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Methodological Challenges in the Study of Social Communication

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Abstract

This chapter examines how the questions and concepts used in social communications research affect data collection. It begins by offering conceptual definitions of two types of social environments – networks and contexts – that are used to define the boundaries of the field and to highlight its diversity. From this starting point, the implications of these definitions for three methodological issues are discussed: 1) choosing an environmental unit of analysis, 2) selecting cases of social environments for inclusion in a study, and 3) establishing causality. The organizing theme of this chapter is that social communications research is best served by focusing on deep measurement of social environments. Although this advice has the consequence of slowing the development of a unified research program, it prioritizes better measurement and conceptual development that will place the subfield on solid footing.

Introduction

The distinguishing characteristic of political communications research is the presumption that citizens are influenced by the environments in which they reside, taking as the fundamental subject of inquiry how environments vary and the consequences this holds for citizens, either as individuals or groups. A significant line of work within this subfield focuses specifically on *social communication*, which encompasses the information available to citizens from formal and informal social units like interpersonal networks, geographic contexts, churches, the workplace and other social conglomerates.[1]

Despite having origins stretching at least as far back as Berelson *et al.*'s (1954) landmark analyses in Elmira, NY, social communication research was not "in vogue" throughout much of the 20th century.[2] Nevertheless, social communication research is moving again to the forefront of the disciplines of political science and communications. Consequently, there is good reason to pause and consider the methodological challenges this subfield faces. In this chapter, I focus on three research design issues that are of particular note in social communication research: 1) choosing among levels of analysis, 2) trade-offs between depth and breadth in sampling environments, and 3) difficulties in demonstrating causality.[3] Though by no means exhaustive, this list serves as a starting point for a broader discussion about how the unique assumptions of social communication research pose specific inferential challenges and affect the advancement of knowledge.

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[1] For the remainder of this chapter, I use the term "political communications" to refer to the broader array of subjects covered in this volume and "social communications" to refer specifically to research that focuses on political communications within networks, groups, and contexts.
[2] Zuckerman (2005) provides an excellent overview of the lineage of socially-oriented political analysis.
[3] Please note that this chapter focuses on designing political communications research rather than on issues of statistical modeling as these are addressed elsewhere in this volume.

After defining the key terms in this field of study, I outline each problem, discuss its consequences, and offer advice for moving forward. My thesis throughout this discussion is that social communications researchers should prioritize measuring independent variables with as much depth at multiple levels of analysis as possible. As the discussion below makes clear, this has implications for other methodological issues, including case selection, statistical analysis, and ability to draw externally valid conclusions. In broad terms, my justification is that even under favorable conditions it is difficult to draw conclusions across a variety of social environments simultaneously. Consequently, greater attention should be given to better understanding of specific environments, the theoretical properties of those environments, and the potential relationships among them. This in turn requires careful and deep measurement of those environments that is built on strong, theoretically-motivated concepts. Heeding this advice encourages attention to social diversity, development of models that are more attendant to this diversity, and recognition of inherent theoretical ambiguities underlying complex social effects.

Environments for Social Communication: Networks and Contexts

Conceptual development is an intellectual task that falls in between theory building and methodology (Gerring 2001; Collier and Mahon 1993; Adcock and Collier 2001; Chaffee 1991) and is therefore a crucial element of understanding research challenges. For this chapter I focus specifically on two types of social communications environments: networks and contexts. In very general terms, social network research

examines interpersonal communication, while contextual research investigates the relationship between people and groups of people more generally.[4]

Social Networks

Definition. The key definitional element of a social network is the presence of identifiable relationships between people where conversations create opportunities for the transfer of politically-relevant information, such pertinent political facts, general perspectives on politics, political norms and mores, etc. Analytically speaking, this means that work in this vein often focuses on questions like how frequently people talk about politics and what political content those conversations involve. Examples of such research includes whether people recognize political differences between themselves and the consequences such relationships hold for political behavior (Huckfeldt, Johnston and Sprague 2005, 2002; Mutz and Martin 2001; McClurg 2006a, 2006b; Mutz 2006; Finifter 1974; Leighley 1990; Price, Cappella, and Nir 2002; Walsh 2004; Huckfeldt, Mendez, and Osborn 2004).

Another stream of network analyses investigates how the structure of social relationships influences information flows between people. Stated differently, the interest here is in how the substance of relationships between people – familial, professional, unequal, etc. – is related to information exchange and influence. Along

[4] I leave the term *environment* undefined even though it is frequently used in this literature, especially to encompass the general notion of external influences on people. I do this for two reasons. First, because political communications research is generally interested in such external influences nearly all research in it is concerned with the environments which operate upon individuals. Second, to the extent that it could be distinguished from a context or network, any particular environment would not necessarily be a source of *social* communications. Accordingly, I use the term in this chapter to refer broadly to any type of social conglomerate that might be a source of socially-supplied and politically-relevant information.

There are also layers of social interaction that may exist *between* networks and contexts – e.g., small groups – that have some properties of both. For example, membership in small groups clearly involves conversation and personal interaction. At the same time, the relationships between the people may not constitute the entire influence of the group. A nice example of this work can be seen in Djupe and Gilbert (*Forthcoming*). And, an extended discussion of methodological issues can be found in the chapter by Black et al. in this volume.

these lines, some researchers examine how social isomorphism in terms of race, class, income, education, and gender affects acquisition of information and eventual political behaviors (e.g., Mendez and Osborne 2005; Brickell, Huckfeldt, and Sprague 1988; Djupe, Sohkey, and Gilbert 2007; Levine 2005). Others focus on levels of intimacy between parties in a social relationship, such as filial ties and/or the somewhat more amorphous concept of "closeness" (Huckfeldt and Sprague 1991; Kenny 1998). Finally, there is the idea of social tie strength identified by Grannovetter (1973) which focuses on how integrated one specific discussion partner is with other people in a network. Of particular interest in political communications research are how tie strength influences exposure to diverse view points (Huckfeldt, Johnson, and Sprague 2005) and the capacity for collective action stemming from social capital (Putnam 2000; Coleman 1988).

Types of Social Networks. As these examples suggest, social network studies encompass a variety of substantive questions. Accordingly, a variety of strategies are used to identify networks and measure their properties. To help categorize this diversity as much as possible, I use a typology that classifies networks along two dimensions: 1) completeness, which refers to how extensively networks are identified and mapped out, and 2) permanence, which refers to the nature of the relationships between the people in a network. Figure 1 provides a visual representation of this conceptual space, showing illustrative studies at different points in that space. This figure demonstrates how a wide variety of communications environments – from protests to school reform organizations to families – can be usefully studied from a network perspective. With this general conceptual space in mind, it is helpful to explain each dimension in greater detail.

Completeness. At one extreme of the completeness dimension is research examining only parts of an identifiable network, typically through the eyes of a single individual. The most common approach in this vein is the study of *ego-centric networks*, where social relationships are defined in terms of a particular person (the ego) and the people with whom she has discussions (the alters). Defining networks in this manner is particularly useful for large sample surveys because it allows for use of "name generators"– survey questions asking people for the names of family, friends, and acquaintances – to identify a respondent's immediate discussion partners (Burt 1983, 1984; Marsden 1987; Huckfeldt and Sprague 1995). Such survey questions elicit *partial network data*, meaning that they are only capturing a specific slice of the respondent's relationships.

