The Electoral Relevance of Political Talk: Examining Disagreement and Expertise Effects in Social Networks on Political Participation

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Although people with larger, more politicized social networks are more likely to participate in elections, we know very little about what drives this relationship. I argue that the electoral relevance of political talk depends heavily on the political expertise imbedded in discussion networks. Using data gathered during the 1996 presidential election, I demonstrate that the level of political sophistication in a person's social network exerts a positive influence on participation. Importantly, this effect is greater than the impact of political preferences in the network, the factor that is implicitly considered to be the main link between networks and involvement. This evidence makes two contributions to research on networks and participation. First, it provides support for a theoretical model that better accounts for research on the relationship between political talk, political disagreement, and involvement. Second, it changes the normative implications associated with political talk by suggesting that networks can encourage both higher levels of involvement and increased consideration of differing viewpoints.

growing body of research seeks to untangle the thorny problem of how political information exchanged in interpersonal networks shapes involvement in electoral politics. While the evidence shows that people with large social networks are more likely to participate (e.g., Klofstad 2005; Knoke 1990; Lake and Huckfeldt 1998; Leighley 1990; McClurg 2003), it does not explain how this effect is achieved. One exception to this statement is research on cross-cutting social ties, or social contacts that expose people to disagreeable viewpoints. Although cross-cutting talk makes people more tolerant and cognizant of others' political positions (Barabas 2004; Mutz 2002b; Price, Cappella, and Nir 2002), it depresses participation in politics (Mutz 2002a). The implication of this evidence is that the distribution of political preferences in networks is the primary social factor shaping participation. If true, it would hold important implications for how we view the relevance of political talk for understanding participation. In particular, it suggests that networks either promote cross-cutting discussions that improve tolerance and understanding or

homogenous networks that encourage participation, but not both.

I argue that such a conclusion is only inevitable if we fail to consider the impact of other elements of political communication on behavior. To make this argument, I first discuss the limits of political disagreement as the main explanation for how social networks influence participation. In particular, I argue that it cannot account by itself for the existing evidence on this subject. I then suggest that another network factor—the supply of political expertise in networks—is also an important determinant of participatory behavior. The specific argument is that knowledgeable political discussants provide access to information that helps people recognize and reject dissonant political views, develop confidence in their attitudes, and avoid attitudinal ambivalence, thereby making participation more likely. Analysis of survey data gathered in two communities during the 1996 presidential election shows that political expertise in social networks (1) is a stronger predictor of participation than support in the network, (2) is distinct from the respondent's level of

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political knowledge, and (3) facilitates confident decision making.

This evidence makes two contributions to research on how discussion networks affect political engagement. From a theoretical standpoint, it elaborates a more extensive and empirically powerful model that connects networks to the attitudinal foundations of participation. Normatively, it demonstrates that the same networks that encourage participation are not necessarily distinct from those that encourage tolerance and consideration of others' viewpoints. Although networks can still lead people down these divergent paths, this means that deliberation and discourse are not incompatible with engagement.

The Content of Social Communication

Earlier research shows that large and politicized social networks are correlated with higher levels of political action (Kenny 1992; Knoke 1990; Lake and Huckfeldt 1998; Leighley 1990; McClurg 2003), frequently producing substantial effects on participatory behavior. For instance, McClurg (2003, 459) finds that increasing the level of political discussion from "never" to "most times" in a discussion dyad increases the expected level of participation by nearly an entire political act among college graduates. Kenny (1992) shows that having a politically active discussant increases the probability of voting by 20%, of working in a campaign by nearly 80%, and all other activities by approximately 40%. Using an innovative quasi-experiment, Klofstad (2005) demonstrates that high levels of peer political discussion increases rates of civic and political participation by 13%.

What explains these results? What factors operate within large, politicized networks that make participation more likely? To date, the main treatments of these questions focus on what I label the political composition of networks. The basic argument is that the impact of a network on a person's participation depends on how much agreement, or support, she experiences when talking to her network discussants. If her family and friends share her political preferences she is likely to participate; if they disagree with her political views, she is unlikely to be involved.

Along these lines, the evidence demonstrates that people in cross-cutting networks, defined as "social interactions that cross lines of political difference" (Mutz 2002a, 840), are less likely to participate. The main explanation for this is that political disagreement helps people learn about (Barabas 2004; Huckfeldt, Johnson, and Sprague 2004; Mutz 2002b; Price, Cappella, and Nir 2002) and become more tolerant of (Mutz 2002b) opposing political views, consequently increasing ambivalence and uncertainty in their own beliefs (Mutz 2002a). Additionally, cross-cutting discussion stimulates conflict-avoidant predispositions held by some people, making them withdraw from active political participation (Mutz 2002a; Ulbig and Funk 1999). In short, this evidence shows that disagreement in networks undercuts the attitudinal foundations of involvement.

A similar set of conclusions can be gleaned from other research on how social groups influence involvement. For example, Putnam distinguishes between two distinct types of social capital. The first—bridging social capital—overlaps with the idea of cross-cutting networks and is important because it exposes people to new information. In contrast, "bonding social capital is good for undergirding specific reciprocity and mobilizing solidarity," (2000, 23) an effect achieved by promoting ingroup identities that create incentives for participation. The implication of Putnam's argument is that people who are not exposed to bonding social capital, ground in mutual support and agreement, are unlikely to be involved. Again, the emphasis remains on *similarity* and *support* as a condition for maintaining involvement.

