don't know from an intercity travel standpoint, it gives you that much payoff. One thing, it makes travel easier. You can zip to St. Louis for lunch and come back. That isn't a necessarily a good thing, environmental-wise. People just ... about we need to restrict travel. ... Stuff like that, you make travel easy. But I do think it's good for the environment. It's just an incredibly expensive way to do it.

You reduce traffic on the expressway, so there's induced demand. People fill the gap because they can now easily drive more. [Economic Skeptic, Social Neutral, Environmental Ally]

This restriction of a basic human right was not a common thought among the research respondents, but as the preceding quotation shows, thought about HSR and the environment was quite broad.

Local social concerns about the separation of different areas by railroad tracks can be described as an environmental concern:

Near empty diesel-powered engines spewing exhaust into the air by the ton, separating the entire east side of the city by the tracks and required prison-like fencing, and halting normal traffic would have added tons of carbon footprint to this area. [Economic Believer, Social Advocate, Environmental Naysayer]

A substantial subsegment of Environmental Allies were ideologically opposed to highways and interstate-highway travel. Responses in general were that this form of travel had only negative attributes and that the sooner this form of transportation stopped, the better it would be for the environment. "Could get more people out of their single occupant vehicles on the interstate, which we seem to be constantly widening and resurfacing. Preventing interstate expansion would be awesome" [Economic Believer, Social Advocate, Environmental Ally]. An additional comment: "More train = fewer cars = better air quality" [Economic Believer, Social Advocate, Environmental Neutral].

Other Environmental Naysayers responded that environmental considerations may impact conveniences of the citizenry. Although HSR could be beneficial to the environment, the addition of HSR and the people's use of it could impact on a number of

conveniences. Questions included the following: Would it impact personal financial convenience (cost to use it)? Would travel times increase because of limited schedules? Would the citizenry have less parking and less pedestrian crossings near the rail stations? Would the citizenry have fewer road crossings and fewer pedestrian crossings in the rural areas? Would the movement of high-speed trains near housing areas create inconveniences of noise pollution and air pollution?

The extent of knowledge about the science of the environment for Environmental Allies and for Environmental Naysayers runs a broad gamut. A large group of respondents had very limited formal or informal understanding about environmental issues and policies. One responded, “I don’t know how it would enhance the environment ... other than another whistle that you hear” [Economic Neutral, Social Neutral, Environmental Neutral]. Another stated, “I would think environmentalists, as a group, would be for it, because it’s supposed to be cleaner, greener, and all that” [Economic Believer, Social Advocate, Environmental Neutral]. This respondent was making statements on supposition, which, although correct, were presented to the interviewer as an educated guess. Another stated, “Well, I don’t necessarily know that you would actually see people arguing that it was that great environmentally anyway, because, of course, the environmentalists don’t want us to use any of the stuff” [Economic Skeptic, Social Neutral, Environmental Ally].

Some respondents lacked understanding about the environmental impacts of an HSR proposal. Research respondents did not know what type of fuel the engines would use or whether the trains would be diesel powered, alcohol powered, electric powered, or

powered by some other source of energy. Describing HSR systems, one respondent described the energy source of the engines as follows:

Yeah, and easier for things like that over time, because you're probably running on pure alcohol anyway, or maybe even other certain types of things. I can't imagine high speed running on diesel, but maybe I'm wrong. But the—by doing stuff like that, it only ends up helping out the federal government, some of the things that they say for environmental type things as well. [Economic Skeptic, Social Neutral, Environmental Ally]

Research respondents also considered the microlevel environmental impact of HSR personally. One noted that the use of an HSR network would allow one to multitask through the ability to travel and conduct personal business or employment activities at the same time. This multitasking was perceived by the research respondent as an efficiency issue that is indirectly an environmental issue. Efficiency issues include having to use lighting or having to use heating or air conditioning in only one setting instead of two.

The majority of research respondents were neither Environmental Allies nor Environmental Naysayers; rather they lacked an opinion or took a neutral position:

I would say I'm in the middle on that. I see pros and cons to that. Less carbon footprint but you're making a mark across the country now that will have an environmental impact. ... needed for environmental reasons. ... I'd say I'm neutral on that one. [Economic Believer, Social Advocate, Environmental Neutral]

The interest in environmental concerns aligned with the economic realities of the area. When asked if the environment was part of the economic decision-making process,

one responded, “Are you kidding me? ... Just go out and take a big whiff. ... My grandfather used to tell me when I complained [about the smell from local industry], he’d say, that’s the smell of money” [Economic Believer, Social Advocate, Environmental Naysayer].

Summary

This chapter presented the findings from a segmentation analysis of interviewees about the impacts of passenger HSR on part of the nonmetropolitan United States. The conceptions of place, space, and time were used to analyze conversations about proposed passenger HSR in the study area. Economics, environment, and mobility/accessibility were the three principle dialogs identified for analysis. In conclusion, the findings of the segmentation analysis revealed a good deal about the sense of space in the nonmetropolitan United States. A chapter summary of findings of how passenger HSR impacts nonmetropolitan sense of place follows:

- Threatens the relative advantage of local business and political interests, versus the advantage of tying communities together and facilitating greater access to other nonmetropolitan regions.
- Issues of social justice were raised; would trade-offs compensate for potential losses?
- In the State of Wisconsin, the sense of place was very much impacted by the political turnabout, regardless of whether the individual was a Democrat or Republican.
- Potential change to sense of place included thinking about potentially quicker access to culture and medical care, both of which are currently limited and

increasingly so because of higher gas prices and fewer private medical practices.

- Employers and highly skilled professionals valued the ability to access easily and quickly cultural and performing-arts opportunities in cities linked by HSR, which would change sense of place of nonmetropolitan areas.
- The current sense of place is understood as one that is problematic in terms of traffic and increasing inconveniences in moving about to do errands or get anywhere; vision that HSR could potentially ease these inconveniences and even regenerate small-town downtowns, accompanies acknowledgment that the current problems will intensify until the political will exists to do something.
- The sense of place of environmental allies was viewed from a perspective that could envision improvements in the environment, conceived as a larger interconnected system.
- Environmental Naysayers' sense of the environment is more rooted in place, rather than the systemic concept of Allies. In their sense of place, the environmental concern is local and limited (time?)

The following chapter takes those three discourses and analyses them in relation to the sense of place in nonmetropolitan US geography.

CHAPTER 6: INTRODUCTION: SENSE OF PLACE

The previous chapter presented the outcomes from a segmentation analysis of interviewees related to the impacts of HSR on part of the nonmetropolitan United States. Specifically, respondents talked about the idea of HSR in terms of economics, environment, and social mobility/accessibility.

The segmentation analysis of the concepts held by residents of the nonmetropolitan Midwest regarding passenger HSR revealed a bipolar understanding that, in many ways, represents the divisions that characterizes the country's politics. Although people often generalize that the political division runs along a rural/urban continuum, the recent 2016 elections showed that elections are more complicated. In this chapter, another set of variables are considered that include relational senses of time and power.

As described in Chapter 3, this study of sense of place in the nonmetropolitan Midwest in confronting the possible addition of HSR involved two separate interviewing phases, each with specific objectives. I structured the first series of interviews around economics, the environment, and mobility/accessibility and how those discourses impact sense of place, which led to a segmentation analysis in Chapter 5. I created the second series of interviews to develop an expanded understanding of present and future sense of place. In this phase I conducted multiple sets of interviews to elicit people's emotions, beliefs, and feelings about the sense of nonmetropolitan place, listening to multiple voices across a wide-ranging socioeconomic spectrum. Interviewees came from three Midwest states of Illinois, Michigan, and Wisconsin. Taking the findings of the

segmentation analysis, the second set of interviews were designed to answer the following questions:

- What imaginations of place exist?
- How do voices differ in imagining place relative to economic and environmental values to passenger HSR?
- How do age and mobility shape views on a changing sense of place in nonmetropolitan geographies?
- How has the chapter advanced understanding of the multiple meanings associated with nonmetropolitan place?

This research about place and space goes further to examine the voices of the diverse actors whose lives and daily practices are embedded in places being reshaped by global and national forces, and to challenge attempts to present singular absolutist knowledges of space.

This analysis of the nonmetropolitan U.S. Midwest builds on Bailey's (2008) multidimensional model studying context, power, and knowledge in relation to emerging population geographies. A number of theories have evolved in the social sciences that researchers have applied to studies of population geography including empirical positivism, humanism, materialism, constructivism, structuralism, poststructuralism, postmodernism, and postcolonialism. These social science theories overlap, concur, and evolve, as well as contradict and refute. Empirical positivism holds that regularity and rules lead to knowledge. Humanism believes in the value of human intelligence, thinking, and learning, and dismisses the divine. Materialism states that the physical is all that exists and that consciousness and human thinking are based on matter. Idealism is its

counterpoint. Theories of social constructivism argue that, over time, subjective statements and experiences of a group evolve into social fact and knowledge.

Structuralism is the belief that cultural relationships build on larger systems and structure.

Poststructuralism states that language and knowledge perceptions over time are free to drive the interpretation of structures. Postmodernism believes that knowing involves not one but many truths and approaches. Postcolonialism brings into the intelligence the prejudices and cultural legacies of colonial history. In Bailey's model, the axes of the multidimensions include context from active to passive, power from weak to strong, and knowledge from absolute to relational. I use Bailey's (2008, p. 112) framework of place as "meaningful, active and powerful" to analyze people's different understandings of the nature of place in relation to planned rail development.

As discussed earlier, place is a meaningful *site* that combines location, locale, and sense of place. In this mix, Cresswell (2004a, p. 1) noted that it is the "feelings and emotions of place" that create a sense of place. This concept feeds the geographical imagination, shaping place somewhere between the factual and fictional, the subjective and objective, and the real and representational (T. L. Daniels, 1999). Translating these ideas to the empirical focus of this chapter leads to the overarching interest in how creation of a passenger HSR system changes the *sense of place* in the geographical imaginations of nonmetropolitan U.S. citizenry?

Bailey (2014) understood place and space as active rather than passive contexts in relation to the way power is exercised. This way of looking at place and space contradicts other models that viewed population geographies as absolute rather than relational, silencing voices by limiting points of view. By considering knowledge as relational, the

variety of conclusions are not limited and diversity of discourse is better explored. Building on this concept, this research into the sense of place and space and passenger HSR yielded broad and abstract results rather than absolute and confined results. By acknowledging that knowledge is relational, context is active, and power relations shape knowledge, a more dynamic analysis emerged.

Voices Representing Nonmetropolitan US Place

Imaginations of Passive/ Static Places

Traditional regional geographies of North America, such as Patterson's (1989) classic text, offer a descriptive account of what were considered to be the essential signifiers of the Midwestern rural United States. As valuable as Patterson's account reflects a static representation of place and space. By contrast, geographers (such as Halfacree, 2012; Phillips, 1998) in the 21st century, looking at rural spaces, have offered a more critical treatment of the contested multilayered meanings of rurality and the nonmetropolitan environment. These perspectives, as applied in this chapter, raise and partially answer a different set of research questions about sense of place in the U.S. Midwest. Important questions include the following:

- Are these places simply locations shaped by differentiated service providers (Higgs & White, 1997)?
- Are micropolitan locations viewed as the rural idyll for gentrified middle-class commuters (Halfacree, 2012; Stockdale, 2006)?
- Are these places viewed as relational shared spaces reflecting the accommodation of competing imaginations?

- How have imaginations of changed connectivity following new passenger HSR produced new perceptions of place?
- How have generational differences and mobility histories impacted sense of place?

If one were to follow Patterson's (1989) approach to describing place in a North American context, it would be easy to select from the interviews a set of quotations representing differences and images of what might be termed *naïve geographies*.

Consider the quotations listed in Table 3.

Table 3

Geographies of Place—Passive

Farming community (nonmetropolitan)	Our biggest crop is corn, and the farmers ... of the small towns, saying the trains are just going to whip right by. [Female, mid 50s]
	Farmland could disappear. Development of housing takes space. [Female, mid 20s]
	So, OK, maybe there's some give and take there ... because we're such a farming community. [Male, early 60s]
Small town retail center (nonmetropolitan)	Especially if we would maintain where current Amtrak stops, so if we would maintain our current stops, I would certainly think it would be attractive for area communities; we'd become more of maybe like a bedroom community, or a place where they would come and park their cars and catch the train, downtown. [Male, mid 50s]
Functional small settlement with nonrural function (e.g., university town or tourist destination)	All those schools are viable and growing but if you look at [Small City A], the university, its a shell of what it used to be. ... There is no rail service and kids can't access [Small City A]. [Female, mid 20s]
	The other thing I would think would be where it runs, in terms of historical monuments and things? [Female, mid 20s]
Ghost town (nonmetropolitan)	Revitalize the ghost towns. Not new construction. At least not immediately. [Male, mid 20s]
Small city (not major metropolitan)	I would love for it to come. If it did come, I could see an increase in tourism, which would also bring an increase in, just in general, in money to the community. And then also, that would uplift a lot of the attitude. [Male, early 60s]
	[Small City A] has changed. We have lost 40% of our populations in the last 15 years and our growth engines are gone. All the corporate offices are gone. Everyone is gone. The only manufacturing left. [Male, early 60s]

These quotations capture the dimension of U.S. Midwest nonmetropolitan place where the interviewees talked about place as passive. The imaginations of place are holistic but in many ways, represent naïve geographies. Although not all-inclusive, the five geographies represented in Table 3 do represent a range of types of geographies in the Midwest, which has farming communities where the rural population density is low, small towns with once active downtowns that now primarily house stores aimed at tourists, rural locales specializing in retail outlets, ghost towns, and smaller urban cities that have lost population in the general migration to large metropolitan regions of the past 50 years. The quotations presented show the geographic heterogeneity of the passive voice of U.S. Midwest nonmajor metropolitan geographies.

Although Table 3 illustrates the persistent stereotypical images of places as passive, the vast majority of interviewees pointed beyond this, engaging instead with the emotion of the geographic place (Tuan, 1974) . Rather than thinking of places as representing themselves passively (Bailey 2008), the recognition of places of lost opportunity represents the first step toward a more hopeful sense of place, one where something might have happened if only the agency of key stakeholders had been enabled at an earlier point in time. Emerging from the research is therefore the idea that the interviewees perceived the potential of transport connections as having an “active impact.”

In contrast, some interviewees used metaphors of death and decay and of dissociation with place. Interviewees expressed the slowing of the progression of decay and abandonment of place because of changes in economics. Talking about passenger HSR, an interviewee expressed, “The people are gaining mobility but the fundamentals of

the town will not change, it (HSR) might prevent it from dying if it is on the verge.”

Showing disengagement from sense of place and a disengaged attitude, one interviewee stated: “Hard to say. I don’t go to [Small Micropolitan City A] or [Small Micropolitan City B] for fun. ... It doesn’t make any difference.”

Some respondents questioned if it was too late for passenger HSR to make a difference because population decline had already occurred and people were not going to be coming back to that place. This concept introduces *memory* and the meanings given by the voices of those interviewed to a sense of place that in the past had been different. A binary conception about place as then and now emerged. The population’s sense of place being impacted by passenger HSR is also impacted by the passing of this time (see Table 4).

Table 4

Place and Time

If this would have been 25 years ago, I think it would of made changes [Small Micropolitan City A], but not anymore. I hate to say it. [Male, early 60s]

If high-speed rail came in here, it would not fundamentally change [Small Micropolitan City A]. Sad to say that. It is not what I want to happen but I think it is what would happen. The needle is way past the middle with this stage of the game. ... It not going to get there. [Female, early 60s]

Imaginations of Active Connected Places

Respondents compared places. They compared where they were or where they came from with other places. The comparison was with geographies that had possible future passenger HSR and those geographies that would not have passenger HSR.

Respondents interpreted place as comparative. Here/there—place A/B contrasted, above all, in relation to the possibility of being on the train line/not on the train line, and

connected or not connected to major metropolitan areas. This produced new imaginaries of how connection did or would make places (future) more urban (or in the absence of access to the train line, more disconnected). Describing major metropolitan areas versus the small city, a research respondent stated, *“It is a positive for the people of [Small Micropolitan City A] to go to Chicago. The scale and scope of the train is not going to change what [Small Micropolitan City A] is.”*

Imaginations of New Connections Changing Place

Potential new connections to other geographies changed perceptions about place. Potential for change raised some concerns about the harm that might come, as well as positive developments in imagined future sense of place. Some respondents expressed concern about outside influences. Others saw how HSR might positively impact a sense of place. “If the next town over has the train then it’s an advantage. A home is a home but it’s a living benefit to have the train in a town.” Others reflected on directional advantages and disadvantages to a place (see Table 5). As a research respondent stated,

The accessibility of [Small Micropolitan City A] from people in Chicago is a negative. It is a positive for the people of [Small Micropolitan City A] to go to Chicago. The scale and scope of the train is not going to change what [Small Micropolitan City A] is.

Table 5

Place Here and Place There

Chicago's problems, which use to be entirely in Chicago, 20 or 30 years ago, now are downstate and the more mobile, the ability for people to travel, via cars and so on has allowed the problems to come down state. If you add high-speed rail, it will make the access even easier for those same problems to be relocated downstate. ... The two biggest ones, and they are related, are gangs and drugs. [Male, mid 50s]

Yes, I see a big difference between [Small Micropolitan City A] and [Small Micropolitan City B]. [Small Micropolitan City A] does not have any rail service currently while [Small Micropolitan City B] has it. There is no doubt about it, that harms [Small Micropolitan City A]. [Male, mid 70s]

How did people understand new connections as changing place? Some understood it as connections producing the opportunity for the resident population to remain resident, but able to commute to jobs in the metropolis (see Table 6). Respondents perceived the economic sense of place as likely to change because employment opportunities would be enhanced through increased accessibility. They reported the employment change as potential to improve the standard of living. Respondents interpreted connection with major metropolitan geographies as leading to continued residence, thereby countering the "decay" ghost-town images held by others about the nonmajor metropolitan United States.

Table 6

Connections Changing Place

Economics will change because it I think it will—it gives them better chance to get to places that have high-paying jobs, allowing them to maintain a better standard of living in their small towns. [Male, mid 20s]

People will be commuting farther for better jobs, so that when they come back to their local towns, their expectations are more. [Female, mid 20s]

A respondent offered an example of the impact of allowing people to stay instead of forcing them to move to a major metropolitan area: “Local kids could use the trains to travel to and from universities and would not have to leave the town.” Another respondent clarified the impact by stating, “You might have less people moving out of those towns, the generation millennium. It will change the movement out of those towns of the young people.”

Imaginations of Connections Driving the Economy and Housing

Continued residence implies economic demands for housing and a production of continued populated places (Table 7). One respondent stated that with this demand,

You would turn a little town in central Illinois into a nice little quaint town again and have the availability of the rail. It would be potential to be able to commute for work a lot easier instead of moving up into the suburbs or into Chicago.

Note the positive attributes mentioned in this quotation and those in Table 7 related to the positive connectivity of networked places (“nice,” “interest,” “less expensive,” and “development”).

Table 7

Housing

I think housing, the market by the train will increase just because any time you live by public transportation there is an interest. Structurally the housing that was already there might be improved. Besides living close to the stop that would be the only change to the sense of place. [Male, early 60s]

The housing would be less expensive but the mobility is going up. [Male, early 20s]

There might be some more development in the housing but you got to look on both sides of the spectrum. What type of housing should be put in? how are things organized? [Female, early 50s]

There might be some change in development housing with more people living in the areas, but eventual prices will increase. With the availability you would be able to commute to work up in Chicago or St Louis. [Male, early 50s]

Respondents suggested that the potential connection of places through new rail routes would bring an inward investment of monies and other flows into nonmajor metropolitan places. Monies would not flow out of the connected places, but rather more monies would stay in the locations. This flow of monies would bring a flow of goods and services. The flow of goods and services would support and create continued and new development. This development would, in turn, ensure the place would be a production place in response to economic growth. Table 8 signifies connectivity would produce positive change, this time in terms of services that result in “better community,” “investments,” and building of small business.

Places as Active and Powerful

Voices of the nonmetropolitan Midwest United States also imagined places as arenas of power. Interviewees recognized power ranging from the weak to the strong. On one hand, interviewees recognized that places were socially constructed (Phillips, 1998), but only in reference to their own positions and ability to exercise human agency along with others in effective ways. In other words, some of those interviewed recognized themselves as more than powerless (Bailey, 2008). This disempowered stance led to a representation of passenger HSR as a catalyst that could be used to change place or create new places (see Table 9).

Table 8

Local Economies, Local Services Affects Place

If passenger high-speed rail came in ... (it would) bring investors in to take over buildings, create a better community, sell different products. [Male, mid 70s]

For people who want to get off the train, want to take break, they would want to eat something. It would bring investments. [Male, early 30s]

Eventually the economies are going to grow because they pull small business. They are going to build it up. Retail will grow more business. [Male, early 40s]

And if there is passenger high-speed rail passing through the small towns, then more chains will be built. They will want to move their stores there because people will get off the trains and stop there and buy stuff. Basically more things will be built if they now think that things are going to be built. More people will visit that town if there is actual stuff to do and places to go to. People can hop on the train and come from the surrounding areas. [Male, early 20s]

Table 9

Passenger HSR as a Catalyst for the Power to Change Place or Create New Place

Now they're building their transmodal center, which I think will be \$38 million, and it's supposed to be – the train will stop there, taxis, Greyhound busses will pick up people leaving the trains and [Small City B] is putting part of their city hall in there. [Female, mid 50s]

I think that you build transit with small routes within communities, bigger routes that connect those communities, even bigger routes that connect those regions or subregions to other subregions ... the building block that is high-speed rail. [Male, early 60s]

The main advantages (of high-speed rail) are the enormous transportation capacity, the enormous transportation strength it provides. It diverts lots of air travel, airport congestion, it is fast enough to divert a great deal of highway traffic, and it can be a city-building tool to enhance downtowns. [Male, early 50s]

The population of the nonmajor metropolitan Midwest United States is diverse in their belief in having the agency to create change. Research results showed that some residents of small micropolitan cities believed that change was possible, whereas in general, residents of small towns were less likely to believe in human agency and the

possibility of change. However, the forces for change were perceived as resting at the local government level, and not at the local-resident level.

The quotations in Table 10 show the *power of change*. The adjectives and adverbs used as descriptors of power include the following examples: building blocks, bigger routes, capacity, enormous transportation strength, fast, city-building, and enhanced downtowns. Respondents used these metaphors to strength their statements on the power of change brought about by passenger HSR.

Table 10

Agency of Change

Strongest force has been city mayors along routes within—there seems to be broad consensus along the corridors to build it. [Male, mid 50s]

The one thing the mayor’s hoping, we have an old abandoned rail yard. It’s sitting on 40 some acres of vacant land ... but his “pie in the sky” vision was that they needed somewhere to build the cars. [Female, early 50s]

Some comments alluded to the power of structures and human agency in producing place. Respondents recognized power as a term that varies in meaning: physical size, monetary cost, faster, or other meanings perceived by interviewees. The general sense emerged that in the context of unevenly produced opportunities and structured futures, human actors can perform in ways that have significance.

The Relation Between Values and Imaginaries of “Future Place”

Economic values in relation to passenger HSR and the views of places.

Segmentation analysis (see Chapter 5) showed that people hold different values supporting their imaginations of future geographies. In examining interviewees’ perspectives about economic drivers, the two ends of the segmentation spectrum included

the Economic Believer and Economic Skeptic. As comments in Table 11 show, an Economic Believer perceived that *future place* would evolve and benefit from passenger HSR. These benefits would come from the addition of economic activity during the construction of the HSR network and during its continued operation. These benefits would be driven from local economies to impact the national economy. In contrast, an Economic Skeptic perceived that the cost of constructing an HSR network would be prohibitive and the continued operation of an HSR network would be an economic drain on the economy at the national level. At the local rural level, an Economic Skeptic believed that the local placement of a passenger HSR line would create economic drain on the local economy by disrupting current economic generators. They also believed that the travel through a rural community would take place without any economic benefits being created and thus not have impact on future place.

Table 11

The Economy

I think also advantages would be that maybe it could bring economically more people to our area. [Female, early 60s]

So whoever gets the stops has some very real benefits in what happens economically. [Male, early 30s]

I mean economically or business-wise or—I don't really see it making that much difference myself. [Female, mid 50s]

(Discussing economic impact:) (Who?) Has been very focused on creating a nice downtown and having a nice city. And for people just to be able to come in, spend some time, and go back home I think would be huge. [Male, early 60s]

(Concerning commercial office, businesses, industrial space:) I'd say even more so than retail shopping and such. ... I can see that being a real boon to that level of the economy. [Male, early 20s]

(Concerning economics of local retail:) I don't know that it will enhance retail, I just—I simply think that there's too much to compete with. [Female, early 30s]

I think it will make us look like a “with it” community, like if you were a business and you have your employees and your business and the way you're going to act, access to faster travel or whatever. I think psychologically that would be good. [Female, early 50s]

No, I don't think you're going to get people coming down from Chicago to spend their money here, because it's just opposite. Losing money here while people go shopping in Chicago. [Male, early 50s]

From the perspective of an Economic Believer, the economic impact of passenger HSR would not be merely jobs. It would also impact local commercial retail sales, commercial office rents, industrial, local-government services and support, and other generators of economic activity. In contrast, uncertainty about economic impact led Economic Skeptics to question the benefits. From this perspective, the potential loss of retail by commuting away from the community to shop would drive a decrease in spending at the local level. Passenger HSR would affect local economies because the addition of the rail system directly impacts the mobility culture of the local rural geography. This concept aligns with research suggesting that contemporary Western mobility cultures in general favor travelling to shop rather than purchasing goods locally (Findlay, Stockdale, Findlay, & Short, 2001). These changes to travel patterns have been driven by changes in the distance of the average work-commuting pattern but switches in Western mobility culture have also impacted other aspects of travel, including the geography of retail shopping.

Ideas about either positive economic impact or negative economic can affect a future sense of place as different. Passenger HSR could create inflows of people into a rural geography (see the first quotation in Table 11). Although a rural municipality may have a small resident population, the economic pull of a small town in its catchment area could be much larger. These rural hinterlands usually tie to a specific small-town economic geography. The addition of any economic activity to the small town could impact the functional significance of the settlement, as well as its surrounding environs.

The imagined meanings of being a better-connected place varied by respondent but were generally positive. As described by one respondent, “You would turn a little

town in central Illinois into a nice little quaint town again.” The terms “nice,” “little,” and “quaint” are all examples of these imaginations. Interestingly, less well-off interviewees were more likely to believe that positive economic impacts would result from the addition of a passenger HSR system than those who were financially secure.

