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Ambiguity, Distorted Messages, and Nested Environmental Effects on Political Communication

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In this paper we are concerned with the clarity of political signals transmitted through political conversation and the accuracy with which those signals are perceived. The social communication of political information is subject to distortion effects that arise due to skewed expectations on the part of the receiver and ambiguous representations on the part of the sender. Indeed, communication that occurs between two citizens might be distorted either by characteristics of the individuals who are transmitting and receiving messages, or by characteristics of the setting in which the information is being transmitted. We argue that the power of majority opinion is magnified by the inferential devices that citizens use to reach judgments in the face of ambiguous political messages and hence the use of a personal experience heuristic gives rise to a political bias that favors the continued dominance of majority opinion.

How important is political communication among citizens? Political discussion is an efficient vehicle for becoming informed about politics (Downs 1957); it is a widespread activity with influential consequences (Berelson, Lazarsfeld, and McPhee 1954; Huckfeldt and Sprague 1995; Lazarsfeld, Berelson, and Gaudet 1944); and it may be fundamentally important to the vitality of democratic politics. At the same time, relatively few citizens demonstrate highly intense levels of political interest and engagement (Verba, Scholzman, and Brady 1995); politics is only one among many important topics competing for airtime during citizens' conversations (Huckfeldt and Sprague 1995); few of the com-

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municated opinions are likely to be carefully researched (Sniderman, Brody, and Tetlock 1991); and many of the political messages delivered through social communication consist of offhand comments and the very briefest expressions of sentiment. For all these reasons, a great deal of political discussion and communication is likely to be imbedded in ambiguity and uncertainty. And the uncertainty of ambiguous communication gives rise to distortions based on the characteristics of the person sending the message, the characteristics of the person receiving the message, and the various environments and settings within which the message is interpreted.

In this paper we are concerned with the *clarity* of political signals transmitted through political conversation and the *accuracy* with which those signals are perceived. The potential for distorted communication arises due to individual and environmental effects operating at several nested and overlapping levels. First, social communication regarding politics is subject to distortion effects that arise both due to skewed expectations on the part of the receiver and ambiguous representations on the part of the sender. Second, political discussion often occurs at the discretion of individual citizens, within the closely defined social environments where they are located, but the distribution of political opinions within these microenvironments depends on the supply of viewpoints available in the larger political community, thereby truncating the distribution of political preferences to which citizens are regularly exposed (Huckfeldt et al. 1995; Huckfeldt and Sprague 1995). Third, the level of distortion in dyadic information flows is contingent not only on the characteristics of the individuals involved in the dyad, but also on expectations that are formed on the basis of individual experience. These experiences, in turn, depend on the immediate circumstances of a person's location within these microenvironments. Finally, in assessing political communication, individuals employ methods of inferential judgment that, while yielding relatively accurate judgments in the aggregate, might give rise to a bias fostering the continued dominance of majority opinion (Miller 1956). In short, our analytic framework examines political communication within a series of nested environmental levels: individuals within dyads, dyads within microenvironments, and microenvironments within larger environments of opinion.

We begin by addressing a number of substantive issues: the importance of disagreement among citizens, the factors that give rise to ambiguity and distortion in political communication, and the sources of a majoritarian bias in political communication and cognition. A Bayesian logic of inference is then articulated for examining nested environmental effects on political communication. Finally, based on an empirical analysis of the 1992 election, we assess the levels of political disagreement experienced by a national sample of survey respondents and their discussants, the extent to which perceptions of disagreement are contingent on the externally imposed supply of preferences in the surrounding macroenvironment, the accuracy of political communication between main respondents and

their discussants, and sources of distortion in the perceptions of discussants' political preferences.

Disagreement, Ambiguity, and the Effectiveness of Communication

If political discussion is to play an important role in democratic politics, it must introduce new information and new ideas to citizens, thereby creating disagreement as the inevitable by-product of deliberation (Granovetter 1973; McPhee 1963). If people only talk politics with others holding compatible views—or if they wrongly perceive their social contacts to hold sympathetic views—they may be spared the social and political discomfort of disagreement, but the communication of diverse political preferences is rendered ineffective.¹

Several factors might be expected to affect the level of political diversity—and hence the *exposure* to disagreement—across the range of a citizen's social contacts. First, the combination of segregated social groups and polarized political preferences reduces the likelihood of encountering alternative political viewpoints (Huckfeldt and Kohfeld 1989). Second, the level of political homogeneity within a citizen's social space is increased to the extent that citizens employ politically relevant selection criteria in constructing their own patterns of social interaction, thereby locating themselves in politically agreeable microenvironments (Finifter 1974). Finally, to the extent that individuals are either unable or disinclined to censor their patterns of political communication, the distribution of political viewpoints in the larger environment takes on heightened importance as a factor that affects individual exposure to alternative political viewpoints (Huckfeldt et al. 1995; Huckfeldt and Sprague 1995). In short, the level of exposure to disagreement and diversity within patterns of political communication is problematic, both across groups and across individuals, and hence the vitality of democratic discourse is an open question.

Just as important, while environmental supply and individual control affect the probabilities of exposure to alternative political viewpoints, exposure alone does not insure the effective communication of political disagreement. In order for politically diverse and disagreeable viewpoints to be communicated effectively, it is also necessary that they be perceived correctly. In this sense, effective communication depends on accurate perception. Of course, inaccurately perceived messages may also be influential, and for many purposes it is the perceived message that is most important for the choices that a citizen makes. But this does not alter the fact that incorrect perception has the potential to obscure and disguise diversity and disagreement at both the individual and aggregate levels.

Several different factors serve to obscure rather than clarify the perception and expression of socially communicated political information. First, it may be help-

¹None of this is meant to suggest that political disagreement is necessarily or inevitably an unpleasant experience for all individuals. Indeed, for some individuals, the expressive benefits of political discussion may even be *increased* as a consequence of disagreement (Fiorina 1990).

ful to understand the ambiguous communication of political messages from a strategic standpoint (MacKuen 1990). The costs of social communication sometimes increase when disagreement is present in a relationship: for instance, it is often painful to tell highly opinionated relatives that their preferred presidential candidate is a loser! In such situations, the cost can be reduced by obfuscation if not complete avoidance. The receiver obtains an obscure message because the sender has strategically chosen to engage in political retreat. Hence, ambiguity is increased, and the likelihood of distorted communication is heightened. Second, not all ambiguity is the residue of strategic interaction. A great deal of political conversation is casual and offhand, occurring among citizens whose opinions are only weakly formulated. Thus, at one extreme we might expect ambiguity to increase as a consequence of intensely held opinions that increase the potential for conflict and thereby produce strategic retreat. At the other extreme, we might also expect ambiguity to be generated by weak or nonexistent opinions that generate vague political signals (Fazio 1990; Latane 1981; Petty and Cacioppo 1986). In summary, for a number of systematic reasons, a great deal of political communication is inevitably ambiguous and open to alternative interpretations.

When citizens are confronted with ambiguous political messages, the potential for distorted communication is enhanced, and several mechanisms of distortion are well known. In particular, selective perception makes it possible for individuals to avoid, disregard, and transform messages that do not agree with their own preconceptions and viewpoints. While earlier explanations for these patterns of selective perception were anchored in dissonance theories (Festinger 1957; Fiske and Taylor 1991), it is also possible to address these processes on the basis of alternative concepts in the newer arsenal of political cognition research (Ottati and Wyer 1990). For example, individuals who receive messages that do not correspond with preexisting conceptions may simply lack a cognitive structure to incorporate the information, thereby integrating it in an inappropriate manner (Lodge and Hamill 1986). In the present context, they might incorrectly identify the message being communicated through political discussion.

Ambiguity, Context, and Cognition

Particularly in the context of ambiguous political messages, people are also likely to employ contextually based cognitive shortcuts in evaluating socially communicated information. In their classic articulations of representativeness and availability as judgmental heuristics, Kahneman and Tversky (1973; Tversky and Kahneman 1973, 1974) demonstrate that individuals often make judgments that seem most representative of the evidence, guided by the availability of similar past experiences (see also Kinder 1978; Sniderman, Brody, and Tetlock 1991). In the present context, consider the following evaluations of a coworker's political preference. First: Joe is a good guy; he is a lot like me; I'm voting for Bill Clinton; Joe will probably vote for Clinton too. Alternatively: Joe is a good

guy; he is a lot like the other people at work; most of them are voting for Bill Clinton; Joe will probably vote for Clinton too. In either case, expectations regarding Joe's behavior are not seriously called into question by the (perhaps intentionally) obscure message that Joe is sending.²

Mechanisms such as these might be seen in the context of behavioral and hence imperfect implementations of a Bayesian logic with prior information updated by (biased) sample data. When citizens interpret an ambiguous signal sent through social communication, they might evaluate that signal in the context of prior information, but where does such information originate? One answer is that the prior information is based on support levels in the larger environment: people who live in Democratic counties, for example, might reasonably expect their associates to be Democrats. This prior information is combined with sample data, where the sample data are obtained through personal experience—personal experience that arises due to the citizen's own biased sample of social encounters accumulated during everyday routines. Bayesian logic may not come naturally to many citizens, however, and experimental results indicate that people rely heavily on their own vivid experience (the sample data), while they systematically undervalue the prior information—Kahneman and Tversky's (1973) base rate. Several questions quite naturally arise with respect to socially communicated political information: How important are such informal sample data in the evaluation of political communication? How important is the prior information?