Though this evidence shows that the political composition of the network is important, it would be misleading to assume that this provides a complete explanation of how networks influence participation.³ The problem stems not from the argument that network composition is important, but from the failure to consider other factors in depth. The clearest demonstration of why this is the case is that network composition cannot account for all the available evidence on the relationship between networks, composition, and participation. This is because larger, politicized networks are an empirical correlate of *both* political participation and the likelihood of encountering political disagreement (Huckfeldt, Johnson, and Sprague 2004,

¹Throughout this article, the term "participation" refers to involvement in mainstream politics. It is undoubtedly true that the impact of networks on participation in extremist groups has a different character than it does for involvement in mainstream electoral politics. However, this is the preview of other research.

²For research relevant to these processes, see Shingles (1981), Uhlaner (1989), Morton (1991), Harris (1994), and Leighley (2001, Chapter 1).

³None of the aforementioned authors explicitly makes this strong claim. My point is mainly that previous research focuses on disagreement and that, if we are to develop a theoretical model here, we must look at factors other than network composition.

2002; but see Mutz and Martin 2001).⁴ In other words, the very networks most likely to create opportunities for cross-cutting discussions are also those that most likely foster involvement. Such a conundrum cannot be explained by the distribution of preference in networks, indicating that we must broaden the theoretical link between networks and participation.

Moreover, an explicit focus on the political composition of networks has specific normative implications about the social foundations of democratic citizenship. This is because it implies that consideration of others' views is the hallmark of reasoned, or "enlightened," thinking (Barabas 2004, 687–88), but that it is also the bane of involvement. From such a perspective, networks are a mixed bag for democracy, either encouraging "enlightenment" or involvement but never both. To the extent other elements of social communication either encourage participation or counter the attitudinal consequences of cross-cutting talk, such a conclusion could be misleading. This means that it is quite possible that in some circumstances, for instance, networks can promote both "enlightenment" and participation.

To understand the role of social networks in American politics, then, we should explore how they influence participation more deeply. If cross-cutting ties are not the only important participatory stimulus in social networks, what else relates networks to electoral action? How important are these factors for explaining involvement relative to disagreement? What does this imply about the impact of networks on democratic citizenship more broadly? To address these questions, the next section elaborates a model of social network influence that identifies another factor connecting networks to participation—the quality of political discussion.

The Social Supply of Political Expertise

The effect of a social network on political behavior depends on how it structures the interpersonal exchange of political information. Since people possess limited political resources and have little incentive to gather more (Downs 1957; Verba, Schlozman, and Brady 1995), they frequently do not pay the full costs associated with political action unless they can supplement

their personal resources. By providing people with a shortcut to a particularly important resource—political information—interpersonal networks help circumvent these individual limitations (McClurg 2003). What type of information other than political support and disagreement can people glean from their social networks?

I argue that a prime candidate is the social supply of expertise, conceptualized as the political sophistication of discussants in social networks (Lake and Huckfeldt 1998). All things being equal, people in networks high in expertise can access larger quantities of political information that is higher in quality (Huckfeldt 2001). In elections, the things people need to know in order to participate range from the personal (e.g., the relevance of the election to the individual, how the individual's politics fit with those of the candidates) to the contextual (e.g., how the candidates differ, what issues are important) to the practical (e.g., how to volunteer, what volunteering entails). People high in political knowledge are more likely to have answers to these questions than those with less knowledge (Delli Carpini and Keeter 1996). If people use social networks as shortcuts for gathering political information (Huckfeldt 2001; Huckfeldt and Sprague 1995), they are more likely to find useful and helpful answers when they have knowledgeable informants.

Additionally, politically expert networks create incentives, opportunities, and pressures that encourage people to make politics a larger part of their identity. Walsh's (2004) comparison of a relatively apolitical women's guild and quasi-political coffee klatch demonstrates the importance of such social expectations. For the women's guild, politics was an infrequent topic of conversation among the women, and there was no expectation that it should be relevant to their lives. In contrast, public affairs were a regular subject among the coffee shop patrons and, as a consequence, the group members more consistently recognized the importance of politics as part of their identity. To the extent that political experts are more attentive to and involved in politics (Delli Carpini and Keeter 1996, 225), having expert discussants increases exposure to norms of political involvement (Kenny 1992). In this way, the capacity for a network to increase the relevance of politics to a person's life is strongly connected to the quality of the information to which people are exposed.⁵

⁵Basically, the argument here is that networks with greater levels of political expertise expand the relevance of politics to the people in that network. This seemingly contradicts Downs's (1957) logic, which suggests that people should be minimally engaged with politics unless they have a specific taste for consuming political information and engaging in political behavior. But these deductions derive from his explicit focus on *homo economicus*, an isolated individual making purposive decisions in a passive social context. A

⁴Although the probability of encountering a disagreeable peer increases with network size, this does not mean that larger networks necessarily have higher degrees of social dissonance. In other words, larger networks have a larger probability of including at least some disagreement, but not necessarily a higher proportion of disagreeable discussion partners.