In summary, perceptions of the potential of place in relation to future rail connections needs to be recognized as a social construct. No unitary perception emerged in all interviews. Instead, people’s sense of place and feelings about the future of places in a changing world was strongly shaped by their value systems and their personal situation in relation to the structuring of economic opportunities resulting from future rail links/connections. If people feel more secure about their position in a nonmetropolitan area, they were more likely look at more connectivity as threatening their economic position through loss of business or people, whereas others viewed the expanded commuting possibilities as a way of keeping working people and students “home.”

Environmental values and sense of place in relation to future rail changes. As the segmentation analysis in Chapter 5 showed, people hold different values on environmental matters. The two ends of the segmentation spectrum of environmental drivers ranged from Environmental Ally to Environmental Naysayer. An Environmental Ally believed HSR would be an asset to the environmental stewardship of the land at national and local levels. The reduction of the carbon footprint of the traveling public would be achieved with the use of rail over other nonenvironmental-friendly modes of transportation. Environmental Naysayers did not believe or understand the possible positive environmental-impact potential of the addition of an HSR network. At the local

level, Environmental Naysayers perceived that the addition of an HSR network would or could cause environmental harm to rural areas.

Perceptions of what constituted “the environment” were important in understanding how rail proposals would impact people’s sense of place (Table 12). Respondents thought of their present sense of place as their municipality at the microlevel, or the rural Midwest at a more macrolevel. As one respondent stated, the “agricultural biosphere would be impacted.” Another respondent tied environmental issues and small towns by describing how farmland would disappear and housing would drive future changes of the sense of place in the small town. One small-city respondent associated environmental issues with addressing industrial issues in that city (see Table 12). The environmental impact on place was therefore different, depending on whether people’s focus was farms, small towns, ghost towns, or small cities.

Table 12

The Environment

If this developed into something that was going to be an environmental improvement, a convenience improvement, and beneficial to the overall production of this community, I would be supportive. [Male, early 60s]

It’s a catalyst for creating an environment where you can walk, and because of that, and because driving’s going to continue to decrease, I think having a dynamic railroad station in the middle of town will change the way people do what? Something’s missing. [Male, early 30s]

I don’t know how it would enhance the environment ... other than another whistle that you hear. [Male, mid 70s]

Any time that we can reduce carbon emissions, it’s a good thing and people I think are generally very aware of that. And when you go around town, you see a lot of things that point to that. [Male, early 30s]

So either you put this thing in the middle of all these towns, which is the least, from an overall environmental perspective, is the least damaging. Or you’ve got to put it out someplace, out in a cornfield, which means you’re splitting farms. [Female, early 30s]

Yeah, and the answer is not going to impact at all the environmental issues at all in [Micropolitan City]. Just go out and take a big whiff. [Male, early 60s]

As with perceptions of the economy in relation to potential passenger HSR, knowledge and lack of knowledge about the environment were key in the perceptions of the respondents. Different levels of knowledge about the meaning of “environmental impact” on place ranged from the physical changes to local land and air quality to a larger understanding of how local carbon footprint relates to local-place, regional-place, and global-place environments.

Knowledge about the environment ranged from respondents who had no knowledge of current environmental issues to people passing judgment based on outdated facts. Some respondents had a good understanding of environmental issues and impacts whereas other respondents had no knowledge of current environmental issues. One respondent, who could only be described as not having a rudimentary knowledge base, said, “It could change it for the worse. Maybe it depends on the fuel to run the train, meaning if its coal it could be bad for the air to breathe.” A positive correlation emerged between the knowledge level of environmental issues of respondents and the employment type and economic level of respondents. The impact of a proposed passenger HSR system on the local place’s carbon footprint was acknowledged by the majority in one way or another, but the general consensus was that it would not change how people perceived the local sense of place.

Age and changing sense of place. Having explored how people’s stance on economic and environmental issues impacted their sense of place, the analysis now turns to the demographic characteristics of interviewees. The most important demographic variable differentiating responses was age. I analyzed age from two perspectives: the age of respondents and the discourse on specific impacts of passenger HSR.

Younger respondents had a stronger interest in cultural, educational, and entertainment experiences and how they are part of what defines the local geography and its sense of place. The focus of both older and younger respondents was on the impact of rail on the vibrancy of local geographies and how changes to mobility and accessibility would create a positive continuation of the sense of place. Older respondents unambiguously understood the importance of younger generations in driving the future sense of place. Younger respondents, in general, described their feelings about their current and future sense of place from an all-encompassing perspective. They brought in a wide range of cultural and social attributes that comprised their perceived sense of place (see Table 13).

Table 13

Place and Age

(Younger respondent:) The locals will not perceive their homes differently but it gives a lot more availability of mobility to the people in the town. People who have lived in these towns for 60 years and are older and their family has moved to the big city these people would be able to go visit their family on the train and not be isolated in that town. The older people will not drive that distance. [Male, early 30s]

(Older respondent:) Local kids could use the trains to travel to and from universities and would not have to leave the town. [Female, mid 50s]

(Older respondent:) The city fathers would think it's a big deal but the reality is I and my friends wouldn't think there would be any change. [Male, mid 70s]

(Older respondent:) You might have less people moving out of those towns (generation millennium) It will change the movement out of those towns of the young people. [Male, early 60s]

(Younger respondent:) Not a lot of access to a lot of cultural facilities. [Female, early 30s]

(Younger respondent:) The small town would be nothing without the colleges. [Male, early 20s]

The range of comments reveals a recognition that, in general, the rural population has been declining. Young people have left home and started careers in metropolitan

areas, leaving older generations in place but somewhat disconnected. Younger people saw HSR as providing mobility for older people to travel to their children, whereas older people hope to see younger people able to stay “home” with the opportunity to have faster commutes to work and to cultural and entertainment offerings.

Life experiences and changing sense of place. Respondents’ life experiences were a strong driver in defining their imaginations of the sense of place and how passenger HSR affects these places. Travel experience was one of these experiences. In addition to living in the United States, some respondents had also lived in Italy, the Philippines, Japan, the United Kingdom, and Switzerland, and most respondents had been outside the United States to many places around the globe. The life experiences of those with travel or living experience outside the U.S. Midwest influenced their concepts of local places. Seeing how the rest of the country and world lived was an influencing factor in how a respondent perceived their current sense of place and their future sense of place.

In contrast to the stereotypical notions of rural backwardness and differences that are often attributed to nonmajor metropolitan places in the Midwest, the research showed a broader, even global, perspective. Small-town parochialism could not be said to characterize the population of the nonmetropolitan Midwest; in fact, it was a negligible issue as illustrated in Table 14.

Table 14

Place and Life Experiences

I would define it as a rail system that's made for actually transporting people from place to place, especially commuters or anyone doing business. And to do it, you know, living in Switzerland, I see high-speed rail and passenger rail in general as being very reliable and on time. As far as high speed, I assume somewhere over 100 miles an hour? [Female, early 30s]

And when you say "high-speed rail" of course, my mind thinks to, oh, the bullet train we used to take in Japan from one part of the country to another, so, but I know it's not that—high speed. [Female, mid 30s]

I was just looking at some statistics on travel from my hometown, Wigan to Liverpool. There's a train service that's been going for 160 years and it's still running. And the passenger use has increased 300% over the last 5 years. [Male, early 70s]

Well, the Italian network is probably not—hasn't been developed very efficiently. Certainly, the French and German models are very different. They both have different strengths and weaknesses. I wish we could do what Spain did in the last decade. And China is a very interesting case. [Male, early 60s]

The addition of passenger HSR brings together the relational knowledge (relational to age and the Other by generation, and relational by experiences of place).

Social mobility/accessibility and changing sense of place. Research respondents understood the concept of accessibility to other places and accessibility from other places. Respondents looked at the impact of passenger HSR on arriving in their locales with reservations and possible concern, but from their locales as something "nice to have." The biggest concern of respondents, as previously described, was about whether crime and big-city problems would migrate to the local geography and change the sense of place for the perceived worse. Unspoken and unvoiced in these concerns is fear of gangs and race.

The quotations in Table 15 show that some respondents thought passenger rail service could bring social benefit to an area but would not change how they perceived the place. Improved rail services would be a benefit but would not herald a basic change.

Table 15

Sense of Place and Accessibility and Mobility

If the next town over has the train then it's an advantage. A home is a home but it's a living benefit to have the train in a town. [Male, mid 70s]

It's a social benefit to the place. How much do people make will impact them if they can get on the train. [Female, early 70s]

Accessibility to other place and not accessibility to the local place. [Male, early 30s]

The connects with the major cities is more of a negative than a positive in my opinion. It's really good for the people downstate to connect to a large city: for medical reasons; for business reasons; for entertainment reasons ... but not vice versa. [Male, early 60s]

Economics will change because it I think it will it gives them better chance to get to places that have high paying jobs, allowing them to maintain a better standard of living in their small towns. [Male, early 30s]

People will be commuting farther for better jobs, so that when they come back to their local towns their expectations are more. [Female, early 20s]

One respondent stated,

Sense of place ... no it creates a different option, but it fundamentally does not change anything because it is not the only option. Today we do not have it. ...

Rail service would not (change sense of place) because we haven't had train service in such a long time.

Another stated, "But the scale and scope of the train is not going to change what [Small City A] is." The change in accessibility of place would impact the local place because rural places can have more physical space: "So in terms of people like to live further out, because they get more space and they can buy more for their dollar. So maybe that would be an inducement for more of that rural spread."

The issues presented in this chapter, developed around Bailey's (2008, p. 112) framework of place as "meaningful, active and powerful," revealed how people's sense of place, in relation to plans for rail development, capture different understandings of the

nature of place. Respondents' comments illustrated how human values shape imaginations of how place might change. Additionally, time dimensions of place were captured not only through historical recollections of time periods, but through other time–space metrics captured by the age or generation characteristics of people and by the mobility history of people (here versus elsewhere in the past). These perspectives were explored to illustrate how people understand places, capturing time/place in different ways.

Summary

Old Places, New Places and the Uneven Geographies of the U.S. Midwest

In this chapter I analyzed the results of the second set of interviews to deepen understanding of the conception of sense of place in nonmetropolitan areas in the Midwest United States by building on multiple meanings of sense of place in relation to the environment, economy, and social life, thereby adding understanding of notions of time. Evolving imaginations of place may relate not only to external drivers of change—the economy, the environment, and mobility culture—but also to individualized meanings arising from the socioeconomic and life-course contexts of the people interviewed. In this chapter, I demonstrated that sense of place is neither singular, passive, nor fixed, but that multiple contested meanings are evident and performed by those involved shaping the area (in this case in relation to possible new transport technologies).

The second set of interviews showed a multiplicity of meanings.

- Various imaginations of place exist.
- Voices differ in imagining place relative to economic, social, and environmental values impacted by passenger HSR.

- Age and mobility shape views on a changing sense of place in nonmetropolitan geographies.

This chapter has advanced understanding of the multiple meanings associated with nonmetropolitan place.

Place in the nonmetropolitan U.S. Midwest is more than merely physical space. Sense of place encompasses the physical as well as the feelings and emotions of people embedded in place: the imagination of place. In this chapter, I interpreted the complex meanings given to place in micropolitan and rural areas of the U.S. Midwest when confronted with the possible addition of passenger HSR and what that might mean in participants' imaginaries of sense of place.

The research about sense of place revealed how, in some ways, the rural Midwest is a contested place. The different imaginations of nonmetropolitan places regarding potential implications for change resulting from new passenger HSR are worth considering in many ways as part of a changing urban–rural dynamic. Too often, space and place are interpreted naïvely as passive and powerless. Furthermore, failure to acknowledge the relational nature of place (Bailey, 2008) and to consider how active discourses of those living in the communities affected by the proposals, risk reinforcing the unequal power relations shaping the geographies of the Midwest. Nonmetropolitan voices must be heard in relation to proposed passenger HSR.

In general, national, state, and regional discussions about HSR, the focus of transport planners, has mostly centered on how linking major cities will impact on urban life, but they have not included those in micropolitan and rural places in the wider conversation about the impact of passenger HSR on Midwestern population geographies.

In this chapter, I showed how the agency of local populations might contribute to the revitalization of the Midwest, adding to the physical investment implied by introducing passenger high-speed train lines. Introducing new transport connections as a catalyst for local agency to bring change is a worthy objective. New rail links should not just serve the interests of the powerful stakeholders of the metropolitan United States. The contribution of this chapter has been to give voice to the nonmetropolitan United States. It should be the objective of planners and decision makers to evaluate how to best to resolve the multiple meanings associated with nonmetropolitan place in an attempt to engage the positive energies of the local community.

CHAPTER 7: DISCUSSIONS AND CONCLUSIONS

Introduction

The purpose of this research was to identify how sense of place in the nonmetropolitan United States was revealed in the context of planning for proposed passenger HSR services. Specifically, the study focused on the nonmetropolitan Midwest, which was one of five regions targeted for passenger HSR. Nonmetropolitan regions that would be linked by passenger HSR are in states commonly known as the “breadbasket” of the United States, because in general the region is characterized by large expanses of mostly flat land with deep topsoil that was traditionally worked by family farms, but is now increasingly farmed by large agribusinesses. This dissertation focused specifically on the case of a proposed high-speed passenger rail in the U.S. Midwest that will link three metropolitan regions: St. Louis, Missouri, to the south, and Chicago, Illinois, and Minneapolis, Minnesota, to the north. I examined two principal questions:

- Perceptions about spatial relationship between nonmetropolitan geographies and large metropolitan areas; and
- Perceptions (aspirations and expectations) of economic, mobility/accessibility, and environmental changes that could occur with the addition of a passenger HSR system and how they disturb and challenge individuals’ sense of place.

Three questions addressed in this research follow:

1. What does planning for an imminent high-speed passenger rail reveal about sense of place and the economy in the nonmetropolitan United States?
2. What does planning for an imminent high-speed passenger rail reveal about sense of place and the environment in the nonmetropolitan United States?

3. What does planning for an imminent high-speed passenger rail reveal about sense of place and mobility/accessibility?

This qualitative study explored how potential changes to economics, the environment, and mobility/accessibility affected ideas of sense of place in nonmetropolitan spaces to be traversed by the HSR. The proposed passenger HSR provided a catalyst for analyzing changes to the conceptions of sense of place and space in nonmetropolitan geographies. The central focus on transportation as a variable to explore socially created perceptions about space and place builds, in part, on the work of Knowles et al. (2008), who argued that transport geography does not take place in a vacuum. Exploring the variables of the environment, economics, and mobility/accessibility show how social, political, and economic circumstances drive different perceptions of space in the nonmetropolitan Midwest.

The results of this study begin to fill a gap that persists in understanding of the human geography of rural/nonurban populations in the United States, particularly in sense of place around economic, social, and environmental issues, in the face of federally imposed transportation changes. It focused specifically on micropolitan (nonurban) and rural geographies to deepen understanding of sense of place, using Bailey's (2008) multidimensional model as an approach to study context, power, and knowledge in relation to emerging population geographies.

This research explored a phenomenon that is not well understood or studied in population geography of the United States by focusing on sense of place in nonmetropolitan areas. Indeed, very little research exists even in planning studies about HSR and its impact (economic, social, and environmental) on nonurban and rural

geographies. Strikingly, studies of the mobility options of rural nonurban populations do not appear in discussions of passenger HSR, much less any understanding of their sense of place and space.

I applied Bailey's (2008) theory of a multidimensional model to study context, power, and knowledge to this study of place and space in relation to emerging population geographies in the nonmetropolitan United States in the context of a proposed new passenger HSR. Bailey's framework of place as "meaningful, active and powerful" was revealed in the polarized understandings of the nature of *place* in relation to planned rail development. This study addressed nonmetropolitan, rural, and micropolitan place and space perceptions. This research presents place and space as active rather than passive, the knowledge of place as relational rather than absolute, and voices about place as powerful and unlimited. This research on place went further, examining the voices of the diverse population whose lives and daily practices are embedded in nonmetropolitan places.

This study of the spatial impact of the proposed HSR on nonurban and rural communities began by comparing the historical development of transportation changes in the United States (i.e., rail growth in the 19th century, automobile growth in the 20th century, and jet aviation growth starting in the 1960s). In the iterative process of the research, other questions emerged: How are the relations between geography and sense of place best understood? How will potential changes in the asymmetries of power in social relations (gender, class, and mobility, revealed in a segmentation analysis) affect the sense of place? How are understandings of environmental issues impacted? How does discourse around the planned project and the local economy reveal representations of

place? (The results presented in Chapters 4 and 5 address the two prior questions and the results presented in Chapter 6 the latter.)

This extensive research project entailed several stages to address not only “verification realism” (Crang, 2008) but also a situated understanding of sense of place. Thorough reviews of secondary sources about the region as well as primary documents specific to the Midwest were the foundation for understanding the economic geography of the region before narrowing the focus. Following close analysis of demographic, economic, and political data, I developed a typology of different types of nonmetropolitan spaces in the Midwest before narrowing the study to those nonmetropolitan spaces to be traversed by the proposed high-speed passenger rail. The next stage of the research was the administration of a qualitative open-ended survey instrument to a purposeful sample of 52 residents. The problem of “insider” versus “outsider” between interviewer and respondents, pointed out as methodologically problematic in transnational studies (Mullings, 1999), in this case was mitigated by my residence and lived experiences in the region. Based on the results of the initial survey, which produced a segmentation analyses of the region, a second round of 30 interviews probed more deeply into perceptions about sense of place in these nonmetropolitan areas.

Emerging Sense of Place in the Nonmetropolitan Midwest

Chapter 4 presented the results of the first two steps of analysis of the findings, identifying thematic categories along an axis for six categories: space, place, and time, with economic, mobility/accessibility, and environmental thinking. I first provided a picture of spatial variations in these areas and established a typology to represent some readily observable differences between different locations, based on secondary sources

and census and economic databases. The purpose was to provide a baseline characterization of locations in those counties that have the potential to have passenger HSR added to their geography, based on verifiable criteria. U.S. Census data (2010) and U.S. County Business Patterns (U.S. Department of Transportation, 2001) data provided material for analysis of the sociological and economic context of each county and the ability to compare and contrast between counties. Of counties, 35 have the potential for passenger HSR, and the data presented provided insight into the demographic and economic strength of each county that has the potential to be affected by the addition of passenger HSR. It also began identification of segmentation that emerged in analysis of the first round of interviews in the domains of space, place, and time and with the components of economic, mobility/accessibility, and environmental concepts. Not surprisingly for the case of the United States, which is a deeply divided country politically, clear polarization in the ways individuals perceived these domains emerged when thinking about the imminent passenger HSR. Regardless of class, I characterized this polarization as an inward-focused sense of place in which participants prioritized local interests rather than more outwardly focused sense of place in which local interests link to larger national or global trends. However, in this polarization of sense of place in the Midwestern United States was a common shared assumption about issues of social mobility/accessibility (defined as the right to move freely regardless of class or race), whether or not the preference was on individual choice about when to travel superseding the advantage of adhering to a schedule that would ensure a quicker trip.

Chapter 4 reported on the emerging sense of place and space and its connections of understandings, perspectives, expectations, ideas, or attitudes about passenger HSR. In

the chapter, I first described the analytical approach of all the counties in the Midwestern states to be impacted by passenger HSR. Analysis led to a sociodemographic typology applied to the 29 nonmetropolitan counties most likely to be directly affected by passenger HSR.

It is important to point out that the demographic statistics for these areas reveal that issues of race and ethnicity are a negligible factor. This is not to discount the concerns of Hispanic migrant workers in the area or Hispanic enclaves around canning plants, nor is it intended to discount issues unique to African Americans or Native Americans living in the regions. Rather, what it reveals is a primarily White population in which individuals of different ethnicities or races are the exception.

The results of the qualitative interviews with community members of the nonmetropolitan region who would be impacted by the introduction of passenger HSR about their concepts of space, time, and place followed. In these three conceptual domains, themes emerged that revealed a sense of place related to the economy, social life, and the environment. Analysis of the first round of interviews in Chapter 4 revealed six important themes, identified as local geography, linked geography, local perceivers, federal thinkers, current time, and future time.

From these perspectives, six further segments emerged in Chapter 5 that showed the array of perceptions in the bipolar picture: economic believers, economic skeptics, social/travel advocates, social/travel challengers, environmental allies, and environmental naysayers. The geographical range of concepts of place fall between geography local and geography nonlocal. The time scales are future time and current time. The conception of space ranges between nonlocal thinkers and local thinkers. In all cases, the range of

knowledge ran between in-depth knowledge and limited knowledge. The richness of the range of responses emerged in the kinds of ways participants described and defined their understandings of passenger HSR and what it meant to their individual perceptions of place, space, and time aligned with the economy, mobility/accessibility, and the environment.

What is Passenger High-Speed Rail? Respondent Defined

Speed. Respondents' perceptions of travel speed affected their concepts of place and space. They understood that HSR would limit the number of stops, which would increase the speed of the rail system as a whole.

Time and life experiences. The conception of time can be applied in two ways: time equated with distance, or time equated with planning. Research respondents defined HSR in how it impacted the respondent's life in time saved to get somewhere, in convenience, or in planning.

Local versus nonlocal perspective. Analysis of responses showed that conceptions about HSR ranged from those more concerned and informed by local conditions to those more grounded in a national/federal perspective.

Limited knowledge. A theme emerging from the interviews was that interviewees disclosed they have very limited knowledge about passenger HSR or do not understand or did not listen to what was defined as passenger HSR

Advantages of High-Speed Rail

When asked about their thoughts about the advantages of HSR, A selection of respondents thought of the advantages from a personal perspective, weighing the advantages between rail travel and other travel. Respondents compared and contrasted the

types of transportation used for personal mobility and HSR. Most-often mentioned among research respondents was the comparison between automobile travel and passenger rail travel. Most comparisons addressed the importance of speed and saved time related to conceptions of place and space.

Disadvantages of High-Speed Rail

Other respondents considered the issues of passenger HSR from a personal perspective only, and did not make any comments on how passenger HSR could impact the community or nation as a whole. For example, the perspectives of federal thinkers on the disadvantages of creating an HSR network centered on the monies needed for implementation of the network, including the cost to build, the cost to operate, and the cost impact on other modes of transportation.

Summary: Componential Analysis/Latent/Coding

The six identified major categories are not mutually exclusive, and all respondents shared elements of multiple categories. This qualitative survey involved 32 participants who responded to questions face to face as well as an additional 27 who responded to the same questions. Although the sample cannot be considered statistically representative, it was purposeful in reaching sufficient representative sectors to ensure saturation in understanding and identifying six major categories and three overlapping concepts to ensure confidence in the conclusions about the commonalities and differences in discourse about passenger HSR.

Chapter 5 presents results of further latent segmentation analysis and the resulting six segments. I used class cluster analysis to group respondents based on attitudinal and preferential perspectives of passenger HSR impacting towns, villages, and small cities. I

added the demographic and economic understandings garnered from Chapter 4, using the conceptions of place, space, and time to analyze conversations about proposed passenger HSR in the study area. Economics, environment, and mobility/accessibility were the three principle dialogs identified for analysis. These results allowed identification of the profile segments. Analysis involved categorizing a large number of attitudes and perceptions on the impact of passenger HSR into the following segments.

Emerging Themes

Economic Believers/ Economic Skeptics

Research participants were asking themselves the questions: *what* type of economic activity HSR could bring or suppress, *where* in that some municipalities would get HSR access and some would not, *why* requiring explanation and clarification, and *so what* referring to the implications and consequences of particular arrangements and processes (MacKinnon & Cumbers, 2007). Diverse outlooks emerged about how local economies might be “driven” by the addition of an HSR network. In general, however, most respondents seemed to imagine that, regardless of the impact, the addition of a HSR line would not dramatically affect (positively or negatively) municipalities. This sentiment was particularly true among those respondents who lived in smaller municipalities with smaller economic bases.

Economic survival, less than potential economic vibrancy, was the predominant concern for rural geographies. A small number of participants did not believe that an HSR network would help the economies of the rural geographies, but most believed the economies could be helped, if only to small degrees. Some respondents expressed a

concern that if HSR did not have a station stop in a municipality, the HSR network would magnify the already slow rural local economy.

Analysis of the second round of open-ended interviews revealed a sense of place in nonmetropolitan areas that is not simply based on an agrarian economy; rather, a rural multicommerce economy emerged with many diverse facets. The economies of the rural and nonmetropolitan geographies are multifaceted in distribution among industries. Agribusiness (farming and its related industries) is a major economic driver, but the micropolitan-geography populations perceived themselves to be more than a single industry. Manufacturing, government, higher education, finance, and others are part of the rural geographies studied. Some of these industries rely heavily on regional, national, and international relationships. Research respondents clearly understood the importance of these relationships. Cronon (1991), in *Nature's Metropolis*, argued that cities are the transfer places between U.S. industry and agriculture. Although this research analysis shows this notion continues to be true, indications also arose that intellectual property and knowledge production are no longer centered in the city.

Respondents understood that access to new communication technology and transportation options would impact the evolution of rural small towns. Echoing the writings of Salamon (2003; parts of this research took place in the same geographies), the changes in small towns will be driven by the older residents as well as the newcomers. A minority of respondents believed their geographies have been bypassed and that economic and population evolution will not take place. In contrast, the possibilities for knowledge work and production in the small towns was a new tendency revealed in this study.

Mobility/Accessibility Travel Advocates/ Challengers

In the sense of mobility/accessibility, the discourse about transportation revealed an expectation of how a transportation mode is supposed to impact residents' mobility and accessibility to place. Although development of the national transportation network is an evolutionary story, comparisons to other historical transportation advances, such as the advent of steam trains in the 1800s, the growth of the automobile industry in the 20th century, or the creation of the low-cost airline industry beginning in the 1980s were negligible. Davidson and Sweeney (2003) argued that although people are always striving to find a "better" mode of transportation, their search is always tempered by the economies of execution. Rather than embracing a paradigm of technological progress and improvement, the nonmetropolitan discourse revealed a greater concern about the large economic commitment of the government involved in the cost of developing a new HSR network. Respondents stated that if "money was no object," an HSR network would be a great addition, but also clearly stated that the economic realities of development, construction, and operations could and would stifle the network's success. Potential change to sense of place includes thinking about potentially quicker access to culture and medical care, both of which are currently limited and increasingly so because of higher gas prices and fewer private medical practices. Employers and highly skilled professionals valued the ability to easily and quickly access cultural and performing-arts opportunities in cities linked by HSR, which would change sense of place of nonmetropolitan areas.

Environmental Allies/Naysayers.

The distribution of thinking about environmental issues showed that the large majority of research respondents were environmental allies or neutral segments.

Environmental considerations of the development of an HSR network varied among research respondents. Among the varied definitions of environmental impact from HSR were the following thoughts: reduced carbon footprints by people driving less; a more environmentally responsible transportation mode; an HSR network would generate unneeded mobility of the population; and an HSR network would cause local pollution problems.