At the other end of the completeness spectrum is research investigating "whole" networks, where the analyst typically identifies a specific and bounded social organization (formal or informal) and then measures *all of the relationships* within it.[5] Rather than relying on an ego's identification of relevant network partners, then, the goal here is to identify all people and then find which links exist from the set of all possible interactions (Scott 2000). Studies in this vein typically focus on network structure rather than individual behavior as the unit of analysis (but see Lazer *et al*. 2007). As such, the nature of the research question often changes from one of individual influence to understanding information flows and group dynamics.

[5] Of course, the different people – nodes – in the network can in a strict sense be perceived of as "egos" and "alters." Similarly, the individuals that constitute the basis of whole network studies are undoubtedly also in other networks as well, implying that "completeness" of a network is not a property of people but of an organization. Thus, this approach is distinguished by a focus on networks as holistic phenomena and therefore focuses on different issues than ego-centric studies, such as the presence of "holes" in a network that might disrupt communication (Burt 1987).

Permanence. As anyone who has changed jobs, moved, or engaged in political action knows, interpersonal relationships vary in terms of length and intensity over time. And, we are undoubtedly influenced in different ways by the variety of relationships that we have (e.g., a boss versus a spouse). Consequently, networks can be usefully distinguished on the permanence of the relationships. At one end of this dimension are *peer networks*, more often than not the subject of social communications research on politics. Here the relationships are relatively sticky over time because they are with spouses, family members, and long-term acquaintances.[6] At the other end are less stable and typically more functional networks. Referred to as *action networks*, these are relationships that arise in response to particular stimuli and then later dissipate.[7] Included here are temporary social groupings, such as classes and/or working groups, and purpose driven networks that people consult *because* of their particular expertise or situation.

Peer and action networks can be distinguished on the basis of how people enter and exit them. While peer networks are less likely to be selected on the basis of criteria relevant to political analysis, action networks are more likely to be selected *because* of political factors. Analysts should be cognizant of selection processes in both cases, but the types of investigation will clearly vary by network type. For example, studies of a network that people join as they enter a social movement must be far more cognizant of

[6] There is some question as to whether or not people have "peer networks" that are politically meaningful because they either self select into expert networks or only talk to people with whom they share political views. While little evidence addresses this specific question, Klofstadt et al. (2007) find that survey-based name generators tend to produce very similar networks, regardless of whether they ask people to identify "most important matters" or "political matters" networks, implying that many people have a core set of relationships that they consult for a wide array of matters rather than specialized friendship networks that exist for political purposes. Nevertheless, this is an area ripe for additional research.

[7] The distinction between peer and action networks is not hard and fast, as relationships that originally form in response to some external stimulus – such as the need for community action – may in fact evolve into lasting relationships.

the formation process than a study of how one's parents influence your political views, if only because you can choose your friends but not your parents.

Social Contexts

Definition. Social communication research is also interested in *contextual effects*. While social network research focuses on specific and observable patterns of human interaction, contextual research thinks of social communications through the lens of citizens reacting to information from or about groups of people (e.g., churches, workplaces, fraternal organizations, neighborhoods and so forth). Although these social contexts are groups where social interaction *can* – but does not necessarily – occur, the interest here is not solely in capturing observable information transfers that occur from networks of human relations. Instead, the focus is on the relationship between individuals and *aggregations of people*. As such, it is a more difficult-to-define concept than the social network. To provide traction, I define social contexts as specific and identifiable social spaces (i.e., they have real physical or social boundaries) from which citizens can receive politically-relevant information. What matters with specific contexts, then, are its social and political properties and how people are (or are not) influenced by those properties. Thus, when we speak of a social context effect we are referring to how people are influenced by its compositional properties, such as the level of education or political attitudes of people in the context.

Excluding social interaction as the principal element defining contextual effects leads to an important question – given that people are in multiple contexts, how are they influenced by them? For example, if someone moved from a highly Republican neighborhood into a highly Democratic one, what influence would that have on a

person's political behavior and why? One common model of contextual effects is based on work by McPhee (1963) and elaborated by Huckfeldt and Sprague (1995). In this model, contexts influence people by probabilistically determines the people with whom we have social interactions. In other words, contexts matter through how they influence social networks. Building on the example, this means that when the person moves to the Democratic neighborhood they are more likely to have conversations and make friends that provide them with information that encourages them to vote Democratic than what they experienced in their old neighborhood. This approach has two important advantages: 1) it provides a very concrete conceptual model for thinking about contextual effects and 2) it creates unity between the contextual and network approaches to studying social communication effects.

However, as the discussion above implies this may be an overly restrictive to think about "contextual effects."[8] If we were to take such an approach it would restrict the field of social communications to only those areas where networks and contexts overlap. Yet there are lots of ways that people may be influenced by contexts even in the absence of a network effect. One alternative, particularly to communications scholars, is the media – newspapers, television, newsletters, organizational reports, blogs, and so forth (e.g., Mutz 1998). Less obvious possibilities are low-level cues – such as personal observation – that lead people to make inferences about their contexts. Along these lines Huckfeldt and Sprague (1992) find that people's judgments about the political leanings of

[8] Even those who use this model do not suggest that contextual influences only operate through social networks (Huckfeldt and Sprague 1995). This reinforces two points underlying the discussion in this chapter. First, there are multiple levels of social reality that may operate simultaneously upon individuals, complicating level of analysis questions in research designs. Second, these different levels of social reality are not necessarily equivalent to each other in their composition and consequences (Huckfeldt and Sprague 1988; Huckfeldt, Plutzer, and Sprague 1993).

their neighborhoods are influenced by the political signs in displayed nearby. Similarly, Baybeck and McClurg (2005) find that people know a wide array of things about their neighborhoods (e.g., how educated they are relative to their neighbors) that are *not* a function of belonging to neighborhood organizations or reading the local papers. Whatever the case, analysts ought to consider which types of causal mechanisms are relevant to the *type of context* they are examining and gather appropriate information for sorting through different causal mechanisms. The point is that contextual effects need not be seen simply as equivalent to network effects; while the two concepts overlap in reality, they are not necessarily the same

Types of Social Contexts. Setting aside the question of the causal mechanisms linking contexts to political behavior, we still need a framework for delineating between types of contexts. The most important issue in this vein involves defining *contextual boundaries*. To identify the universe of different contexts and to measure the properties of individual contexts, the boundaries that delineate among separate contexts must be clearly identified. Potential ambiguities in this process are nicely illustrated by the idea of "neighborhood effects." Deciding that people on one street, for example, are "in" the neighborhood while others in adjacent locations are not is a necessary part of studying the importance of neighborhood contexts. However, these kinds of determinations clearly involve judgment calls.

Two convenient methods are typically used for delineating contextual boundaries. The first, and most common approach in my experience, is use of readily-available geographic boundaries (Huckfeldt 1986; Brown 1981; Wright 1977; Putnam 1966; Johnston et al. 2007). These are convenient because they are widely accepted as

meaningful and allow for clear delineation of contexts by reference to physical space. For instance, when someone refers to the county as a social context it is generally clearer what is meant than when they refer to neighborhoods instead. But though such boundaries may be more clearly understood, they are to a significant degree arbitrary, or at least based on criteria that are irrelevant to contextual theories. When analysts want to understand how people respond to their neighbors, it is therefore unclear what should guide their choice from the menu of geographic options. Is a census block group the appropriate choice? Or, should it be the city? Unfortunately, the necessities of gathering data mean that such ambiguities are often built into social communications research.