While cognitive shortcuts may be quite efficient and perform quite well overall, they might also give rise to distortions and communication failures. In terms of political communication between discussion partners, empirical demonstrations of misperception and systematic bias in political cognition are readily available. Citizens are certainly more likely to perceive discussants' preferences accurately if they share the discussants' preferences (Huckfeldt et al. 1995; Huckfeldt and Sprague 1995), but these empirical demonstrations show something else as well. The perception of a discussant's political preference depends on contextual opinion distributions—the perception is biased in the direction of environmental preference distributions quite independently of the discussant's true preference. How should we explain these environmental effects?

One explanation focuses on the importance of the external macroenvironment: people who live in Republican or Democratic communities might be more likely to generalize on the basis of these external environments when making judgments regarding a particular political message received through social communication. Consider the 1992 campaign in the context of a traditionally

² A direct parallel is readily drawn between these personal experience heuristics, on the one hand, and the structural equivalence explanations invoked by network theorists, on the other (Burt 1987). In particular, the representativeness argument suggests that people base their social and political cognitions of other individuals on the extent to which these other individuals can be seen to represent particular social categories. According to structural equivalence, one very important form of social influence derives from the extent to which one individual sees another as occupying a similar location in social structure. In both instances, social location drives perception.

Democratic county. If Gloria tells Burt that Bill Clinton lacks foreign policy experience, he may assume that she would have preferred some other Democratic candidate but that she is likely to vote for Clinton anyway. In the context of a Republican county, he may assume that she will vote for George Bush. In Bayesian terms, such a potential explanation suggests that people generalize on the basis of prior information taken from the external environment.

Given generally pessimistic reviews regarding the ability of citizens to engage in Bayesian reasoning based on the use of prior information, why should we expect individuals to make use of information taken from the external environment in this way? A long and continuing tradition of empirical research in political science has demonstrated the importance of the macroenvironment, frequently defined at the county level, for the behavior of individual citizens. A wide range of activities, inferences, preferences, and perceptions are shown to be contingent on macrolevel circumstances (Glaser 1994; Key 1949; Miller 1956; Putnam 1966; Wright 1976). It is important, then, to understand these macroenvironmental effects more fully: does the macroenvironment translate directly into an information source that citizens use in drawing inferences and making decisions, are these effects simply the spurious consequences of model misspecification, or are they filtered through effects on microenvironmental social interaction?

Indeed, an alternative explanation stresses the importance of *nested* environments, operating at multiple levels, which serve to establish successive, interdependent filters on political communication. At one level, the supply of potential discussants is imposed by the external macroenvironment, and communication networks are individually constructed within the context of this externally provided supply (Huckfeldt and Sprague 1995). These networks, in turn, provide the relevant environment against which political messages are evaluated (Finifter 1974). People understand political information within the context of the world they know best—the world created by their own patterns of social interaction. In terms of the Bayesian logic, rather than combining prior information with their own sample estimates, people might instead disregard the prior information, forming a judgment based on their own personally collected sample data. The first explanation suggests that people generalize on the basis of an external environment, while the second suggests that they generalize on the basis of their own experience of that environment, as it is realized through individually distinctive networks of political communication. The questions to be addressed in this analysis are the following: How important are these inferential criteria? How well do they perform, for which people, under what circumstances, with what consequence? Before undertaking this analysis, we turn to the design of the study.

Study Design and Method

Political communication occurs in the context of individual preference and environmental supply. The exposure to particular messages, as well as the

perception of those messages, depends on a citizen's own preferences interacting in complex ways with the preferences of others in the citizen's surrounding environment. As a consequence, this analysis confronts significant measurement challenges. In addition to the standard measures of political preference obtained through sample surveys, measures of social network construction are also required, as well as measures of the external environment. Moreover, information regarding political communication networks must come from two sources: the perceptions of the main respondents and the self-reports of the network discussants.

The fieldwork for this study was designed to investigate the acquisition of political information at the intersection between individual citizens and the environment. In this paper we focus on individuals, the socially communicated information to which they are exposed, the effectiveness of that communication as measured by the accuracy of their perceptions, and the larger environment from which the information is drawn. Measurement thus occurs at several levels. First, a survey is conducted with a nationally representative sample of the American population immediately after the 1992 presidential election. Second, social network data are collected based on the report of the main respondent. Third, we verify main respondent perceptions by interviewing discussants who belong to the networks defined by the main respondents. Finally, individuals and their networks are measured with reference to distinctive environments that are external to the individual. For purposes of this paper, the external environment is measured at the county level, based on a stratified cluster sample design with 40 separate county samples. (Study design details are available in the appendix.)

The design of the name generator for collecting the social network data is particularly important to the research reported here. Each of the main respondents was asked: "Looking back over the last six months, I'd like to know the people you talked with about matters that are important to you. Can you think of anyone?" We used this probe to compile a list of no more than four first names. At the point when either the respondent could offer no more names, or the respondent had provided four names, a follow-up question asked for the first name of *someone else* with whom they discussed the election: "Aside from anyone you have already mentioned, who is the person you talked with most about the events of the recent presidential election campaign?" Thus, the last named "political discussant" could *not* be someone who had already been identified by the main respondent, and the end result of the name generator was some combination of (1) between zero and four "important matters" discussants and (2) either zero or one "political" discussant, with no discussant named twice.³ After identifying

³One of the larger goals of this study is to identify patterns of political communication across the main respondents' ranges of contacts, regardless of whether a discussant is ranked highly on a list of explicitly political discussants, and this goal is accomplished by employing a more inclusive name generator. By incorporating the follow-up probe for the name of an explicitly defined political discussant, we are able to achieve a high rate of coverage for the political discussants as well. For further analyses see Huckfeldt et al. 1995.

the list of discussants, interviewers asked a battery of questions regarding each discussant, including the respondent's perception of which presidential candidate the discussant supported in the previous election.

Finally, at the end of the survey, interviewers asked the main respondents if they would be willing to provide identifying information—either a name and address or a telephone number—that would make it possible to interview the discussants. Based on this information, interviews were conducted with 841 nonspouse discussants and another 271 spouse discussants. The nonspouse discussant interviews are employed here, allowing us to compare the main respondent's perception of the discussant's political preference with the discussant's own self-report. Thus, our unit of analysis is a nonspouse dyad, where some main respondents are involved in more than one dyad, and our analyses are based on the self-reports of main respondents and discussants as well as main respondents' perceptions of discussants and their preferences.⁴

Levels of Political Agreement

How widespread is political disagreement within social networks? How frequently do people encounter contrary political preferences within their own self-defined social space? To the extent that people invoke political criteria in the construction of social networks, we should expect high levels of political agreement. Alternatively, to the extent that social location is highly related *both* to individual political preference *and* to systematic patterns of social interaction, we should expect political homogeneity to occur quite independently of the individual exercise of political criteria in the selection of associates. Finally, it may be that social communication is so effective that political agreement is the necessary consequence of social interaction, and political homogeneity would thereby become the stable equilibrium outcome of a powerful social influence dynamic.

Choosing among these explanations might be a difficult task, except that none of them fit the data. We consider the relationship between the self-reported candidate preferences of the main respondents and discussants in Table 1A. Candidate preference is defined as self-reported vote choice among those main respondents and discussants who reported voting. Among those individuals who reported not voting, it is defined as the candidate they favored most on three candidate evaluation questions. Individuals who neither voted nor had a favored candidate are treated as being nonsupporters. The top cell entry—the column percentage—is the percentage of discussants in the column who support each candidate, conditional on the main respondent's candidate preference. The bottom cell entry—the total table percentage—is the percentage of all the

⁴The resulting data includes 841 dyads based on 841 discussants and 519 main respondents.