While these possibilities have been indirectly considered in previous research (Lake and Huckfeldt 1998), there is a third reason why network expertise influences participation that has direct implications for previous research on compositional effects. Simply stated, sophisticated political networks provide environments that support clearer and more contextualized communication of political information, which establishes a more secure attitudinal foundation for involvement. Political expertise is an important factor for recognizing dissonant information, rejecting it, and subsequently minimizing ambivalence. This is because, as Zaller (1992) notes, people who are politically aware pick up on important cueing information, which he defines as "contextual information' about the ideological or partisan implications of a persuasive message." They are important because "...they enable citizens to perceive relationships between the persuasive messages they receive and their political predispositions, which in turn permits them to respond critically to the persuasive messages" (1992, 42).

Just as politically expert individuals better understand the relevance of persuasive messages for their own predispositions, so are they likely (on average) to communicate those messages with greater clarity and context (i.e., descriptions of their relevance) than nonexperts. Expert discussants are useful to their peers because they add clarity to information exchanges in networks, thereby helping people connect that information to their predispositions. Therefore, people who talk politics with political experts are in a better position to identify, reject, and understand the relevance of dissonant political information exchanged in their networks. The primary consequence of this process should be to reduce ambivalence about and increase confidence in their political views.

This final observation is important to single out. Because networks serve as information shortcuts, people who rely on them are unlikely to become political sophisticates themselves.⁶ The virtue of information shortcuts is that they allow people to reach seemingly competent political decisions without searching for political information. However, those decisions are not necessarily equal to those reached by people who *do* possess adequate amounts of political information because their usefulness depends upon the decision-making context (Lau and Redlawsk 2001; Sniderman 2000). For example, re-

sociological view of human behavior envisions the social context as a somewhat more coercive force affecting individual choice, even when people exercise control over their environments (Boudon 1986; Zuckerman 2005, Chapter 1).

⁶In other words, if people are turning to their networks as an information shortcut it is because it allows those people to be *less unsophisticated* themselves.

search in political psychology demonstrates that the cognitive shortcuts people employ in politics often fail to help people develop opinions and attitudes that are similar to what they would possess if they were themselves experts (Bartels 1996; Kuklinski and Quirk 2000; Kuklinski et al. 2001). The argument laid out here implies that social shortcuts may not suffer to the same degree from this shortcoming because expert networks are not just an information substitute, but a condensed information source that also provides signals for how that information is relevant to underlying predispositions.⁷

Before moving to a discussion of the data, one clarification is in order. The model implies that people should be more likely to recognize the dissonant information provided by politically expert peers, potentially creating a situation in which disagreement has a *larger* effect for people with sophisticated discussants. This is not necessarily the case. Since expert discussants are assumed to provide more cueing information when they disagree with their peers, the model implies that their peers should be in a better position to recognize the information as dissonant and therefore likely to reject it. Consequently, I argue that cross-cutting talk still diminishes the likelihood of participation when people receive and accept disagreeable messages, but that knowledgeable discussants make acceptance less likely.⁸

Data and Measures

To investigate the effect of expertise in social networks on political participation, I use data from a survey administered during the 1996 presidential election that was specifically designed to investigate processes of social influence within two midwestern communities (Huckfeldt and Sprague 2000). Survey respondents were randomly selected from lists of registered voters in the Indianapolis and St. Louis metropolitan areas (2,612 interviews). There were two preelection and two postelection survey waves, each administered as a rolling cross section. Since the first preelection wave was administered very early in the election cycle (March 3–July 14, 1996) and the second postelection wave went into the field about a

⁷I do not mean to imply that networks high in expertise can replace individual knowledge and expertise, only that when used as shortcuts to information gathering they may have some advantages that are not shared by cognitive information shortcuts.

⁸An overlapping explanation is that recognition of dissonant cues leads people to double-check their own views with others in their context, enhancing the effect of potential agreement if those discussants are also knowledgeable. Along these lines, some evidence shows the impact of disagreement on behavior can be muted if people reside in generally more favorable social contexts (Huckfeldt, Johnson, and Sprague 2004; McClurg 2005; McPhee 1963).

year after the election (October 17–December 12, 1997), analyses in this article are limited to respondents interviewed in the second and third waves (1,562 interviews). These waves were in the field July 1–November 4, 1996, and November 5, 1996–January 12, 1997, respectively. Although using a regional study limits the external validity of the investigation, these data include measures of key sociological concepts that are not often found in national sample surveys. In the remainder of this section, I discuss the measurement of both the dependent variable and the important network variables.⁹

Electoral Involvement. The dependent variable is based on survey questions that asked respondents whether they participated in each of the following political activities: working on a campaign, attending meetings or other campaign events, putting up a yard sign, or donating money to a candidate or campaign. Following the path of earlier studies (Lake and Huckfeldt 1998; McClurg 2003), I combine these into an index of political activity that ranges from zero to four.

This measure has some limitations. First, participation in these activities is a relatively rare occurrence. The average number of activities for the sample is .45. Only 17% of the sample engages in the most frequent form of political activity (donating money to a candidate or campaign) and less than 30% of the sample engaged in *any* activity. Second, it restricts analysis to electoral activity even though social networks may be at least as, and potentially more, important for other forms of political action, such as protests, violent acts of political expression, or even issue activism. ¹¹ Nevertheless, these participants are worthy of analysis since they play a particularly important role in elections and have a somewhat exaggerated impact

on political processes because of their unique position between elites and the electorate (Verba et al. 1993). Moreover, to the extent that we worry about citizens completely withdrawing from politics and being uninformed, these concerns are most pressing in the realm of elections since this is the most egalitarian political arena.