A second way of defining contexts is with organizational boundaries, the paradigmatic examples here being churches and workplaces (e.g., Huckfeldt, Plutzer, and Sprague 1993; Djupe and Gilbert 2006; Mutz and Mondak 2006). As with geographic boundaries, using formal organizations to delineate among contexts is convenient. Not only are referents like "churches" and "workplaces" substantively interesting, but it is relatively clear on who is "in" and who is "out" of the context. Unlike geographic contexts, the boundaries of formal social units are *not* arbitrarily drawn. Yet this strength also involves tradeoffs, the most important being that *because* the boundaries are *meaningful* to average people, self-selection into the context is an even more acute concern. Additionally these contexts are typically seen as *unique* and/or *specialized*, thereby limiting how widely conclusions drawn from them are believed to extend to other contexts.

Methodological Problems: Choosing a Level of Analysis

Problem. The first methodological choice facing any scholar testing a social communication hypothesis regards the appropriate level of analysis to measure an environmental effect. Levels of analysis problems outside of political communications research typically center on appropriate measurement of dependent variables (e.g., to avoid the ecological inference fallacy), but the aggregate characteristic of most *independent variables* in political communications research means that important choices are to be made there as well. Given any particular social communication hypothesis it is likely possible to formulate it for many types of networks and contexts. But which one is appropriate? In some situations the decision is not daunting because substantive question narrows analytical choices, such as studies of family or marital influence on voting behavior (Stoker and Jennings 2005; Brickell, Huckfeldt, and Sprague 1988; Zuckerman, Fitzgerald, and Dasovic 2005). Yet theoretical expectations are often not sufficiently precise to make the choice obvious.

Take for example the question of how racial context affects whites' attitudes towards African Americans. Key (1949) argued that whites would be more hostile to blacks in those areas where "racial threat" – measured by the proportion of black in a county – was at its highest. While Key's argument is straightforward, the question of whether the proportion of minorities in a white person's immediate locale makes them more tolerant debatable (Giles and Buckner 1993, 1996; Giles and Hertz 1994; Glaser 1994; Voss 1996a, 1996b; Oliver and Mendelberg 2000; Branton and Jones 2005). The problem is, in short, that the results *depend upon the contextual unit employed*. As Baybeck's (2006) analysis of survey and census data from St. Louis and Indianapolis

shows, the impact of racial context on behavior differs when the unit of analysis for the independent variable is the census block group than when it is the municipality in which people reside. Although both contexts are reasonable choices, the fact that the results *depend upon* the choice demonstrates the underlying problem here – the environment level of analysis can be among the most significant research design choices made.

Implications. Ignoring the unit of analysis problem can lead to a variety of substantive misunderstandings, the first of which is that findings are invariant to the choice of environment.[9] *Choices about which networks and/or contexts to analyze are meaningful because they prioritize certain types of theoretical links between social environments and political behavior*. If we were to believe, for example, that racially-charged political debate is the source of racial hostility between whites and blacks then it is inappropriate to choose neighborhoods or networks as a unit of analysis. In the case of the former, neighborhoods are not meaningful arenas of political debate. In the case of the latter, it is possible that political debate occurs between acquaintances but highly unlikely to be a function of cross-race interaction because of racial isomorphism in interpersonal networks. Instead, it would make far more sense to focus on social diversity within governing boundaries like municipalities, districts, and the like as those are the units that constrain political debate through election campaigns and policy.

A second, but related, issue is that social communication effects may be incorrectly treated as constant across multiple levels of analysis. This is an issue of *causal heterogeneity*, where the effect of one independent variable depends at least in part on how it combines with other independent variables to influence the dependent

[9] In geography this methodological concern is known as the *modifiable areal unit* problem, though it is expanded here to include not just the appropriate geographic context but the choice of types of networks and contexts as well.

variable.[10] For example, McClurg (2006b) shows the political disagreement in networks demobilizes people who are *also* in the political minority in their neighborhood, whereas it has *no effect* for people that are in the neighborhood majority (also see Djupe and Gilbert *forthcoming* for another example). Because citizens are less likely to make the sort of distinctions between social environments that scholars make in order to ensure a tractable empirical analysis, scholars should be cognizant that empirical conclusions are vulnerable to change when additional levels of analysis are incorporated. Indeed, what makes social communications research interesting is the possibility for cross-environmental heterogeneity. Yet most studies look at a slice of social life, so analysts should be sensitive to unexplored heterogeneity in causal parameters.

A final point to make is that level of analysis problems may arise simply because environments are chosen as a matter of convenience rather than as a matter of theory. Even though many social communications hypotheses are not precise enough to provide clear expectations across many types of networks and contexts, the lack of precision does not imply that certain environments cannot be ruled out as inappropriate for a specific research question. If the research hypothesis suggests that face-to-face interaction is necessary for a social communication effect, then using a neighborhood or church context to measure the social environment is less appropriate than peer networks as there is considerable variation among individuals in how much face-to-face interaction that occurs. Likewise, if the research hypothesis suggests that behavior depends upon social diversity, a network study is unlikely to be meaningful if it focuses core networks rather

[10] Ragin (2000) provides an excellent and broad discussion of causal heterogeneity. A discussion more germane to this chapter is Iversen's (1991) arguments about cross-level effects in contextual analysis.

than the extended network because they tend to be very socially, economically, racially, and politically homogenous.

Advice. Ideally, the best way to tackle level of analysis questions is straightforward – lean on theory. Yet advancement in this field is limited by the absence of conceptual development that distinguishes among the multitude of social environments and their theoretical properties. Huckfeldt and Sprague (1995) provide a nice foundation for thinking about mechanisms linking aggregate social contexts to networks, while Books and Prysby (1991) discuss issues of causality in some detail for aggregate social contexts. But there is very little work that either expands upon these beginnings or empirically explores important conceptual distinctions, such as what causal mechanisms dominate in different environments (but see Huckfeldt, Johnson, and Sprague 2005; McClurg 2006b; Djupe, Gilbert, and Sohkey 2007). To help alleviate these concerns, future research should try to rule in and out different causal mechanisms linking social environments to political behavior.

In lieu of more refined conceptual definitions that can guide choices about appropriate units of analysis, it may be beneficial to test the robustness of the assumptions underlying use of data analysis with data. In a paradigmatic example, Branton and Jones (2005) show that the joint effect of racial and socioeconomic context on political attitudes holds across *multiple geographic contexts*, simultaneously building some support for a claim of generality and providing hard evidence on the scope of that claim.

Methodological Problems: Sampling

Problem. The second methodological choice in social communications research regards sampling and it involves two related issues. The first is the selection of environmental cases on which to gather data, an important choice because random sampling is unavailable as a method at the aggregate level; the second is how many different *types* of social units (*between unit sampling*) to select versus how much information to gather about each unit that is in the data set (*within unit sampling*). While the substance of research questions may again provide guidance in dealing with sampling issues, these two issues create a natural tension between breadth and depth of analysis that is fundamental to social communications research. In essence, the wider variety and larger number of environments – be they networks or contexts – that that are measured, the less that can be learned about any specific environment. The end result of this tension is that, even with tremendous resources, original data collection will struggle to have a deep and generalizable understanding of any social communication effect.