Policy creation and decision making in considerations of environmental stewardship and sustainability were not deemed as of major importance except among a small minority of research respondents. In general, environmental responsibility was deemed to be “nice to have” but not essential. Still, even with this neutral attitude, most research respondents self-described themselves as having an environmental conscience and being sensitive to environmental issues. The laissez-faire attitude (in general) of most research respondents suggested that environmental issues would only play a minor part in shaping the development of local planning and policy.

The segmentation analysis in Chapters 4 and 5 of the concepts held by residents of the nonmetropolitan Midwest regarding the passenger HSR in economic, environment, and travel mobility/accessibility issues revealed a bipolar understanding that in many ways represents the divisions that characterize the nation’s politics. Although it is often generalized that the political division runs along a rural/urban continuum, the recent 2016 elections showed that divisions are more complicated. Chapter 6 analyzed another set of

variables including relational senses of time and power that reveal a more complicated understanding of sense of place in the Midwestern United States that cannot be so easily categorized.

The Sense of Place

The narratives presented in Chapter 6 reveal how people's sense of place in relation to plans for passenger HSR development come from very diverse understandings about the nature of place. They illustrate that a diverse array of human values shape imaginations of how place might change. Additionally, the dimension of time is part of a sense of place. The age/generational characteristics of people, the mobility history of people (here versus elsewhere in the past), and mobility/accessibility issues captured a sense of time.

Despite diversity in the context from which participants understood sense of place (local or interdependent), the research revealed an emerging and clear sense about place, including close identification with major metropolitan areas and a perception that participants were psychologically (emotionally) part of the major metropolitan geography, even though residents of rural or micropolitan spaces are not physically part of the major metropolitan geography. Research respondents understood the linkages between them and the major metropolitan areas (the relationship of space between and among place) and the segments of economic believers and social/travel advocates perceived that the addition of an HSR network would further strengthen those linkages. Research respondents also believed that economic activity could become synergistically interdependent on the development of transportation connections.

Answering Research Questions and Major Findings

Sense of place in the nonmetropolitan U.S. Midwest involves much more than just physical space; it also encompasses feelings and emotions of people embedded in space: the imagination of place. This research showed that discourse around a plan to introduce passenger high-speed train lines as part of a national effort intended to bring about economic revitalization revealed that the rural Midwest is a contested place and that different imaginations of nonmetropolitan places are operating there. This study has given voice to nonmetropolitan U.S. populations in the Midwest, and has also unlocked the idea that people there share a unified voice. Differing imaginations of place exist.

Returning to the three research questions posed for this research, the following answers emerged.

What does planning for an imminent high-speed passenger rail reveal about sense of place and the economy in the nonmetropolitan United States?

Whether or not respondents understood their sense of space from a local outlook or from a sense of place as part of a larger interdependent system, respondents in general did not fully understand the financial structure underlying the proposed project. They had confusion about the differences between federally subsidized passenger-rail transportation and privately owned freight-rail networks. Although most respondents understood that an HSR network would be only a passenger system, respondents did not have a clear understanding of the relationship between passenger systems and freight systems in the United States. In the United States, the rails are owned and controlled by private rail companies, and passenger-rail movements are subservient to those of freight-rail movements. Few respondents had any knowledge of how these rail systems operate

and their interactions and competition for resources. This lack of clarity emerged with some diversity of opinion about the role of government in the economies of nonmetropolitan geographies.

Some respondents understood the forces of political compromise at work because they understood that economic constraints will also be part of the future reality, though they were either confused or did not care about the source of funds. They had concern/interest in how government dollars are spent but did not understand how funding for construction would be structured. However, they did have concerns about how the funds would be administered. They questioned the source of the funding and the (political?) implications: would funding from the federal government drive the decision-making process unilaterally?; would state funding mean the state government would unilaterally drive the decision making?; would federal money funneled through the state mean that state government would unilaterally drive the decision making or would a combination of federal funds and state funds implicate both in bilateral decision making? In respondents' minds, these questions linked to political concepts about the proper role of the federal government in individual state affairs.

The discourse around what the passenger HSR project would mean economically to the sense of place seemed to reinforce Paterson's (2007) theory that the current force of the political economy, the cultural politics, and the environmental politics are automobilecentric in the nonmetropolitan Midwest. Discussion of possible problems associated with HSR development centered mostly on the ability to compete with automobile and transcontinental air travel. Respondents drew comparisons with travel time and convenience of schedule between current train travel, future high-speed train

travel, automobile travel, and air travel. Respondents associated convenience of mobility with accessibility in place, space, and time. This association was important in the comparison between different transport modes. When considering HSR, mobility from trip start assumed use of the automobile to the station, and some respondents even questioned the accessibility of the final destination because of a perceived lack of mobility after exiting the HSR network.

In understanding place in terms of the economy, some perceived place primarily from a local perspective; in contrast, others understood place as part of a larger linked geography (local geography/linked geography). As an example, questions designed to elicit respondents' awareness of European and Asian development and operation of HSR in accessibility and demand revealed how the awareness affected their thinking about their local scenarios. In this way, respondents revealed their knowledge about transportation issues, as well as local stakeholders' spatial perceptions of economic, social, and environmental matters. Although some respondents perceived possibilities for local and regional players to continue to play controlling roles in local economies, the general consensus was that strong central (federal) controls would have absolute authority in matters impacting local economies and HSR.

Other respondents looked at political compromise because they understood that economic constraints will also be part of the future reality, though they were either confused or did not care about the source of the funds. They had concern/interest in how government dollars are spent but they did not understand how the funding for construction would be structured. However, they did have concerns about how funds

would be administered. They questioned the source of the funding and the (political) implications.

Some respondents understood that accessibility to place (their place and other places) may be lessened when a limited-stop HSR network is added to the economic mix. Research participants understood that an HSR network would only have limited stops and that only larger rural economic centers (micropolitan areas) would most likely have direct train access. These micropolitan areas would be fed by the smaller economic towns and hamlets that surround them. A minority of respondents believed that unless their municipality was a designated stop, no economic benefit would accrue to the municipality from an HSR network. Mirroring findings by Gutierrez et al. (1996) on HSR in Europe, these findings for the nonmetropolitan Midwest show that respondents worried that accessibility would increase for those geographies directly along the lines, but may not stay even and could possibly decrease for those geographies that are not tied to the new network, thereby directly affecting the economic and social benefits.

What does planning for an imminent high-speed passenger rail reveal about sense of place and the environment in the nonmetropolitan United States?

The distribution of thinking about environmental issues showed that more research respondents fell into the environmental-allies segment than those into the environmental-neutrals segment; very few were part of the environmental-naysayers segment. Environmental consideration of the development of an HSR network varied among research respondents. Among the varied positive and negative perceptions of the environmental impact from HSR were the following: it would reduce carbon footprints by people driving less; HSR would be a more environmentally responsible transportation

mode; an HSR network would generate unneeded mobility of the population; and an HSR network would cause local pollution problems.

Policy creation and decision making in consideration of environmental stewardship and sustainability were not deemed as “all important” except among a very few research respondents. In general, environmental responsibility was deemed to be “nice to have but not essential. Still, even with this neutral attitude, most research respondents self-described themselves as having an environmental conscience and being sensitive to environmental issues. Environmental concerns would not be important in shaping the future development local planning and policy.

Although respondents had a weak grasp on the general planning and policy dimensions of the HSR project at the rural/nonurban local level, they had a clear sense that policy planning of HSR was driven by forces outside the local level. In this respect they had strong awareness of and opinions about social and environmental questions in nonurban and rural geographies, and a generally clear perception of the interdependencies between proposed actions and social and environmental ramifications.

Environmentally aware and passionate research respondents (the environmental-allies segment) described the conundrum that the addition of HSR networks would generate increased demand through accessibility to new places. The Jevons Paradox, used in economic modeling, can be applied to HSR travel. In giving humans increased mobility, the increased demand for travel commensurately increases the carbon footprint of travel (Kasarda & Lindsay, 2011). Except for one transportation research expert who questioned the need for travel, a few respondents raised the concern but valued the greater good of accessibility to wider places through travel.

What does planning for an imminent passenger high-speed rail reveal about sense of place and mobility/accessibility?

Nonurban/rural respondents understood the linkages between their geographies and the added possibility of making connections to national and international aviation networks through the use of HSR systems. Respondents were aware that major metropolitan regions in other parts of the world link to coordinated systems of hubbed rail and aviation transportation. Respondents compared these systems to the proposed HSR network that would connect to the major international airports in the region. Respondents agreed that the accessibility to the major metropolitan areas was attractive not only because of accessibility to the metropolitan area itself, but also to national and international linkages through major metropolitan airports. However, the attraction of additional accessibility to international airports with HSR was tempered by concerns about the lack of flexibility in time of departure, which is not a problem with private passenger cars.

Research respondents' understanding of the importance of mobility in different transport modes confirmed Knowles and Hoyle's (1998) argument that geographical inquiry drives humans' quest for greater levels of mobility. The importance of accessibility, related to choice in the time and space of transportation in the nonmetropolitan sense of place, is a significant new finding.

Most discourse centered on the HSR network as a regional network, independent of the larger national project. Discussion of the rural local public-transportation modes and how they would or should impact (feed) a new HSR station development did not occur, suggesting the negligible role it plays in a local sense of place. Despite the

existence of public-transportation systems in these micropolitan geographies, their scope and size are quite small. The implied assumption was that the mobility of the rural population would not change and that the current majority mode of transport (automobile) would continue as the feeder transport mode to the HSR line. In imagining the impact, the sense of how it would change local sense of place did not extend to include national or international ties that might open. Applying Fröidh's (2005) study to this geographic study area, the new catchment areas created from the addition of an HSR-network station would be limited because of the automobile-feeder network to these stations. Fröidh believed that high frequency of service, low ticket prices, and short travel times with a high degree of comfort would capture traffic; creating better accoutrements for a place would allow a better relationship of space between places.

Conclusions

The current sense of place is problematic in terms of traffic and increasing inconveniences in moving about to do errands or get anywhere, and despite a vision that HSR could potentially ease these inconveniences and even regenerate small-town downtowns, respondents also acknowledged that current problems will intensify until the political will exists to do something. It became quite clear from the results that despite these polarities, residents had considerable sophistication and experience with global connections in the nonmetropolitan Midwest. The old stereotype about rural areas being a wasteland of "country bumpkins" in the United States cannot be applied to the nonmetropolitan Midwest. The following observations emerged:

- Passenger HSR disturbs sense of place by revealing tension between relative advantage of local business and political interests versus the advantage of

tying communities together and facilitating greater access to other nonmetropolitan regions.

- Passenger HSR reveals issues of perceptions about social justice in sense of place. Residents wondered if trade-offs would compensate for potential losses.
- Proposed passenger HSR politicized the sense of place by raising issues of local versus state versus federal control, particularly in Wisconsin, where a dramatic political turnabout emerged, regardless of the political party of individual (Democrat, Republican, Independent, or Other).
- Potential change to sense of place raises the possibility of potentially quicker access to medical care, access now growing more difficult and limited because of higher gas prices and fewer private medical practices.
- The potential that passenger HSR would provide quick access to cultural and performing-arts opportunities in linked metropolitan areas was perceived as an advantage, in particular by employers and highly skilled professionals, providing possibility for retaining and attracting employees and encouraging stability over population lost by young people leaving.
- In contrast, the potential disadvantage that passenger HSR might pose in traffic and increasing inconveniences in moving about to do errands or get anywhere locally, especially if the passenger HSR would transect a town center, despite possibilities of regenerating small-town downtowns, also revealed ambivalence about the potential change to sense of place.
- The potential impact of passenger HSR on the environment, either locally or more widely, also revealed the polarization in perceptions of sense of place, in

which one pole values a rooted sense of place and prioritized local concerns, while the other understood sense of place as part of a wider system, averring that what happens locally must consider the wider good.

Sense of place in the nonmetropolitan U.S. Midwest involves much more than just physical space; it also encompasses the physical and emotional aspects of people embedded in place: the imagination of place. Local populations perceived that although introducing passenger high-speed train lines might contribute to the revitalization of the Midwest, the rural Midwest is a contested place and that different imaginations of nonmetropolitan places are operating there.

Although the study has given voice to nonmetropolitan U.S. populations in the Midwest, it has also unlocked the idea that this is a unified voice, and that differing imaginations of place exist. It should be the objective of planners and decision makers to evaluate how to best to resolve the multiple meanings associated with nonmetropolitan place in an attempt to engage the energies of the local community.

In a discussion of *The Power of Place and Space*, Sack (1993) argued that people are all geographical beings and place provides power to people. Discussion about the potential of an HSR network impacting the rural nonurban geographies is taking place and shaping discourse about a nonmetropolitan sense of place. Despite a robust skepticism that the completion of a new HSR network will happen, the population of these rural geographies believe that if a new rail network would be added, fundamental changes to the local rural geographies would result. However, divergent opinions emerged on what these changes to the economic, social, and environmental issues would mean, and these divergent opinions revealed in the segmentation analysis suggested that

power dynamics are likely to shift, leaving the less advantaged more isolated and less likely to benefit from the advantages of closer regional ties to the metropolis and international transportation hubs that reduce space. All agreed on one point: if a new HSR network was brought to the rural nonurban geographies, that the sense of the rural nonurban place would fundamentally change. Spatial relationships between rural and urban would change and the definition of rural nonurban place would change. If place changes with new attributes, then the strength and power of that place changes.

Respondents perceived HSR as one of the new attributes.

According to MacKinnon and Cumbers (2007), the commonality of economic development activity within and between the geographies creates and defines the megalopolis. This research indicated that commonality is more than merely a definition; rather, commonality is a perception of the nonmetropolitan place that assumes unity of economics (information technology, production, and trade) as well as social and emotional considerations, again shrinking space as rural nonurban place is redefined and transformed. Anas, Arnott, and Small (1998) theorized that micropolitan geographies act like edge cities and could be conceived as edge cities. Senses of place get redefined with the shrinkage of space, and HSR further expands the psychological/emotional boundaries of metropolitan geographies. Although this sense of shrinkage may occur over time in the case of the implementation of HSR in the U.S. Midwest, the sense of place that emerges from this research does not yet reach that point, and a sense of separation still characterizes nonmetropolitan sense of space.

Mobility of the rural population and *accessibility* of the rural geography were at the core of the research questions and at the core of the research findings. Results showed

that the rural population understood and had distinct perceptions of their spatial place in the overall geography. Consensus of the research respondents was that a new transport form, HSR, would impact the dynamics of the population's mobility. Additionally, a new transport form would impact the accessibility of place for the rural geography's relationship with the urban geography and the urban geography's relationship with the rural geography. Research participants believed that with the possible addition (however unlikely) of an HSR network, mobility and accessibility would fundamentally change. Space and place would transform.

The creation of different transportation modes like HSR and the evolution of the information age creates shrinkage of space (Knowles et al., 2008). This research reveals perceived desire and perceived need for the synergy of information and communication technology and HSR among research participants who favor the creation of an HSR network. Connections with large metropolitan areas, be they through electronic means or through an HSR network, answer an important need for these rural geographies populations. Lewis' (1995) contention that the nonurban landscape allowed for a nonagrarian population was reinforced with the blending of information and communication technology and advanced transportation technologies. Research participants who looked favorably on the addition of an HSR network also sought the transformation of the rural United States into an extended geography of the metropolitan United States. Place that has new and enhanced accoutrements is changed fundamentally and deemed more attractive and more desirable.

The research about sense of place revealed how, in some ways, the rural Midwest is a contested place. The different imaginations of nonmetropolitan places regarding

potential implications for change resulting from new passenger HSR are worth considering in many ways as part of a changing urban–rural dynamic. Too often, space and place are interpreted naïvely as passive and powerless. Furthermore, failure to acknowledge the relational nature of place (Bailey, 2008) and to consider how active discourses of those living in the communities affected by the proposals, risks reinforcing the unequal power relations shaping the geographies.

Returning to Bailey's (2008) multidimensional model to study context, power, and knowledge, this study revealed some concrete understandings about the nonmetropolitan Midwest. For example, for power, tension emerged between metropolitan/nonmetropolitan, but more tension among local, state, and federal power. Although identity tied to nonmetropolitan place, some perceived it from a locally rooted perspective and others from an interdependent perspective. Respondents perceived tension about race/ethnicity as an urban issue, negligible in the nonmetropolitan Midwest. Some had varying perceptions about class, economics, and sense of place, ranging from a relative lack of economic understanding to greater tension, but not necessarily class tension. Regardless of perspective from which sense of place was experienced (local versus interdependent), respondents had knowledge of a general awareness of regional ties with metropolitan areas and lacked provincial thinking.

Limitations of the Study

The research was limited by the following constraints: it was delimited to specific geographies, specific sample populations, specific scope, and depth of research questions. This research created a basic understanding of rural nonurban geographies in regard to specific and limited economic, social, and environmental issues in the U.S. Midwest. The

sample population was limited to a subset of the rural nonurban populace that excluded the youth population and farmers. Because of research-design constraints and interview-time constraints, the research questions had a limited scope.

This research was a qualitative empirical study of the perceptions of the expectations and aspirations of the populations of rural (nonurban) geographies on economic, social/transportation, and environmental issues affecting them with the addition of a passenger HSR system. This study focused on the relationships between and among the urban and rural geographies in relationship to the academic focus of the geographic theories of place and space.

This study *did not* examine local public policy on passenger HSR; it *did not* provide an analysis and ruling of whether a passenger HSR system would benefit or detract from the population; and it *is not* a review of the decision-making processes currently in place. Additionally, it *is not* a study of local organized community activism or organized special interest groups. This study is about the sense of place in a nonmetropolitan space that can be applied to a broad spectrum of world geographies, even though the research was limited to this specific geography.

Future Research Directions

This research study is an empirical assessment of the expectations and aspirations of the nonmetropolitan population about the proposed passenger HSR. The research design was intended to permit transfer of learnings (generalizability of the findings). The findings from the research may be used directionally or in detail to address the following problems.

- Use Bailey's multidimensional approach to define population geography by addressing nonurban versus urban differences.
- Study HSR discourses from the perspective of psychological and sociological disciplines.
- Evaluate and reevaluate national and local transportation policy and theory from a comparative perspective of this case.
- Study transportation environmental impact.
- Study a business model of HSR operations as to schedule, price sensitivity, and other aspects.
- Examine local rural public-transportation theory.
- Study local economic-development impact and economic creation.
- Add rural nonurban new depth of knowledge to megalopolis theory and edge-city theory.

Summary

This research was a first look at discourses on place and space in rural nonurban geographies. The study addressed the significance of space and place of rural nonurban geographies in understanding the impact of an HSR network in the geographies. This research was a step in defining the discourses taking place in rural nonurban geographies on the impact HSR would have on the economic, social/transportation, and environmental parameters of the geographies.

The importance of pursuing the gap in the research about place and space in the nonmetropolitan United States was that the impact and potential transformation of economic, mobility/accessibility, and environmental dimensions of an area could be

higher and more significant in nonurban and rural areas than in the large metropolitan areas that anchor the ends of the HSR networks. At the core of the academic-research direction was the understanding that the current knowledge of rural nonurban geographies in its population's mobility and its self-described sense of place and space was not previously addressed and defined. In the research findings, the concepts of place and space were categorized into the segments of economic, social/transportation, and environmental directions of commonality. The rural nonurban population believes that an HSR network would enhance the population's mobility and that the relationship of space between and among urban and nonurban place would continue to develop into a closer and more mutual linkage.

State and federal policy planners can use the new knowledge created about these nonurban and rural geographies in the development of appropriate HSR policy creation. Findings can also inform and contribute to larger academic discussions about the human dimension of geographic space, time, and place.

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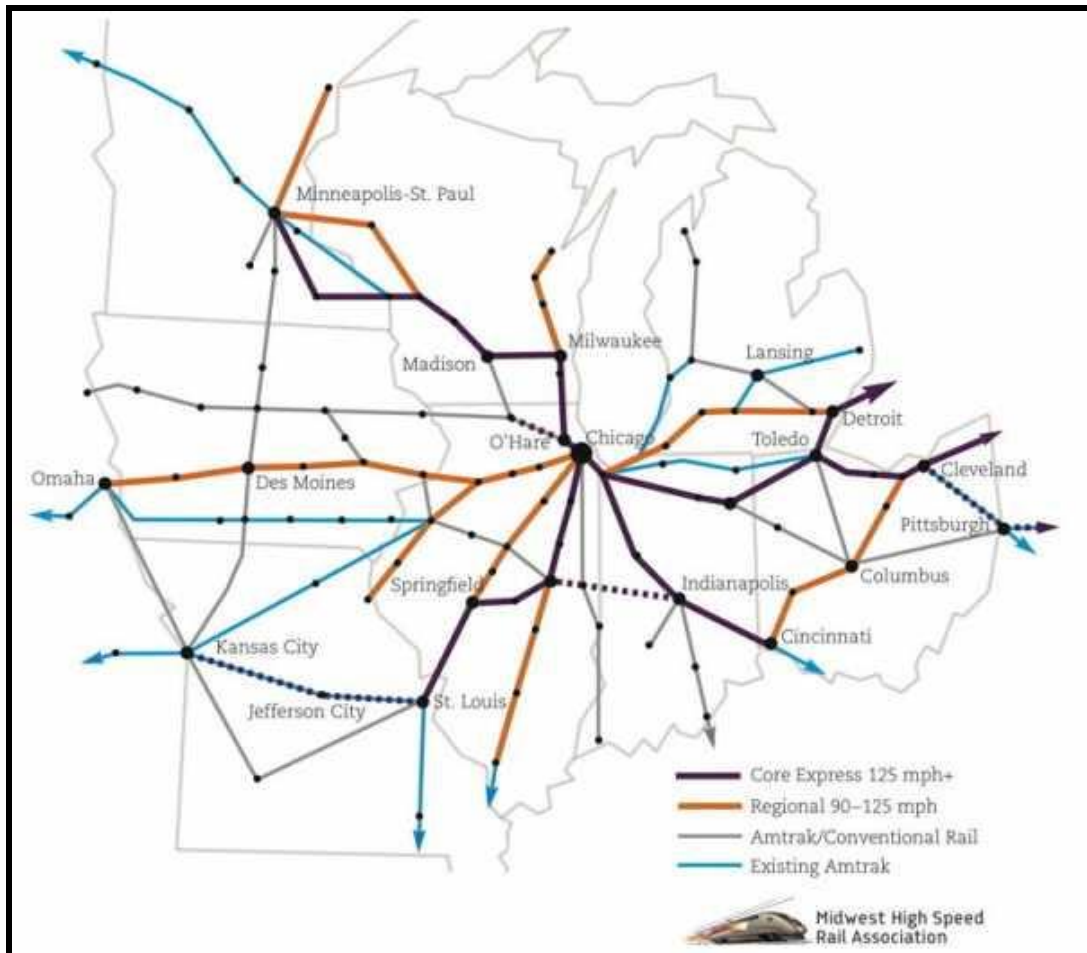
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EXHIBIT 1: PROPOSED MIDWEST HIGH SPEED RAIL NETWORKS



Source: The Vision, by Midwest High Speed Rail Association, 2014, retrieved from <http://www.midwesthsr.org/vision>

EXHIBIT 3: LOCAL NEWSPAPER URLS

City	County	Newspaper URLs
Dwight	Livingston County, IL	http://www.pontiacdailyleader.com/
Decatur	Macon County, IL	http://www.herald-review.com/
Kankakee	Kankakee County, IL	http://daily-journal.com/
Bloomington	McLean County, IL	http://www.pantagraph.com/
Springfield	Sangamon County, IL	http://www.sj-r.com/
Champaign	Champaign County, IL	http://www.news-gazette.com/
Rockford	Winnebago County, IL	http://www.rrstar.com/
Kalamazoo	Kalamazoo County, MI	http://www.mlive.com/kzgazette/
Battle Creek	Calhoun County, MI	http://www.battlecreekenquirer.com/
Grand Rapids	Kent County, MI	http://www.grandrapidspress.com/main/
Kenosha	Kenosha County, WI	http://www.kenoshanews.com/home/
Racine	Racine County, WI	http://www.journaltimes.com/
Madison	Dane County, WI	http://www.journaltimes.com/

EXHIBIT 4: FOUR-STATE SUMMARY AND PROPOSED ROUTE MAPS

Table 4.1

Understanding Midwest Counties—Four-State Summary Report

Potential HSR County	Population, 2014 estimate	Pop % change - 2010 to 2014	Summary of Wholesale, Retail, and Food Combined Sales per capita, 2007 (with 2010pop)	Pop Growth	Sales Strength	
UNITED STATES	318,857,056	3.3	\$28,197			
ILLINOIS	12,880,580	0.4	\$32,890			
INDIANA	6,596,855	1.7	\$24,376			
MICHIGAN	9,909,877	0.3	\$23,347			
WISCONSIN	5,757,564	1.2	\$24,886			
Four States (IL, IN, MI, WI)	35,144,876		\$27,299			
Menominee County, WI	4,522	6.9	\$1,230	Growth	UnderProducing	1
Switzerland County, IN	10,452	-1.5	\$2,248	Negative	UnderProducing	2
Pope County, IL	4,276	-4.3	\$2,336	Negative	UnderProducing	3
Cumberland County, IL	10,833	-1.9	\$2,351	Negative	UnderProducing	4
Alexander County, IL	7,492	-9.1	\$2,774	Negative	UnderProducing	5
Keweenaw County, MI	2,217	2.8	\$3,547	Growth	UnderProducing	6
Hardin County, IL	4,129	-4.4	\$3,560	Negative	UnderProducing	7
Crawford County, IN	10,655	-0.5	\$3,801	Flat	UnderProducing	8
Henderson County, IL	6,916	-5.6	\$3,827	Negative	UnderProducing	9
Ohio County, IN	6,035	-1.5	\$3,873	Negative	UnderProducing	10
Putnam County, IL	5,814	-3.2	\$3,984	Negative	UnderProducing	11
Cass County, MI	51,608	-1.3	\$4,026	Negative	UnderProducing	12
Brown County, IL	6,832	-1.5	\$4,327	Negative	UnderProducing	13
Union County, IN	7,246	-3.6	\$4,526	Negative	UnderProducing	14
Massac County, IL	14,905	-3.4	\$4,922	Negative	UnderProducing	15
Pulaski County, IL	5,815	-5.6	\$5,168	Negative	UnderProducing	16
Hamilton County, IL	8,296	-1.9	\$5,283	Negative	UnderProducing	17
Lake County, MI	11,341	-1.7	\$5,295	Negative	UnderProducing	18
Owen County, IN	20,969	-2.8	\$5,413	Negative	UnderProducing	19
Calhoun County, IL	4,956	-2.6	\$5,440	Negative	UnderProducing	20
Alcona County, MI	10,454	-4.5	\$5,443	Negative	UnderProducing	21
Mercer County, IL	15,945	-3.0	\$5,531	Negative	UnderProducing	22
Brown County, IN	14,962	-1.8	\$5,614	Negative	UnderProducing	23
Pierce County, WI	40,958	-0.1	\$5,886	Flat	UnderProducing	24
Florence County, WI	4,481	1.3	\$5,889	Growth	UnderProducing	25
Marquette County, WI	15,050	-2.3	\$5,965	Negative	UnderProducing	26
Carroll County, IN	19,923	-1.2	\$5,980	Negative	UnderProducing	27
Benton County, IN	8,700	-1.7	\$6,037	Negative	UnderProducing	28
Parke County, IN	17,233	-0.7	\$6,287	Flat	UnderProducing	29
Barry County, MI	59,281	0.2	\$6,435	Flat	UnderProducing	30
Gladwin County, MI	25,411	-1.1	\$6,490	Negative	UnderProducing	31
Missaukee County, MI	15,037	1.3	\$6,825	Growth	UnderProducing	32
Scott County, IL	5,204	-2.8	\$6,836	Negative	UnderProducing	33
Marshall County, IL	12,014	-5.0	\$6,938	Negative	UnderProducing	34
Schuyler County, IL	7,330	-2.8	\$7,037	Negative	UnderProducing	35
Miami County, IN	35,954	-2.6	\$7,078	Negative	UnderProducing	36
Johnson County, IL	12,601	0.2	\$7,080	Flat	UnderProducing	37
Alger County, MI	9,459	-1.5	\$7,148	Negative	UnderProducing	38
Forest County, WI	9,127	-1.9	\$7,196	Negative	UnderProducing	39
Buffalo County, WI	13,188	-2.9	\$7,230	Negative	UnderProducing	40
Washington County, IN	27,878	-1.4	\$7,324	Negative	UnderProducing	41
Greene County, IN	32,726	-1.3	\$7,405	Negative	UnderProducing	42
Clinton County, IN	32,776	-1.3	\$7,484	Negative	UnderProducing	43
Oscoda County, MI	8,371	-3.1	\$7,654	Negative	UnderProducing	44
Menominee County, MI	23,714	-1.3	\$7,662	Negative	UnderProducing	45