Network Measures. Survey respondents were asked to name up to five people with whom they discussed "government, elections and politics" or "important matters." Looking at all respondents, the average network had approximately 2.5 discussants (n=1537), with 18% of all respondents failing to mention any discussants. Each respondent was then asked a series of questions about each discussant, including the frequency of political discussion between them, the respondent's perception of each discussant's political vote choice, and the respondent's belief about the discussant's level of political knowledge.

Political discussion was measured on a 4-point scale where a zero indicates "never talking politics" and a three indicates "often talking politics." This variable, which measures the level of political interaction between a respondent and discussant, can be aggregated to the network level in two ways, either by summing responses across all discussants or averaging them. In order to capture the quantity of political interaction experienced by respondents—something distinct from the quality of interaction—I use the summed measure. When summed the variable has a range of 0 to 15, with a mean of 4.7, indicating that most respondents are exposed to limited levels of political interaction in their network. Table 1 provides the full descriptive statistics for this and the other network variables.

Network composition is measured with an index of political agreement in the network. Each respondent reported a perception of who each discussant would cast a ballot for in the 1996 election. Response options included the following: will not or cannot vote, Bill Clinton, Robert Dole, some other candidate, or don't know. The measure of network agreement is constructed by contrasting these

⁹Appendix A details the questions and variable coding for all variables used in this article.

¹⁰Respondents were also asked a question about voter turnout. This measure is not included for two reasons. First, well over 90% of all respondents said they were going to vote or had voted depending upon the wave of the survey. Including it in the measure is akin to adding a constant to the dependent variable. Second, it is well known that survey responses overreport voter turnout (Clausen 1968; Silver, Anderson, and Abramson 1986). If this overreport is correlated with any of the variables in the model, then it is a systematic measurement error and it makes estimates based on it problematic. Although the other activities included in the dependent variable may be biased, they are superior measures for two reasons: (1) social pressure is probably lower for costlier forms of political activity than for voting and (2) the relatively low proportion of people participating in these activities provides for a relatively more meaningful analysis.

¹¹These forms of political activity may require more social support than the act of working on a campaign (Granovetter 1978). This in turn implies that the role of different network attributes may vary across *types of activity*. This possibility is generally ignored in the research on American political behavior.

 $^{^{12}\}mbox{Respondents}$ were randomly assigned to one of these two name generators.

¹³Respondents supplied a substantive answer in roughly 88% of all discussion dyads, with a specific candidate preference being reported 80% of the time. They tended to believe their discussants were more likely to choose Bob Dole than Bill Clinton, though the difference is never substantial and probably reflects the political biases of the Indianapolis and St. Louis metropolitan areas. Perceptions of the first-named discussant's preference was nearly equal (38% believed Clinton was preferred by their first-named discussant compared to 39% for Dole). The difference for the second, third-, and fourth-named discussant is always less than 4%. Only for fifth-named discussants, where 41% of discussants were believed to favor Dole compared to 33% for Clinton, was there a substantial difference.

perceived preferences with the respondent's reported vote preference and aggregating across the full network. Every dyad where the respondent's preference did not match his or her discussants' was considered a "disagreeable" dyad; where they did match, the dyad was coded as "agreeable." The measure ranges from 0 to 1, with higher numbers indicating more agreement between the respondent and her network. Agreement in networks is low, with an average of approximately 40%.

To measure the social supply of political expertise, I aggregated responses to a question that asked whether the respondent believed each discussant had "not much," "an average amount," or "a great deal" of political knowledge. 14 Based on these responses, a measure of socially supplied political knowledge was created by averaging the respondent's answers to this question across the network. An average is used for two reasons. First, using an absolute level of political knowledge makes it highly correlated with the sum-based measure of political discussion, decreasing precision in standard errors due to collinearity. 15 Second, it is important to conceptually separate the effects of quantity and quality of political discussion.¹⁶ Since the quantity of political interaction is most sensibly measured as a "total," I use an average level of expertise here, recognizing this can mischaracterize variance in network expertise. The typical network has a range of zero to two, with an average of 1.22 on this variable, implying that the typical discussant in a respondent's network has about what you would expect from a person "on average."

Social Networks and Involvement: The Importance of Network Knowledge

Does Network Knowledge Affect Participation. I begin with a basic examination of the influence that network characteristics have on participation in elections. My

TABLE 1 The Political Character of Social Networks This table provides descriptive statistics for the political character of the social networks as perceived by respondents.

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	Mean	Standar Deviation		Max	N
Panel A: Descr	iptive St				
Size ^a	3.13	1.49	1	5	1260
Political Talk	1.82	0.61	0	3	1253
Political Agreement	0.43	0.41	0	1	1154
Political Knowledge	1.22	0.42	0	2	1220
		Political	Political	Po	litical
	Size	Talk	Agreement	Kno	wledge
Panel B: Corre	lation C	oefficients			
Size ^b	1.00 1.00				
Political Talk	0.55 0.08	1.00 1.00			
Political Agreement	0.05 0.05	0.03 0.03	1.00 1.00		
Political Knowledge	0.03 0.04	0.34 0.27	0.09 0.10		.00

Notes: ^aWhen respondents who report having *no network* respondents are included, the mean of this variable drops to 2.57 with a standard deviation 1.81 (n=1537). Given the focus here on features of social networks, the remainder of the analysis only discusses the data reported in the table.