To understand the problems, first consider the contrasting case of a random sample survey. All social scientists understand that survey samples need to be comprised of people who have been selected in a manner that is independent from the study itself lest they incur selection bias.[11] Likewise, social scientists recognize that estimates of relationships between any two individual level characteristics are less certain when based on a handful of observations then when based on thousands (e.g., Gill 1999). Accordingly, good survey researchers draw large random samples of individuals from

[11] For example, if we want to study the relationship between standardized test scores and performance in graduate school, we would have to account for the fact that people with low scores do not gain admission into graduate school in the first place (e.g., King 1989, Chapter 9).

well-defined populations in order to avoid selection bias and statistical inefficiency, while maximizing the ability to make generalizable statements about the population.

Yet to use this kind of procedure, it is necessary to have a well-defined population *and* a large number of observations within that population. Unfortunately, the questions pursued in social communications research usually make it difficult to match these conditions, especially when multiple individuals are embedded within a single environment.[12] When we are referring to a single type of environment, for example a specific type of network or context, not only is there rarely a well-defined list of component parts from which we could sample, but the underlying "population" of environmental units may not be large enough to make random sampling useful. At the same time, it is often impractical to gather information on *all environmental* units. This means that analysts are usually given two choices when trying to determine how much information to gather within the environment: "some" or "all," with the second option involving fewer individual-units per social communications environment.

While this suggests that choosing "some" environments for analysis must be done purposively, there is a second sampling decision involved regarding *how* many environments to include in a study. Whether the goal is to examine as many neighborhoods, churches, or types of network relationships as possible, larger environmental sample sizes in a study (either per individual or across all individuals) comes at the price of reduced information on any specific environment itself.

Huckfeldt and Sprague (1995) illustrate these kinds of tradeoffs in their study of how neighborhoods affect political behavior. To measure their independent variable –

[12] There are some exceptions to this kind of statement – e.g., using clustered sampling designs where aggregate units are randomly selected – but these designs are not always viable for studies of specific contexts for which sampling frames are not available.

neighborhood political composition – they needed to aggregate survey responses within each neighborhood. In doing so, they not only had to decide how many individuals to select per neighborhood (they settled on about 100), but they had to select specific neighborhoods (they settled on 16) in which to conduct the surveys. While they could randomly select *within* neighborhoods and thereby get rid of *systematic measurement error*, the amount of imprecision in their measurements (i.e., *unsystematic measurement error*) was a direct function of the neighborhood sample size and their ability to draw conclusions about how neighborhoods influence behavior has uncertain generalizability.[13]

At its most basic level, these sampling concerns mean that social communications research – and likely political communications research more generally – has a *built-in* tradeoff between good measurement of the independent variables and generalizability of the sample. For a political psychologist who uses survey data, the main concerns with measurement have little to do with external validity of the population except to the degree that respondents self-select out surveys and experiments. By contrast, any study of a social network or context will have to decide whether it is more important to examine multiple environments or understand the ones that they do measure with greater depth. At the same time, this work must *still be concerned* with the same self-selection problems faced by other researchers.

Implications. What consequences do these sampling problems hold for social communications research? By accepting that "context matters," it is inherently built into

[13] Their example also illustrates the first set of sampling concerns as they had to systematically choose from all South Bend neighborhoods a subset within which they would conduct their random samples. Among the many choices they made, they decided to focus on predominantly white neighborhoods (1995, p. 37). While the choices they made were all reasonable and/or done out of necessity, it illustrates the difficulties of coming up with a study that was generalizable even to South Bend.

social communications research that findings are highly contingent on the particular group of people included in analysis; gains in external validity across and within environments depend particularly on environmental sampling decisions. Keep in mind that that this is not a *flaw* of social communications research per se, but rather a reflection of the complexity caused by the multiple, overlapping social environments that surround people in the modern world.

Drawing on this perspective, one implication of the sampling problem is that social communications researchers must make *purposive* decisions about *what* to observe. In this sense, it is starkly different from volumes of other research on political behavior that effectively employs random sampling strategies. But as noted above, what environments to include in a study and what component parts of those environments to include in a study are not decisions that can be readily solved with such strategies. This potentially introduces researcher-induced selection-bias into social communications data. The last codicil – that the bias is a function of investigator choices – not only distinguishes it from selection biases induced by the behavior of respondents (see below), but highlights a potentially serious problem for social communications research. Although all research is likely affected to some degree by the biases of the researchers, particularly with regards to the questions that get asked, there are often good methodologies – like random sampling – that reduce bias from the sample selection process. Almost by definition, these concerns are more acute in social communications research for the reasons laid out above.

A second implication is that these sampling issues may lead scholars to simply ignore the unique issues involved in environment sampling, instead randomly sampling

individuals and relying either on their perceptions of the environment or using external information (e.g., census data) as a measure of the context. In my opinion, while both strategies can yield some useful information on social communication effect, neither is satisfactory as a panacea for sampling concerns.

First consider an approach that only measures the context through people's perceptions of it. Understanding people's beliefs about social environments is clearly a necessary part of research in this field and does avoid tricky issues of sampling on both independent and dependent variables simultaneously. Yet people's perceptions of their environments are not entirely accurate because they are partly a projection of individual characteristics (Huckfeldt and Sprague 1988, 1992; Mutz and Martin 2001; Baybeck and McClurg 2002). And while we should study such perceptual errors, ignoring the actual social communications environment means we are only focused on the individual-half of the equation. This is akin to ignoring supply to only study demand in economics in that we would only be examining part of the environmental process (people's views of the environment) and overlooking the role of the informational supply (the composition of the environment). Such a one-sided approach would completely reshape the core questions of the field into ones of social psychology with less emphasis on exposure. As defined earlier, network and context research necessarily cares about *both* processes.

How about using aggregate data to measure contexts and linking it to a random sample of individuals? What are the drawbacks of this approach? As with studies relying only on perceptions, such an approach has some merit as *one* among *many* because it would provide good information across environments. However, limited within-context sampling would mean that estimates of the associated causal effect would

be limited. At its most basic level, the problem is obvious – if we only had one person per county the variability around estimates of county-level effects would be much larger than if we had 1000 people per county. It would be very difficult to hold much confidence in such a result as the standard errors would be based on cross-individual variance when what we care about are the within-context cross-individual variance. Additionally, this kind of approach is naturally limited to only certain types of questions – those for which aggregate data is available – and those are not necessarily motivated by theoretical concerns.

Advice. My initial inclination when writing about environment sampling and the tradeoffs it necessitates is to suggest throwing your hands up in the air, if only because they seem so overwhelming. My second inclination is to advocate sticking as closely as possible to previous practices, largely because that would speed the accumulation of knowledge which these types of problems generally retard. Instead I will advocate giving priority to *within-environment* criterion in social communications research. The one thread running through the discussion in the preceding subsection is that generalizability is not only difficult to achieve, but if focused on entirely leads to strategies that are in the long-run not likely to speed the accumulation of knowledge anyway.

Accordingly, my primary piece of advice for gathering new data is to focus first and foremost on defining what specific type of network or context is appropriate and then gathering sufficient observations within that social unit for measuring it accurately. Then – and only then – should attention be given to thinking about how many different environments in which to gather data. Although this certainly prioritizes sampling for the purpose of measurement at the expense of external validity, it will enrich the details

about *how* social environments structure individual behavior. The justification for this advice is simply that trying to measure environments broadly (but shallowly) is similar to catching a greased pig – no matter how hard you try, you are unlikely to be satisfied with the outcome whether or not you catch it.