Table 4.1

Understanding Midwest Counties—Four-State Summary Report (continued)

Potential HSR County		Population, 2014 estimate	Pop % change - 2010 to 2014	Summary of Wholesale, Retail, and Food Combined Sales per capita, 2007 (with 2010pop)	Pop Growth	Sales Strength	
2	Oceana County, MI	26,221	-1.3	\$7,670	Negative	UnderProducing	46
	Woodford County, IL	39,187	1.4	\$7,871	Growth	UnderProducing	47
	Montmorency County, MI	9,300	-4.8	\$7,989	Negative	UnderProducing	48
	Burnett County, WI	15,328	-0.8	\$8,034	Flat	UnderProducing	49
	Gallatin County, IL	5,291	-5.3	\$8,062	Negative	UnderProducing	50
	Antrim County, MI	23,267	-1.3	\$8,141	Negative	UnderProducing	51
	Noble County, IN	47,618	0.2	\$8,271	Flat	UnderProducing	52
	Oconto County, WI	37,417	-0.6	\$8,342	Flat	UnderProducing	53
	Van Buren County, MI	75,199	-1.4	\$8,356	Negative	UnderProducing	54
	Gratiot County, MI	41,665	-1.9	\$8,393	Negative	UnderProducing	55
	Jennings County, IN	28,000	-1.8	\$8,409	Negative	UnderProducing	56
	Arenac County, MI	15,353	-3.4	\$8,451	Negative	UnderProducing	57
	Leelanau County, MI	21,915	1.0	\$8,568	Growth	UnderProducing	58
	Fulton County, IL	36,007	-2.9	\$8,586	Negative	UnderProducing	59
	Perry County, IN	19,454	0.6	\$8,599	Flat	UnderProducing	60
	Wells County, IN	27,862	0.8	\$8,705	Flat	UnderProducing	61
	Baraga County, MI	8,654	-2.3	\$8,799	Negative	UnderProducing	62
	Adams County, WI	20,215	-3.2	\$8,860	Negative	UnderProducing	63
	Kewaunee County, WI	20,444	-0.6	\$8,861	Flat	UnderProducing	64
	Presque Isle County, MI	13,004	-2.8	\$8,882	Negative	UnderProducing	65
	Clare County, MI	30,652	-0.9	\$8,893	Flat	UnderProducing	66
	Ogle County, IL	52,085	-2.6	\$9,303	Negative	UnderProducing	67
	Starke County, IN	23,074	-1.2	\$9,336	Negative	UnderProducing	68
	Ionia County, MI	64,294	0.6	\$9,434	Flat	UnderProducing	69
	Franklin County, IN	22,934	-0.7	\$9,458	Flat	UnderProducing	70
	Newaygo County, MI	47,900	-1.2	\$9,473	Negative	UnderProducing	71
	Shiawassee County, MI	68,933	-2.4	\$9,515	Negative	UnderProducing	72
	Dunn County, WI	44,305	1.0	\$9,677	Growth	UnderProducing	73
	Marion County, IL	38,571	-2.2	\$9,699	Negative	UnderProducing	74
	Osceola County, MI	23,169	-1.5	\$9,713	Negative	UnderProducing	75
	Branch County, MI	43,545	-3.8	\$9,760	Negative	UnderProducing	76
	Lawrence County, IL	16,519	-2.3	\$9,769	Negative	UnderProducing	77
Stark County, IL	5,813	-3.0	\$9,777	Negative	UnderProducing	78	
Pike County, IN	12,624	-1.7	\$9,831	Negative	UnderProducing	79	
Union County, IL	17,447	-2.0	\$9,865	Negative	UnderProducing	80	
St. Joseph County, MI	60,946	-0.6	\$10,011	Flat	UnderProducing	81	
Huntington County, IN	36,706	-1.1	\$10,028	Negative	UnderProducing	82	
1	Logan County, IL	29,746	-1.8	\$10,092	Negative	UnderProducing	83
	Perry County, IL	21,672	-3.0	\$10,137	Negative	UnderProducing	84
	Dearborn County, IN	49,506	-1.1	\$10,183	Negative	UnderProducing	85
	Manistee County, MI	24,420	-1.3	\$10,196	Negative	UnderProducing	86
	Benzie County, MI	17,519	0.0	\$10,211	Flat	UnderProducing	87
	Henry County, IL	49,635	-1.7	\$10,292	Negative	UnderProducing	88
	Vermilion County, IL	79,728	-2.3	\$10,326	Negative	UnderProducing	89
	Orange County, IN	19,626	-1.1	\$10,381	Negative	UnderProducing	90
	Taylor County, WI	20,540	-0.7	\$10,400	Flat	UnderProducing	91
	Houghton County, MI	36,495	-0.4	\$10,427	Flat	UnderProducing	92
	Putnam County, IN	37,618	-0.9	\$10,529	Flat	UnderProducing	93
	Clark County, WI	34,423	-0.8	\$10,698	Flat	UnderProducing	94
	Price County, WI	13,675	-3.4	\$10,738	Negative	UnderProducing	95
	Monroe County, MI	149,824	-1.4	\$10,767	Negative	UnderProducing	96
DeKalb County, IN	42,383	0.4	\$10,809	Flat	UnderProducing	97	

Table 4.1

Understanding Midwest Counties—Four-State Summary Report (continued)

Potential HSR County		Population, 2014 estimate	Pop % change - 2010 to 2014	Summary of Wholesale, Retail, and Food Combined Sales per capita, 2007 (with 2010pop)	Pop Growth	Sales Strength	
	Muskegon County, MI	172,344	0.1	\$10,905	Flat	UnderProducing	98
	Stephenson County, IL	46,435	-2.7	\$11,011	Negative	UnderProducing	99
	Lincoln County, WI	28,493	-0.9	\$11,018	Flat	UnderProducing	100
	Lafayette County, WI	16,853	0.1	\$11,021	Flat	UnderProducing	101
	Manitowoc County, WI	80,160	-1.6	\$11,026	Negative	UnderProducing	102
	Ripley County, IN	28,497	-1.1	\$11,052	Negative	UnderProducing	103
1	Kankakee County, IL	111,375	-1.8	\$11,093	Negative	UnderProducing	104
	Lee County, IL	34,735	-3.6	\$11,141	Negative	UnderProducing	105
	Iron County, MI	11,387	-3.6	\$11,143	Negative	UnderProducing	106
1	Livingston County, IL	37,903	-2.7	\$11,161	Negative	UnderProducing	107
	Whitley County, IN	33,403	0.3	\$11,166	Flat	UnderProducing	108
	Charlevoix County, MI	26,121	0.7	\$11,169	Flat	UnderProducing	109
	LaGrange County, IN	38,436	3.5	\$11,187	Growth	UnderProducing	110
	Scott County, IN	23,712	-1.9	\$11,246	Negative	UnderProducing	111
3	Jefferson County, WI	84,395	0.9	\$11,276	Flat	UnderProducing	112
	Waushara County, WI	24,178	-1.3	\$11,346	Negative	UnderProducing	113
	Lawrence County, IN	45,704	-0.9	\$11,372	Flat	UnderProducing	114
	Bayfield County, WI	14,985	-0.2	\$11,414	Flat	UnderProducing	115
	Kosciusko County, IN	78,564	1.6	\$11,468	Growth	UnderProducing	116
	Christian County, IL	33,892	-2.6	\$11,473	Negative	Near AVG	117
	Iosco County, MI	25,420	-1.8	\$11,505	Negative	Near AVG	118
	Adams County, IN	34,791	1.2	\$11,544	Growth	Near AVG	119
	Montcalm County, MI	62,893	-0.7	\$11,584	Flat	Near AVG	120
	Midland County, MI	83,427	-0.2	\$11,686	Flat	Near AVG	121
	Isabella County, MI	70,616	0.4	\$11,707	Flat	Near AVG	122
2	Jackson County, MI	159,741	-0.3	\$11,708	Flat	Near AVG	123
	Sanilac County, MI	41,587	-3.5	\$11,736	Negative	Near AVG	124
	Gogebic County, MI	15,737	-4.2	\$11,789	Negative	Near AVG	125
	Lapeer County, MI	88,153	-0.2	\$11,804	Flat	Near AVG	126
	Calumet County, WI	49,491	1.1	\$11,827	Growth	Near AVG	127
	Boone County, IL	53,869	-0.6	\$11,838	Flat	Near AVG	128
	Franklin County, IL	39,411	-1.4	\$11,857	Negative	Near AVG	129
	McDonough County, IL	31,880	-2.2	\$11,986	Negative	Near AVG	130
	Saline County, IL	24,612	-1.2	\$12,020	Negative	Near AVG	131
	Jersey County, IL	22,571	-1.8	\$12,051	Negative	Near AVG	132
	Morgan County, IN	69,693	1.1	\$12,063	Growth	Near AVG	133
	Mecosta County, MI	43,186	0.9	\$12,128	Flat	Near AVG	134
	Grant County, IN	68,569	-2.1	\$12,188	Negative	Near AVG	135
	Luce County, MI	6,426	-3.1	\$12,277	Negative	Near AVG	136
	Clay County, IN	26,562	-1.2	\$12,303	Negative	Near AVG	137
	Vermillion County, IN	15,693	-3.2	\$12,389	Negative	Near AVG	138
	Ontonagon County, MI	6,172	-9.0	\$12,431	Negative	Near AVG	139
	Waupaca County, WI	52,066	-0.7	\$12,562	Flat	Near AVG	140
	Fulton County, IN	20,500	-1.6	\$12,618	Negative	Near AVG	141
3	Racine County, WI	195,163	-0.1	\$12,654	Flat	Near AVG	142
	Harrison County, IN	39,299	-0.2	\$12,689	Flat	Near AVG	143
	Trempealeau County, WI	29,509	2.4	\$12,718	Growth	Near AVG	144
	Marshall County, IN	47,107	0.1	\$12,784	Flat	Near AVG	145
	Martin County, IN	10,203	-1.7	\$12,802	Negative	Near AVG	146
2	Calhoun County, MI	134,878	-0.9	\$12,878	Flat	Near AVG	147
	Fayette County, IN	23,468	-3.4	\$13,035	Negative	Near AVG	148

Table 4.1

Understanding Midwest Counties—Four-State Summary Report (continued)

Potential HSR County		Population, 2014 estimate	Pop % change - 2010 to 2014	Summary of Wholesale, Retail, and Food Combined Sales per capita, 2007 (with 2010pop)	Pop Growth	Sales Strength	
	Warrick County, IN	61,149	2.4	\$13,075	Growth	Near AVG	149
	Jefferson County, IN	32,494	0.2	\$13,133	Flat	Near AVG	150
	Douglas County, WI	43,698	-1.0	\$13,158	Flat	Near AVG	151
	Jackson County, IL	59,677	-0.9	\$13,159	Flat	Near AVG	152
	Hillsdale County, MI	45,830	-1.8	\$13,179	Negative	Near AVG	153
	Tuscola County, MI	54,000	-3.1	\$13,280	Negative	Near AVG	154
	Bay County, MI	106,179	-1.5	\$13,322	Negative	Near AVG	155
	Decatur County, IN	26,524	3.0	\$13,399	Growth	Near AVG	156
	Monroe County, IL	33,722	2.3	\$13,401	Growth	Near AVG	157
	Allegan County, MI	113,847	2.2	\$13,525	Growth	Near AVG	158
	Polk County, WI	43,437	-1.7	\$13,557	Negative	Near AVG	159
	Henry County, IN	48,995	-0.9	\$13,575	Flat	Near AVG	160
	Vernon County, WI	30,362	2.0	\$13,577	Growth	Near AVG	161
	Crawford County, IL	19,393	-2.1	\$13,642	Negative	Near AVG	162
	Delta County, MI	36,559	-1.4	\$13,656	Negative	Near AVG	163
3	Juneau County, WI	26,395	-1.0	\$13,675	Flat	Near AVG	164
	Adams County, IL	66,988	-0.2	\$13,834	Flat	Near AVG	165
	Jackson County, IN	43,705	3.1	\$13,875	Growth	Near AVG	166
	Cheboygan County, MI	25,675	-1.8	\$13,878	Negative	Near AVG	167
	Marinette County, WI	41,298	-1.1	\$13,923	Negative	Near AVG	168
	DeKalb County, IL	105,462	0.3	\$13,960	Flat	Near AVG	169
	Shelby County, IL	22,048	-1.4	\$13,963	Negative	Near AVG	170
	Kalkaska County, MI	17,394	1.4	\$14,063	Growth	Near AVG	171
	Knox County, IL	52,069	-1.6	\$14,167	Negative	Near AVG	172
	Schoolcraft County, MI	8,171	-3.7	\$14,257	Negative	Near AVG	173
	Grant County, WI	51,829	1.2	\$14,286	Growth	Near AVG	174
	Rusk County, WI	14,333	-2.9	\$14,289	Negative	Near AVG	175
	Gibson County, IN	33,759	0.8	\$14,360	Flat	Near AVG	176
	Moultrie County, IL	14,837	-0.1	\$14,408	Flat	Near AVG	177
	Chippewa County, MI	38,321	-0.9	\$14,521	Flat	Near AVG	178
	Washburn County, WI	15,694	-1.4	\$14,540	Negative	Near AVG	179
1	Macon County, IL	108,350	-2.2	\$14,638	Negative	Near AVG	180
1	Macoupin County, IL	46,453	-2.7	\$14,707	Negative	Near AVG	181
	Randolph County, IN	25,384	-3.0	\$14,772	Negative	Near AVG	182
	Portage County, WI	70,482	0.7	\$14,780	Flat	Near AVG	183
	Marquette County, MI	67,676	0.9	\$14,797	Flat	Near AVG	184
	Madison County, IN	130,069	-1.2	\$14,922	Negative	Near AVG	185
	Lenawee County, MI	99,047	-0.8	\$14,924	Flat	Near AVG	186
	Jackson County, WI	20,652	1.0	\$14,934	Growth	Near AVG	187
	Allen County, IN	365,918	3.0	\$14,985	Growth	Near AVG	188
	Alpena County, MI	28,988	-2.1	\$15,168	Negative	Near AVG	189
	Dodge County, WI	88,574	-0.2	\$15,318	Flat	Near AVG	190
	Iron County, WI	5,917	0.0	\$15,368	Flat	Near AVG	191
	St. Joseph County, IN	267,618	0.3	\$15,446	Flat	Near AVG	192
	Roscommon County, MI	23,955	-2.0	\$15,643	Negative	Near AVG	193
	Ashland County, WI	16,103	-0.3	\$15,673	Flat	Near AVG	194
	Randolph County, IL	32,869	-1.8	\$15,697	Negative	Near AVG	195
	Rush County, IN	16,892	-2.9	\$15,853	Negative	Near AVG	196
	Newton County, IN	14,156	-0.6	\$15,887	Flat	Near AVG	197
	Wabash County, IN	32,252	-1.9	\$15,960	Negative	Near AVG	198
	Green Lake County, WI	18,836	-1.1	\$16,057	Negative	Near AVG	199
	Menard County, IL	12,570	-1.1	\$16,103	Negative	Near AVG	200

Table 4.1

Understanding Midwest Counties—Four-State Summary Report (continued)

Potential HSR County		Population, 2014 estimate	Pop % change - 2010 to 2014	Summary of Wholesale, Retail, and Food Combined Sales per capita, 2007 (with 2010pop)	Pop Growth	Sales Strength	
2	Berrien County, MI	155,233	-1.0	\$16,143	Flat	Near AVG	201
	Fountain County, IN	16,658	-3.4	\$16,197	Negative	Near AVG	202
	Tippecanoe County, IN	183,074	6.0	\$16,257	Growth	Near AVG	203
	St. Clair County, MI	160,078	-1.8	\$16,267	Negative	Near AVG	204
	Wayne County, IL	16,543	-1.3	\$16,279	Negative	Near AVG	205
	Boone County, IN	61,915	9.3	\$16,338	Growth	Near AVG	206
	Jefferson County, IL	38,534	-0.7	\$16,365	Flat	Near AVG	207
	Richland County, WI	17,662	-2.0	\$16,474	Negative	Near AVG	208
	Hancock County, IN	71,978	2.8	\$16,496	Growth	Near AVG	209
	Clinton County, MI	77,297	2.5	\$16,512	Growth	Near AVG	210
	Hancock County, IL	18,564	-2.8	\$16,644	Negative	Near AVG	211
	Williamson County, IL	67,008	1.0	\$16,669	Growth	Near AVG	212
	Crawford County, MI	13,745	-2.3	\$16,799	Negative	Near AVG	213
	Sullivan County, IN	21,050	-2.0	\$16,887	Negative	Near AVG	214
	Shawano County, WI	41,579	-0.9	\$17,000	Flat	Near AVG	215
	Dickinson County, MI	25,957	-0.8	\$17,040	Flat	Near AVG	216
	Spencer County, IN	20,801	-0.7	\$17,345	Flat	Near AVG	217
	Wabash County, IL	11,549	-3.3	\$17,483	Negative	Near AVG	218
3	La Crosse County, WI	118,011	2.9	\$17,569	Growth	Near AVG	219
	Columbia County, WI	56,615	-0.4	\$17,576	Flat	Near AVG	220
2	Kalamazoo County, MI	258,818	3.4	\$17,699	Growth	Near AVG	221
	Warren County, IN	8,352	-1.8	\$17,719	Negative	Near AVG	222
	Daviess County, IN	32,729	3.4	\$17,729	Growth	Near AVG	223
	Greene County, IL	13,434	-3.3	\$17,801	Negative	Near AVG	224
	Delaware County, IN	117,074	-0.5	\$17,861	Flat	Near AVG	225
	Jasper County, IN	33,475	0.0	\$18,006	Flat	Near AVG	226
	Tipton County, IN	15,415	-3.3	\$18,042	Negative	Near AVG	227
	Ottawa County, MI	276,292	4.7	\$18,065	Growth	Near AVG	228
	Mason County, MI	28,824	0.4	\$18,071	Flat	Near AVG	229
	Edgar County, IL	17,841	-4.0	\$18,079	Negative	Near AVG	230
	Monroe County, IN	143,339	3.9	\$18,132	Growth	Near AVG	231
	Sheboygan County, WI	115,290	-0.2	\$18,139	Flat	Near AVG	232
	Ogemaw County, MI	21,039	-3.0	\$18,243	Negative	Regional Influencer	233
	Huron County, MI	32,065	-3.2	\$18,430	Negative	Regional Influencer	234
	Clinton County, IL	37,857	0.3	\$18,473	Flat	Regional Influencer	235
	Barron County, WI	45,455	-0.9	\$18,482	Flat	Regional Influencer	236
	Clark County, IL	16,180	-0.9	\$18,532	Flat	Regional Influencer	237
	Shelby County, IN	44,579	0.4	\$18,567	Flat	Regional Influencer	238
	Winnebago County, WI	169,511	1.5	\$18,670	Growth	Regional Influencer	239
	Bond County, IL	17,269	-2.8	\$18,870	Negative	Regional Influencer	240
1	Madison County, IL	266,560	-1.0	\$19,052	Flat	Regional Influencer	241
	Mackinac County, MI	11,042	-0.6	\$19,105	Flat	Regional Influencer	242
	Livingston County, MI	185,596	2.6	\$19,529	Growth	Regional Influencer	243
	Saginaw County, MI	195,012	-2.6	\$19,695	Negative	Regional Influencer	244
3	Monroe County, WI	45,379	1.6	\$19,695	Growth	Regional Influencer	245
	St. Clair County, IL	265,729	-1.6	\$19,863	Negative	Regional Influencer	246
	Macomb County, MI	860,112	2.3	\$19,905	Growth	Regional Influencer	247
	Howard County, IN	82,982	0.3	\$20,117	Flat	Regional Influencer	248
	Coles County, IL	53,320	-1.0	\$20,299	Flat	Regional Influencer	249
1	Grundy County, IL	50,425	0.7	\$20,322	Flat	Regional Influencer	250
	McHenry County, IL	307,283	-0.5	\$20,519	Flat	Regional Influencer	251
	Clay County, IL	13,520	-2.1	\$20,527	Negative	Regional Influencer	252

Table 4.1

Understanding Midwest Counties—Four-State Summary Report (continued)

Potential HSR County		Population, 2014 estimate	Pop % change - 2010 to 2014	Summary of Wholesale, Retail, and Food Combined Sales per capita, 2007 (with 2010pop)			
					Pop Growth	Sales Strength	
	Crawford County, WI	16,392	-1.5	\$20,538	Negative	Regional Influencer	253
	Mason County, IL	13,898	-5.2	\$20,557	Negative	Regional Influencer	254
	Blackford County, IN	12,401	-2.9	\$20,740	Negative	Regional Influencer	255
	Door County, WI	27,766	-0.1	\$20,762	Flat	Regional Influencer	256
	Warren County, IL	17,874	0.9	\$20,768	Flat	Regional Influencer	257
	Wayne County, IN	67,671	-1.9	\$20,848	Negative	Regional Influencer	258
	Cass County, IN	38,438	-1.4	\$20,881	Negative	Regional Influencer	259
	Ozaukee County, WI	87,470	1.2	\$20,937	Growth	Regional Influencer	260
	Genesee County, MI	412,895	-3.0	\$20,950	Negative	Regional Influencer	261
	Emmet County, MI	33,204	1.6	\$21,075	Growth	Regional Influencer	262
	Sawyer County, WI	16,437	-0.7	\$21,083	Flat	Regional Influencer	263
	Chippewa County, WI	63,460	1.5	\$21,179	Growth	Regional Influencer	264
	Johnson County, IN	147,538	5.5	\$21,221	Growth	Regional Influencer	265
	Steuben County, IN	34,308	0.4	\$21,336	Flat	Regional Influencer	266
3	Kenosha County, WI	168,068	1.0	\$21,406	Growth	Regional Influencer	267
	Kendall County, IL	121,350	5.8	\$21,473	Growth	Regional Influencer	268
	Green County, WI	37,063	0.6	\$21,715	Flat	Regional Influencer	269
	White County, IN	24,453	-0.8	\$22,033	Flat	Regional Influencer	270
4	Porter County, IN	167,076	1.7	\$22,092	Growth	Regional Influencer	271
	Knox County, IN	37,938	-1.3	\$22,115	Negative	Regional Influencer	272
	Montgomery County, IN	38,146	0.1	\$22,199	Flat	Regional Influencer	273
	Eaton County, MI	108,579	0.8	\$22,240	Flat	Regional Influencer	274
	Wexford County, MI	32,886	0.5	\$22,349	Flat	Regional Influencer	275
	Jo Daviess County, IL	22,254	-1.9	\$22,601	Negative	Regional Influencer	276
	Vigo County, IN	108,175	0.3	\$22,697	Flat	Regional Influencer	277
	Rock Island County, IL	146,063	-1.0	\$22,861	Flat	Regional Influencer	278
2	Washtenaw County, MI	356,874	3.4	\$22,987	Growth	Regional Influencer	279
	Montgomery County, IL	29,359	-2.5	\$22,992	Negative	Regional Influencer	280
4	Lake County, IN	490,228	-1.2	\$23,226	Negative	Regional Influencer	281
4	LaPorte County, IN	111,444	0.0	\$23,410	Flat	Regional Influencer	282
	Winnebago County, IL	288,542	-2.3	\$23,467	Negative	Regional Influencer	283
1	Piatt County, IL	16,431	-1.8	\$23,477	Negative	Regional Influencer	284
	Peoria County, IL	187,319	0.4	\$23,480	Flat	Regional Influencer	285
	Vilas County, WI	21,398	-0.1	\$23,485	Flat	Regional Influencer	286
	Fond du Lac County, WI	101,759	0.1	\$23,642	Flat	Regional Influencer	287
	Hamilton County, IN	302,623	10.2	\$23,717	Growth	Regional Influencer	288
3	Milwaukee County, WI	956,406	0.9	\$23,987	Flat	Regional Influencer	289
	Walworth County, WI	103,527	1.3	\$24,289	Growth	Regional Influencer	290
	Posey County, IN	25,540	-1.4	\$24,401	Negative	Regional Influencer	291
3	Sauk County, WI	63,379	2.3	\$24,413	Growth	Regional Influencer	292
	Morgan County, IL	34,929	-1.7	\$24,561	Negative	Regional Influencer	293
	Tazewell County, IL	135,707	0.2	\$24,648	Flat	Regional Influencer	294
	Pike County, IL	16,022	-2.5	\$25,286	Negative	Regional Influencer	295
2	Wayne County, MI	1,764,804	-3.1	\$25,536	Negative	Regional Influencer	296
	Bartholomew County, IN	80,217	4.5	\$25,552	Growth	Regional Influencer	297
	Fayette County, IL	21,870	-1.2	\$25,665	Negative	Regional Influencer	298
	Grand Traverse County, MI	90,782	4.4	\$25,668	Growth	Regional Influencer	299
1	Sangamon County, IL	198,997	0.8	\$25,679	Flat	Regional Influencer	300
	Marathon County, WI	135,780	1.3	\$25,803	Growth	Regional Influencer	301
	Jay County, IN	21,179	-0.3	\$26,031	Flat	Regional Influencer	302
	Carroll County, IL	14,715	-4.4	\$26,222	Negative	Regional Influencer	303
	Richland County, IL	16,061	-1.1	\$26,246	Negative	Regional Influencer	304