TABLE 1
Levels of Political Agreement Regarding Candidate Preference

		A. All Nonspouse Dyads			
		Main Respondent Preference			
<i>Discussant Preference</i>		<i>None</i>	<i>Bush</i>	<i>Clinton</i>	<i>Perot</i>
None	column % =	3.8	1.7	1.4	2.4
	total % =	.1	.6	.6	.4
Bush	column % =	15.4	63.7	22.6	26.4
	total % =	.5	23.2	10.1	4.2
Clinton	column % =	34.6	20.1	62.7	40.8
	total % =	1.1	7.3	28.0	6.4
Perot	column % =	46.2	14.5	13.3	30.4
	total % =	1.5	5.3	5.9	4.8
Total <i>N</i> = 794					
Column <i>N</i> =		26	289	354	125
B. Nonspouse dyads in which the discussant is either named as a political discussant, or in which an important matters discussant is someone with whom the main respondent "often" discusses politics					
		Main Respondent Preference			
<i>Discussant Preference</i>		<i>None</i>	<i>Bush</i>	<i>Clinton</i>	<i>Perot</i>
None	column % =	.0	.0	.7	2.2
	total % =	.0	.0	.3	.3
Bush	column % =	14.3	65.7	24.2	24.4
	total % =	.3	22.6	11.8	3.6
Clinton	column % =	42.9	17.1	65.8	40.0
	total % =	1.0	5.9	32.0	5.9
Perot	column % =	42.9	17.1	9.4	33.3
	total % =	1.0	5.9	4.6	4.9
Total <i>N</i> = 306					
Column <i>N</i> =		7	105	149	45

dyads demonstrating the particular preference combination. Thus, looking at the top cell entry, we see that 64% of the main respondents who support Bush are paired with a discussant who also supported Bush, 63% of Clinton supporters are paired with a discussant who supported Clinton, and 30% of Perot supporters are paired with a discussant who supported Perot. Alternatively, by summing together the bottom cell entries along the main diagonal, we see that 56% of the dyads involve objectively defined agreement regarding candidate support.

These levels of agreement are higher than one would expect on the basis of the column marginals (chi-square *p*-value = .00), and thus the evidence certainly

fails to support a naive random mixing assumption. At the same time, however, there is little evidence to suggest an overpowering process of social influence, nor any rigid enforcement of political criteria in the construction of social interaction patterns, nor any overwhelming synergy between social location and political preference on the one hand and social location and social interaction on the other. The reality of social communication is more complex and more interesting, falling between expectations of random mixing on the one hand, and lock-grip political uniformity within small social groups on the other (Huckfeldt 1983; Przeworski 1974; Sprague 1976).

Levels of disagreement become even more impressive when it is remembered that we are dealing with dyads rather than complete networks. If for the moment we set the probability of agreement at .6 and assume it is independent across dyads for the same main respondent, then the probability of agreement across three dyads in the same network would be: $.6^3 = .22$. In other words, the probability of encountering disagreement within a closely defined social space would rise to approximately .8 for a single citizen. Even though the probability of disagreement is *not* independent across the discussants within a single network, this exercise helps to illustrate that exposure to disagreement and diverse opinions through social interaction is unlikely to be a rare event. Indeed, it appears to be the norm, and it is certainly a phenomenon worthy of study.⁵

One final issue must be reconsidered before proceeding. Our name generator produces “important matters” discussants as well as “political” discussants. Some of these important matters discussants also serve as frequent political discussants, and some do not. Thus, we must consider whether agreement might be higher among political discussants and among important matters discussants with whom the frequency of political discussion is higher. In other words, are levels of political agreement more pronounced within political information networks than within social networks more generally defined?

Note that we do not intend to explain levels of political agreement based on whether people discuss politics. Our only goal is descriptive—to determine whether objectively defined agreement is higher either when the frequency of political discussion is higher, or when someone is specifically identified as a political discussant. In keeping with this objective, Table 1B replicates 1A, but only for those dyads in which the discussant is identified by the main respondent either as a political discussant or as an important matters discussant with whom the main respondent “often” discusses politics. While there are some variations in levels of objectively defined agreement considered within particular categories,

⁵ We do not have a sufficient sample of main respondents with three interviewed discussants to estimate these probabilities directly, but we can estimate the probability of *perceived* disagreement with three discussants, remembering that it will be somewhat smaller than the probability of actual disagreement due to perceptual biases toward agreement. Among respondents who identified three discussants, the overall probability of perceived disagreement with at least one discussant is .63 among Clinton supporters, .76 among Bush supporters, and .94 among Perot supporters.

the overall level is nearly identical: 59% of these dyads involve a shared vote preference. In short, political agreement falls short of being complete even among explicitly defined political discussants.⁶

Environmentally Contingent Patterns of Political Communication

Is the exposure to alternative political preferences contingent on the macroenvironmental distribution of these preferences? Other work demonstrates that the social and partisan composition of social interaction patterns reflects the surrounding social context defined at the neighborhood level (Huckfeldt 1986; Huckfeldt and Sprague 1995), but neighborhoods are not best defined as macroenvironments. Rather, they are reflections of proximate political and social structure—an environmental level experienced by the individual in a very direct and immediate manner. People experience their neighborhoods when they drive home after work, when they take a walk, when they go outside to pick up the morning paper.

In contrast, our interest here is directed toward the macroenvironmental reality, measured at the level of the county, that is experienced by most citizens only indirectly and in a very fragmented fashion. Except in the most rural circumstances, no one experiences their county directly, as a whole. Rather, the experience comes in bits and pieces, and people impose their own individually defined structure upon it. They work at one place, live in another, shop somewhere else, and each setting provides only one glimpse of the larger whole. Moreover, these fragmentary experiences do not provide a random sample, but rather an aggregation of experiences that reflect idiosyncratic choices, habits, and predispositions. In short, to ask whether the macroenvironment defined at the county level affects the individual experience of political disagreement is to impose a tough test on an environmental argument (Brown 1981). *We are asking whether an impersonal objective reality that lies beyond the reach of individual manipulation is able to penetrate the individually tailored lives that citizens live.*

This question is addressed in Figure 1A by aggregating the main respondents within each of the 40 county samples. In each county sample we calculate the average proportion of discussants named by the main respondents who are perceived to be Clinton supporters.⁷ This proportion is, in turn, scattered on the proportion of presidential voters in the county who, according to official returns,

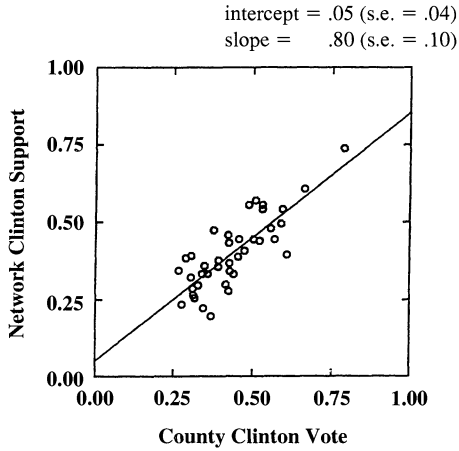
⁶Indeed, the simple relationship between objectively defined agreement and the main respondent's report of political discussion frequency is quite weak ($r = .10$; $\text{gamma} = .16$). In contrast, the simple relationship between discussion frequency and the main respondent's perception of the discussant's political knowledge is much stronger ($r = .38$; $\text{gamma} = .58$). In short, there is little evidence here to suggest that people carefully avoid political conversations with discussants who hold wrongheaded views, but other analyses (Huckfeldt and Pappi 1996) show a very strong relationship between discussion frequency and perceived political knowledge.

⁷We employ the main respondent perceptions in order to maximize the N -size within counties. Such a procedure does not compromise the argument being made here.

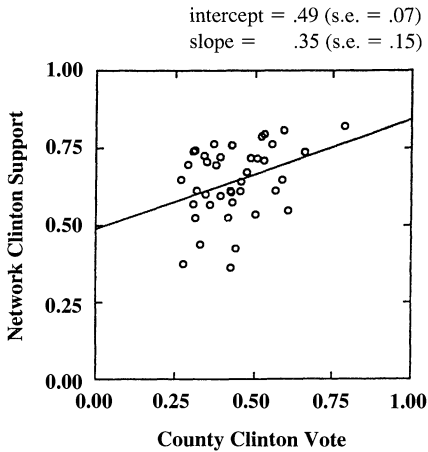
FIGURE 1

Support for Clinton in Respondents' Networks by Support for Clinton in the County, Aggregated within County Samples

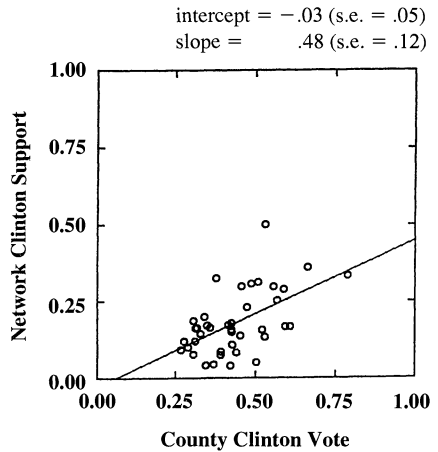
A. ALL RESPONDENTS



B. CLINTON SUPPORTERS



C. BUSH SUPPORTERS



cast their votes for Clinton. Thus, each point on the scatterplot represents a particular county sample, and the superimposed line represents the predicted least squares regression line.