In pursuit of deep, rich measurement of social units we need not simply and uncritically default to standard techniques such as the important matters name generator or hierarchically stratified samples for gathering contextual data. Instead, special priority should be given to developing new and creative strategies appropriate for a wider variety of units. For example, scholars interested in how disagreement influences attitudes might consider manipulating discussion environments and group composition in focus groups in order to gain theoretical control over properties of the environment (Druckman and Nelson 2003; Fishkin 1997). Similarly, contextual researchers might consider purposively choosing contextual units to maximize variation in key independent variables, much in the way that comparative politics scholars choose nations to provide maximum empirical leverage from a handful of cases. Indeed paying closer attention to strategies developed in the fields of comparative politics and communications where large-N research is frequently not plausible may hold some of the best advice for dealing with purpose selection of environmental cases for inclusion in analysis.

Although these suggestions in essence mean that knowledge will be more diffuse in the area of social communications than in some other fields of study, it is faithful to the fundamental theoretical issues how individual behavior is influenced by social groupings like networks and contexts. If taken seriously, it means that it is inevitable that there will be only a handful of purposefully chosen environments included in any particular study

that are thoroughly measured and representative of social diversity, but not necessarily generalizable to some well-defined population of social units.

Methodological Problems: Establishing Internal Validity

Problem. While by no means true that all social communications scholarship is based on a belief that the environment has a direct and coercive impact on individuals, questions of causality remain at the center of the field. The question of whether social environments have causal effects is nicely stated by Michael Laver in his review of *A Social Logic of Politics*, an edited volume by Alan Zuckerman. While complimentary of the book, Laver (2005, p. 933) writes that,

> [t]here is, of course, always the potential for selection bias…in survey evidence on 'network contacts' of respondents. It seems at least plausible that those explicitly named by respondents as people with whom they discuss politics may be a biased selection of those with whom politics is actually discussed – contacts who are more similar in views or more persuasive, perhaps.

Consequently, social communications researchers who are interested in causal effects face serious challenges to establish causality that are fundamental because the characteristics of social environments are difficult to disentangle from individual characteristics which drive people into different environments.[14] Social communications processes – like most political phenomena – are inherently endogenous, with social aggregates influencing individuals and then evolving as those individuals make decisions that influence the environment. Given that there is feedback between people within

[14] Note that this is a different type of selection bias than the one discussed in the section on sampling as this is a *substantive* process, rather than a *methodological one*.

networks and contexts, these processes may even be of *specific* empirical and theoretical interest.[15]

Comparing social communications research designs with classical experimental designs clarifies the problem. If we want to use an experiment to know whether a context or network is the star of a social science "whodunit," we would have to meet at least two minimal conditions: 1) random assignment of individuals to environments and 2) control over the environmental stimulus. Starting with the first condition, we could circumvent many of the problems with establishing causality because we could rule out any *individual-level* explanations were it possible to randomly assign people to networks, neighborhoods, churches, etc. Doing so would allow us to isolate environmental factors as explanations of behavior; this is, of course, the principal strength of experiments.

The second condition, however, is also important and likely overlooked. Consider the contrived example in Figure 2, which plots two possible relationships between how neighborhood partisanship (x-axis) is related to the probability an individual participates in politics (y-axis). In both cases we can see that there is a parabolic relationship, with participation highest in more competitive neighborhoods and lower in highly unbalanced contexts. The main difference between the two curves is in the strength of the neighborhood effect. Were we in an experimental situation, the ability to control the size of the neighborhood partisan bias would allow us to accurately distinguish between the two situations. In short, it would give us the ability to get a better estimate of the *true causal effect*. However, because of the processes by which people select neighborhoods, *real observable contexts* rarely reach out to these extremes,

[15] See Mark Buchanon's *The Social Atom* (2007) for a popularized account of how positive and negative feedback are central to understanding social phenomena.

meaning that we have a limited range over which we can examine causal effects. Once you include sampling variability into the equation, this means that we might be unable to find the presence of all but the strongest environmental effects, but that our ability to get a good sense of the strength of causal effects is constrained by selection processes.

Implications. One vexing consequence of this problem is the difficulty of empirically distinguishing between true social communications effects and the processes by which individuals are exposed to the communications in the first place. Whether we are looking at the church, the workplace, friendship circles or any other *social* environment, people typically exercise some control over both their entry into that social environment and the types of information available to them therein. Moreover, the *reasons for selecting* those contexts and receiving specific information may be strongly correlated with the individual's beliefs, especially with respect to politics.[16] Such problems are very similar to issues of selective communication that are commonly recognized in mass communication-oriented research where people have considerable control over what messages they see – or do not see – in a modern media environment (e.g., Stroud 2007; Slater 2007).

For example, if someone votes in most elections and considers herself a Democrat, the desire to avoid conflict with her family and friends as well as the need for social support might lead her to explicitly limit discussions with Republicans. If we then observe that her network or neighborhood is highly Democratic, we are unclear as to whether she chose that environment because it was Democratic, whether she has become

[16] The degree to which selection and communications processes correlate is not constant across all environments. For example, most people don't attend church or take a job for political reasons, while they may in fact choose friends on this basis.

Democratic because of its partisan bias, or even if the environment plays an important role in *sustaining* her original preference.

It is important to recognize that this is not a problem of analytical technique, but one of theory and data. There are well-established statistical methods for dealing with different types of selection bias, such as the Heckman selection model and seemingly unrelated modeling techniques (Heckman 1976; see King 1989, Chapter 9 for an overview of this class of statistical model). Yet such statistical methods only provide purchase when variables are available which independently predict the selection process, something that is very hard to come by in social communications research *because* of the very presumption that politics and social interaction are intertwined (Kenny 1992, 1994).

The second consequence is possible reciprocal causation. As with the case of selection bias, the root concern here is that estimates of social communication effects are not exact because of the underlying data generating process. Assuming for a moment that no selection effect is likely present – for example, if we were studying boss-employee relationships and their impact on politics – serious questions about the direction and strength of the causal impact would still exist. If the employee donates money to a specific presidential candidate, as does her boss, is it because the boss has persuaded her to make that donation in lieu of facing professional setbacks? Such an argument is perfectly sensible and gets raised frequently in discussions of campaign reform. However, it is equally possible that it is the employee, anxious to demonstrate her political perspicacity, explains to her boss the importance of making the contribution in order to advance the company's interests. It is also possible that *both* processes are

acting simultaneously to produce the behavior of interest. Another possibility is that there are no social effects at all, with only individual-characteristics driving behavior.

The problem faced by social communications scholars in distinguishing between a communication effect and reciprocal causation is again that most potential observations that can be made would constitute evidence for *either explanation*. Moreover, in-depth probing of the parties to the interaction would not provide the necessary answers; in short, a procedure equivalent to "process tracing" in qualitative research would not help. Why? Even if the boss were influenced by his employee, a number of other variables might produce in him the impression that he was not – gender differences, status differences, and so forth. And, again, the variables necessary for properly identifying statistical models of simultaneity are difficult to find.

Advice. There are three ways to establish validity for causal claims in social communications research. The most obvious, but to some degree least useful, is use of advanced statistical techniques. As I note above adequate statistical techniques exist for gaining purchase on causality. For either selection bias or simultaneity problems, these techniques require the analyst to identify variables that independently predict values of both the dependent variable and the social environment under investigation. For example, we could potentially model the type of neighborhood that someone chooses as a function of its distance from the workplace, property values, and the quality of the schools. Each of these variables would be independent of most political dependent variables, such as willingness to participate or vote choice. Likewise, we might estimate variation in those dependent variables with information on family background, career choice, and campaign stimuli.