Table 4.1

Understanding Midwest Counties—Four-State Summary Report (continued)

Potential HSR County		Population, 2014 estimate	Pop % change - 2010 to 2014	Summary of Wholesale, Retail, and Food Combined Sales per capita, 2007 (with 2010pop)	Pop Growth	Sales Strength		
1	Eau Claire County, WI	101,564	2.7	\$26,257	Growth	Regional Influencer	305	
	Champaign County, IL	207,133	3.0	\$26,345	Growth	Regional Influencer	306	
	Wood County, WI	73,608	-1.5	\$26,494	Negative	Regional Influencer	307	
	Whiteside County, IL	56,876	-2.8	\$26,635	Negative	Regional Influencer	308	
	Douglas County, IL	19,889	-0.5	\$26,679	Flat	Regional Influencer	309	
	Clark County, IN	114,262	3.7	\$27,116	Growth	Regional Influencer	310	
	De Witt County, IL	16,284	-1.7	\$27,231	Negative	Regional Influencer	311	
	LaSalle County, IL	111,241	-2.4	\$27,270	Negative	Regional Influencer	312	
	Effingham County, IL	94,320	0.2	\$27,540	Flat	Regional Influencer	313	
	Pulaski County, IN	12,967	-3.2	\$28,032	Negative	Regional Influencer	314	
	Edwards County, IL	6,617	-1.5	\$28,306	Negative	Regional Influencer	315	
	Will County, IL	685,419	1.2	\$28,497	Growth	Regional Influencer	316	
	Ingham County, MI	284,582	1.3	\$28,573	Growth	Regional Influencer	317	
	3	Dane County, WI	516,284	5.8	\$28,873	Growth	Regional Influencer	318
Floyd County, IN		76,179	2.1	\$29,605	Growth	Regional Influencer	319	
Brown County, WI		256,670	3.5	\$29,803	Growth	Regional Influencer	320	
Elkhart County, IN		201,971	2.2	\$29,969	Growth	Regional Influencer	321	
1	Pepin County, WI	7,335	-1.8	\$30,087	Negative	Regional Influencer	322	
	Iroquois County, IL	28,879	-2.8	\$30,322	Negative	Regional Influencer	323	
	Cook County, IL	5,246,456	1.0	\$30,347	Growth	Regional Influencer	324	
	Kane County, IL	527,306	2.3	\$30,972	Growth	Regional Influencer	325	
	Ford County, IL	13,688	-2.8	\$31,734	Negative	Regional Influencer	326	
	Dubois County, IN	42,345	1.1	\$32,296	Growth	Regional Influencer	327	
	Washington County, IL	14,337	-2.6	\$32,627	Negative	Regional Influencer	328	
	Oneida County, WI	35,563	-1.2	\$33,111	Negative	Regional Influencer	329	
	Hendricks County, IN	156,056	7.3	\$33,256	Growth	Regional Influencer	330	
	Cass County, IL	13,156	-3.5	\$33,338	Negative	Regional Influencer	331	
	Rock County, WI	161,188	0.5	\$33,378	Flat	Regional Influencer	332	
	Marion County, IN	934,243	3.4	\$34,293	Growth	Regional Influencer	333	
	3	Waukesha County, WI	395,118	1.3	\$34,506	Growth	Regional Influencer	334
		Otsego County, MI	24,158	0.0	\$35,148	Flat	Regional Influencer	335
Jasper County, IL		9,623	-0.8	\$35,376	Flat	Regional Influencer	336	
Washington County, WI		133,251	1.0	\$35,738	Growth	Regional Influencer	337	
Vanderburgh County, IN		182,006	1.3	\$35,895	Growth	Regional Influencer	338	
St. Croix County, WI		86,759	2.9	\$35,938	Growth	Regional Influencer	339	
White County, IL		14,374	-2.0	\$36,468	Negative	Regional Influencer	340	
Kent County, MI		629,237	4.4	\$36,514	Growth	Regional Influencer	341	
Outagamie County, WI		182,006	3.0	\$38,072	Growth	Regional Influencer	342	
Bureau County, IL		33,840	-3.3	\$38,223	Negative	Regional Influencer	343	
Langlade County, WI		19,410	-2.8	\$38,707	Negative	Regional Influencer	344	
Oakland County, MI		1,237,868	3.0	\$41,830	Growth	Regional Influencer	345	
1		McLean County, IL	174,061	2.6	\$46,451	Growth	Regional Influencer	346
		Lake County, IL	705,186	0.3	\$67,792	Flat	Regional Influencer	347
1	DuPage County, IL	932,708	1.7	\$76,173	Growth	Regional Influencer	348	
	Iowa County, WI	23,825	0.6	\$79,552	Flat	Regional Influencer	349	

Source: U.S. Census Bureau. 2010. *American Community Survey 1-Year Estimates*, Table GCT0101, by U.S. Census Bureau, 2010, retrieved August 15, 2014 from <http://factfinder2.census.gov>

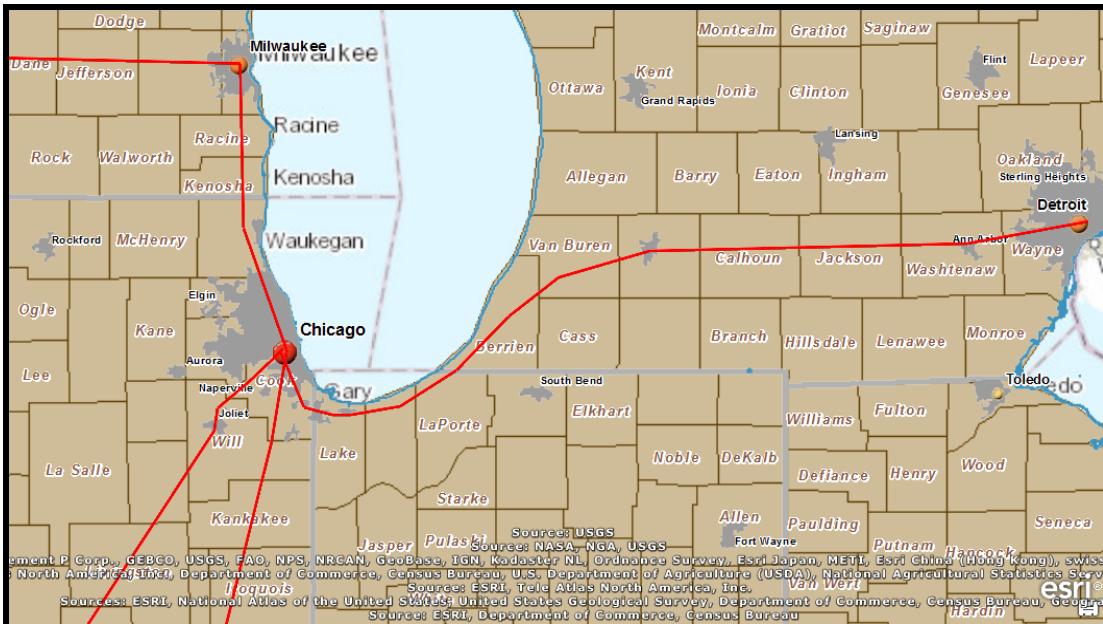


Figure 4.1. Understanding Midwest counties—Potential passenger high speed rail lines Chicago hub to Detroit Michigan.

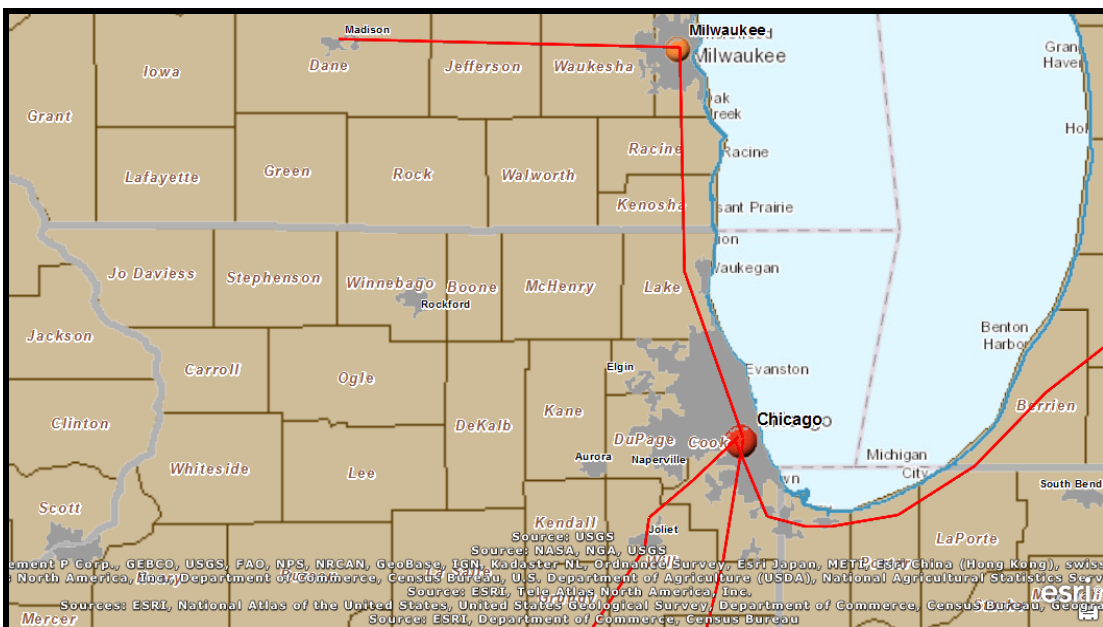


Figure 4.2. Understanding Midwest counties—Potential passenger high speed rail lines Chicago hub to Madison Wisconsin

EXHIBIT 5: RESPONDENT'S SEGMENTATION PROFILES AND MATRICES

Table 5.1

Respondent's Segmentation Profiles

Respondent #	Economic, Social, Environmental Discourses			
	Economic	Social	Environmental	
1	3	3	2	[Economic Believer, Social Advocate, Environmental Neutral]
2	3	3	1	[Economic Believer, Social Advocate, Environmental Naysayer]
3	3	3	2	[Economic Believer, Social Advocate, Environmental Neutral]
4	1	3	2	[Economic Skeptic, Social Advocate, Environmental Neutral]
5	3	2	2	[Economic Believer, Social Neutral, Environmental Neutral]
6	2	1	2	[Economic Neutral, Social Challenger, Environmental Neutral]
7	3	2	2	[Economic Believer, Social Neutral, Environmental Neutral]
8	1	2	1	[Economic Skeptic, Social Neutral, Environmental Naysayer]
9	1	3	2	[Economic Skeptic, Social Advocate, Environmental Neutral]
10	2	3	2	[Economic Neutral, Social Advocate, Environmental Neutral]
11	2	2	3	[Economic Neutral, Social Neutral, Environmental Ally]
12	3	3	3	[Economic Believer, Social Advocate, Environmental Ally]
13	3	3	3	[Economic Believer, Social Advocate, Environmental Ally]
14	3	3	3	[Economic Believer, Social Advocate, Environmental Ally]
15	3	3	3	[Economic Believer, Social Advocate, Environmental Ally]
16	3	3	2	[Economic Believer, Social Advocate, Environmental Neutral]
17	3	3	2	[Economic Believer, Social Advocate, Environmental Neutral]
18	3	3	3	[Economic Believer, Social Advocate, Environmental Ally]
19	1	2	3	[Economic Skeptic, Social Neutral, Environmental Ally]
20	1	2	2	[Economic Skeptic, Social Neutral, Environmental Neutral]
21	2	2	3	[Economic Neutral, Social Neutral, Environmental Ally]
22	3	3	1	[Economic Believer, Social Advocate, Environmental Naysayer]
23	2	2	2	[Economic Neutral, Social Neutral, Environmental Neutral]
24	1	1	3	[Economic Skeptic, Social Challenger, Environmental Ally]
25	3	3	3	[Economic Believer, Social Advocate, Environmental Ally]
26	3	3	3	[Economic Believer, Social Advocate, Environmental Ally]
27	2	2	2	[Economic Neutral, Social Neutral, Environmental Neutral]
28	3	3	2	[Economic Believer, Social Advocate, Environmental Neutral]
29	1	1	1	[Economic Skeptic, Social Challenger, Environmental Naysayer]
30	3	3	3	[Economic Believer, Social Advocate, Environmental Ally]
31	3	3	3	[Economic Believer, Social Advocate, Environmental Ally]
32	2	3	2	[Economic Neutral, Social Advocate, Environmental Neutral]

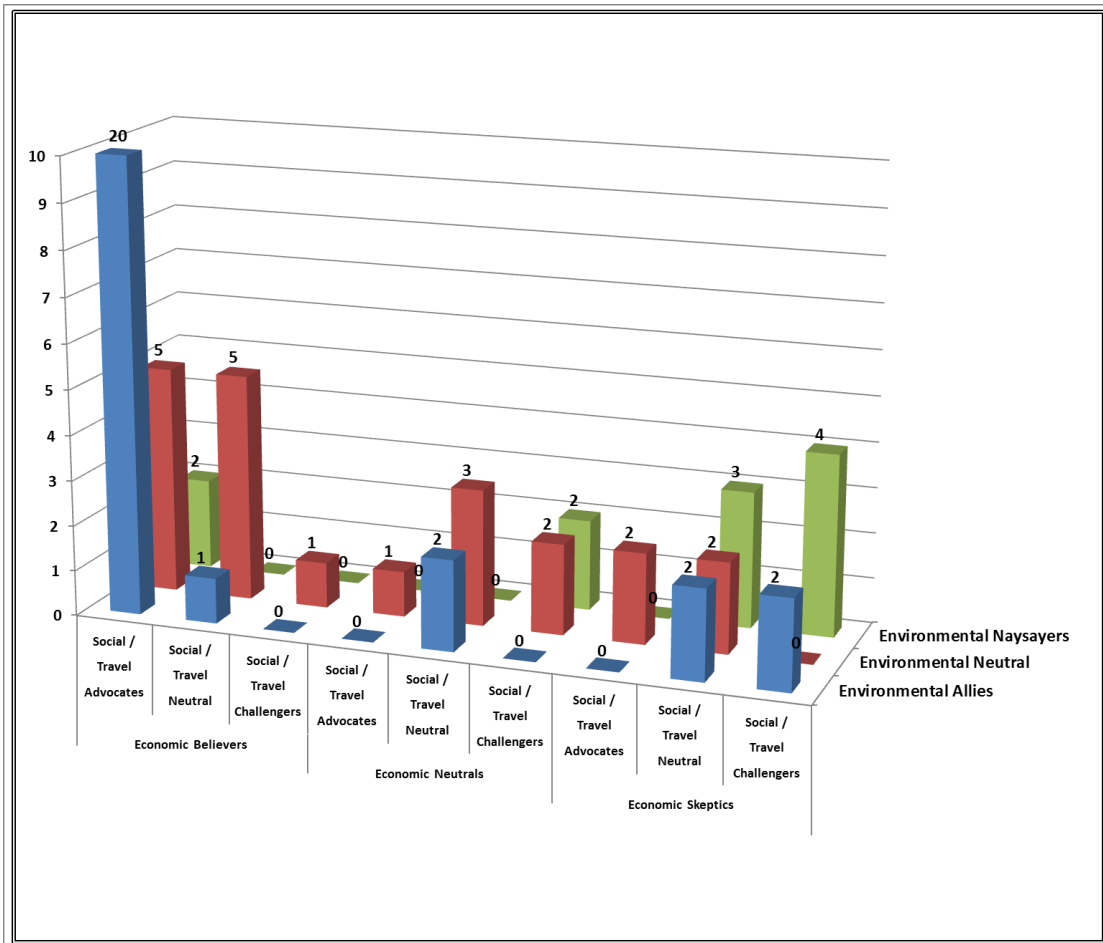


Figure 5.1. Summary—Respondent’s segmentation profiles.

Table 5.2

Summary—Respondent's Segmentation Matrix (Number)

Segmentation Matrix		Total= 59			
		Environmental Allies	Environmental Neutral	Environmental Naysayers	TTL
Economic Believers	Social / Travel Advocates	20	5	2	27
	Social / Travel Neutral	1	5		6
	Social / Travel Challengers		1		1
Economic Neutrals	Social / Travel Advocates		1		1
	Social / Travel Neutral	2	3		5
	Social / Travel Challengers		2	2	4
Economic Skeptics	Social / Travel Advocates		2		2
	Social / Travel Neutral	2	2	3	7
	Social / Travel Challengers	2		4	6
TTL		27	21	11	59

Table 5.3

Summary—Respondent's Segmentation Matrix (Percentage)

		Environmental Allies	Environmental Neutral	Environmental Naysayers	TTL
Economic Believers	Travel Advocates	33.9%	8.5%	3.4%	45.8%
	Travel Neutral	1.7%	8.5%		10.2%
	Travel Challenger		1.7%		1.7%
Economic Neutrals	Travel Advocates		1.7%		1.7%
	Travel Neutral	3.4%	5.1%		8.5%
	Travel Challenger		3.4%	3.4%	6.8%
Economic Skeptics	Travel Advocates		3.4%		3.4%
	Travel Neutral	3.4%	3.4%	5.1%	11.9%
	Travel Challenger	3.4%		6.8%	10.2%
TTL		45.8%	35.6%	18.6%	100.0%

EXHIBIT 6: LETTER OF RESEARCH UNDERSTANDING



University
of
St Andrews

Letter of Research Understanding

This is an academic dissertation project under the auspices of the University of St Andrews, School of Geography and Geosciences, Fife, Scotland.

Participation is voluntary.

You have the option of omitting questions that you do not want to answer.

You may withdraw from the research at any time and for any reason, without having to give an explanation.

The conversation (interview) will be audio recorded.

The conversation (interview) data will be digitally stored. I will control access to it. It will be destroyed when no longer needed for academic research purposes.

The conversation (interview) will be treated with full confidentiality and if published, will not be identifiable.

A written consent from participants is requested.

Thank you for your support in this research.

Mark Patrick Boyle

Interview Participant

Mark Patrick Boyle
PhD Student
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EXHIBIT 7: PARTICIPATION RECRUITMENT LETTER



University
of
St Andrews

Hello,

My name is Mark Boyle and I am a PhD research student at the University of St. Andrews, School of Geography and Geosciences in Fife, Scotland. I am currently conducting primary research in regards to perceptions on change resulting from high speed rail (110 mph and 220 mph) impacting your community. While political processes can cause acceleration of projects and then postponement and/or cancellation of projects, I am trying to research how the addition of high speed rail could/will change the economic, social, and environmental characteristics of your area.

I would like to be able to gather your thoughts, perceptions, and ideas on high speed rail and your community. I am asking for 45 minutes of your time so that I can ask you a series of questions (an informal interview). Your participation is invaluable in helping to understand how possible new transportation modes can affect the different facets of life in the community. All data (conversations) will be treated with full confidentiality and if published, it will not be identifiable.

I am planning on being in your community the first week of _____. Timing is at your convenience. Can you respond back to let me know that you have the time to help in this research endeavor?

Thank you for your support in this research.

Mark Patrick Boyle

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EXHIBIT 8: PARTICIPATION RECRUITMENT LETTER FOR ONLINE
SURVEY—BLIND MAILING



Hello,

I am a PhD research student at the University of St. Andrews, School of Geography and Geosciences in Fife, Scotland. I am currently conducting primary research in regards to perceptions on change **resulting from high speed rail (110 mph and 220 mph) possibly impacting your city/town**. Your participation is invaluable in helping to understand how possible new transportation modes can affect the different facets of life in your city/town. I am asking for 20 minutes of your time to complete an online survey. This survey can be found at:

<http://www.zoomerang.com/Survey/WEB22EK6AAN8MS>

Research recruitment is challenging and any and all help is gratefully appreciated. If you know anyone (friends, neighbors, coworkers, etc.) that would have an interest in helping with this research, please pass this email along. The more opinions that I can obtain, the richer my data analysis. All surveys will be treated with full confidentiality and if published, will not be identifiable.

Again, thank you for your help in this academic endeavor.

A handwritten signature in black ink that reads "Mark Patrick Boyle".

Mark Patrick Boyle

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“You know what the three most exciting sounds in the world are? – Anchor chains, plane motors, and train whistles.”
 George Geographic Explorer Bailey

EXHIBIT 9: PARTICIPATION RECRUITMENT LETTER FOR ONLINE
SURVEY—FACE-TO-FACE INTERVIEWEES



Hello,

I am writing to thank you for participating in my research on high speed rail. As I mentioned when we met, the interview questions that I asked on high speed rail have also been used to develop an online survey. This survey can be found at:

<http://www.zoomerang.com/Survey/WEB22EK6AAN8MS>

If you know anyone (friends, neighbors, coworkers, etc.) that would have an interest in helping with this research, please pass this along. The more opinions that I can obtain, the richer my data analysis. Completing the online questionnaire should take approximately 20 minutes. As with the face to face interviews, all surveys will be treated with full confidentiality and if published, will not be identifiable.

Again, thank you for your help in this academic endeavor.

A handwritten signature in black ink that reads "Mark Patrick Boyle".

Mark Patrick Boyle

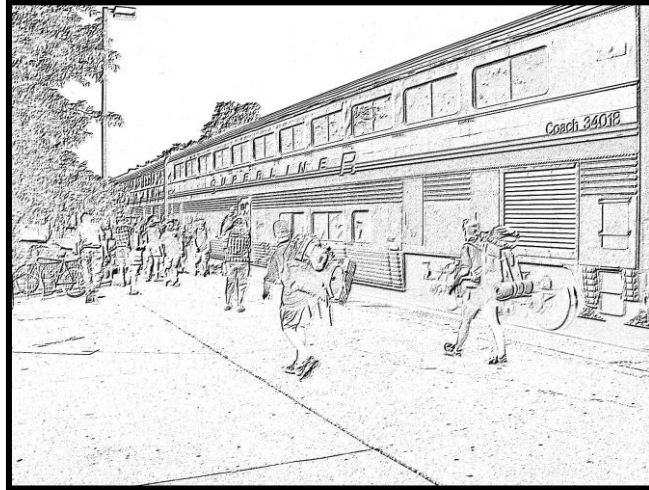
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Naperville, Illinois 2004

Photo by: M. P. Boyle

EXHIBIT 10: SAMPLE TRANSCRIPT—FACE-TO-FACE INTERVIEWEES

Q: Let me get started. What can I tell you? I am not a proponent or opponent of high speed rail, I'm going into this basically very neutral on the subject. As you think about answering the questions, think about overall in the last couple years, etc. ...

Are you aware that there has been discussions at the federal and state government levels about bringing passenger high speed rail to the Springfield area?

A: [Question 1] Yes.

Q: How have you heard about that? What sources?

A: [Question 2] You know, I believe it was mostly just people talking about – in election conversations – about who was for high speed rail and who was not, because, in relation to jobs. People talking about 'This is a good idea' 'It's not a good idea'. How would it affect, in Springfield, how would it affect how the city looks? What would it mean to have those trains coming through? A lot of people being scared because those are neighborhoods, how fast are those trains coming through our neighborhoods? Will it disrupt, is it too close to the Dana Thomas House, is it too close to our historic monuments? You know, Springfield's trying to build the tourism and will that take away from what we're trying to do here? That's really how I think I've heard it, in general just sort of just _____ talk shows on radios and then in election discussions.

Q: OK. How do you define high speed rail? If somebody said 'what's high speed rail?' what would you say?

A: [Question 3] I could totally be wrong, but I think of a train that goes-

Q: You can't be wrong on anything you answer.

A: [Question 3] – OK, great, I love this. A train that goes like 300 miles an hour, is what I'm thinking, something like that. And I'm thinking of these slick trains that you see on TV or in Europe and stuff, so. Yeah, that's-

Q: OK. What advantages do you see with high speed rail, and what disadvantages could you see with high speed rail? You touched upon – a lot of times I'm going to ask you a question a couple different ways.

A: [Question 4] Advantages, I would definitely see possibly green jobs, possibly just green technology in general, whereas, you know, I'm guessing these aren't – one of those things that could possibly help free us from the whole oil economy, you know. But jobs, absolutely. One thing I think of a lot is connectedness of people in disparate regions, because I teach creative writing in prison. And one of the problems with – they move all of these prisoners to southern Illinois from Chicago, or to Danville, to these odd locations – and their families can't reach them. If the train tickets are reasonable, people could get to those places-

Q: Isn't that why Blagojevich is going to Denver, because his wife can fly there? I'm sorry, go on.

A: That's OK. He was not someone I was thinking of...[unclear]

Q: That's the reason why he picked that.

A: You can quote me on that. Yeah, right, so she could ski, right?

Q: I understand what you're saying.

A: But you know, people from very low socio-economic regions or economic level, their family does not have the means to get to them. Their kids never see them, and all these kinds of things. So I also think it would save – it might save people's lives and it could be safer because you could text, you can do whatever sitting there on the train. As population grows, we can't have all those SUVs on the road and all these cars on the road.

Q: OK. You've hit about 4 of the 5 different questions I'm going to ask you in a few minutes.

So...we're on the same page here. OK?

A: OK, yeah.

Q: Disadvantages?

A: [Question 5] Disadvantages. In this region in particular, my family's all in farming. 'Is it going to take up our land?' 'Are we going to recess our good rich Illinois dirt, our good [unclear], eating it up?' But I'd have to say, I'd rather see it in a high speed rail than I would see it in subdivisions. So, OK, maybe there's some give and take there. So that could possibly be a disadvantage, it could certainly create

dissent in Illinois, because we're such a farming community. The other thing I would think would be where it runs, in terms of historical monuments and things, and is it an eyesore? Is it noise pollution? And I don't know, but that would be – all those things would concern me.

Q: Do you believe that passenger high speed rail will come to Springfield in fifteen years?

A: [Question 6] Yes. Yes.

Q: Why do you feel that way?

A: [Question 7] I just, the way things are going in terms of information and what we know about global warming, I can't believe that initiatives like that aren't going to...I'd hope it would in the next 5, but.