^bThe first number reported is the correlation coefficient. The second number is the partial correlation coefficient.

Size: Number of people identified as discussants for respondents. One half of the names was generated by asking with whom the respondent discussed "important matters." The other half was generated by asking respondents for the names of people with whom they discussed "political matters."

Political Talk: The average level of political discussion between the respondent and the discussants in a network. For each discussant, respondents reported their perception of how often they talked about politics with $0 = \text{``never,''}\ 1 = \text{``rarely,''}\ 2 = \text{``sometimes,''}$ and 3 = ``often.'' This was then aggregated across all respondents in the network.

Political Agreement: The proportion of all discussants that shared the respondent's reported vote preference.

Political Knowledge: The average level of political sophistication of discussants as reported by the respondent. Respondents reported their perception on how knowledgeable they perceived each discussant to be where 0= "not much," 1= "average amount," and 2= "a great deal." This was then aggregated across all discussants to get a measure of political sophistication in the network.

¹⁴Although an objective measure of discussant knowledge would be preferable to the respondent's perceptions, this is only available for a sample of discussants. Since the goal of this study is to understand network effects more broadly and because Huckfeldt (2001) shows that these perceptions have a strong basis in objective fact, I proceed with the perceptual measure.

¹⁵When the variables are measured as the "volume" of interaction and the "total" level of expertise, they have correlation coefficient equal to .81. When one is measured as an average and the other as a total, these correlations drop below .25.

¹⁶Theoretically, there should be a high correlation between the quantity and quality of political discussion—people with expert discussants talk more frequently with them about politics. However, my approach is consistent with the goal of this article, which is to parse these effects out separately.

TABLE 2 The Effect of Network Disagreement and Political Sophistication on Participation in Electoral Activities These are results from a negative binomial regression predicting how many activities in which respondents participated. They demonstrate that the average level of political sophistication in networks has a positive influence on participation.

	Baseline ^a			t Network Knowledge	With Network Political Knowledge	
	β	Std. Error	β	Std. Error	β	Std. Error
Control Variables						
Education	0.03	0.05	0.01	0.06	-0.02	0.06
Household income	0.10	0.04***	0.09	0.04**	0.09	0.04**
Age ^b	0.01	0.004*	0.01	0.004^{*}	0.01	$0.004^{\#}$
Group memberships	0.18	0.03***	0.15	0.03***	0.15	0.03
Respondent knowledge	0.11	0.06^{*}	0.04	0.06	0.05	0.06
Interest	0.52	0.08***	0.50	0.10***	0.50	0.10***
Strength of partisanship	0.26	0.06***	0.22	0.06***	0.20	0.06***
Political contact	0.78	0.09***	0.76	0.10***	0.74	0.10***
Network Variables						
Volume of political talk			0.05	0.02***	0.04	0.02***
% agreeing discussants			0.31	0.13**	0.28	0.13**
Avg. pol. knowledge					0.35	0.14**
Constant	-4.89	0.35***	-4.92	0.39***	-5.04	0.40***
$lpha^*$	0.56***		0.51***		0.49***	
Likelihood Ratio χ^2	283.27***		232.65***		229.80***	
N	1325		1023		995	

^{***}p < .01, **p < .05, *p < .10 for two-tailed tests. *p < .10, one-tailed test.

Notes: ^aTo create an appropriate baseline for investigating the foundations of social influence, this model only includes respondents who have at least one network partner.

approach is to estimate a baseline model of participation based on factors identified in other research. These include measures of the respondent's socioeconomic status (Verba and Nie 1972), age (Wolfinger and Rosenstone 1980), political knowledge (Delli Carpini and Keeter 1996), partisan strength, political interest (Verba, Schlozman, and Brady 1995), and partisan contacts (Rosenstone and Hansen 1993). I also include a control for the number of nonpolitical groups to which a respondent belongs (Putnam 2000), ¹⁷ which helps rule out an alternate explanation of network effects—namely that they reflect a personal predilection for involvement in all facets

of social life, from groups, to politics, to networks. ¹⁸ I then add in the measures of political interaction and agreement to create a "socially specified" baseline model. This establishes how the individual-level controls respond to inclusion of network variables *other than* the one of primary interest in this article. A final model includes average political knowledge in the network. Since the dependent variable is a count of political activities, I use a negative binomial regression model to estimate independent variable coefficients.

Results are reported in Table 2. The control model performs as expected with most variables achieving

^bP-values for the coefficients change for age even though the reported coefficients and standard errors do not because of rounding error. *Dependent variable:* Number of participatory acts engaged in as reported by the main respondent. Activities include working on a campaign, attending a meeting or rally, donating money, or displaying a sign or bumper sticker.

¹⁷In addition to including this variable, I also tried model specifications that included measures of work status, religious attendance, marital status, and residential mobility. Whether included separately or together, none of these variables achieved minimal levels of statistical significance and are excluded from the reported analysis. As such, they enhance the interpretation of the social network variables.