Unfortunately, such solutions are frequently intractable and impractical, as social communications theory is underdeveloped with respect to selection processes and reciprocal causation. Even assuming that we had theory that was specified enough to identify good exogenous variables to model processes which confound causality, introducing such variables into the data collection process is a further restriction on the depth of information we can collect about the social environments themselves. For these reasons, statistical solutions often provide only imprecise and rough estimates about causal effects, implying that a certain amount of circumspection should be employed when using these methods.

A second approach to establishing causality is to use creative analytic strategies. In particular, there are natural variations in real world data that might allow us to build at least a circumstantial case against some threats to internal validity. For example, people cannot choose their parents and siblings on the basis of politics, but could potentially structure the extent of their interaction and political discussion as a consequence of political views. Analysts who have enough information to parse their data into groups of relations who interact frequently and infrequently can re-estimate causal models and compare parameter estimates in order to get some sense of how much of an effect selection processes have on estimates.

While this approach ultimately relies on the creativity of individual scholars, it also has natural limitations that even the most creative among us must consider. To use a trial metaphor, this approach is akin to building a circumstantial case. It is not as definitive as DNA evidence, but builds towards a guilty verdict. Additionally, the fact that such an approach requires the parsing of data increases the chances that sampling

error is responsible for null findings. In other words, the utility of such strategies is positively correlated with the number of observations. As most widely available datasets for analyzing social communications have fewer than 1,500 observations, split-sample analytic strategies become unworkable very quickly.

A final way to tackle these questions is through use of innovative research designs that explicitly tackle internal validity problems. Some of the most promising efforts in this vein use field experiments and natural experiments. For example, Klofstad (2007) examines naturally evolving roommate effects among college freshmen. Since students are randomly assigned to dorms, he reasons that any change in their political behavior from the start of a Fall term to its end is caused by the level of political discussion that occurs between roommates. Similarly, Nickerson (2008) shows that the spouses of people contacted in a traditional voting experiment are much more likely to vote than the spouses of a group that was *not* contacted. Though he cannot prove that this is a consequence of social communication per se, he can reasonably argue that the social tie is responsible.

These two examples show the power of clever research designs for establishing strong inferences about the impact of social environments on political behavior. However, these designs are not only very difficult to specify and execute, but are not equally useful for all types of problems. For example, while we can find situations where we can adequately randomize the stimulus (as in Nickerson) or where assignment to new environments is independent of social content (as in Klofstad), there is a limited array of environments in which these situations occur. And, unfortunately, these situations may be unique and not necessarily of broad interest. For example, Nickerson's research

cannot speak to the influence of friends, congregationalists, etc. without an extensive survey of all parties involved. This would significantly increase the practical costs and problems of this kind of research, while also adding in survey stimuli as plausible alternative explanations for political outcomes. Moreover, Klofstad was restricted to a study of college freshman, a clearly unique population when it comes to how open they are to persuasion. Nevertheless, these "shortcomings" show why we need *more* of these kinds of designs rather than fewer, as they hold promise for building evidence in a wide variety of environments about causal effects of social communication.

In the end, there is no one way for avoiding problems in making causal inferences. And while each approach is helpful, none of them hold out the promise for solving these problems "once and for good" in the field of social communications. This again suggests to me that healthy progress in the subfield of social communications depends deeply on the use of multiple methods and the slow accumulation of evidence, rather a single set of methodological solutions to causal validity issues.

Conclusion

As interest increases in the study of social communication effects, increasing energy is being devoted to gathering new data for exploring the multitude of contexts and networks surrounding typical citizens. While we should be enthusiastic about such efforts, the desire to advance knowledge should not overwhelm a sober understanding of the challenges faced in this field. Whereas most political behavior research can make good use of fundamental research principles to gather data on the basis of the dependent process being studied, those scholars interested in understanding how social systems influence people must also be cognizant of how they gather information on those

systems. While traditional dependent-variable driven data can be used, it is suboptimal because it is not driven by the core questions of the field.

To the extent that the advice in this chapter can be summarized, the central point is to prioritize in-depth understanding of specific contexts. Undue concern for trying to capture the multiple social influences surrounding people will lead to research designs that are unfocused, lacking in depth of measurement, and ultimately unable to satisfy a desire to broadly understand social communications effects. It seems far more prudent to me to embrace the incremental nature of this research program *because* it is built into the very fabric of social processes.

Figure 1. Conceptual Mapping of Social Network Types, with Examples.

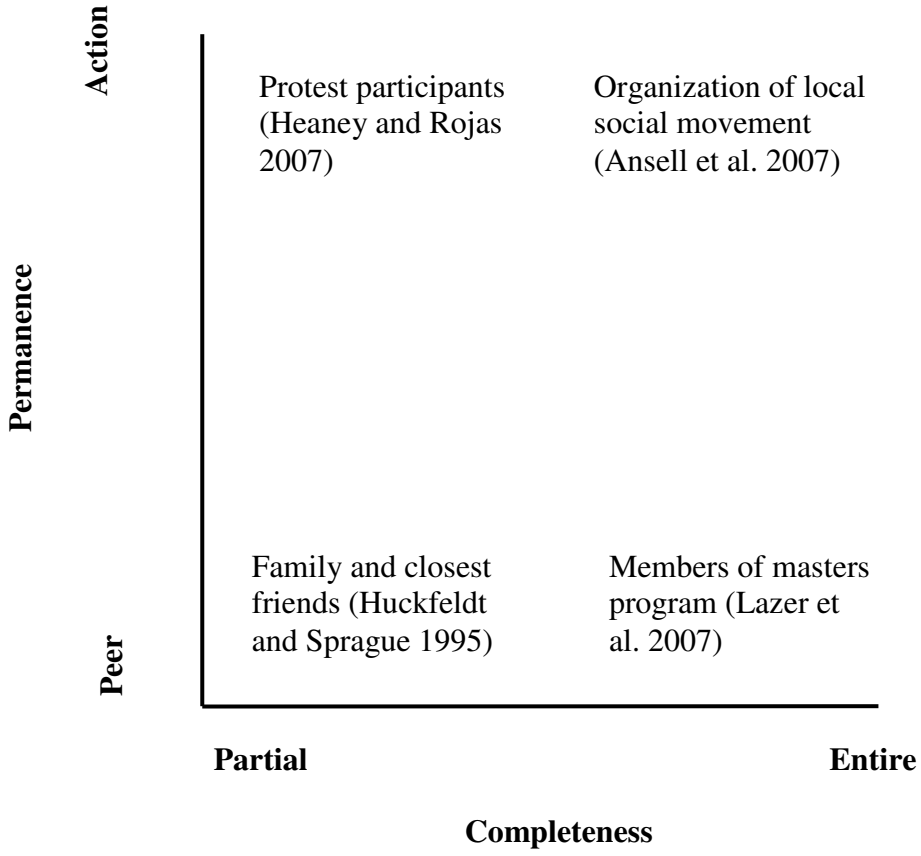
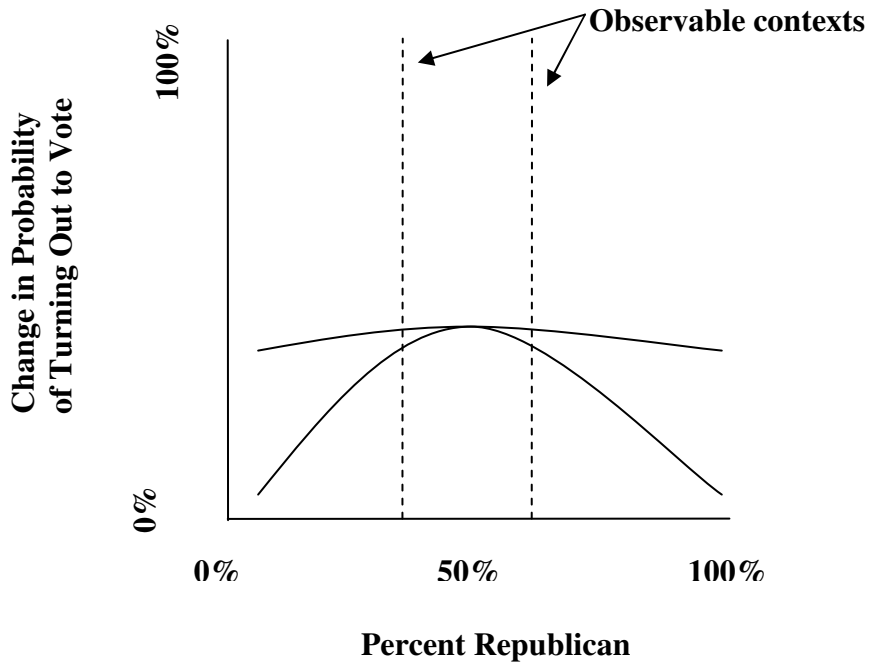