Q: Alright. Who's making the decisions about bringing high speed rail here? Let me rattle off a list: federal government, state government, private corporations, regional planning, county planning, local, municipal – are they all in the decision making process, or only some of them?

A: [Question 8] My understanding was, it's basically the feds. And then everybody else is on a 'need to know' basis.

Q: OK.

A: [Question 8] That was my understanding.

Q: Should it be that way? And specifically, at the local level, should they be part of that process or not?

A: [Question 10] I think absolutely. I think to get anything going, somebody has to make the decision and make the directives. But for people to accept it and for people to understand, or for communities maybe to get the most out of it, and people to be most satisfied with it, then of course I think there needs to be some sort of organic organization within the community who agrees and...

Q: OK. Do you know any individuals or groups that are specifically promoting high speed rail in this area?

A: [Question 12] I don't. I don't.

Q: OK. How about any specific groups that are trying to oppose it? Individuals or groups trying to oppose it?

A: [Question 15] You know, I thought I heard some of the...I don't know specific, the historical groups because they didn't want it to be an eyesore. I thought I remembered hearing that. Dana Thomas House in particular, which is the Frank Lloyd Wright house in Springfield.

Q: Alright. Has the media been very active in communicating what's going on with high speed rail in the area: are they very active in communicating, or somewhat active, or?

A: [Question 18] Somewhat, I would say.

Q: How about the local governments: have they been very active, somewhat active, somewhat inactive?

A: [Question 15] I would say just somewhat active. Somewhat.

Q: But they are communicating to the people?

A: [Question 15] Eh, some. I think it's more a thing of people, the topic comes up, it gets asked by journalists in interviews or people pose the question during debates and things. I don't think anybody's bringing it up because I don't they have any control over it. So no politician wants to bring it up and say 'I really have no influence over this'.

Q: OK. Have you heard –

A: [Question 15] Obama talks about it more than anyone else, I think.

Q: Right, and always in his State of the Union, right, OK. How active have informal local conversations been with high speed rail? You ever hear anything in the Starbucks, at the pub, at work, school?

A: [Question 15] Well, I mean yes, at work, I've heard like our maintenance staff talking about it, particularly because we're on this side of town, so we're on the side of town where it will affect our universities.

Q: You know, to be honest with you, as a side note. I know the Department of Transportation is looking at the corridor to coming through Springfield, but I never

bothered to look at a local level what corridor specifically they want, so, and I know there's discussion. There's different corridors that mean different things, so-

A: Right, yeah. And I think they're talking about coming through Ten, basically, near Tenth Street, as I understood it, which is right where, near Benedictine.

Q: So you do hear conversations?

A: [Question 15] Oh yeah, absolutely.

Q: And most of the conversation deal with...

A: [Question 15] What's it going to be like? People just don't really know, or what is it going to disrupt? More than – because people are concerned about. You know, Springfield has a traffic problem anyway, so if large parts of that side of town are tore up, this side of town, how are we going to get anywhere? You know, that's more of the – you know, what roads will be cut off.

Q: What do you expect will happen here with high speed rail coming, and another part of that would be, what do you want to have happen? You did say earlier you expect it to come.

A: Mmm-hmm.

Q: Is that what you want?

A: [Question 21] Yes. What I would like is that it would...come through town in a way that benefitted the people who had to give anything up. So if people had to give up their homes for rail to be laid, that kind of thing, with the maximum benefit to individuals and the minimum upset to the community would be wonderful. And if it could bring jobs. And it could bring a sense of sort of a global, sort of a, you know, 'Chicago is just down the road from us, St. Louis is just down the road from us', you know, more sense of community, if we could gather something like that.

Q: Global community or whatever?

A: Right, you know, people that get on a train – people can sit and have a conversation. Yeah, I'm hoping it brings that sort of thing. It could bring families who've been apart together and things like that.

Q: OK. I think you answered my next question. Do you think high speed rail will affect the economy of the Springfield area?

A: [Question 23] Yes, I think so, in a positive way.

Q: In what way? The things you just said and...

A: [Question 23] Bringing jobs. I also think that it's a possibility that – you know, I've been asked before to teach in Chicago, that's not realistic for me, no matter what they offer, but with high speed rail, I think it's possible that you could go up and do a weekend seminar, that you could do things like that. And so I think there will be other types of jobs where it would be possible to travel.

Q: You might see where my next couple questions are going now. We're on the same page. Do you see it affecting retail at all?

A: [Question 24] Absolutely.

Q: The retail environment of Springfield?

A: [Question 24] I do, because I think that more people could come here, for visits and things like that, and too, Springfield has, we have a really unique thing here with the Lincoln Museum and with some of the attention that we're getting. And if more people would come for a day trip. If it's not, 'five hours on the Amtrak maybe, and then we get another delay, and then'. You know?

Q: Yeah, I know.

A: And I love the rickety old Amtrak, but you know, you only have so much time.

Q: I've taken in Britain, their system in Britain all the time, and they think it's lousy. And I think the British system is absolutely wonderful. You leave London at 125 miles an hour going to Edinburg, I'll take that any day of the week.

A: Absolutely. Yes, yes.

Q: It's a matter of perspective, I guess. Do you think passenger high speed rail will affect the commercial and industrial vitality of the area? Do you think it will bring in industrial/commercial jobs?

A: [Question 24] I feel like it will. I mean, why wouldn't it? How can it not? It's opening up paths of communication and ways for people to get places quicker and easier, so I don't know how it couldn't.

Q: How about housing? Do you think there will be more housing? Do you think – getting back to your statement from before – do you think people would telecommute and then commute to Chicago or St. Louis a couple days a week or live – no longer live in a metropolitan area?

A: [Question 24] I think that's possible, absolutely.

Q: A minor, major? Do you see it changing the core structure of Springfield with that?

A: [Question 24] No, probably not.

Q: Alright.

A: That's probably too much to hope for.

Q: Passenger high speed rail, do you see it impacting the physical environment of Springfield, for better and for worse? The question I'm asking is, is it important to the carbon footprint to bring high speed rail?

A: [Question 27] Oh, yeah, absolutely. I think so. I'm not an expert on that sort of thing, but it seems like it only can be...because people aren't stopping. No matter how high gas gets, people don't stop buying trucks and SUVs and, you know. Americans, we do want our space, and so...

Q: And so using passenger high speed rail could be healthy to the nation's physical environment?

A: [Question 26] Yeah, and I think, in fact, even help individuals in general, because once they get somewhere, they don't have a car, so if they don't want to pay for a taxi, they're going to have to walk. So maybe people will walk more, right?

Q: [unclear]

A: Yes, indeed.

Q: High speed rail coming in, do you see it changing any of the social services, meaning fire, police, park, things like that? So that just the major support services of Springfield?

A: [Question 28] How it would affect them? Hmm. I don't know about that. I don't know how that would affect them.

Q: How about cultural enrichment and betterment of quality of life?

A: [Question 28] Absolutely. I mean, not that Springfield does not have a host of cultural events, but it seems like people could get to other communities and experience other things so much more easily economically for them. Yeah.

Q: What about health and wellbeing?

A: [Question 28] Yes, absolutely, because I would think there would be particular doctors that you might need to reach in some other city that you could now do in a reasonable way. Absolutely, yeah.

Q: How important is ticket price to using high speed rail?

A: [Question 30] Well, if gas stays up, I think you could have, they could still make a pretty good clip on the ticket, and still be cheaper than driving.

Q: It'd be economically – it'd be driven by comparing it to automotive transportation?

A: [Question 30] That, and I think the other thing is, not just that, but also, what does it cost once you get somewhere to park? What's the stress of driving in a city that you don't know, in a city that's very different from Springfield, Springfield's easy to drive in, everybody stops and 'you go, you go'.

Q: It's easy.

A: Right. Yeah. So if you get to Chicago and it stresses people out to drive, it's much easier to put everybody on the train and go.

Q: Is speed to the destination, is that very important, not important?

A: [Question 30] Well, I think it's very important that they stay inside the speed, so it's got to be significantly faster than Amtrak or you're not going to want to do it. People will be disappointed.

Q: How about frequency of service? Is that going to be a major driver on you using the passenger high speed rail?

A: Frequency of, like, there's-

Q: So instead of –

A: Five trains a day, or whatever?

Q: – two trains, five trains, twelve trains a day?

A: [Question 30] Yeah, absolutely. There's got to be at least a pretty good variety. Yeah.

Q: I'm going to read five questions to you. Tell me if you strongly disagree to strongly agree, or anything in between. Passenger high speed rail is not needed in the United States.

A: [Question 31] Not needed?

Q: Not needed.

A: [Question 31] Strongly disagree.

Q: Passenger high speed rail planning and development should continue, whatever the cost.

A: [Question 31] Hmm...

Q: It's a loaded question.

A: [Question 31] Uhh, moderately agree?

Q: OK. Intercity passenger rail service (meaning Amtrak) is no longer needed in the United States.

A: [Question 31] I would not agree with that.

Q: Passenger high speed rail is too expensive and should not be constructed.

A: [Question 31] Strongly disagree.

Q: Passenger high speed rail is needed for environmental reasons.

A: [Question 31] Strongly agree.

Q: How many times per month do you travel more than 50 miles away from Springfield for shop, work or play?

A: How many times a month?

Q: Yeah...one to two?

A: [Question 33] One to two, I'd say.

Q: How many times a year do you travel by commercial air?

- A: [Question 34] Twelve.
- Q: OK. That's a lot.
- A: Yeah.
- Q: If you travel by commercial air, where do you usually start your trip: at a local airport, meaning Peoria, Bloomington...?
- A: [Question 35] St. Louis, more likely.
- Q: St. Louis? OK. How often do you use intercity rail, meaning Amtrak per year?
- A: [Question 36] Four times, five times.
- Q: Four times a year?
- A: [Question 36] Yeah, four to five times.
- Q: Can I have your age?
- A: [Question 39] 43.
- Q: OK. Education is...MFA?
- A: [Question 40] Uh-huh.
- Q: And you're employed for, with a not-for-profit university?
- A: [Question 42] Yes.
- Q: Well, Joel Carroll is probably for-profit, isn't he?
- A: Well, you do know him!
- Q: He doesn't know me that well, but I'm in enough meetings with...
- A: That's so funny.
- Q: What is your zip code where you live?
- A: [Question 43] 62704.
- Q: And how many years have you lived in the Springfield area? Generally?
- A: [Question 44] I'd say...about 12. We moved to Champaign when I did my graduate work and came back, so all together, 12, I'd say.

Q: Do you have any final comments on high speed rail, or on – your thoughts and perceptions on it and the economy of Springfield and how the two are tied together, or just society in general and Springfield and what high speed rail might do to it?

A: [Question 45] In particular, to me as a writer, it's just a very exciting idea, that you could, somebody could be at the University of Chicago, and we could have them here. We could – they want to fly somebody in, that person could be in Champaign and we could split costs, and that would be wonderful, because you would be bringing people who would never consider coming here, here. You know, when Bloomington had Noam Chomsky, what would if we could have got him here? If you had a quick way like that, and quick access to a major airport-

Q: Benedictine used to have that lecture series up at the Lisle campus, it'd be nice to have it down here, too.

A: Wouldn't it? Yeah, exactly.

Q: They haven't done those lately though, that I know of.

A: Yeah, I'm trying to think of the last one that was there. Yeah, things like that. To me, just shared resources...yeah.

Q: So it shrinks the geography, is a fair statement?

A: Yeah, which is nice. Yeah.

Q: Any other comments, or?

A: I hope it happens, yeah.

Q: Well, thank you.

A: You're welcome.

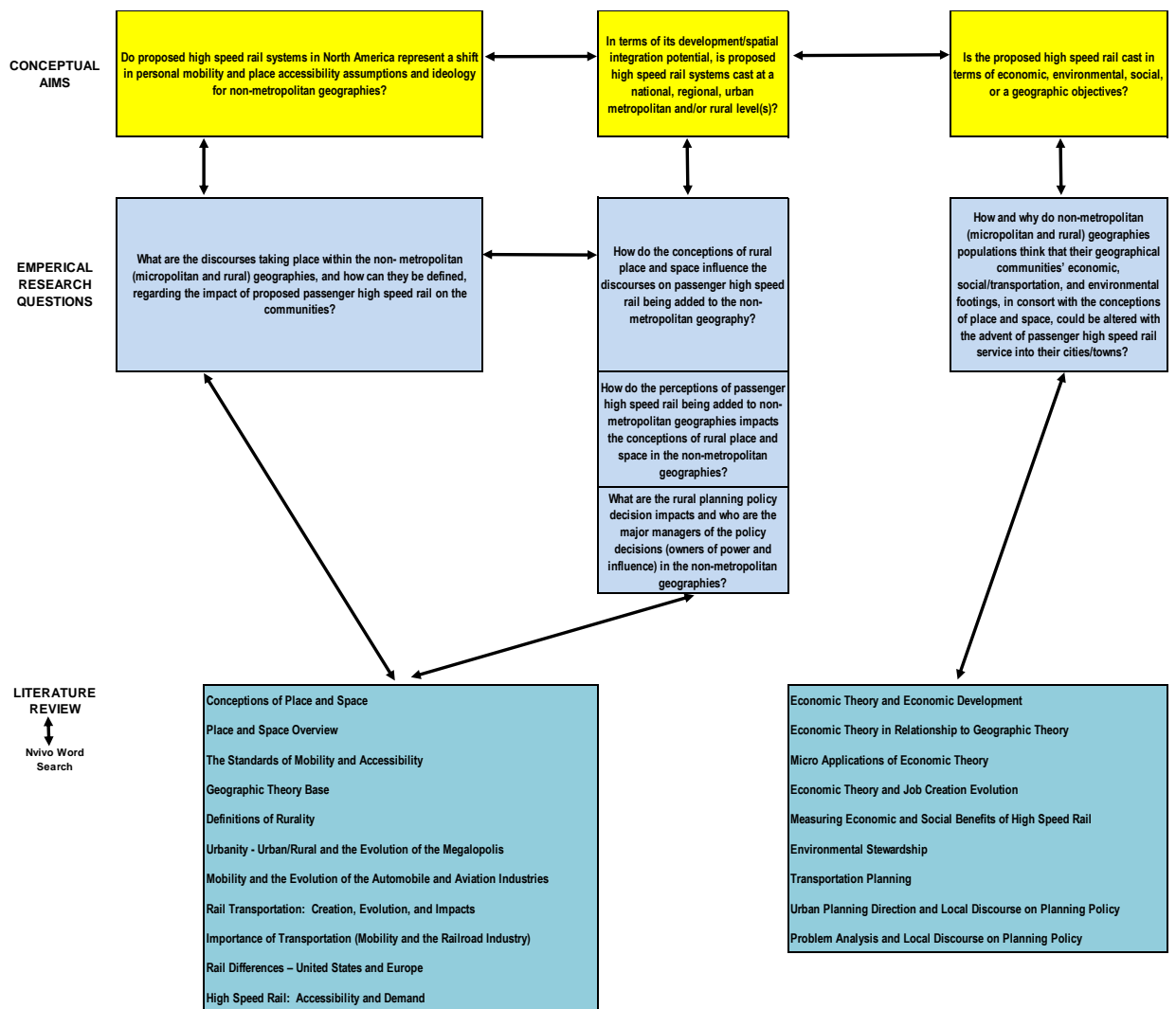
Exhibit 11: Coding Process - NVivo

The phenomena being studied relates to the possibility, and not necessarily the actuality, of new transport opportunities ‘serving’ non-metropolitan places. Whether those transport opportunities are ever built is not the issue but rather the issue is the planning and discussion of building the new transport opportunities.

The focus is on how non-metropolitan geographies have conversations, thoughts, and perceptions on its perspective of its sense of self-place. Additionally, relationships with other-places and spaces, metropolitan and non-metropolitan geographies, are also explored. Self-space and other-space are both explored in regards to change that could be driven with the announcement of a possible new transport system and the not the actual execution and development of said system.

NVivo

NVivo was the tool used to digest and categorize the respondents comments. Respondents comments were reviewed and analyzed multiple times. A search of specific words was undertaken using NVivo. Additionally, all oral recording were transcribed with questions numbers associated with the text. While this was qualitative survey, there was adequate structure built into the survey process to allow for question grouping. Commonality of responses were grouped together for analysis. A total of 680 page of transcribed text was analyzed through an iterative process using both approaches .



Outline of Findings from Transcripts to be used in analysis and in chapter design

Issues – Perceptions and Perspectives

- Definition of Rail and Expectations
 - Interviewees definition of High Speed Rail (HSR)
 - Wide variance on basic knowledge base
 - Confusion between HSR and Commuter rail
 - Proximity to major cities impacts perceptions
 - Proximity/Timing to HSR introduction drives interest and opinion
- Advantages and disadvantages of HSR
 - Vision versus reality
 - Current Amtrak service – get it right
 - Current freight movement impact/interruptions
- Policy Makers
 - Politics as a driver/issue

- National master plan?
- Federal and State governments are the drivers
- Perception of county government involvement
- Local should have seat at the table
- Spatial relationships between big and small/ small town syndrome/ perceptions of worth of small towns
- Communications
 - Debate versus information conversations
 - Media has been reactive and informational only
 - American cultural issues
 - Facebook, water cooler, etc. conversations

Expectations and Aspirations (probabilities versus wants)

What will happen (expectations) when it comes to HSR coming to their city/town?

What do they want to have happen (aspirations) when it comes to HSR coming to their city/town?

- Economic
 - Types of Economic Impact (short term construction costs and benefits and long term operation cost and benefits).
 - Can High Speed rail stand on its own from an economic perspective?
 - Politics of Economics
 - Comparisons with European systems
 - Success of HSR is driven by economics only
 - US is a private rail system
 - Subsidization issues
- Social
 - Local issues driven versus regional issues
 - Impact on small towns
 - Population growth and population change impact
 - Road crossings and impact on farm implement movement
 - Rail lines as crime generators for small towns
 - Feeder system between major metros and small towns
 - Traveling public
 - Hassles of flying/ Security of flying and timing/ Airport feed
 - Price of service, frequency of service, speed of service
 - Transportation when you get to the destination
- Environmental
 - Knowledge base of HSRs environmental/energy efficiency to move people
 - Economic versus Environmental
 - Climate change issues/ responsibility
 - National needs of 'clean transportation'

- Car versus train versus air efficiencies
- Negative local environmental impact of construction and/ or operation of HSR

Examples – tables used for coding - word mining (partial and with raw transcript data)

Question 1: Changing economic and political environments (changes in president/governors and/or legislative bodies) can cause changes in direction and priorities of rail transportation projects. Answer the following questions not on where projects stand as of today but on the overall direction of projects and discussions within the last five years. Are you aware that there have been discussions at the federal and state government level to change the passenger rail service to your city/town?

Question 2: Where/from what source did you learn of this information?

Session ID	Question 1 Response	Question 2 Response
578009272	yes	Community news sources, word of mouth, and official press releases.
578081626	yes	Dwight Village Board Member, we have been in contact since 1994 when they first talked about HSR.
578158437	yes	Newspaper, Village Government
578168614	yes	Village government; local newspapers
578279587	yes	Newspaper, village officials, friends
579289190	yes	Denver media talks a lot about Fastracks.
582859028	yes	Champaign County First, Champaign County Chamber of Commerce, Champaign County EDC, Midwest High Speed Rail Association
583272083	yes	
583272617	yes	TV news
583290384	yes	Family gossip
584157090	yes	From a friend
584971268	yes	Seminars hosted by the University of Illinois College of Engineering
585114935	yes	too numerous to list
586366252	yes	Discussions with elected officials, media articles & stories, participation in seminars.
586401330	yes	newspapers
586451452	yes	I am the Town Planner, and we have been working on a new "multimodal transportation center" for about 10 years. It will be the new Amtrak station. Thus, I'm very much "in the know" compared to the average person.
586661839	yes	From TV, newspapers, radio, and the railwork performed throughout our county and the other counties on the rail line. I've personally seen the work as it progressed.
587873879	yes	news media
588312106	yes	federal and state Government press releases picked up by local and national media
589326070	yes	I am in active communication with both State and Federal legislators, staff, and specific departments that are actively engaged in these types of discussions.
591415578	yes	Multiple sources several years ago, including the media and government.
591419123	yes	Attended many meetings on the subject.
591937019	yes	I have attended many meetings and presentations on implementation in my area.
592394800	yes	Worked on project for 17 years
593642054	yes	Television news.
594514793	yes	local news
594704750	yes	The Governor of Wisconsin, James Doyle The President of the U.S. Barack Obama and the Sec. of Transportation Ray La Hood. Thought this was a good idea. Most the citizens of Wisconsin thought it was a ridiculous attempt to spend nearly a Billion dollars on a transportation system from the 19th Century. Like offering a telegraph key to the state instead of an iPhone. Average speed if built would have been 58 MPH for the first 4 years, ridership estimates, were wildly over estimated, costs were underestimated- The definition of a Boondoggle.

Question 3: How do you define passenger high speed rail? What do you understand passenger high speed rail to be...? (in a sentence or two, please)

Question 4: What are your thoughts on the advantages of passenger high speed rail (greater than 110mph)?

Question 5: What are your thoughts on the disadvantages of passenger high speed rail (greater than 110mph)?

Question 6: Do you believe that passenger high speed rail (greater than 110 mph) will come to your city/town within the next 15 years?

Question 7: Do you have any thoughts on why you feel this way?

Session ID	Question 3 Response	Question 4 Response	Question 5 Response	Question 6 Response	Question 7 Response
578009272	I understand high speed rail to be trains that make fewer stops; thus, they can achieve faster speeds and worry less about equipment failure from going from high speeds to lower speeds.	Faster trips which makes more trips in a day if the transit authority deems appropriate.	Smaller communities will lose their stops; because not many people use high speed rail, this could result in a massive waste of public funds	Yes	I feel this way because my community was recognized to have a stop as well as the fact that my community is part of Illinois' test run for high speed rail.
578081626	Waste of Money	I can not think of any advantages of high speed to 110 mph. Needs to be higher speed to be reach a positive impact.	Impact to communities, I know some have real issues with planning a logistical changes in town. Braidwood is a fine example how they want to split the town and intercession changes proposed to Dwight. These changes would greatly impact of the aesthetics of our rich downtown history.	Yes	The connection to Chicago to the midwest and St. Louis could lead to progressive changes along this corridor.
578158437	A movement of passengers at speeds of 110 mph.	I don't see any for the cost.	The extreme changes on the right of way and the villages that are on the route. The cost vs increased(?) ridership.	Not Sure	The cost is extreme. Passenger service has never paid it's own way. I see this as a backhanded way for government (taxpayers) to pay for all new tracks and crossings for the railroad.
578168614	Passenger trains exceeding 110 mph so that time between destinations is shortened.	The only advantage I see is for people who are afraid to fly for any length of time (even a short period of time).	High cost to construct dedicated rail lines outside of small towns; a lot of money to spend just to arrive someplace a few minutes earlier than they already can arrive	Yes	HSR is already in the works for our area.
578279587	Trains traveling at speeds in excess of 100 mph that make few stops between major cities.	Shorter travel time. Not many advantages, in my opinion.	Existing tracks are being upgraded slightly, but is this enough? Are these extreme speeds safe through towns and cities? Life for those who live in these towns will be impacted negatively. And not that many people travel by train anyhow. We can watch the trains go by every day. They're usually about half full, maybe.	Not Sure	The railroad wants to shut down most of the crossings in our town. Glad I live on the same side as the fire and police departments. The trains come barreling through town already, at "regular" speeds. And as mentioned above, they're NEVER full. Why should citizens living all down the tracks have their lives disrupted so that the Chicago lawmakers can get to Springfield more quickly? If the powers that be want high speed rail, they need to BUILD high speed rails outside of cities and towns ... in our case they could build parallel to the interstate.

579289190	For me, an average speed of 80mph would compete enough with cars. But the 110mph of NE Corridor pales in comparison to 180mph routine in Europe. California will have true high speed eventually.	Much less energy/passenger-mile. More space. See the scenery. Leave from city center. Read while you travel instead of concentrating on road. Rail takes less land than roads/cars. Same real cost as roads/cars and air.	None.	No	Boulder, CO will be lucky to have passenger rail, let alone high-speed. We would get a commuter route from Denver if things go very well. It's planned but the price is high compared to tax money available. You are researching high-speed rail, but I think attitudes about rail in general are a worthwhile study. Why does it have to be high-speed? Trains used to be very fast, before Amtrak, before subsidies to cars and planes. A train went from Chicago to Denver in 12 hrs in the 1930s!
582859028	Over 220 MPH	Economic development, less auto use, move larger number of people faster, link up bigger urban areas with smaller urban areas	If under 220 mph, not as much benefit.	Yes	In Illinois and our area specifically, private enterprise is being looked at as the main funding and owner and operator as opposed to government.
583272083	Quick mode of transportation between cities.	Create jobs, reduce commute time giving more time for family and leisure, enable travel for those currently not able to travel.	Can be greater accidents.	Not Sure	
583272617	I probably would have said traveling over 80 mph and making few stops, except that in the cover email, I saw that it was 110 or 220 mph.	Faster, more convenient, and possibly cheaper, method of transportation.	That it may be very expensive to start up and that maybe not enough people would use it to make it cost-effective.	Not Sure	Decatur, IL used to have passenger train service, but it's been a long time ago. The closest passenger service is out of Springfield, IL. So, while high speed rail is likely coming to Illinois, I kind of doubt it would come to Decatur.
583290384	A really fast train. Something like 2 hours to get from Chicago to St. Louis	If it means I can get elsewhere in the country w/o having to drive myself or pay for an expensive airline ticket, it sounds AWESOME.	The only real downside I see is that it has the potential to be disruptive to traffic, agriculture, etc: these tracks w/ a stupid fast train on it, cutting through places.	Not Sure	I'm skeptical that it'll come to fruition at all. Moreover, I'm VERY skeptical that Decatur would be important enough of a destination that we'd get a depot. I hope we do, though!
584157090	A train moving quickly to get passengers to a destination. Might not make as many stops in smaller towns.	Good way to travel across the country.	Safety	Not Sure	Expense of fixing tracks so that this could happen. I believe for our city to grow we need high speed rail in our town.
584971268	Reliable, predictable rail service at speeds and service frequencies sufficient to be a reasonable alternative to car travel in most cases	Passenger convenience and safety relative to car travel; environmentally friendly	Not clear that the required level of construction, equipment and operating subsidies are justified; 110 mph HSR isn't sufficient to alter travel and development patterns to the extent that 220 mph HSR would.	No	Population density isn't sufficient to make it cost-effective at this point
585114935	220 mph	time saved, more energy efficient, stimulus for economic development	expense of construction	Yes	Conversations with individuals who have built high speed rail in other countries
586366252	Faster than 80 mph	Economic development, environmental protection (less auto travel), relief of congestion, encouragement of housing nearer to rail facilities and not on agricultural lands.	Disadvantageous to airlines, perhaps smaller communities that are not stops along the line.	Yes	A strong hope that United States governments and planners see the economic and environmental value of this development.