¹⁸ Although including these variables helps control for this alternate explanation, it is important to recognize that it is an imprecise measure of why people might be involved in multiple types of social environments. See Klofstad (2005) for an extended discussion of these matters and a quasi-experimental design that provides leverage on determining whether networks exert independent causal effects on participation. His results support the interpretation offered here that networks independently influence involvement. I am grateful to an anonymous reviewer for clarifying these points.

statistical significance and pointing in the expected direction. The main exceptions to this statement are education (insignificant) and the respondent's political knowledge (marginally significant). Adding in the first two network variables does not change these results substantially, even though they are statistically significant and in the expected direction. Consistent with earlier research, respondents that experience higher levels of political interaction and agreement participate in more political activities. Respondent political knowledge is statistically insignificant in this model, but adding the network variables has a minimal effect on all other factors.¹⁹

The last results are the most interesting. Network political expertise exerts a positive and statistically significant effect on electoral participation. Including it in the model has no influence on the statistical significance of other variables, implying that it is not affecting the relevance of the other variables in the model. Of particular note is that respondent political knowledge becomes statistically insignificant before adding in a measure of average network knowledge, meaning that it is not acting as a statistically more precise proxy for the respondent's political sophistication.

The Added Value of Network Knowledge. These results suggest that the sophistication of discussants is important for understanding when networks make participation more likely, but how much of an independent effect is there? There are two issues here: (1) Is network political knowledge acting mainly as a proxy for the respondent's own level of political expertise? (2) Is there any *added value* to having knowledgeable discussants, or is this variable mainly an indirect route for factors in the model to influence participation? The interpretation of the results in Table 2 depends heavily on answers to these questions, and a perusal of earlier research on the consequences of education (Nie, Junn, and Stehlik-Barry 1996) and political discussion (Huckfeldt 2001) at least hints at these alternatives.

To address these alternate explanations, I evaluate the factors that influence how much political knowledge respondents find on average among their discussants. One possibility is that human capital increases the likelihood of having networks with greater levels of political expertise (Lake and Huckfeldt 1998). Another perspective is

that respondents with strong political predilections construct networks with like-minded individuals who, consequently, have high levels of political knowledge or whom they think of as more knowledgeable because they agree (Finifter 1974; MacKuen 1990). A final perspective is that the other political characteristics of the network create opportunities for a respondent to seek out and learn about their discussant's political knowledge. Using these explanations as a guide, I regressed the level of political knowledge held by discussants in a respondent's network on individual and network characteristics. Coefficient effects for these variables are estimated using ordinary least squares regression with robust standard errors. Table 3 provides the results for two models, one with and one without the network variables.

Consistent with previous research, political knowledge in social networks is related to the respondent's personal characteristics. This is especially true of factors exogenous to the network; educated and older respondents are more likely to have informed discussion partners. Likewise, people with a strong interest in and partisan attachment to politics experience higher quality political discussions. In line with the results from Table 2-and important for the purposes of this paper—the respondent's level of political knowledge does not predict her discussant's knowledge. Stated differently, political experts do not necessarily seek out other political experts as their discussants. Other characteristics of the network also achieve statistical significance. Specifically, people who talk politics more frequently are more likely to report higher levels of expertise in their network, as are people with higher levels of agreement. Somewhat surprisingly, the number of civic groups a respondent belongs to is unrelated to network sophistication.

Despite the fact that network knowledge is related to these other variables, what is most important is that they have moderate substantive effects and explain only a small part of its variance. Network political knowledge is not functioning as a proxy for the respondent's own level of knowledge, though it may be filtering some of these effects through the respondent's education. Additionally, the results suggest that average levels of network knowledge are not primarily a way for other factors such as education, age, partisan strength, and interest to indirectly explain participation. In sum, socially supplied

²⁰Huckfeldt (2001) argues that the amount of political discussion between a respondent and discussant is driven in part by their views on how the respondent perceives the discussant's political knowledge. Here I am reversing that logic in considering the entire network. Undoubtedly, the two variables have reciprocal influences on each other. Since my ultimate purpose here is to look at the influence of network knowledge that is independent of political talk, I defer discussion of this issue to future research.

¹⁹Considering the amount of explanatory power attributed to education, its marginal significance here is an aberration. Nevertheless, there are two reasonable explanations for this effect. First, one way that education affects participation is through how it influences people's social networks (Nie, Junn, and Stehlik-Barry 1996; Table 3). Second, excluding household income from the model—which is highly correlated with education—moves it back into the realm of statistical significance at the .10 level.

TABLE 3 The Effect of Individual and Network Characteristics on the Average Level of Political Knowledge in the Network An individual's education, partisanship, and interest and the level of political discussion and disagreement in a social network influence how much sophistication a respondent seeks in her discussants. Importantly, the results suggest that the effect of political knowledge in networks is distinct from individual political knowledge.

	Baseline Model		Full Model	
	β	Std. Error	β	Std. Error
Individual Characteristics				
Education	0.07	0.01***	0.06	0.01***
Age	0.001	0.0008**	0.001	0.0008**
Number of groups	0.01	0.01	0.00	0.01
Partisan strength	0.04	0.01***	0.03	0.01**
Interest	0.07	0.02***	0.05	0.02***
Respondent knowledge	0.01	0.01	0.00	0.01
Network Characteristics				
Volume of political talk			0.02	0.003***
% agreeing dyads			0.06	0.03*
Constant	0.75	0.06***	0.69	0.07***
Adjusted R ²	0.08		0.09	
MSE	0.40		0.39	
F	17.22***		14.21***	
N	1162		1075	

^{***}p < .01, **p < .05, *p < .10 for two-tailed tests. *p < .10, one-tailed test. Dependent variable: The average level of political sophistication of discussants as reported by the respondent. Respondents reported their perception on how knowledgeable each they perceived each discussant to be where 0 = "not much," 1 = "average amount," and 2 = "a great deal." This was then aggregated across all discussants to get a

expertise affects participation in a manner that is fairly independent of these other factors.

measure of political sophistication in the network.