Figure 1A demonstrates a strong and direct relationship between the composition of social networks and the composition of the county populations within which these networks are constructed. The mean proportion of discussants who are perceived to be Clinton supporters in a main respondent's network is closely related to the proportion of county voters who supported Clinton in the 1992 election. Figure 1A only shows support for Clinton; the same basic pattern also holds for Bush support. (Significantly for our later argument, county variation in levels of support for Perot is insufficient to sustain a similar analysis of Perot support.)

Some readers might object that such an analysis fails to recognize that people who live in Democratic counties are not only more likely to encounter Democrats, but they are also more likely to be Democrats and hence to seek out other Democrats as discussants. Such an argument is certainly justified, but there is still more to the story. People who live in Democratic counties may be Democrats *because* they talk with other Democrats (Brown 1981)! This simultaneity problem is addressed elsewhere in the context of these data (Huckfeldt et al. 1995). For present purposes it is only important to show that people who live in Democratic counties are more likely to be imbedded in networks populated by Democrats. Indeed, even when we conservatively assume that political preferences are exogenous and prior to patterns of social interaction—by repeating Figure 1A separately for main respondents who support Clinton and Bush in Figures 1B and 1C—we continue to see the effect of county composition. In summary, the externally defined macroenvironment intrudes on the private, idiosyncratic patterns of social interaction that occur within the microenvironments of our respondents. And a primary focus of this paper is on the relative consequences of *both* microenvironments *and* macroenvironments for the political communication that occurs between and among individual citizens.

Distortions in Political Communication

Thus far we have focused on the exposure of main respondents to political preferences that differ from their own, but this is only one part of the problem. People might be exposed to divergent political preferences without ever realizing it, and a variety of factors have the potential to render political communication ineffective by distorting the message being sent from one person to another. Indeed, we can think of two separate stages in communication: exposure and recognition. We have seen that exposure occurs at the intersection of individual preference and environmental supply (Huckfeldt et al. 1995). What are the factors that determine the effectiveness of political communication—the accurate recognition of a discussant's political preference?

First, we might expect characteristics of the *sender* to be important in determining the effectiveness of communication. In particular, strong opinions should communicate more clearly than weak ones (Latane 1981). In terms of this analysis, people with intensely held opinions and preferences are more likely to communicate in a direct and unambiguous manner.

Second, to the extent that citizens engage in strategic obfuscation (MacKuen 1990), we should expect the clarity of political messages to decline as a consequence of the *receiver's* level of opinionation and commitment. The sender should be most likely to obfuscate when the receiver is highly opinionated, and hence the same factors that, on the part of the sender, give rise to effective and unambiguous communication might at the same time impede effective communication when they are present on the part of the receiver. In short, we might expect accuracy to increase when the sender of a message is highly opinionated, but to decrease when the receiver is highly opinionated.⁸

Third, to the extent that citizens perceive social communication in the context of the larger environment—on the basis of a Bayesian logic that employs environmentally derived prior information—we should expect distortion to arise when the preference of a sender is less common in the larger environment. In other words, minority preferences would be expected to communicate less effectively (Huckfeldt and Sprague 1987; Miller 1956).

Fourth, to the extent that citizens form expectations on the basis of *their own* personally realized patterns of social interaction—to the extent that they update the prior information based on their own biased sample data—distortion is more likely to arise when a sender's preference is less common within the remainder of the receiver's social network. Once again, minority preferences would be expected to communicate less effectively, but in this context minority preferences are defined relative to the idiosyncratically defined interaction patterns of the receiver.

Fifth, the accuracy and effectiveness of communication might depend on exposure frequency. The more frequently one citizen is exposed to the preferences of another, the more likely it is that distortion will be reduced and clarity enhanced. Latane (1981, 334) argues that social influence depends on three characteristics of the source: strength, immediacy, and number. We have conceived strength as the extent to which the sender is highly opinionated, and immediacy is subsumed by our definition of a social network—the discussants are, by definition, close to the respondents in time and space. In contrast, “number” refers to multiple and extended opportunities for the main respondent to receive the same messages from the same source. All else being equal, multiple opportunities for the reception of a message should increase the clarity with which the message is communicated.

⁸ An alternative argument is that strong opinions on the part of the receiver tend to obscure political communication because intense preferences lead to selective perception. Such an argument produces an empirical expectation that is coincidental with the expectation generated by the strategic obfuscation argument.

Finally, a great deal of evidence accumulated in a broad range of settings suggests the existence of a “false consensus effect” in which people project their own beliefs onto their perceptions of others (Fabrigar and Krosnick 1995; Granberg 1987; Granberg and Brent 1983; Krueger and Clement 1994; Krueger and Zeigler 1993). As a consequence, political messages are more likely to be interpreted accurately when there is objectively defined agreement in political preferences between the sender and the receiver of communication. Perhaps the larger question for this analysis is all the various ways in which the presence of agreement or disagreement might be related to accuracy. One interpretation focuses on dissonance reduction and the tendency of citizens to avoid the psychic discomfort of political disagreement through selective perception. Alternatively, disagreement might give rise to strategic obfuscation on the part of the sender of a message, and hence the clarity of communication could be reduced as a function of disagreement because people send vague signals to sidestep potential conflict. Yet another explanation is that citizens perceive the preferences of others in the context of their own preferences and, lacking strong evidence to the contrary, infer agreement. This last argument is actually another version of Bayesian updating, where the sample information is based on an N -size of one—namely the receiver’s own preference. In short, the relationship between agreement and accuracy might be seen in the context of the other explanations we are entertaining, and one purpose of this analysis is to understand the ways in which disagreement is obscured through these mechanisms.

As a first step in the analysis of distorted messages, Table 2 shows the levels of accuracy with which main respondents perceive the political preferences of their discussants, contingent on the particular combination of preferences between the main respondent and the discussant. The table shows several things. First, within each category of main respondent preference, the level of accuracy is highest when the discussant agrees with the main respondent, but this is only barely the case among main respondents who support Perot. Second, the table shows that accuracy is especially low among main respondent supporters of Bush or Clinton who have a Perot supporter as a discussant. Third, among the main respondents who support Perot, we see levels of accuracy that are generally quite high. But Perot supporters are less likely to recognize agreement correctly than are Clinton and Bush supporters.

What do we learn from Table 2? First, distortions in communication produce the net effect of reducing levels of disagreement, but only slightly. While 56% of the dyads involve objectively defined agreement, 61% of the dyads involve a main respondent who perceives agreement. Second, some preferences are communicated less effectively than others—they are subject to higher levels of distortion. In particular, it would appear that Perot preferences do not communicate well. The main respondents are less likely to perceive Perot discussants accurately, *even when they are Perot supporters themselves!*

TABLE 2

Percent of Main Respondents Who Perceive Discussants'
Candidate Preferences Accurately by Reported Preferences
of the Discussant and the Main Respondent

Self-Reported Main Respondent	Preference Discussant	Percent of Main Respondents Who Perceive Discussant Accurately	N
Clinton	Clinton	89.8	215
Clinton	Bush	68.4	76
Clinton	Perot	33.3	45
Clinton	None	0.0	5
Bush	Clinton	71.1	52
Bush	Bush	93.2	177
Bush	Perot	58.5	41
Bush	None	0.0	4
Perot	Clinton	72.9	48
Perot	Bush	66.7	30
Perot	Perot	74.3	35
Perot	None	100.0	2
None	Clinton	75.0	8
None	Bush	50.0	2
None	Perot	36.4	11
None	None	100.0	1

Why was communication regarding Perot subject to higher levels of distortion? A number of answers are plausible, but in the context of our argument, one answer stands out. Communication regarding Perot may have been rendered ineffective because Perot support was both rare and lacking in social concentration. As the Table 2 marginals show, not only were Perot supporters a decided minority, but their patterns of political communication were widely dispersed. Among all the dyads where the main respondent supported Perot, only 30% involved a discussant who also supported Perot (see Table 1A). In such a context, discussions with Perot supporters were relatively rare events, even for people who supported Perot. In summary, Perot support may not communicate well because people do not expect to encounter Perot supporters. If such an interpretation is on target, we should expect to see similar patterns of recognition and distortion for Bush and Clinton preferences as well, *depending on the minority or majority standing of the preferences within main respondents' social settings.*⁹

⁹The danger of focusing too intently on Perot is that there may be other factors unique to his candidacy and supporters that impede the accurate recognition of those who support him. In fact, however, complementary patterns are found with respect to interaction patterns for minority parties in other national contexts (see Huckfeldt, Pappi, and Ikeda 1996), and we shall see that the same patterns are sustained for Clinton and Bush supporters when they are in a minority.

Evaluating Sources of Distortion

We shift our focus in this section to a direct analysis of distortion and the sources of distortion in political communication. The criterion variable is whether or not individuals correctly perceive the political preferences of their discussants with respect to the 1992 presidential candidates. Main respondents who perceive a discussant as supporting Clinton, for example, are coded as perceiving correctly if the discussant reports supporting Clinton. This variable provides us with a direct measure of perceptual accuracy, where incorrect perception indicates that distortion has rendered communication ineffective. Which sources of distortion are most influential?