Figure 2. The Importance of Controlling Environmental Stimuli.



Works Cited

Adcock, Robert and David Collier. 2001. "Measurement Validity: A Shared Standard for Qualitative and Quantitative Research." *American Political Science Review*. 95:529-46.

Ansell, Christopher, Andrew Kelly, and Sarah Reckhow. 2007. "One Man's Reform is Another Man's Hostile Takeover: Using Network Leverage to Identify Opportunities in Oakland School Reform." Paper presented at the Annual Meeting of the American Political Science Association, Chicago, IL.

Baybeck, Brady. 2006. "Sorting Out the Competing Effects of Context." *Journal of Politics*.

Baybeck, Brady and Scott D. McClurg. 2005. "What Do They Know and How Do They Know It? An Examination of Citizen Awareness of Context." *American Politics Research*. 33(4):492-520.

Berelson, Bernard R., Paul F. Lazarsfeld, and William N. McPhee. 1954. *Voting: A Study of Opinion Formation in a Presidential Campaign*. Chicago, IL. University of Chicago Press.

Books, John W. and Charles L. Prysby. 1991. *Political Behavior and the Local Context*. New York: Praeger Press.

Branton, Regina P. and Bradford S. Jones. 2005. "Reexaming Racial Attitudes: The Conditional Relationship Between Diversity and Socioeconomic Environment." *American Journal of Political Science*. 49:359-72.

Brown, Thad A. 1981. "On Contextual Change and Partisan Attitudes." *British Journal of Political Science*. 11:427-48.

Brickell, Bettina, Robert Huckfeldt and John Sprague. 1988. "Gender Effects on Political Discussion: The Political Networks of Men and Women." Presented at the annual meeting of the Midwest Political Science Association, Chicago, IL.

Burt, Ronald S. 1984. "Network Items and the General Social Survey." *Social Networks*. 6: 293–339.

Burt, Ronald S. 1985. "General Social Survey Network Items." *Connections*. 8:119-23.

Chaffee, S.H. 1991. *Communication Concepts 1: Explication*. Newbury Park, CA: Sage.

Coleman, James S. 1988. "Social Capital in the Creation of Human Capital." *American Journal of Sociology*. 94(Supplement):S95-S120.

Collier, D. and J. Mahon, Jr. 1993. "Conceptual 'Stretching' Revisited: Adapting Categories in Comparative Politics." *American Political Science Review*. 87(4): 845-55.

Djupe, Paul A. and Christopher P. Gilbert. Forthcoming. *The Political Influence of Church*. New York: Cambridge University Press.

Djupe, Paul A., Anand E. Sohkey, and Christopher P. Gilbert. 2007. "Present But Not Accounted For? Gender Differences in Civic Resource Acquisition." *American Journal of Political Science*. 51(4):906-20.

Djupe, Paul A. and Christopher P. Gilbert. 2006. "The Resourceful Believer: Generating Civic Skills in Church." *Journal of Politics*. 68(1):116-27.

Druckman, James N. and Kjersten R. Nelson. 2003. "Framing and Deliberation: How Citizens' Conversations Limit Elite Influence." *American Journal of Political Science*. 47(4):729-45.

Fishkin, James C. 1997. *Voice of the People: Public Opinion and Democracy*. New Haven, CT: Yale University Press.

Finifter, A. 1974. "The Friendship Group as a Protective Environment for Political Deviants." *American Political Science Review*. 68(2):607-25.

Gerring, John. 2001. *Social Science Methodology: A Critical Framework*. New York, NY: Cambridge University Press.

Giles, Michael W. and Melanie A. Buckner. 1993. "David Duke and Black Threat: An Old Hypothesis Revisited." *Journal of Politics*. 55(3):702-13.

Giles, Michael W. and Melanie A. Buckner. 1996. "Comment." *Journal of Politics*. 58(4):1171-81.

Giles, Michael W. and Kaenan Hertz. 1994. "Racial Threat and Partisan Identification." *American Political Science Review*. 88(2):317-26.

Gill, Jeff. 1999. "The Insignificance of Null Hypothesis Testing." *Political Research Quarterly*. 52(3):647-74.

Granovetter, Mark S. 1973. "The Strength of Weak Ties." *American Journal of Sociology*. 78(6):1360-80.

Heaney, Michael T. and Fabio Rojas. 2007. "Partisans, Nonpartisans, and the Antiwar Movement in the United States." *American Politics Research*. 35(4):431-64.

Heckman, James J. 1976. "The Common Structure of Statistical Models of Truncation, Sample Selection and Limited Dependent Variables and a Simple Estimator for Such Models." *Annals of Economic and Social Measurement.* 5:475-92.

Huckfeldt, Robert. 1996. *Politics in Context*: *Assimilation and Conflict in Urban Neighborhoods*. New York: Agathon.

Huckfeldt, Robert. 2001. "The Social Communication of Political Expertise." *American Journal of Political Science* 45(2):425-39.

Huckfeldt, Robert, Paul E. Johnson and John Sprague. 2002. "Political Environments, Political Dynamics, and the Survival of Disagreement." *Journal of Politics*. 64(1):1-21.

Huckfeldt, Robert, Paul E. Johnson, and John Sprague. 2004. *Political Disagreement: The Survival of Diverse Opinions within Communication Networks.* Cambridge, England: Cambridge University Press.

Huckfeldt, Robert, and Jeanette Morehouse Mendez. 2008. "Moths, Flames, and Political Engagement: Managing Disagreement within Communication Networks." *Journal of Politics*. 70(1): 83-96.

Huckfeldt, Robert, Jeanette Morehouse Mendez, and Tracy Osborn. 2004. "Disagreement, Ambivalence, and Engagement: The Political Consequences of Heterogeneous Networks." *Political Psychology*. 25(1):65-95.

Huckfeldt, Robert, Eric Plutzer, and John Sprague. 1993. "Alternative Contexts of Political Behavior: Churches, Neighborhoods, and Individuals." *Journal of Politics*. 55(2):365-81.

Huckfeldt, Robert and John Sprague. 1987. "Networks in Context: The Social Flow of Political Information." *American Journal of Political Science*. 32(2):467-82.