586401330	If the trains ran reliably on time I would consider that to be a big improvement.	Slim, because until you work out the bottleneck between Bloomington, IL and Union Station in Chicago, it will not matter how fast a train can operate between Bloomington and Joliet. After Joliet, the average speed today is about 30 mph. To go faster you will need dedicated track or better cooperation with the people who own the track.	Currently it is screwing up the bicycle crossing and pedestrian crossing in up town Normal. Other disadvantages include the high cost of building and maintaining the tracks which will also be used for freight traffic. Not a good thing to have to maintain.	Not Sure	The government does not have the money and they need to stop printing and spending money that they do not have! Again, if the trains ran on time with a high degree of reliability, it would almost seem like high speed rail. And getting into Chicago faster is the real key to success.
586451452	HSR is a train that goes about 120 MPH and makes fewer stops than the commuter trains.	Quicker trip to Chicago and to St. Louis. Presumably, the train cars will be nicer.	Likely to be more expensive. Creating more train traffic and the need to shut off a very heavily used (and much loved) multiuse trail crossing of the train tracks. Very sad.	Yes	The track has been upgraded, and the train sets are on order.
586661839	I understand it as a quicker way of public transportation to get from St. Louis to Chicago.	It shortens the traveling time from one place to another.	I am uneasy about the crossings, considering how many people already get killed trying to beat the trains. Then I worry about how this will impact people traveling on the train itself. On another note, some towns are bisected by the tracks, so I wonder if more trains on the line will cause them more problems with traffic disruption.	Yes	It is being so promoted in our state.
587873879	connection from point A to B in a expedited capacity	Faster than I can do it in a car. at no cost to the tax payers.	If the train cannot get me to a place faster than I can drive it. They use tax payer money to support it.	Not Sure	We cant afford any more hand outs in this country !
588312106	True high-speed rail is well beyond the 110 mph promised in the above-mentioned press releases	In most of the U.S. true high-speed rail is not economically viable. Generally, our cities are not populated densely enough and are too many miles apart	True high-speed rail is extremely expensive to build and (if built) will require never-ending subsidies.	No	It's simply too expensive to build and on-going operations would be a drain on taxpayers
589326070	My definition is any rail service that will have the ability to facilitate a "commuter" type of opportunity for people from my community to get to larger job or commerce markets like Chicago. The term "communter" suggests both time required for the commute and a regularly scheduled (multiple weekday) routes.	The ability for local residents and businesses to engage (either jobs or business transactions) actively in larger markets.	Safety is the single largest concern or disadvantage to high speed rail. Other issues revolve around the total cost to implement.	Yes	The current route between Chicago, IL and St. Louis Mo. is one of the most heavily used by rail passangers. My community is a logical mid-point stop on this route.
591415578	passenger trains that travel at 80-110 mph on improved tracks.	the reduction in transit time between destinations, which makes train travel superior to auto travel and competitive with air travel.	none	Not Sure	because our governor, in his infinite non-wisdom, returned the federal grant that would have brought us HSR, and now the planning has passed us by.
591419123	In the U.S. it's Amtrak service running at 110 mph or better.	Reduces car travel and emissions, provides access for people who can't or won't drive, contributes to development in city centers by stations, provides a productive work environment for business travelers.	Requires some new sort of subsidy, which makes the Republicans crazy.	Yes	We nearly had a train this year, until the Republicans were elected and rejected the federal funding. The plans have long been laid, and this governor will be out soon. It makes too much sense to just kill.

591937019	150 mph + between major population areas at least 75 miles apart.	I think that high speed transportation will evolve in the future to become more individualized as opposed to mass transit in order to allow more point to point, unscheduled trips.	The robust infrastructure and corridor alignment for the weight of mass transit vehicles at that speed would require significant investment and could not use many of the existing freight rail corridors. Whereas lighter weight individual vehicles or small group modules could be installed on lighter elevated or on ground infrastructure along or in current major transportation corridors.	Not Sure	I hope not. The liberal political climate is pushing for this, but wants to use an existing freight rail corridor that contains 153 at grade crossings within a 75 mile stretch and 33 at grade crossings within an 8 mile city stretch. Some of these crossings would be closed while others would have trains traveling through at 45 to 80 mph +.
592394800	Generally, I think of it as 125 m.p.h. and higher, but the concept is often stretched downward to the 110 m.p.h. in the USA.	The obvious reduction in time, but the aura around HSR will also bring more attention that will increase consumer interest and train frequency.	Safety, closed grade crossings, and noise.	Yes	Tracks have already been built.
593642054	Any train that can travel over tracks higher than 110 mph in the U.S. But, 220 mph in France or Japan.	Ability to find work in towns that would typically be too far away. Reduces highway congestion. Good free time to read or work on train.	Can't think of any.	Yes	Need to improve infrastructure anyway. Also, people will demand it.
594514793	trains that travel at a high rate of speed. like the bullet trains in asia	get from point to point faster than driving	train schedule	No	republicans keep blocking it at every turn
594704750	Over 200 MPH. The so called HSR here would have had an average speed of 58 MPH on old freight rails. Passenger trains died in the USA in the late 1950's early 60's. There are no privately run rail systems in the US for good reason: few passengers, horrendous operational and Capital costs- all taxpayer supported systems lose huge amounts of money to move a tiny population in US	There are none.	It is a technology who's time has come and gone. The reason it is struggling in the US is because the population prefers their privately owned vehicles for convenience, safety, flexibility, cost and the pure simple pleasure of driving your own vehicle wherever and whenever you wish. Buses are far more flexible and less costly also.	No	See 2-5 above. I've done a vast amount of reading, talking to people in this area over 4 years and concluded that high speed rail is an outrageously stupid idea for a mode of 21st Century transportation. See California- they are beginning to realize a \$98,000,000,000 train system is a taxpayer money pit that should never be built.
578009272	I understand high speed rail to be trains that make fewer stops; thus, they can achieve faster speeds and worry less about equipment failure from going from high speeds to lower speeds.	Faster trips which makes more trips in a day if the transit authority deems appropriate.	Smaller communities will lose their stops; because not many people use high speed rail, this could result in a massive waste of public funds	Yes	I feel this way because my community was recognized to have a stop as well as the fact that my community is part of Illinois' test run for high speed rail.
578081626	Waste of Money	I can not think of any advantages of high speed to 110 mph. Needs to be higher speed to be reach a positive impact.	Impact to communities, I know some have real issues with planning a logistical changes in town. Braidwood is a fine example how they want to split the town and intercession changes proposed to Dwight. These changes would greatly impact of the aesthetics of our rich downtown history.	Yes	The connection to Chicago to the midwest and St. Louis could lead to progressive changes along this corridor.

Question 8: Do you have any thoughts on who is making the decisions in deciding if passenger high speed rail (greater than 110 mph) could come to your city/town? (check all that apply)

Session ID	Question 8 Response: Federal Government	Question 8 Response: State Government	Question 8 Response: Corporate Entities	Question 8 Response: Regional Planning	Question 8 Response: County Planning	Question 8 Response: Local Community Planning
578009272	X	X	X	X		
578081626	X	X				
578158437	X	X	X			
578168614	X	X				
578279587		X	X			
579289190	X	X	X	X	X	
582859028	X	X	X	X	X	X
583272083	X	X	X	X	X	X
583272617		X	X	X		X
583290384		X			X	X
584157090	X	X				
584971268	X	X				
585114935	X	X	X	X		X
586366252	X	X	X	X	X	X
586401330	X					
586451452	X	X				
586661839	X	X				X
587873879	X	X				
588312106	X	X		X		
589326070	X					
591415578	X	X				
591419123	X	X				
591937019	X	X		X	X	X
592394800	X	X				X
593642054	X	X	X	X	X	X
594514793	X	X				
594704750		X			X	

Question 9: How do you perceive the decisions for bringing passenger high speed rail to your city/town are being made?

Question 10: At your local city/town level, do you have any thoughts on who should be making the decisions on whether passenger high speed rail could be coming to the city/town?

Question 11: At your local city/town level, do you have any thoughts on who actually is making the decisions on whether passenger high speed rail could be coming to the city/town?

Question 12: What individuals or groups are promoting passenger high speed rail coming to your city/town?

Session ID	Question 9 Response	Question 10 Response	Question 11 Response	Question 12 Response
578009272	The federal government, state, and planning authorities are making these decisions without consulting local governments or the populace. Even though the local government have no say, I feel it is the correct decision as some local governments do not have the necessary experience to properly make decisions.	Regional planning authorities and the State.	Unless they are involved with regional planning or the State, I do not feel anyone local is making the decisions.	City of Pontiac, local news papers and radio
578081626	Federal gov't based on bad information and poor planning	The downtown businesses and elected local government	the village board has been dealing with the state and federal and RR, in addressing concerns	
578158437	Bureaucrats are always looking for ways to spend taxpayer money. They have talked about it for years as a savings in time and to increase ridership. Those certainly don't equal the costs involved.	Each town should have the ability to determine what is best for them. The people affected should have the chance to be heard. For a small town the economic impact could be devastating.	High speed rail is coming no matter what we want. The town council will vote on how much it will affect us; as to the rail crossing and road realignment.	The Union Pacific Railroad and the Illinois Commerce Commission.
578168614	The Federal government has transportation money to spend & the State doesn't want to turn down money.	I believe all cities, towns, and villages (regardless of size) along the proposed route, should be involved in making the decision for their corridor.	I believe the State is making the decisions.	The Dept. of Transportation, the Commerce Commission.
578279587	It's being shoved down our throats by big business hand in hand with greedy politicians.	What choice do we have? The railroad owns the tracks and the land they're on. The Village Board may voice opinions, but it's like spitting in the wind.	The Village Board, mayor, and anyone who has their ear. The former newspaper editor writes informative columns.	None that I know of. Everyone seems mostly against it. The trains will stop less in our town. We'll get a little less service and a great lot of inconvenience.
579289190	No plans for high speed here in Colorado. We would be lucky to just get decent commuter rail.	Usual government processes... elected officials make the final decisions	Elected officials to control and decide. Burlington Northern RR, though, is asking a heck of a lot of money to use their right of way.	Nobody talking high speed here. Just passenger, commuter rail or passenger rail up/down Front Range and along I-70 in mtns.
582859028	As good as we can expect.	Money will always be the deciding factor. I think it should be a group of federal, state and local.	local government, local business, citizens, u of i	local government, chamber of commerce, u of i, local business
583272083	Economic bennefit	The community that will be affected	no	
583272617	I really don't know.	I would hope it would be a joint effort among city council, Decatur Economic Development, tourism, and other interested parties.	Nope.	Not aware of any.
583290384	No clue.	Our local gov't should be petitioning/lobbying the state	No clue.	None.

Session ID	Question 9 Response	Question 10 Response	Question 11 Response	Question 12 Response
		and federal gov'ts to bring it here.		
584157090	The government is controlling if this will happen in our city	I believe others than the government should be making the decisions.	corporate entities	City officials
584971268	At the federal level with regard to Amtrak funding and at the state level with regard to additional construction and operating subsidies	Any agencies that will be involved in providing or generating revenue for HSR projects	City councils, county board, regional planning agencies are weighing in, but no local agencies have authority to implement or fund HSR	Economic development proponents; rail travel advocates
585114935	Local enthusiasm, existing rail system more easily upgraded here than in other parts of Illinois, support at state and national levels	Local, state and federal all need to be involved with financing from private sector as well	Research currently being done on best route and financing. Decision will be made with involvement at local, state and federal levels.	City government, University of Illinois, Chamber of Commerce, state and federal governments
586366252	Much publicity and public involvement is available in the process.	local government, in relationship to adjoining communities on the line, plus state and federal officials.	Local government, state & federal officials	Illinois State University, local government, labor unions, local businesses, government officials.
586401330	As completely out of touch with reality.	First of all, you need to make Amtrak completely independent of subsidies and then let them make the decisions and pay for the improvements.	It is the Federal government.	government officials
586451452	It seems very big picture rather than focused on our community. We seem to be just making the very most of the circumstances by embracing HSR and building a new station. We see it positively impacting our Uptown area and the community at large. That said, the big decisions about HSR are made at a higher level -- state and federal. They seem to be looking at the bigger picture of rail lines, and ours is already very busy and effective. It's a natural to upgrade to HSR.	Like I said, the town isn't making that decision. But I guess if we wanted to, we could oppose it. I think Springfield is protesting the new amount of train traffic through its downtown.	Ditto to #10 -- we have made the decision to support HSR, but we are not the ones who control whether or not it comes.	Elected officials in Normal, Bloomington and McLean County. Economic Development Council. Maybe the Chamber of Commerce -- I'm not sure.
586661839	Mostly the state and federal folks are apportioning the money, and we (in the towns along the rail line) are just told how it will be. I do remember some contentious arguing early on about whether the line would follow through my town or one farther east. Both areas argued for their routes.	Well, this couldn't be afforded without the federal government \$. Local governments want the train to promote more business development in our area, but I don't see that they can do more than produce a plan.	No, other than above in #10, ie that the Federal/State governments do.	The big corporate entities, like State Farm Corporate, and other businesses who send folks to Chicago to conduct a day's business there.
587873879	if your a dem your for it, if your rep your against it.	Tax Payers	Government state and fed	Liberals
588312106	At this point, no decisions are being made. Un-informed (or ill-informed) citizens and officials are the only ones touting high-speed rail. When the economics are publicized, high-speed rail will be nothing but a bad idea that did not catch hold	Well-informed citizens and officials should reject high-speed rail proposals after fundamental evaluation shows it to be not financially feasible	We are not far enough into discussions of high-speed rail for anyone to be making any decisions, yet	Fans of big government and train nuts
589326070	Staff recommendations supported by the Federal legislative process.	I typically support local decision making, however in this case, federal funding will be needed, and this is a topic that has impacts far beyond local authority. The Federal Government needs to be fully involved in the decisions and funding.	See Question 10.	Local government and business leaders are active in the promotion of the use of high speed rail to connect our community to larger communities.
591415578	Poorly and with lack of long term vision; based on ideology rather than what is good for the public.	I wish we could make the decision on a local level, but realistically, the decision will be made at the state and federal level.	The only local decisions will be on where to site station(s).	there are multiple groups - activists, business groups, local government, etc.

Session ID	Question 9 Response	Question 10 Response	Question 11 Response	Question 12 Response
591419123	Very well until the current governor was elected and decided to pull the plug.	It's not really a local decision. The local part of the decision is where to put the station, how to handle the traffic, etc., but not whether to extend service here.	No one. They are powerless to do this. The state owns the rail lines, and the federal government funds this kind of expansion. It's a state and federal decision.	Enviros, smart growth groups, transit advocates, the Chamber of Commerce, local elected officials.
591937019	Largely from an emotional, anti-private vehicle, pro public transportation perspective.	A balanced group who are willing to set emotions aside and look at what is the best solution for the community, by considering the safety, quality of life implications as well as the economic cost/benefit and environmental aspects.	The liberal local government had already a plan in place for construction until a conservative, rational state government cancelled the project.	See answer 9
592394800	Most activity has been conducted by the State of Illinois as a middleman.	At City level, the City Council.	The City Council.	Government, business.
593642054	Increases employment opportunities.	Don't know	Don't know	Some state officials
594514793	political gridlock	they should put it up for a local vote	probably the city government but who knows	democrats
594704750	Poorly. Withholding facts, no realistic discussion of actual costs to build and maintain and fantasy figures as to whom will ride.		Transportation 2020. An organization that began as a study of all transportation systems and quickly morphed into a government tax supported advocacy group for commuter and "Cow speed" rail in Wisconsin.	About 25 people on the County board, the MPO transportation board and the former Governor Doyle. Governor Walker ran on killing the billion-dollar boondoggle Doyle and Co tried to force on the state. WALKER won. His opponent who supported rail lost.
Session ID	Question 9 Response	Question 10 Response	Question 11 Response	Question 12 Response
578009272	The federal government, state, and planning authorities are making these decisions without consulting local governments or the populace. Even though the local government have no say, I feel it is the correct decision as some local governments do not have the necessary experience to properly make decisions.	Regional planning authorities and the State.	Unless they are involved with regional planning or the State, I do not feel anyone local is making the decisions.	City of Pontiac, local news papers and radio
578081626	Federal gov't based on bad information and poor planning	The downtown businesses and elected local government	the village board has been dealing with the state and federal and RR, in addressing concerns	
578158437	Bureaucrats are always looking for ways to spend taxpayer money. They have talked about it for years as a savings in time and to increase ridership. Those certainly don't equal the costs involved.	Each town should have the ability to determine what is best for them. The people affected should have the chance to be heard. For a small town the economic impact could be devastating.	High speed rail is coming no matter what we want. The town council will vote on how much it will affect us; as to the rail crossing and road realignment.	The Union Pacific Railroad and the Illinois Commerce Commission.
578168614	The Federal government has transportation money to spend & the State doesn't want to turn down money.	I believe all cities, towns, and villages (regardless of size) along the proposed route, should be involved in making the decision for their corridor.	I believe the State is making the decisions.	The Dept. of Transportation, the Commerce Commission.
578279587	It's being shoved down our throats by big business hand in hand with greedy politicians.	What choice do we have? The railroad owns the tracks and the land they're on. The Village Board may voice opinions, but it's like spitting in the wind.	The Village Board, mayor, and anyone who has their ear. The former newspaper editor writes informative columns.	None that I know of. Everyone seems mostly against it. The trains will stop less in our town. We'll get a little less service and a great lot of inconvenience.
579289190	No plans for high speed here in Colorado. We would be lucky to just get decent commuter rail.	Usual government processes... elected officials make the final decisions	Elected officials to control and decide. Burlington Northern RR, though, is asking a heck of a lot of money to use their right of way.	Nobody talking high speed here. Just passenger, commuter rail or passenger rail up/down Front Range and along I-70 in mtns.
582859028	As good as we can expect.	Money will always be the deciding factor. I think it should be a group of federal, state and local.	local government, local business, citizens, u of i	local government, chamber of commerce, u of i, local business
583272083	Economic benenefit	The community that will be affected	no	
583272617	I really don't know.	I would hope it would be a joint effort among city council, Decatur Economic Development, tourism, and other interested parties.	Nope.	Not aware of any.

Session ID	Question 9 Response	Question 10 Response	Question 11 Response	Question 12 Response
583290384	No clue.	Our local gov't should be petitioning/lobbying the state and federal gov'ts to bring it here.	No clue.	None.
584157090	The government is controlling if this will happen in our city	I believe others than the government should be making the decisions.	corporate entities	City officials
584971268	At the federal level with regard to Amtrak funding and at the state level with regard to additional construction and operating subsidies	Any agencies that will be involved in providing or generating revenue for HSR projects	City councils, county board, regional planning agencies are weighing in, but no local agencies have authority to implement or fund HSR	Economic development proponents; rail travel advocates
585114935	Local enthusiasm, existing rail system more easily upgraded here than in other parts of Illinois, support at state and national levels	Local, state and federal all need to be involved with financing from private sector as well	Research currently being done on best route and financing. Decision will be made with involvement at local, state and federal levels.	City government, University of Illinois, Chamber of Commerce, state and federal governments
586366252	Much publicity and public involvement is available in the process.	local government, in relationship to adjoining communities on the line, plus state and federal officials.	Local government, state & federal officials	Illinois State University, local government, labor unions, local businesses, government officials.
586401330	As completely out of touch with reality.	First of all, you need to make Amtrak completely independent of subsidies and then let them make the decisions and pay for the improvements.	It is the Federal government.	government officials
586451452	It seems very big picture rather than focused on our community. We seem to be just making the very most of the circumstances by embracing HSR and building a new station. We see it positively impacting our Uptown area and the community at large. That said, the big decisions about HSR are made at a higher level -- state and federal. They seem to be looking at the bigger picture of rail lines, and ours is already very busy and effective. It's a natural to upgrade to HSR.	Like I said, the town isn't making that decision. But I guess if we wanted to, we could oppose it. I think Springfield is protesting the new amount of train traffic through its downtown.	Ditto to #10 -- we have made the decision to support HSR, but we are not the ones who control whether or not it comes.	Elected officials in Normal, Bloomington and McLean County. Economic Development Council. Maybe the Chamber of Commerce -- I'm not sure.
586661839	Mostly the state and federal folks are apportioning the money, and we (in the towns along the rail line) are just told how it will be. I do remember some contentious arguing early on about whether the line would follow through my town or one farther east. Both areas argued for their routes.	Well, this couldn't be afforded without the federal government \$. Local governments want the train to promote more business development in our area, but I don't see that they can do more than produce a plan.	No, other than above in #10, ie that the Federal/State governments do.	The big corporate entities, like State Farm Corporate, and other businesses who send folks to Chicago to conduct a day's business there.
587873879	if your a dem your for it, if your rep your against it.	Tax Payers	Government state and fed	Liberals
588312106	At this point, no decisions are being made. Un-informed (or ill-informed) citizens and officials are the only ones touting high-speed rail. When the economics are publicized, high-speed rail will be nothing but a bad idea that did not catch hold	Well-informed citizens and officials should reject high-speed rail proposals after fundamental evaluation shows it to be not financially feasible	We are not far enough into discussions of high-speed rail for anyone to be making any decisions, yet	Fans of big government and train nuts
589326070	Staff recommendations supported by the Federal legislative process.	I typically support local decision making, however in this case, federal funding will be needed, and this is a topic that has impacts far beyond local authority. The Federal Government needs to be fully involved in the decisions and funding.	See Question 10.	Local government and business leaders are active in the promotion of the use of high speed rail to connect our community to larger communities.
591415578	Poorly and with lack of long term vision; based on ideology rather than what is good for	I wish we could make the decision on a local level, but realistically, the decision will	The only local decisions will be on where to site station(s).	there are multiple groups - activists, business groups, local government, etc.

Session ID	Question 9 Response	Question 10 Response	Question 11 Response	Question 12 Response
	the public.	be made at the state and federal level.		
591419123	Very well until the current governor was elected and decided to pull the plug.	It's not really a local decision. The local part of the decision is where to put the station, how to handle the traffic, etc., but not whether to extend service here.	No one. They are powerless to do this. The state owns the rail lines, and the federal government funds this kind of expansion. It's a state and federal decision.	Enviros, smart growth groups, transit advocates, the Chamber of Commerce, local elected officials.



Alton, England 2006

Photo by: M. P. Boyle

EXHIBIT 12: IMPLICATIONS FOR PLANNING AND DECISION MAKERS

Although the focus of this dissertation centered on the sense of place as it related to economic, social, and environmental issues in the nonmetropolitan Midwest in the context of planning for new networks of high-speed rail, the findings also have implications for planners and decision makers at the local, regional, and even national levels. The findings can be useful when considering the broader applied-policy level. The knowledge of the discourse of nonmetropolitan population regarding sense of place can be important because it can be applied to the current planning process for passenger high-speed rail; planning for and managing the increasing growth of the populations in nonurban small cities (micropolitan areas); understanding the changing dynamics between nonmajor metropolitan relationship with urban areas (at the economic, social, and environmental levels) and how passenger high-speed rail might change the mobility of urban and rural populations; preparing for the changing mix of mobility options of using road, air, and rail modes of transportation; and how the impacts on the environmental footprint would affect individuals and the population as a whole.

Directions in Urban Planning and Local Planning Policies

Professional planners solicit opinions and track discourse created by local stakeholders, particularly in their spatial perceptions of economic, social, and environmental matters. This approach is not particularly effectively in trying to solve problems as it is to understanding the questions that the problem is generating. The perceptual representations about the problem/issue inform the critical thinking of planners and decision makers that allows for a more robust policy result (Bacchi, 2009). In this way, review of economic, social, and environmental impacts on communities where high-speed rail is being planned can drive the institutional logic of the community and the policymakers. Planning-policy problems can be alleviated or tempered through proactive problem recognition. According to Hopkins (2001), problem analysis or conflict mitigation should be a proactive, early onset opportunity to understand possible impacts of a change. Creation of appropriate agendas, policies, visions, designs, or strategies are all means to create successful outcome plans.

Public participation at the local level for high-speed rail should include all social segments if a successful understanding of the impact is to be obtained. In this way, the planner engages “communities of practice” (Wenger-Trayner & Wenger-Trayner, 2006) around the planning of high-speed rail and begins to directly impact changing perceptions of space in nonmetropolitan areas.

Transportation planning in nonmetropolitan places. When focusing on nonurban communities, one must consider the interrelated roles of the countryside as a reservoir and production area for food, timber, minerals, and water for urban areas; as a haven for wildlife and plants; as a cerebral place of solitude; and as a recreation area for the urban dwellers (Blacksell & Gilg, 1981). According to Blacksell and Gilg (1981), it takes a multitude of planners (agencies) to plan for the countryside and the influence of these planners is limited.

The creation of a transport network (passenger high-speed rail) shrinks the distance between the nonurban and rural markets and metropolitan areas through reduced time of transport. Changes in the relationship of the nonmetropolitan place to other places with the addition of a new transport network creates a need to adjust planning scenarios. The sense of place is redefined as the relationship of place with space. What was once a set definition of urban, suburban, and fringe planning areas has changed. T. L. Daniels (1999) writes about planning for fringe areas (defined as those areas that lie physically between suburban areas and rural areas (countryside)). Changes in time/distance using passenger high-speed rail mean fringe dynamics are no longer limited to physically linked suburban/countryside boundary areas. Areas that are completely removed from metropolitan areas can become as connected to the metropolis through space and time as the physical fringe area. Rural areas, small towns, and micropolitan areas may develop fringe-like area dynamics.

The term transit orientated development (TOD) usually aligns with urban and suburban areas and relates to the marriage of appropriate development in close proximity and in companion with transit (light rail, bus rapid transit, bus, or traditional rail). In *The New Transit Town Best Practices in Transit-Orientated Development*, discussions center on how to create successful TODs by understanding demographic changes in the United States and shifts in housing and neighborhood preferences in urban settings (Dittmar & Ohland, 2004). These same understandings

may be applied to TOD in nonmetropolitan and rural areas. Because high-speed rail can change the time/distance between nonmetropolitan and rural areas to the metropolis, these areas can act like a suburban area in transit-orientated development. Findings from this study can be useful in planning for TOD, while also highlighting the complexities of changes in human geography and altered dynamics in space and time that cross state boundaries.