Table 3 presents a logit model where correct perception is regressed on a set of explanatory variables: (1) whether or not the main respondent and the discussant

TABLE 3
Does the Main Respondent Correctly Perceive
the Discussant's Vote Preference?
Logit Model

	Coefficient	s.e.	t-ratio
Constant	-1.961	0.436	-4.496
Agreement within dyad (dummy)	0.959	0.257	3.730
Agreement within network	1.032	0.380	2.719
Agreement within county	1.998	0.884	2.260
Discussant preference intensity	0.031	0.014	2.191
Main respondent preference intensity	-0.015	0.014	-1.095
Discussant time of decision	0.456	0.108	4.227
Main respondent time of decision	0.144	0.105	1.372
Reported frequency of political discussion within dyad	0.367	0.143	2.564

Number of cases = 625
 Log likelihood ratio = 144.793 with 8 d.f.
 Chi² *p*-value = 0.000
 McFadden's rho² = 0.209

agreement within dyad: agreement between main respondent and discussant, 1 = yes; 0 = no
 agreement within network: proportion of residual network that is perceived to hold the same preference as that reported by the discussant
 agreement within county: proportion of county voters who voted for the candidate favored by the discussant
 main respondent and discussant preference intensities: standard deviation for individual ratings of the three candidates—Perot, Bush, and Clinton
 main respondent and discussant times of vote decision: 0 = nonvoters and voters who decided during the last week of the campaign; 1 = voters who decided earlier during the fall campaign; 2 = voters who decided during the summer; 3 = voters who decided before the summer
 frequency of political discussion within dyad: 0 = main respondent perceives that political discussion never occurs with discussant; 1 = rarely occurs; 2 = sometimes occurs; 3 = often occurs

agree regarding their candidate preferences, (2) the preferences that are perceived to be present in the rest of the main respondent's network of associates, (3) the preference composition of the macroenvironment measured at the county level, (4) the intensity of the candidate preferences held by both the main respondent and the discussant, (5) the "time of decision" for the vote choices of the main respondent and the discussant, and (6) the main respondent's reported frequency of political discussion with the discussant. With the exception of agreement, which is measured with a simple dummy variable where "1" is set to "agree," the construction of these explanatory variables requires some elaboration.¹⁰

The measure of macroenvironmental preference composition is taken from county voting returns. For each discussant, we code the proportion of the county voting in agreement with the discussant's own reported candidate preference. Thus, if the discussant reports a preference for Clinton, we code the proportion of the county voting for Clinton, and we treat this as the basis for the (Bayesian) prior information. The hypothesis is that, to the extent that main respondents infer discussant preferences based on macroenvironmental support levels, they will be more likely to be correct if the county reflects the discussant's preference.¹¹

A similar set of procedures is employed with respect to the preference composition of the main respondent's remaining network of reported contacts—the sample data that might be used to update the prior information. We code the proportion of the remaining network that shares the discussant's self-reported preference, based on the main respondents' perceptions of the other network members, and we limit the analysis to main respondents who identify at least three discussants. Finally, the discussant who is involved in the dyad being analyzed is eliminated from the network for purposes of determining network political composition, and the resulting explanatory variable is the partisan composition of the "residual network" absent the discussant being analyzed.¹² Thus

¹⁰ We subjected the model to further analyses by including several controls for the nature of the relationship between the main respondent and the discussant: whether the discussant was a relative, whether the discussant was a close friend, whether the discussant was named as the final "political" discussant. None of these additional factors resulted in any statistically discernible effects, and they did not produce any meaningful changes in the other estimates.

¹¹ The county is well suited to our analytic purposes: It has been widely employed as a unit of aggregation in many political analyses. It is substantially larger than the neighborhood or any other small cohesively defined unit, thereby approximating the macroenvironment. It is widely recognized by most American citizens as an important political subdivision.

¹² These procedures are worthy of further elaboration. First, the discussant involved in the dyad is removed from the network measure in a conservative effort to avoid any exaggeration of network compositional effects—the resulting network measure is not, by construction, related to the dependent variable. Second, we only include respondents who name three or more discussants so that the residual network measure is always based on at least two discussants. Including dyads in which the main respondent names only two discussants does not significantly change the pattern of effects demonstrated here. Finally, while it might be interesting to base the residual network measure on the self-reported votes of discussants, neither this study nor any other study possesses an adequate snowball sample of interviews with discussants to construct such a measure. Moreover, it is less than clear

we are able to address the following question: Are the main respondents' perceptions of a discussant's candidate preference affected by their perceptions of other discussants?

The intensity of a respondent's candidate preference is measured on the basis of candidate evaluation questions using an 11-point (0 through 10) scale. All of the main respondents and interviewed discussants were asked their evaluations of Bush, Clinton, and Perot, and we construct a measure of opinion intensity based on the variance around each individual's mean candidate evaluation (d.f. = 2), where a higher variance indicates a more opinionated discussant.¹³ In keeping with our earlier discussion, more intense opinions on the part of the discussant (the sender) are expected to reduce distortion, but more intense opinions on the part of the main respondent (the receiver) are expected to increase distortion to the extent that they encourage the discussant to engage in strategic obfuscation.

Finally, we measure frequency of exposure in two ways: (1) the main respondent's reported frequency of political discussion with the discussant and (2) the time of the vote decision reported by the discussant. (A control for the main respondent's time of decision is included as well.) We assume that discussants who decide early will have multiple opportunities to convey their preferences to the main respondents. A discussant who finalizes the vote decision at the last possible moment may have little opportunity to convey a preference to anyone, even if they regularly discuss the campaign with their associates. Nonvoters and individuals who reported making a decision "the week before the election" are coded 0, those who made their decision "earlier in the fall campaign" are coded 1, those who decided "during the summer" are coded 2, and those who decided "before the summer" are coded 3. Political discussion frequency is coded 0 for "never," 1 for "rarely," 2 for "sometimes," and 3 for "often."

The results shown in Table 3 demonstrate effects on clarity and distortion that largely meet our expectations regarding directions of effects, although the

that such a measure is desirable because this is one of the previously mentioned cases in which perceptions are more important than reality. The real issue is whether a respondent's perceptions of candidate support in a more broadly defined social network affect the accuracy with which she or he perceives any single discussant's preference. For these purposes, respondent perceptions are the key. In contrast, for purposes of the prior information, we are interested in objectively defined circumstances in the external environment, and the question is whether respondents take advantage of such information.

¹³ The resulting measure, which has a range from 0 to 33, is designed to tap the intensity of an individual's candidate preference, relative to the available alternatives and independent of overall favorability (or disgust) toward the candidates. Thus, evaluation scores of (10,9,8); (6,5,4); and (3,2,1) would all yield the same value on our variance measure of opinionation. At the same time, however, the measure of opinion intensity can only reach a high level if an individual holds relatively extreme and diverse views on the particular candidates, and hence intensity is predicated on extremity. For a general discussion of alternative viewpoints with respect to the measurement of attitude strength, see Abelson 1995; Fazio 1995; Krosnick and Petty 1995.

t-values for main respondent opinion intensity and time of decision do not satisfy null hypothesis rejection criteria. In summary, the model suggests that respondents are more likely to perceive discussant preferences correctly if: (1) they agree with the discussant, (2) the rest of their network agrees with the discussant, (3) voters in the county agree with the discussant, (4) the discussant holds an intense preference regarding the candidates, (5) the discussant made an earlier vote decision, and (6) the main respondent reports more frequent political discussion with the discussant.

Before turning to the magnitudes of these effects, however, it is important to consider several adjustments in model specification, first with respect to the strategic obfuscation argument. Our hypothesis was that the effects of opinion intensity should be oppositely signed, with highly opinionated discussants producing more effective communication and highly opinionated main respondents producing less effective communication. While the directions of these effects confirmed our expectations, the negative effect of main respondent opinion intensity was insufficient to reject the null hypothesis that the effect is equal to zero. One alternative is to reformulate the question in a way that focuses on the relative opinion intensity of the receiver and sender of the message: Is the clarity of communication enhanced to the extent that the discussant is more opinionated than the main respondent? Is it attenuated to the extent that the main respondent is more opinionated than the discussant? Such a formulation suggests that a single variable might be constructed that is the simple difference in opinion intensity between the main respondent and the discussant (main respondent opinion intensity—discussant opinion intensity), with the hypothesis that the effect be negatively signed. Such a procedure produces an effect that lies in the appropriate direction with a strong t-value, even with a control for the main respondent's opinion intensity. No effort is being made here to deceive the reader; this new specification is only an algebraic rearrangement of the Table 3 specification, and hence it offers no empirical basis for choosing between the specifications. The advantage of this alternative formulation is that it provides a direct focus on the relative intensity of the opinions held by the receiver and the sender of a political message.