The Impact of Selection Bias. One drawback to these data is that not all survey respondents report having discussion partners, creating a situation in which data are systematically missing on the final two network measures reported in Table 2. As such, the conclusions only generalize to a subsample of the entire electorate that have discussion networks and may be biased estimates of how important networks are for participation more generally. If the process that structures whether a respondent has a network or not is correlated with the dependent variable—a plausible argument from multiple theoretical perspectives—then it is possible that these coefficients misrepresent the relationships being examined here.

There are two possible theoretical models for how this selection bias occurs. One perspective takes a respondent's report of no network at face value, meaning that he or she

is socially isolated from other people. In this case, the process of opting into or out of social networks may be more strongly related to involvement than the qualities of the network itself. A second theoretical argument implies that the data are not really "missing" because no individual is truly isolated. Instead, the failure of a respondent to answer questions reflects the low salience of their network. In this case, network stimuli "exist," but are "minimal."

Each model suggests a different type of empirical strategy, with the former leaning toward use of a selection model and the latter implying that we should substitute minimum values in for respondents without discussants. As the results reported in Appendix B demonstrate, both solutions yield results similar to those in Table 2.²¹ Though the substantive consequences of the

²¹Specification of the selection model requires the use of some exogenous variables, which leads to a slightly different causal model in Appendix B. Unfortunately, the data do not provide enough leverage on the selection process to avoid making such specification assumptions.

Two-Person Network

Four-Person Network

Two-Person Network

Four-Person Network

Four-Person Network

Average Network Expertise

High Network Expertise

Graphs by Level of Political Interaction

FIGURE 1 The Effect of Network Disagreement and Knowledge on the Probability of Participating in Politics

Source: Table 2.

network variables are reduced after accounting for the selection process, suggesting that some of the "action" in participation is whether or not people have meaningful social networks, the basic interpretations offered above do not change. This is consistent with work by Klofstad (2005) that explicitly accounts for selection bias with a field experiment. However, while this evidence somewhat dampers concerns about selection bias, this subject requires further exploration in order to better sort out these processes.

Substantive Effects. How important is the effect of network expertise on participation? Specifically, how does it compare to the impact of network composition? To investigate these questions, I examine the joint influence of political interaction, agreement, and network political sophistication on the expected number of political activities. These simulations were produced by varying level of network agreement across three levels of network expertise—low, moderate, and high²²—and two types of networks with average levels of political interaction—a two-person network (volume of discussion = 3.61) and a four-

person network (7.25). Expected values were produced using *SPOST* (Long and Freese 2001), while holding all other variables at their mean. The patterns illustrated in Figure 1 support earlier research on the positive effects that discussion and agreement have on participation. However, they show network political knowledge effects to be even more substantial.

In low-expertise networks, moving from complete disagreement to full agreement increases the participation rate from .23 to .31 (an increase of .08) in the twoperson network and .27 to .36 (an increase of .09) in the four-person network. The comparable effect of agreement in average and highly expert networks is an increase of .12 and .16 in two-person networks and .14 and .17 in the four-person network. These are notable increases in involvement when compared to the average rate of participation in the sample (.45), thereby suggesting that agreement is an important factor relating networks to participation. However, these gains are modest relative to the impact produced by increases in network political sophistication. In wholly disagreeable networks, moving from a network with no expertise to one with just average amounts increases participation by .14 and .17 units in two- and four-person networks, respectively. In other words, a moderate amount of political expertise is larger than being in a network full of supportive discussion

²²Low-network expertise is scored with the minimum of zero; moderate-network expertise is the mean of 1.22; high-network expertise is the maximum of two.

partners. This effect is somewhat stronger in agreeable networks (.16 and .19) *though it is not dependent upon the presence of agreement*. Clearly, the quality of discussion matters quite a bit relative to the political constitution of networks.

Explaining the Effect of Socially Supplied Political Expertise: Preliminary Analysis

So far the results show that the social supply of political expertise makes participation more likely, even in the face of substantial political disagreement. While this evidence is important for understanding the relationship between networks and involvement, it leaves an important question unanswered. Does the level of political knowledge in the network influence participation through the same attitudinal mechanisms as disagreement? Or do these elements influence participation through separate mechanisms? According to Mutz, "political inaction could be induced by the attitudinal ambivalence that cross-cutting exposure is likely to engender within an individual" (2002a, 840). Given her findings that people are more capable of recognizing justifications for opposing points of view when exposed to cross-cutting networks (2002b) and that ambivalence decreases the likelihood of participation (2002a), a strong case exists that this is a principle mechanism linking disagreement to lower electoral participation (indirect, but supportive, evidence of these mechanisms can be found in Barker and Hansen 2005 and Ulbig and Funk 1999). Is it possible that the social supply of political expertise counteracts this effect?