Decision Makers in the High-Speed-Rail Decision-Making Process in the Midwest

Who research respondents perceive are the decision makers in passenger high-speed rail development impacts the research respondents' perceptions of how passenger high-speed rail development could or should affect them. The results indicate a shift in assumptions about personal mobility and accessibility of place, imagined at local, regional, or national levels. Respondent's perceptions of who the decision makers are when making judgments on whether high-speed rail is brought to the community or region varied widely. Their discourse revealed errors and confusion about the realities of who would actually make the decision about high-speed rail. Some respondents did not know who would be making the decisions about bringing passenger high-speed rail to their community or region and they did not care; some respondents thought they knew who would be making decisions about bring high-speed rail to their community or region and they were incorrect. Respondents' answers ran the gamut in understanding from detailed knowledge to no knowledge about the planning. Perceptions about who the decision makers are also ran across a wide spectrum. Generally, respondents knew very little about how the actual decision-making process is driven. Respondents often guessed about who the decision-making players were. Many time these guesses were correct, but much of the discussion about decision making was speculative.

Online and in-person interviews with respondents asked the following questions: *Do you have any thoughts on who is making the decisions in deciding if passenger high-speed rail (greater than 110 mph) could come to your city/town? Is it the federal government, the state government, private corporate entities, regional planning, county planning, local community planning, or other? Any or all can be included.* The respondents were also asked: *How do you perceive the decisions for bringing*

passenger high-speed rail to your city/town are being made? and At your local city/town level, do you have any thoughts on who should be making the decisions on whether passenger high-speed rail could be coming to their city/town?

For planning purposes, simple descriptive statistics from the qualitative survey can be helpful. As shown in Table 8.1, most respondents interpreted the project as being a federal-government intervention without much local or public involvement. Very few knew that the state government was involved, or even that county- and local-government bodies were involved. About a third of respondents did understand that business – local and national – was a driver in the decision-making process (see Figure 8.1).

Table 11.1

Federal Government Involvement

Respondent #	Federal Government	State Government	Corporate Entities	Region and/or Local Government	Comments
1	1	1		1	Local needed
2	1	1	1	1	
3	1	1	1	1	
4	1	1			Local needed
5		1			Local needed
6		1			Local needed
7	1				County needed
8	1	1	1	1	Public input
9		1			
10					
11					
12	1	1	1	1	Local needed
13	1	1			
14	1				
15	1	1	1		
16	1	1	1	1	
17		1			Regional needed
18	1				Local needed
19	1	1	1	1	Driven by Business
20	1				
21	1	1			Local needed
22					Local needed
23					All needed
24	1	1			Local needed
25	1	1	1	1	All except state needed
26	1	1			Private business important
27		1	1	1	Private business important
28					
29	1	1			Academia interested
30	1	1			
31	1	1	1	1	Planners adding input
32	1	1			Local needed
33	1	1	1	1	Regional needed
34	1	1			Local needed
35	1	1	1		Local needed
36	1	1			Local needed
37		1	1		Local needed
38	1	1	1	1	
39	1	1	1	1	Local needed
40	1	1	1	1	Local needed
41		1	1	1	Local needed
42		1		1	Local needed
43	1	1			Public Input
44	1	1			All needed
45	1	1	1	1	All needed
46	1	1	1	1	Local needed
47	1				
48	1	1			
49	1	1		1	
50	1	1			Public Input
51	1	1		1	Public Input
52	1				Feds is driver
53	1	1			
54	1	1			Not local decision
55	1	1		1	Local needed
56	1	1			Local needed
57	1	1	1	1	
58	1	1			Local needed
59		1			
	45	48	20	22	

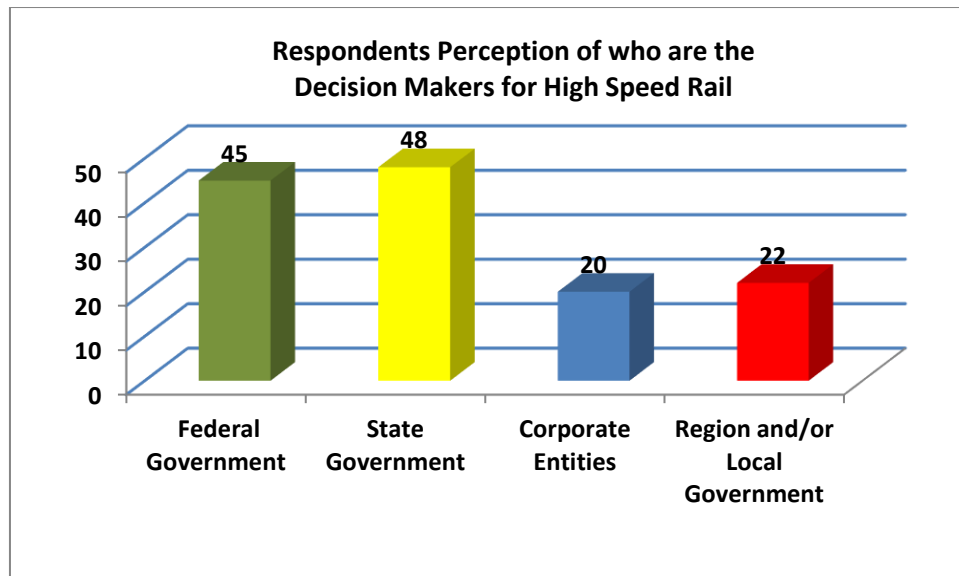


Figure 11.1. Respondents' perceptions of who are the decision makers for high-speed rail.

Limited Knowledge of Respondents About Planning

A minority of respondents stated they had 'limited' knowledge or 'no' knowledge of the decision-making process.

See, I know nothing about this. I don't know, all of the above, I guess? Maybe all of the above? I think it's probably all of the above, but it probably should be ... I guess, the state, maybe? [Female, 20s, private industry; Economic Neutral, Social Neutral, Environmental Neutral]

Really hadn't thought about it too much, really. What I had seen was some involvement of the [Rural City]. [Female, 50s, government employee; Economic Neutral, Social Neutral, Environmental Ally]

This is obviously just a guess. Like I said, I don't know a ton about it, but I would guess state government, I would guess corporations and probably. [Female, 30s, private industry; Economic Neutral, Social Neutral, Environmental Neutral]

Respondents admitted they did not have any ideas about specific actors in the decision-making process but did generalize about who should be part of the process, variously mentioning the federal and state governments as well as regional-planning, county-planning, and local-planning boards. One participant stated he had 'no idea' who was making the decisions, but believed that there has to be planning, even if he

did not know what the plan is. Additionally he believes regional planning (rather than local) should be at the forefront and that state and federal planning support is needed to get ‘anything’ done. In summary, he stated he did not know particulars but had an opinion nonetheless about how planning should happen. [Male, 60s, Private Industry] [Economic Believer, Social Advocate, Environmental Naysayer] Another respondent also stated that he did not know but thought it should be the federal, the state, and the local governing agencies as well as a consortium of the local cities that the passenger high-speed-rail route would pass through. [Male, 30s, private industry; Economic Skeptic, Social Neutral, Environmental Ally]

Local Perceptions About Decision Makers

About a quarter of respondents stated that all players (federal, state, private companies, regional planning, county planning, and local planning) were part of the decision-making process.

I believe they’re all part of it. [Female, 30s, private industry; Economic Believer, Social Advocate, Environmental Neutral]

The degree to which the individual government bodies are part of the decision-making process might not be understood, but the belief is that all are part, to varying degrees.

I can tell you at our level who’s involved. We know it involves the feds, we know it involves the state. ... I know we have [a major employer], and they’re very concerned about good transportation for their employees. ... They’re very proactive. We have a county regional planning on that, the county, the city and the town are the three major funders. [Female, 50s, local government employee; Economic Skeptic, Social Neutral, Environmental Naysayer]

One respondent replied that all the decision makers (federal, state, private companies, regional planning, county planning, and local planning) were part of the process of developing passenger high-speed rail but the state government was engaged only to stop any success of a completed project. One proponent of high-speed rail passionately responded:

Right. It seemed like our state government effectively killed this project and I mean, we had number one: the local governments had planned for the project to go forward and were in the process of planning for it to go forward. We had this company ... that was going to build the equipment for the things, so the whole thing was set to go, but the pinheads that got elected last time around turned down the federal dollars. So everybody was in except for this state government. [Male, 40s, union representative; Economic Believer, Social Advocate, Environmental Ally]

Perceptions about federal decision makers. The majority of respondents believed the federal government is part of the decision-making process but only a small minority believed it is the federal government alone in the decision-making process.

My understanding was, it's basically the feds. And then everybody else is on a "need to know" basis. [Female, 30s, academic instructor: Economic Believer, Social Advocate, Environmental Ally]

Another credited only the federal government because of public communication about it:

I feel it's the federal government, maybe just because I've heard President Obama speak about it. But I really don't think a private company would put the money and investment into a high-speed rail system. [Female, 30s, private industry; Economic Believer, Social Advocate, Environmental Ally]

The federal government was described as the decision maker but respondents also suggested that other players, such as state governments, should be part of the process.

I think the federal government is making the decisions, but maybe the state should be more involved. But because a lot of the high-speed rail has to go through several states, say the Chicago to Detroit line, then the federal government would be a good driver of it. [Female, 30s, private industry; Economic Believer, Social Advocate, Environmental Ally]

One respondent stated that there needs to be a uniform system that runs across the United States, similar to the interstate highway system and a federal approach is needed to accomplish that [Male, 30s, private industry; Economic Believer, Social

Advocate, Environmental Ally]. Some respondents stated that decision making is driven by economic factors and the government body (federal vs. local, etc.) that controls the monies for a project is the government body that makes the decisions [Male, 50s, private industry; Economic Believer, Social Neutral, Environmental Neutral]. Money drives the decision making:

I think economics is one reason, the millions and millions and millions of dollars, according to their studies. I don't know where that money is going to come from because local government, county government is not going to be able to chip in, even if it was 80/20 or 90/10 in terms of the reimbursement. They just can't do it. [Male, 60s, retired academician; Economic Believer, Social Advocate, Environmental Neutral]

Perceptions about state and federal decision makers. Almost one in four (23.7%) stated that decision makers for high-speed rail were a combination of federal and state governments only. Respondents perceived the federal government was the funding source and the state government was the developer/driver of the high-speed-rail-network concept. As one described,

I thought it was the state government that was supposed to get funded by the federal government, and then ... I don't know, the whole thing got spoiled. I would say the state government. [Male, 20s, private industry; Economic Skeptic, Social Challenger, Environmental Ally]

Politics at the state and federal levels are also perceived as a significant factor in the decision-making process. Respondents perceived that individuals with federal political appointments and federally elected officials have specific agendas in promoting the creation of a high-speed rail network; that is, an affiliation with a particular political party.

I've only heard of it on a state level and then federal level. Mostly what I hear is Republicans don't want it; the Democrats are more for it. I haven't heard anything in the press. [Male, 50s, private industry; Economic Believer, Social Advocate, Environmental Ally]

Specific politicians were described as promoting or discouraging passenger high-speed rail development.

See, I think initially it was, in the '90's, a state push ... and with the [federal administration], ... Secretary of Transportation and, [federal senator], a big high-speed rail proponent. I think certainly with the stimulus money (2008) that has put this back on the fast track. You know, they talked about it in the mid-'90's and then we didn't hear about it for 10 years. [Male, 50s, local government employee; Economic Skeptic, Social Advocate, Environmental Neutral]

Other federal issues were also perceived as driving the decision-making process. For example, environmental regulations are generally established by the federal government. One respondent described federal and state involvement but added that environmental considerations of the federal government were important:

I was going to say, I think that it should be, I think federal and state is what I would say personally is who I think should be making those decisions. Only because if they figure it was best for environmental reasons or for the state itself, that's the reason why I think those two should be the top players. So I guess from the top down ... is how I'd answer that. [Male, 30s, private industry; Economic Skeptic, Social Neutral, Environmental Neutral]

Another respondent credited the state as the decision maker but added that the federal National Transportation Safety Board (NTSB) would also be involved.

I'd say the state actually needs to have a hand in it, but is it the NTSB, is that who actually would be over it. [Male, 30s, private industry; Economic Skeptic, Social Neutral, Environmental Neutral]

(The NTSB deals with accidents and safety issues and would not have jurisdictions over passenger high-speed rail development.)

Only three per cent of respondents perceived that the state governments act alone in the decision-making process about whether a high-speed rail network should be added.

That's my impression, is that it's a state-led effort to get that done. [Male, 50s, not-for-profit industry; Economic Believer, Social Advocate, Environmental Neutral]

Another respondent also replied that passenger high-speed-rail development is directed by the states, whether or not the local constituency wants it. Again respondents perceived local interest but state monies are what drives development.

If the locals want it but the state leadership does not, then it does not happen. [Female, 70s, retired, political activist; Economic Believer, Social Advocate, Environmental Ally]

Perceptions about local decision makers. Roughly one third of respondents thought the local decision makers (regional planning, county planning, or local community planning) were part of the decision-making process considering high-speed-rail network creation. Over half the respondents thought that the local decision makers should be part of the decision-making process even if they were not.

I'm thinking the decision makers are probably the federal and the state governments. Local governments and local people should have a say in it, whether they do or not. [Female, 50s, private industry; Economic Believer, Social Advocate, Environmental Ally].

Another respondent argued that local support for the decision-making process must start at a grassroots citizen level:

I think to get anything going, somebody has to make the decision and make the directives. But for people to accept it and for people to understand, or for communities maybe to get the most out of it, and people to be most satisfied with it, then of course I think there needs to be some sort of organic organization within the community who agrees. [Female, 30s, academic instructor; Economic Believer, Social Advocate, Environmental Ally]

The development of a high-speed rail network impacts local municipalities because of the geography of the rail and the location of stops.

Well I think the local, for sure, if it's going to affect their area, or if it's going through their area. [Male, 20s, private industry; Economic Skeptic, Social Challenger, Environmental Ally]

Respondents consider that local involvement is needed to decide where the track should go in a municipality [Female, 20s, Physician] [Economic Believer, Social Advocate, Environmental Neutral], what stops the train should make [Female, 70s, Retired, Political Activist] [Economic Believer, Social Advocate, Environmental Ally], and where the train station should be placed in a municipality. [Male, 40s, union representative; Economic Believer, Social Advocate, Environmental Ally].

As discussed in Chapters 5 and 6, respondents believe high-speed rail lines, high-speed rail stations, infrastructure around these stations such parking lots and garages, and other peripheral structures and improvements will impact the local economic and social environments. Changes that result from these additions should be planned by and for (but not mutually exclusively) local governing bodies. Respondents believe that any single government body does not have the all-inclusive resources, either financial or political, to get the job completed by themselves and that there must be intergovernmental cooperation in the decision-making process.

I think that it's the state government, mostly, but they aren't going to be able to get it done by themselves. They have to get our local aldermen and everybody involved for it to work here. [Female, 30s, private industry; Economic Believer, Social Advocate, Environmental Neutral]

A minority of respondents proactively stated they questioned whether local decision makers should be part of the process of bringing high-speed rail to the area.

First of all, I don't know that local government should be making the decision, because it's more of regional idea, regional concept, so multiple counties should be involved, so that either means the state or the federal government. [Male, 60s, retired academician; Economic Believer, Social Advocate, Environmental Neutral]

Another respondent surmised that it was at the county level:

Who is making the decisions on how that affects? Obviously, it's kind of the political component behind. Primarily, I would say it's the county that has the biggest impact on it. Is that right? Maybe. [Male, 50s, private industry; Economic Believer, Social Neutral, Environmental Neutral]

And still another was confused on the differences between the local players:

Yeah, I guess I don't really know the difference between regional, county, or local community planning. I would guess regional but I don't know for sure. [Female, 30s, private industry; Economic Neutral, Social Neutral, Environmental Neutral]

Respondents also believe that although the decision-making process should have had local involvement, it clearly did not. As described by a government employee who wanted to be part of the process and was not,

They certainly weren't made with any local input. [Male, 50s, local government employee; Economic Skeptic, Social Advocate, Environmental Neutral]

Another respondent also described the decision-making scenario as being local, but not engaging in the process:

You know, I get the sense that they didn't really have a seat at the table, but they certainly made their opinions on it known. Obviously, [Mayor of Rural City] was our mayor at the time, and he was a big proponent of rail. But I don't know that he really had any influence on the decision making process. [Female, 30s, union representative; Economic Believer, Social Advocate, Environmental Ally]

Perceptions about the role of private business in decision making. Results show that respondents perceive another stakeholder in the decision-making process is private business, usually as a secondary participant. One in three respondents perceived that private business was one of the drivers in the decision-making process. Two respondents believe that private business is the major driver in the decision-making process about the creation of high-speed rail.

One respondent described the 'big three' decision makers as the state government, the federal government, and private industry.

These three are the biggest monetary stakeholders and are the entities that make the planning work. The other possible decision makers can express their views but have little say in the decision making process. [Male, 60s, retired government employee; Economic Believer, Social Advocate, Environmental Naysayer]

Another respondent realizes that private corporations, if brought into the mix, will be a decision maker, but only if brought in.

Private industry would be reactive and not proactive. [Female, 50s, private industry; Economic Believer, Social Advocate, Environmental Ally].

Another respondent believes that private business will be a large part of the cost of construction, but federal involvement is needed to create structure to get the population to 'use rail'. [Male, 30s, private industry; Economic Believer, Social Advocate, Environmental Ally]

A respondent stated that business drives the legislative process, so they are involved indirectly [Female, 30s, private industry; Economic Believer, Social Advocate, Environmental Neutral].

Job creation is one of the drivers as to why private business would have an interest in being part of the decision-making process for high-speed-rail creation. Job creation can take different forms: jobs created in the construction of the passenger high-speed rail network; jobs created with the construction of rail cars and other pieces of equipment; and jobs created from ancillary economic development that results from the creation of a high-speed-rail network:

Well, obviously, the state should be making the decision with federal help. But to get private businesses involved to help sell it, because it's not just the train, it's supporting the train, the other jobs that can be supported around it, construction or whatever. That private businesses could be involved in, to support it, that's a good idea. [Male, 50s, private industry; Economic Believer, Social Advocate, Environmental Ally]

Some respondents commented that private industry does not care about the transportation aspects of a passenger high-speed rail network; rather, their interest is

in the immediate construction jobs that would be created. Additionally, the building of railcars would be a job generator. [Female, 30s, private industry; Economic Neutral, Social Neutral, Environmental Neutral]

As stated by a respondent for equipment jobs:

Private entities, in that they bring the industry and did build the trains. I don't know if that's the right thing or not, but like e ... they were part of the process, yeah. Like I said, [Private Rail Company] was going to and did not. [Female, 30s, union representative; Economic Believer, Social Advocate, Environmental Ally]

A respondent for ancillary economic-development jobs stated she believes a correlation exists between a passenger high-speed rail network and the direct creation of jobs from corporations near the high-speed rail lines. [Female, 30s, private industry; Economic Neutral, Social Neutral, Environmental Neutral]

The US rail system is fundamentally different from most other rail systems throughout the world. Simplistically defined, in the United States, private corporations own rail-line networks that move freight across these lines as part of their business model. Passenger rail is not part of that model and passenger-rail transportation is not part of their business models. Because of these realities respondents believed that these private-industry players are a major driver in the decision-making process:

I think they're all part of it, but I would say the main players are the federal government, state government, and [major rail company], who own the track. [Male, 60s, retired government employee; Economic Believer, Social Advocate, Environmental Naysayer]

This respondent understood the relationship between the freight rail companies and passenger rail service. Another respondent also commented on the public-private relationship between shipping and passenger rail:

But, on the other hand, it could be private enterprise, because we know that the current rail line is private ... and I would see that passenger-rail service wouldn't change, so far as being subsidized by the federal government to operate. But if they

can justify the cost, then maybe we could have the – I don't know whether the feds should be involved in it, maybe from a regulatory standpoint, they already are. It has to be at the state level. [Male, 60s, retired academician; Economic Believer, Social Advocate, Environmental Neutral]

Transportation experts. I interviewed transportation experts as key informants. They were clear about who is making the decisions and who they thought should be making the decisions on the creation of a high-speed-rail network. However, they had different perceptions about how involved the different entities are in the decision-making process. Some believed federal, state, local, and regional planning is involved, whereas others commented that it is mainly a federal and state planning process. As perceived by one,

And the local regional planning agencies and the local communities are not that involved. [Male, 50s, transportation expert; Economic Believer, Social Advocate, Environmental Ally]

In contrast, another argued that:

I think they all have a voice. I think they all have a pretty strong voice. [Female, 50s, transportation expert; Economic Believer, Social Advocate, Environmental Ally]

Where all experts were in agreement was in their knowledge that the federal government moves monies to the state and the state is the driver in the use of those monies. As one described,

Seems to me the main players are the states leading the process looking for funding from the federal government. That seems to be the way leadership works. [Male, 50s, transportation expert; Economic Neutral, Social Advocate, Environmental Neutral]

When I raised the question about who the players were in the decision-making process, it was usually thought of in totality of each of the possible stakeholders. Each of the respective government entities encompasses a number of individual components. As an example, a governmental body acting as a decision maker brings in the expertise of its elected officials, its professional staff, its citizenry, its consultancy, and others. All or part can play a part in driving the decision-making

process. One transportation expert perceived that the academic arena is influencing the decision-making process through the subplayers:

The feds, the state, and academics. I think the academic world, and in particular there are academics who are really active in [major metropolitan area] planning ideas. I think that, you know, from a concept standpoint, from a research standpoint, from a public-policy-development standpoint, high-speed rail is such an exciting topic. I think the academics can help keep that alive. I think that the state and the feds are working on where the pots of money get allocated. But I mean I don't even see [the major metropolitan area regional planning agency] really talking. [Female, 50s, transportation expert; Economic Skeptic, Social Challenger, Environmental Naysayer]

Local input into the decision-making process was acknowledged by some transportation experts but they also perceived marked limitations in how and to what extent the local players are part of the decision-making process. Local players may look at station development but not at the macroroute structure. [Male, 50s, Transportation Expert] [Economic Believer, Social Advocate, Environmental Ally] A transportation expert described the local players as advocates and champions for passenger high-speed rail but uncoordinated (integrated into?) with the federal passenger high-speed-rail vision [Male, 50s, Transportation Expert] [Economic Neutral, Social Advocate, Environmental Neutral] Another transportation expert stated the local players are there to push the state and federal entities but have no real planning process. [Male, 50s, transportation expert; Economic Neutral, Social Advocate, Environmental Neutral] Still another states:

I don't see the [major metropolitan area regional planning agency] talking much about this, I don't see the [major metropolitan area regional transportation planning agency] talking much about this, I don't see, you know, some of the business planning interests that tend to be active in public policy development, like [multiple business planning groups]. I just don't see. [Female, 50s, transportation expert; Economic Skeptic, Social Challenger, Environmental Naysayer]

A transportation-expert respondent stated that 'to keep the conversation going' [Female, 50s, transportation expert; Economic Skeptic, Social Challenger,

Environmental Naysayer], the regional planning councils need to be part of that decision-making process. These regional-planning councils are the conduits used by the federal government to pass through to the state and local entities the monies needed for transportation-infrastructure improvements. These metropolitan planning organization have been created throughout the United States to coordinate and be part of the decision-making process.

Another transportation expert pointed out that private industry is working behind the scenes with lobbying efforts. Some industries would endorse passenger high-speed rail whereas others (i.e., the airline industry) would not be supportive of rail. [Female, 50s, transportation; Economic Believer, Social Advocate, Environmental Ally] The geography of political boundaries was also a reality in the decision-making process:

With the state, and you don't have to coordinate these two different, you've got to tax yourself and all kinds of things to make 220 [mph high-speed rail] happen. That's very hard to do when you have two states that have different political processes. So California's almost a perfect case, where you've got one big state that's very progressive. [Male, 50s, transportation expert; Economic Neutral, Social Advocate, Environmental Neutral]

Additionally, ownership of the rail lines was one of the problems described in having a successful decision-making process:

I think where the federal government blew it was by not taking ownership of a couple corridors and say 'We're going to show this country we can do high-speed rail and we're not going to be just doling out money to 50, 30 different projects, we're going to pick a few. [Male, 50s, transportation expert; Economic Neutral, Social Advocate, Environmental Neutral]

In summary, transportation experts identified a variety of obstacles to planning proposed high-speed rail. At the federal level, regional planning boards function to coordinate planning and to funnel money appropriately to individual states. Multistate high-speed passenger-rail projects in the United States are challenged because the country lacks a subnational government system. The Department of Transportation is authorized, through the Interstate Commerce Act, to regulate transportation across state lines, but not to implement transportation systems across state lines. Regional-

planning commissions can be created across states, but the conflicts between individual states on the direction, vision, and policy of high-speed-rail creation can result in marked challenges. Politics play no small part in this regard; while the project was implemented by a Democratic administration at the national level, Republican administrations at the state level can actively work against implementation. Agreements about planning, design, construction, and taxation, all need to be worked out in each state, and then between the states. In states, planning is informed by local stakeholders. The serving of multiple masters can work but it does create another layer of challenges. If planning is driven at the state level, federal policies, such as tax and labor policies, can cause states to slow the ability to create policy quickly. Federal permits and approvals are always part of the process (Thompson 1994). Commitment at the local nonmetropolitan level can also impact planning, not just on development of local stations, but also on the acceptance of an alternative way of improving mobility in time, along with some loss of accessibility of the automobile.

Implications for Planning in Rural/Nonmetropolitan Areas

Research results showed that discussion about the high-speed-rail discourse is considerable among individuals in the rural target population, but the different understandings among the various social segments have not been transferred into any significant formalized policy planning. Local policy should be driven by local discourse, but presently, local discourse about high-speed rail is disconnected from any policy-direction process. Perceptions about structure and the decision-making process for the creation of high-speed-rail networks tend to be incorrect. Respondents presented a menagerie of scenarios of who is involved and how it works. Although respondents acknowledged the role of the federal government in the high-speed-rail project, the parameters of that role were understood in the most abstract way. Very few respondents clearly understood the importance of the federal government in the financial and development process. The definition of who the local planning participants were was open to debate. Ambiguity and confusion were the norm for the majority of respondents in understanding the differences among municipal planning, county planning, and state planning.

Blacksell and Gilg (1981) believed that a multitude of planners in the rural geographies are needed to plan, but that the influence of these planners may be limited. In other parts of the world, government authorities have created rural planning bodies that develop actionable plans. As defined by the British Royal Town Planning Institute, *mediation of space and making of place* (Royal Town Planning Institute 2011) are the cruxes of responsible planning.

In contrast, rural populations in the Midwest have little or no voice in the planning process for high-speed rail. This research shows that perceptions about local planning are weak and little attempt has been made to engage the population as active participants. Findings also show that the rural Midwest is a contested 'place' and that different imaginations of nonmetropolitan places are operating there. The results suggest that adding the voice of the rural nonmetropolitan population to the planning of high-speed rail could be empowering in shaping the evolving sense of place of the Midwest. The alternative means distancing the population, despite increased mobility.