Second, in light of the Table 2 results, we also tested an alternative specification that included a dummy variable for whether the discussant supported Ross Perot. This produced a strong negative effect with a marginal t-value (1.7), and it greatly reduced the effect of the county environment (t-value = .9). These two variables—discussant Perot support and the percentage of the county supporting the discussant's preference—are highly correlated ($r = -.59$), and thus we might assume that the two are measuring the same effect with respect to perceptual accuracy. The variables are highly correlated because the respondents with a discussant supporting Perot tend to be the same respondents whose discussant's candidate preference fails to win widespread support in the county population. (The three-way division in the vote across the counties in our study ranges from

27% to 79% for Clinton, from 16% to 58% for Bush, and from 5% to 28% for Perot.) Thus, the county effect on misperception is absorbed by the effect of discussant Perot support. Even after taking account of microenvironmental preference distributions within networks, Perot support does not communicate well, probably because it is a relatively rare event in the external macroenvironment, and hence the main respondents are less likely to develop an expectation that their discussant is a Perot supporter. These results suggest that we should consider reformulating the basis of the prior information—an issue that will be addressed below.

An alternative model is displayed in Table 4 that incorporates the changes: it includes the Perot support variable for the discussant and deletes the county variable, and it reformulates the effect of discussant and main respondent opinion intensity.¹⁴ The Perot support variable produces a negative effect on accuracy and a crisp t-value, as does the difference between main respondent and discussant opinion intensity. The coefficients and t-values for the other variables parallel the

TABLE 4
Does the Main Respondent Correctly Perceive the Discussant's
Vote Preference? Alternative Specification
Logit Model

	Coefficient	s.e.	t-ratio
Constant	-1.129	0.386	-2.924
Agreement within dyad (dummy)	1.010	0.257	3.932
Agreement within network	1.094	0.372	2.939
Discussant supports Perot (dummy)	-0.673	0.252	-2.673
Main respondent preference intensity	0.016	0.018	0.893
Difference between main respondent and discussant preference intensity	-0.032	0.014	-2.232
Discussant time of decision	0.455	0.108	4.201
Main respondent time of decision	0.147	0.105	1.392
Reported frequency of political discussion within dyad	0.365	0.143	2.543
Number of cases = 625			
Log likelihood ratio = 146.653 with 8 d.f.			
Chi ² p-value = 0.000			
McFadden's rho ² = .211			

discussant Perot support: 1 = discussant reports being a Perot supporter; 0 otherwise

¹⁴The original formulation was $aX + bZ$, where X is the intensity of the discussant's opinion and Z is the intensity of the main respondent's opinion. The new formulation is $c(Z - X) + dZ$, which on rearrangement yields $-cX + (c + d)Z$. The values for c and d in Table 4 are $-.033$ and $.018$. If Table 4 is reestimated with the initial specification of main respondent and discussant opinion intensity, the values for a and b are $.033$ and $-.015$. Thus, some simple arithmetic confirms that $-c$ is isomorphic to a , and $(c+d)$ is isomorphic to b .

earlier specification shown in Table 3, and further analyses are based on these Table 4 results.

How Important Are these Effects?

Certainly the best-known source of distortion in the communication of political information is the political preference of the receiver (Klapper 1960). The tendency of individuals to reinterpret information so that it coincides with their own preferences is well known, and we have found the same tendency in our own data (see Table 2). Thus, in assessing the importance of various effects on distortion, we adopt the effect of political disagreement within the dyad as a comparative baseline against which to judge the importance of other factors and their consequences for generating distortions in communication.

In the nonlinear logit models of Tables 3 and 4, the effect of any single explanatory variable is a complex, multiplicative function of its own estimated coefficient, the coefficients for the other explanatory variables, and the particular levels of all other explanatory variables (Hanushek and Jackson 1977). In such a context, perhaps the best way to assess the effect of any particular explanatory variable is to use the estimated model to predict probability values across the range of one explanatory variable while the others are held constant at mean or typical values.¹⁵

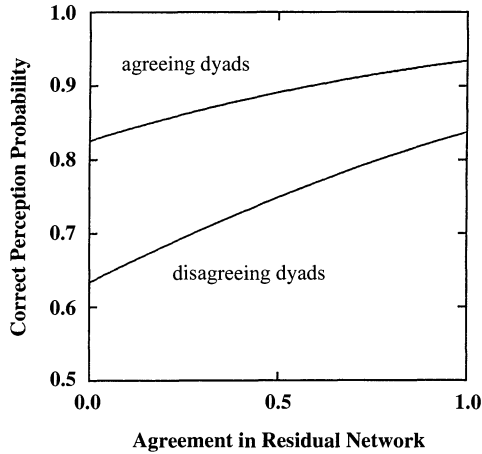
Such an approach is employed in Figure 2, where a direct comparison is made between the effect of agreement within the dyad and the effect of the preference distribution in the residual network. The difference in the probability of correct perception between dyads marked by agreement and disagreement, measured as the vertical distance between the two lines, varies from a high of .2 to a low of .09. In comparison, the effect of the residual network, measured as the vertical increase in each of the lines across the graph, varies from .21 for a disagreeing dyad to .1 for an agreeing dyad. Thus, the effect of agreement between the sender and the receiver is comparable to the effect of preference distributions in the residual network. Main respondents are more likely to perceive a discussant correctly if they agree with the discussant, or if they perceive that the remainder of the network agrees with the discussant, and the two effects are comparable in magnitude.

What are the consequences of this pattern of effects for the relative influence of minority and majority preference distributions? The two probability plots from Figure 2 are redisplayed as tabular data in Table 5. Several things are worthy of note. First, the lowest level of correct perception occurs in the bottom left-hand cell of the table, where the discussant is in disagreement *both* with the

¹⁵ The mean values are .5 for network agreement with the discussant, 11 for the main respondent's preference intensity, 0 for the difference between the preference intensity of the main respondent and the discussant, 1.3 for the discussant's time of decision, 1.2 for the main respondent's time of decision, 2.0 for reported discussion frequency.

FIGURE 2

Effect of Agreement within the Residual Network on the Probability of Correct Perception, by the Presence or Absence of Agreement within the Dyad



Source: Table 4 estimates

main respondent *and* with the residual network. In this instance the discussant is in a minority and highly likely to be misperceived. But what of the situation when the *main respondent* is part of the minority? This occurs in the bottom right-hand cell of the table, where it can be seen that the minority, as represented by the main respondent, is much better able to perceive the majority opinion accurately. Thus it would appear that *the logic of inference and judgment based on personal experience loads the dice in favor of majorities at the expense of minority opinion*. People do not change their preferences based on perceived agreement, but rather on the basis of perceived disagreement (McPhee 1963). Minorities are not only more likely to encounter discussants with whom they disagree, but they are also more likely to recognize such disagreement when they encounter it, thereby heightening the majority's natural advantage (Huckfeldt and Sprague 1995; Miller 1956).

While these results are coincidental with earlier work on the disadvantaged position of political minorities, they provide a more complete and detailed specification of the majority's advantage. People who live in macroenvironments dominated by Democrats (or Republicans) are more likely to encounter Democrats (or Republicans) in their networks of association. And to the extent that these microenvironments of social relations are dominated by partisans of one type or another, citizens will be more likely to misperceive the occasional sup-

TABLE 5

The Predicted Probability of Correctly Perceiving the Discussant by Agreement between the Main Respondent and the Discussant and by Agreement between the Discussant and the Residual Network

	Percent of the Main Respondent's Residual Network That Agree with the Discussant's Preference		
	0%	50%	100%
The main respondent:			
Agrees with the discussant	.83	.89	.93
Disagrees with the discussant	.63	.75	.84

Source: Table 4 model.

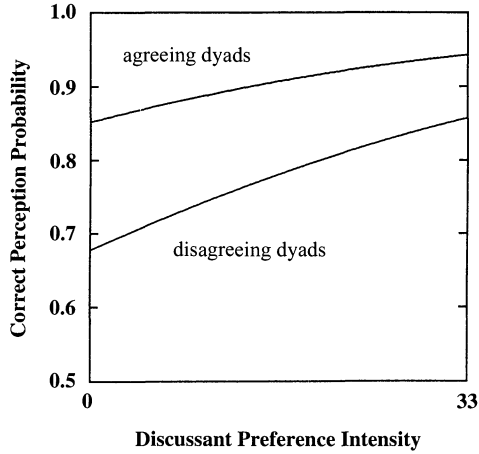
porter of the opposite candidate or party. At the same time, however, if an individual's network of associates is in some way sheltered from the compositional effects of the larger environment—as a consequence of choice, or organizational involvement, or perhaps by accident—then the minority disadvantage realized in terms of supply at the macroenvironmental level does not necessarily translate into a communication disadvantage in terms of distortion and misperception at the microenvironmental level. In this way, the composition of the microenvironment might serve as a shield or filter on macroenvironmental influence—a result that reconciles Finifter's (1974) introverted Republican autoworkers with Huckfeldt and Sprague's (1995) contextual effects on political minorities.