Huckfeldt, Robert and John Sprague. 1988. "Choice, Social Structure, and Political Information: The Information Coercion of Minorities." *American Journal of Political Science*. 32(2):467-82.

Huckfeldt, Robert and John Sprague. 1992. "Political Parties and Electoral Mobilization: Political Structure, Social Structure, and the Party Canvas." *American Political Science Review*. 86:70-86.

Huckfeldt, Robert, and John Sprague. 1991. "Discussant Effects on Vote Choice: Intimacy, Structure, and Interdependence." *The Journal of Politics* 53: 122-158.

Huckfeldt, Robert, and John Sprague. 1995. *Citizens, Politics, and Social Communication: Information and Influence in an Election Campaign*. New York, NY: Cambridge University Press.

Iversen, Gudmund R. 1991. *Contextual Analysis*. London: Sage Press.

Johnston, Ron, Kelvyn Jones, Carol Propper, and Simon Burgess. 2007. "Region, Local Context, and Voting at the 1997 General Election in Britain." *American Journal of Political Science*. 51(3):6450-54.

Kenny, Christopher. 1992. "Political Participation and Effects for the Social Environment." *American Journal of Political Science* 36: 259-267.

Kenny, Christopher. 1994. "The Microenvironment of Attitude Change." *The Journal of Politics*. 56 (3): 715-728.

King, Gary. 1989. *Unifying Political Methodology: The Likelihood Theory of Statistical Inference*. Cambridge, UK: Cambridge University Press.

Key, Jr., V.O. 1949. *Southern Politics*. New York: Alfred A. Knopf.

Klofstad, Casey A. 2007. "Talk Leads to Recruitment: How Discussions about Politics and Current Events Increase Civic Participation." *Political Research Quarterly*. 60(2):180-191.

Klofstad, Casey, Scott D. McClurg, and Meredith Rolfe. 2007. "Measurement of Political Discussion Networks: A Comparison of Two "Name Generator" Procedures." Unpublished manuscript.

Lazer, David, Brian Rubineau, Nancy Katz, and Carol Chetkovich. 2007. "Networks and Political Attitudes: Structure, Influence, and Co-Evolution." Paper presented at the Annual Meeting of the American Political Science Association, Chicago, IL.

Laver, Michael. 2005. "Book Review of *The Social Logic of Politics*." *Perspectives on Politics*. 3(4): 933-934.

Leighley, Jan E. 1990. "Social Interaction and Contextual Influences on Political Participation." *American Politics Quarterly*. 18(4):459-75.

Levine, Jeffrey. 2005. "Choosing Alone? The Social Network Basis of Modern Political Choice." Alan S. Zuckerman, ed. *The Social Logic of Politics*. Philadelphia, PA. Temple University Press.

Marsden, Peter V. 1987. "Core Discussion Networks of Americans." *American Sociological* Review. 52:122-31.

Mendez, Jeanette and Tracy Osborn. 2005. "Artificial Intelligence? Women, Knowledge, and Political Discussion." Paper presented at the American Political Science Association, Washington, DC.

McClurg, Scott D. 2006a. "The Electoral Relevance of Political Talk: Examining Disagreement and Expertise Effects in Social Networks on Political Participation." *American Journal of Political Science*. 50(3):737-54.

McClurg, Scott D. 2006b. "Political Disagreement in Context: The Conditional Effect of Neighborhood Context, Disagreement, and Political Talk on Electoral Participation." *Political Behavior*. 28:349-66.

McClurg, Scott D. 2003. "Social Networks and Political Participation: The Role of Social Interaction in Explaining Political Participation." *Political Research Quarterly*. 56(4): 449-64.

McPhee, William N. 1963. *Formal Theories of Mass Behavior*. New York: MacMillan.

Mutz, Diana C. 2002. "The Consequences of Cross-Cutting Networks for Political Participation." *American Journal of Political Science*. 46(4):838-855.

Mutz, Diana C. 2006. *Hearing the Other Side: Deliberative Versus Participatory Democracy*. Cambridge, UK: Cambridge University Press.

Mutz, Diana C. 1998. *Impersonal Influence: How Perceptions of Mass Collectives Affect Political Attitudes*. Cambridge, UK: Cambridge University Press.

Mutz, Diana C. and Paul S. Martin. 2001. "Facilitating Communication Across Lines of Political Difference." *American Political Science Review*. 95(1):71-114.

Mutz, Diana C. and Jeffrey J. Mondak. 2006. "The Workplace as a Context for Cross-Cutting Political Discourse." *Journal of Politics*. 68(1):140-56.

Nickerson, David. 2008. "Is Voting Contagious? Evidence from Two Field Experiments." *American Political Science Review*. 102:49-57.

Oliver, J. Eric and Tali Mendleberg. 2000. "Reconsidering the Environmental Determinants of White Racial Attitudes." *American Journal of Political Science*. 44(3):574-89.

Putnam, Robert D. 2000. *Bowling Alone: The Collapse and Revival of American Community.* New York: Simon & Schuster.

Putnam, Robert D. 1966. "Political Attitudes and the Local Community." *American Political Science Review*. 60:640-54.

Price, Vince., Joseph N. Cappella, and Lilach Nir. 2002. "Does Disagreement Contribute to More Deliberative Opinion?" *Political Communication*. 19(1):95-112.

Ragin, Charles C. 2000. *Fuzzy-Set Social Science*. Chicago, IL: University of Chicago Press.

Scott, John. 2000. *Social Network Analysis: A Handbook*. Second Edition. London: Sage Publications.

Slater, Michael D. 2007. "Reinforcing Spirals: the Mutual Influence of Media Selectivity and Media Effects and Their Impact on Individual Behavior and Social Identity." *Communication Theory*. 17(3):281-303.

Stoker, Laura and M. Kent Jennings. 2005. "Political Similarity and Influence between Husbands and Wives." Alan S. Zuckerman, ed. *The Social Logic of Politics*. Philadelphia, PA. Temple University Press.

Stroud, Natalie Jomini. "Media Effects, Selective Exposure, and Fahrenheit 9/11." *Political Communication*. 24(4):415-32.

Tingsten, Herbert. 1963. *Political Behavior: Studies in Election Statistics*. Totwa, NJ: Bedminster.

Voss, D. Stephen. 1996a. "Beyond Racial Thread: Failure of an Old Hypothesis in the New South." *Journal of Politics*. 58(4):1156-70.

Voss, D. Stephen. 1996b. "Familiarity Doesn't Breed Contempt: A Rejoinder to 'Comment.'" *Journal of Politics*. 58(4):1181-83.

Walsh, Katherine Kramer. 2004. *Talking about Politics: Informal Groups and Social Identity in American Life*. Chicago, IL: University of Chicago Press.

Wright, Gerald C., Jr. 1977. "Contextual Models of Electoral Behavior: the Southern Wallace Vote." *American Political Science Review*. 71:497-508.

Zuckerman, Alan S. 2005. "Returning to the Social Logic of Politics." Alan S. Zuckerman, ed. *The Social Logic of Politics*. Philadelphia, PA. Temple University Press.

Zuckerman, Alan S., Jennifer Fitzgerald, and Josip Dasovic. 2005. "Do Couples Support the Same Political Parties? Sometimes: Evidence from British and German Household Panel Surveys." Alan S. Zuckerman, ed. *The Social Logic of Politics*. Philadelphia, PA. Temple University Press.