A second comparison of effects is presented in Figure 3, where the effect of agreement within the dyad is compared to the intensity of the discussant's political preference. Once again, the effects are highly comparable, with effects across the range of discussant preference intensity that are comparable to the effects of agreement in the dyad. Moreover, Figure 4 shows that the time of the discussant's vote decision is especially influential in affecting the likelihood of distortion, with an effect of .25 across its range among disagreeing dyads and an effect of .13 among agreeing dyads. As a consequence, time of decision is perhaps even more important as a predictor of correct perception than whether or not agreement is present within the dyad.

It is important to emphasize that the effects for discussant time of decision are in addition to effects that arise due to the frequency of political discussion within the dyad (as reported by the main respondent). As Figure 5 shows, the effect due to the reported frequency of political discussion is highly comparable to the effect of agreement within the dyad. In short, people who make up their minds early have more frequent opportunities to make their views known, independently of the frequency of political discussion or the intensity of their preferences.

FIGURE 3

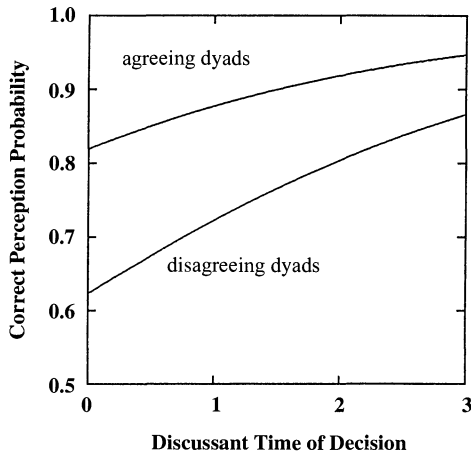
Effect of Discussant Preference Intensity on the Probability of Correct Perception, by the Presence or Absence of Agreement within the Dyad



Source: Table 4 estimates

FIGURE 4

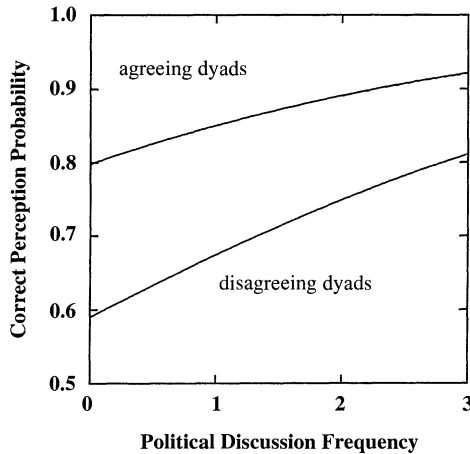
Effect of Discussant's Time of Vote Decision on the Probability of Correct Perception, by the Presence or Absence of Agreement within the Dyad



Source: Table 4 estimates

FIGURE 5

Effect of Political Discussion Frequency on the Probability of Correct Perception, by the Presence or Absence of Agreement within the Dyad



Source: Table 4 estimates

How much difference does it make whether the main respondent or the discussant is more highly opinionated? With other variables held constant at mean values (and discussant Perot support set to 0), the probability of correct perception for agreeing dyads is .95 when the discussant is maximally opinionated and the main respondent is minimally opinionated, but .80 when the main respondent is maximally opinionated and the discussant is minimally opinionated. For disagreeing dyads the corresponding probabilities are .88 and .60. And hence, as expected, the potential effect is particularly large for disagreeing dyads.

Finally, what is the magnitude of the “Perot effect”—to what extent is a Perot preference less likely to be perceived accurately? With all other variables held constant at their mean values, the Perot effect is $-.15$ for disagreeing dyads and $-.08$ for agreeing dyads. That is, for discussion partners who disagree, the probability of correct perception is reduced by .15 if the discussant is a Perot supporter. For discussion partners who agree, the probability of correct perception is reduced by .08 if the discussant is a Perot supporter.

What empirical conclusions can be drawn from this analysis? First, characteristics of the discussant have a substantial effect on whether or not the main respondent perceives the discussant’s preference correctly. Intensely held opinions communicate more effectively, and people who make up their minds earlier about the candidates are more likely to communicate their opinions clearly.

Second, disagreement is an important predictor of distorted communication, but it is not the most important—indeed it is only one among several factors that show important effects on distortion and clarity. Third, people collect their own sample data in the course of day-to-day living, and they use these data to form expectations regarding which candidates their associates are likely to support. This means, for example, that people who are imbedded in networks populated by Clinton supporters are more likely to overlook the fact that one of their associates happens to support Bush.¹⁶ Finally, even after these other factors are taken into account, some preferences communicate poorly, such as a preference for Perot, and this is probably due to the fact that they constitute rare events in external macroenvironments.

Assessing the Quality of Social Communication

How much assistance does this analysis provide in assessing the quality of social communication in politics? First and most important, distortion does not erase the importance of social communication in politics, and a great many political signals are in fact getting through to the receiver. No one should mistakenly assume that voters are infinitely willing and capable of rewriting the texts of their conversations and communications to suit their own preferences and preconceptions. The preference of the receiver is only one of several factors that might impede effective communication. Indeed, we might well argue that the characteristics of the sender are more important than the preferences of the receiver in determining the clarity of communication.

Second, one of the most important factors that compromises accurate perception is a discussant who makes a late decision. But what does this mean? It means, perhaps, that there is genuine deliberation occurring in democratic politics. Citizens fail to send clear signals regarding their candidate preferences because they have not yet decided what their preferences will be. Indeed, labeling this particular effect on perception as a distortion in communication is perhaps misleading. The communication is not so much distorted as it is incomplete, and it may be incomplete because citizens are engaged in an ongoing process of deliberation.

Third, the clarity of communication is affected by the intensity of the communicated preference. Opinionated discussants communicate messages with higher levels of clarity. In combination with time of decision, this helps to identify the characteristics of opinion leaders in democratic politics (Berelson, Lazarsfeld,

¹⁶ It is conceivable, of course, that people who misperceive one discussant in the context of four other network members are actually incorrect regarding all five! We cannot address this counterargument directly because the necessary discussant interviews are not available, but such an interpretation constitutes a significant stretch. Again, the overall probability of correct perception is about .75, and the counterargument suggests that there are many people who are *exceptionally* unlikely to perceive *anyone* correctly.

and McPhee 1954; Lazarsfeld, Berelson, and Gaudet 1944). Correct perception is both logically and empirically a precondition for personal political influence (Huckfeldt and Sprague 1995), and thus the effective opinion leader in the deliberations of democracy is the citizen with intensely held, enduring preferences.

Fourth, while our analysis cannot entirely specify the process of conflict avoidance in political communication, and while the empirical results are not unambiguous, the evidence of asymmetrical effects due to opinion intensity provides some support for the role played by strategic obfuscation in dyadic exchanges (MacKuen 1990). The probability of effective communication is enhanced when the sender is more opinionated than the receiver, and it is diminished when the receiver is more opinionated than the sender. These results coincide with an interpretation suggesting that the social costs of disagreement must be judged relative to the intensity of underlying opinions, and the interplay between receiver and sender determines which opinion becomes ascendant in the social exchange.

Fifth, we have identified several effects on the clarity and distortion of communication that are due to inferential devices based on the use of information in the environment. In Bayesian terms, there is evidence here to suggest that people use prior information in assessing the probability that their discussants support Perot. Relative to third party and independent candidacies in other elections, Perot's candidacy was extraordinarily successful, but this does not diminish the fact that support for Perot was a relatively rare event in the 1992 election. At the national level, only one in five voters supported him at the polls, and the highest level of support in our study counties was 28%. In this context it would appear that our respondents make use of this environmental information and hence do not expect Perot support.

How is this result reconciled with the generally pessimistic picture that is drawn regarding the Bayesian capacity of citizens to incorporate prior information into the process of inferential reasoning? Tversky and Kahneman (1982) argue that the effect of a base rate (or prior information) depends quite dramatically on the context of a particular inferential problem. For example, base rates are more likely to be influential when individuals interpret the information as revealing something quite important regarding the likelihood of an event due to "external-situational factors" independently of the immediate circumstances ("internal-dispositional factors") affecting the inference (1982, 159). In terms of the Perot candidacy, our main respondents appear to infer that Perot support is a very unlikely event, quite independently of the circumstances surrounding any particular discussant, and therein lies the influence of the prior information. Indeed, this "unpopular candidate prior" is logically similar to the "causal base rate" identified by Tversky and Kahneman (1982, 155): respondents do not expect their discussants to have supported Perot because the Perot candidacy was demonstrated to be an unpopular cause that relatively few citizens supported. In short, (1) the logic of the unpopular candidate prior corresponds quite closely to

other prior information that has been demonstrated to be influential; (2) it is not unlike the prior information that citizens might employ in other similar political settings (Bartels 1988); and thus (3) Bayesian reasoning based on environmentally supplied prior information may not be such a rare event in the real-world involvement of citizens in democratic politics.

Finally, citizens generate political expectations of others based on their own personal sample data. Citizens surrounded by the supporters of a particular candidate are more likely to believe that any one of their discussants supports the same candidate. But we have seen that the political composition of these micro-environments is affected by the political composition of macroenvironments, and thus we have identified a two-part indirect effect of macroenvironmental preference distributions on perceptions of political support: (1) Preference distributions in the macroenvironment systematically translate into corresponding preference distributions within microenvironments. (2) People infer discussant preferences based on the perceived composition of these microenvironments, thereby indirectly translating majority standing in the macroenvironment into a bias that exaggerates the perception of support for the majority preference. Not only are members of political majorities more likely to encounter people who actually agree with their political views, but they are more likely to perceive agreement even when people disagree. Not only are members of political minorities more likely to encounter people who actually disagree with their viewpoints, but they are also more likely to perceive disagreement even when people agree. In this way the perceived level of support for majority positions is systematically overestimated, and the perceived level of support for minority positions is systematically underestimated (Huckfeldt and Sprague 1995).

While our analysis supports the argument that people use the low level of support for Perot as prior information in forming inferences regarding discussant preferences, we fail to find evidence that people use county-specific support levels as prior information. How much difference does it make for the quality of their inferences? To choose an exemplary case, consider the Bayesian posterior odds that a discussant supports Clinton, given that a respondent perceives the discussant to support Clinton:

$$\text{posterior odds} = \frac{P(C)}{P(\text{NC})} \times \frac{P(\text{PC}|C)}{P(\text{PC}|\text{NC})} = 4.56$$

where: $P(C)$ = probability that a voter in the county supports Clinton (mean = .43); $P(\text{NC})$ = probability that a voter in the county does not support Clinton (mean = .57); $P(\text{PC}|C)$ = probability that a main respondent perceives a discussant as supporting Clinton given that the discussant does support Clinton (sample estimate = .79); $P(\text{PC}|\text{NC})$ = probability that a main respondent perceives a discussant as supporting Clinton given that the discussant does not support Clinton (sample estimate = .13).

Thus, the posterior probability that a discussant supports Clinton, given that the main respondent believes the discussant supports Clinton, is:

$$P(C|PC) = 4.56/(1+4.56) = .82$$

This exercise allows us to pose the following questions: What are the consequences of depending on prior information versus depending on personally collected sample data? How do these two alternatives compare to the Bayesian posterior? In the case of those main respondents who believe that their discussant supports Clinton, Bayesian citizens would, based on the prior information, discount their own judgment to produce an average posterior of .82. This posterior is much closer to the citizen's own original judgment (set at $p = 1.0$) than it is to the average prior information derived from the external macroenvironment (set at $p = .43$). In short, and for the average respondent in this particular inferential context, citizen judgment does not do a bad job of approximating the Bayesian posterior, and it certainly does a better job than prior information based on county support data.

We do not intend to imply that the personal experience that provides the basis for perceptual judgment is wholly based on social interaction within the residual network, or that the external environment is the only source of prior information. (Indeed, direct interactions with the discussant in question might provide both a wealth of relevant personal experience as well as other sources of prior information.) Neither are we suggesting that citizens are always good Bayesians. Indeed, they would be more effective at interpreting political communication if they were! Rather, our only argument is that personal experience sometimes outperforms prior information, and at least in the case of perceiving Perot support, citizens appear as though they invoke prior information based on the low overall level of support for Perot in the electorate. The bigger question for this analysis is: What are the political biases that arise in the collective deliberations of democratic politics due to the joint consequences of (1) ambiguous signals, (2) inferences based on personal experience, and (3) environmental information?

Conclusion: Ambiguous Signals and the Majoritarian Bias

Not all political signals are ambiguous. As we have demonstrated, some individuals communicate their preferences quite forcefully and effectively. Citizens with intense, long-enduring, and hence more socially visible preferences are likely to be perceived accurately by their discussion partners. Indeed, they are the opinion leaders in democratic politics—the citizens who exercise more than the normal measure of influence in the collective workings of democracy (Berelson, Lazarsfeld, and McPhee 1954; Lazarsfeld, Berelson, and Gaudet 1944).

While not all signals are ambiguous, many others are. Either because they are motivated by indifference or indecision or perhaps conflict avoidance, some citizens fail to communicate an unambiguous preference through patterns of social

communication. In such instances, their associates are more likely to invoke inferential decision rules and environmentally supplied data in forming an impression of their preferences. As we have seen, the preferences of *other* associates are especially influential for affecting these sorts of inferences. Moreover, the preference composition of microenvironments is not a simple reflection of individual choice. Rather, networks of relationships are established at the intersection of individual choice and environmental supply. Hence, people are more likely to associate with Democrats if they are imbedded in a macroenvironment where Democrats are in abundant supply (Huckfeldt et al. 1995). What does this mean for the exercise of majority influence?

Not only are citizens more likely to interact with Democrats if they live among Democrats, but they are also more likely to infer that one of their associates is a Democrat if they believe that other associates are Democrats. As a consequence, the power of majority opinion is magnified by the inferential devices that citizens use to reach judgments in the face of ambiguous political messages. Hence, it is not simply that minorities encounter more disagreement, but it is also the case that they are more likely to recognize disagreement when they encounter it. In summary, *the use of a personal experience heuristic gives rise to an overall political bias that favors the continued dominance of majority opinion* (Miller 1956). At the same time, the personal experience heuristic might also serve to shield citizens from the larger environment, but only when individuals are able to swim against the tide by constructing networks of association that run counter to the political composition of the larger environment (Finifter 1974; Huckfeldt et al. 1995).

None of these tendencies toward distortion in the resolution of communication ambiguities should disguise two key facts: First, individual citizens are highly likely to experience political disagreement. Second, distortions in perception occur on a systematic basis, but the pattern of distortion produces only a very modest net difference between the actual level of disagreement and the level of disagreement perceived by members of the electorate. This is primarily because *distortion does not consistently produce perceptions of agreement within dyads*. Rather, individuals quite frequently and incorrectly infer majority opinion with respect to other individuals who are, in fact, members of the minority. In other words, ambiguity is not only resolved by inferring agreement, it is also resolved by inferring majority opinion, *even when the person making the inference is part of the minority!* The ultimate irony is that fellow members of the same political minority—Clinton supporters in Bush counties, Bush supporters in Clinton counties, and perhaps the supporters of Ross Perot in almost any county—frequently do not recognize the reality of their shared opinions and preferences.

Appendix

This study is one part of a five-nation comparative effort undertaken in the United Kingdom, Germany, Japan, Spain, and the United States during the early 1990s. The American study design is based on a stratified cluster sample in

which the primary sampling units are counties. Three strata are employed: county population size, the educational composition of the county population, and the proportional change in the county's population from 1980 to 1990. Based on these strata, the county populations of the 48 contiguous states and the District of Columbia were allocated to 20 cells, each of which included 5% of the total population. A replicate design was employed in which two counties (or the District of Columbia) were independently chosen from each cell with replacement. And the probability of selecting a particular county within a particular cell was proportional to the relative population of the county within the cell. This produced two separate representative samples of 20 counties each. Los Angeles County appears in both samples, and thus the end product is 40 county samples drawn from 39 counties. Within each county, random digit dialing was used to generate a sample of approximately 33 respondents per county sample, for a total sample of 1318 respondents.

While the main respondent survey provides the central data base for this paper, these survey data are supplemented by other data collection efforts and data sources. Shorter interviews were conducted with two snowball samples. One snowball sample includes 271 spouses of the main respondents. A second snowball sample includes 841 nonspouse discussion partners. All interviews were conducted with people identified as discussants by the main respondent. Finally, we are also able to collect aggregate data on the counties and merge these data together with the survey in order to characterize the county environments within which the respondents reside.

All survey fieldwork was conducted using computer-assisted telephone interviewing by the Polimetrics Laboratory at Ohio State University and the Center for Survey Research at Indiana University. Interviews with the 1,318 main respondents began during the week after the election campaign, and except for loose ends, was completed by the end of January. The main respondent interviews lasted, on average, somewhat in excess of one hour. The main respondent cooperation rate was 48%, calculated as the ratio of completions to the sum of completions, refusals, and partials. Alternatively, if we include subjects who were never available after multiple calls, the response rate drops to 45%. And if we also include phone numbers where no one ever answered the phone after multiple calls, the response rate drops to 40%. The main factor keeping us from achieving a higher response rate was the length of the survey, and this produced a sampling bias in the direction of the politically activated. The survey provides exceptionally accurate estimates of the three-way division of the popular vote for president, but it seriously overestimates turnout. Finally, nearly 90% of the respondents provide perceptual information regarding their networks, but only about 50% provided the identifying information that was necessary to interview members of the network.

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