The earlier discussion alludes to three reasons why it may. First, it might increase respondent sophistication and improve a person's ability to integrate political information into their opinions by themselves. Second, politically sophisticated partners might provide cueing information that helps respondents integrate persuasive information into their belief systems. Finally, respondents with multiple discussion partners who have some political expertise can "check" their reactions against each other (e.g., McPhee 1963) in order to figure out how to react to information, meaning whether to reject it or accept it as a relevant consideration.

Ambivalence, defined as holding competing considerations about an attitude object (Zaller 1992), is typically measured by combining informational and affective considerations that people hold about candidates into a single index. Since the Indianapolis-St. Louis survey did not include open-ended like-dislike questions (Lavine 2001;

Zaller 1992) or feeling thermometer questions (Mutz 2002a) used to measure ambivalence in previous studies, a direct test of this argument is not possible here. However, it is possible to construct an *indirect* test of the argument by examining the impact of network characteristics on the length of time it took respondents to make their decisions as to which candidate to support. Berelson, Lazarsfeld, and McPhee (1954) demonstrate one of the primary consequences of cross-cutting networks is to delay reaching a vote decision, a result that is undoubtedly related to voter ambivalence (Lavine 2001; Mutz 2002a). By examining the impact of network agreement and sophistication on the amount of time it took respondents to establish their candidate preference, it is possible to indirectly shed light on the mechanisms underlying network knowledge effects.

Respondents in the immediate postelection survey wave reported when they made up their mind about the presidential vote choice. Responses to the question range from "before summer" (coded as zero) to "the week before" the election (coded as three).²³ Although a significant proportion of respondents (44%) reported making up their mind before the summer, a majority made their mind up at some later point. Fully 14% did not make up their mind until the week before the elections. Overall, there is substantial variance in this measure, making it amenable to empirical analysis.

Estimates from an ordered probit model used to test the hypothesis that network agreement and sophistication reduce ambivalence are in Table 4. To control for other factors that influence this decision, I include measures of education, interest, partisan strength, voter knowledge, and the other political characteristics of the network. Positive coefficients reflect a *delay* in the process, while negative values reflect an early crystallization of preferences.

Overall, these results are in line with previous research. Like Lavine, I find that education does not predict crystallization of vote preferences, but that partisan strength has a positive influence. Interest in the election is statistically insignificant and in an unexpected direction. Consistent with Mutz's work, I find that network agreement has a theoretically consistent and statistically precise influence on when people make up their mind. Respondents who experience disagreement in their network score higher on the dependent variable, meaning that they put off making up their mind about which candidate they prefer. Of most interest, though, is that the average level of

²³ Fifty-nine respondents, approximately 8% of the sample, who reported they did not vote are excluded from this analysis. I exclude them in order to ensure the dependent variable is distinct from a measure of participation. The same conclusions offered here hold if these respondents are included.

TABLE 4 Effect of Individual and Network
Characteristics on When the Main
Respondent Made a Decision to Vote
for a Specific Presidential Candidate
This table shows that one measure of
ambivalence is strongly affected by the
level of political sophistication in the
respondent's network.

Independent Variables	β	Std. Error
Education	-0.05	0.09
Interest	0.21	0.13#
Partisan strength	-0.67	0.11***
Main respondent knowledge	-0.26	0.10***
Network size	-0.05	0.06
Avg. political talk	0.05	0.15
% agreeing discussants	-0.41	0.23*
Avg. pol. knowledge	-0.47	0.22**
Cut point #1	-2.82	0.47
Cut point #2	-1.87	0.45
Cut point #3	-0.45	0.46
Wald χ^2	54.91	
N	503	

^{***}p < .01, **p < .05, *p < .10 for two-tailed tests. *p < .10, one-tailed test.

Dependent Variable: At what point did respondent choose a presidential candidate? 0 = "before summer," 1 = "during the summer," 2 = "earlier in the fall," and 3 = "week before."

political knowledge in the network has a statistically significant influence on when respondents time their vote decision.

Figure 2 demonstrates the strength of these effects. Each panel of this graph displays the probability of a category in the dependent variable for one of the two network variables while holding all other variables at their mean. This visual display shows that network agreement is smaller than the effect associated with average levels of political knowledge in a network. For instance, voters who have no agreement in their networks have a probability of making a vote decision before the summer campaign season of 43%. This increases to a little over 53% if the network completely agrees with the respondent. By comparison, respondents with no knowledgeable respondents have a 33% probability of deciding before the summer while those with the highest level of political knowledge have a 55% probability of deciding at that time. Comparable conclusions apply to the other categories, but the general dynamic is to influence whether the respondent makes up her mind before or after the campaign begins.

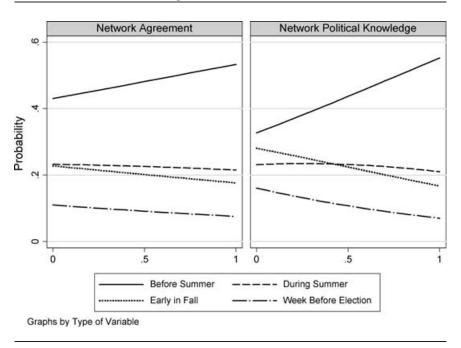
This evidence suggests that the social supply of political expertise is important in no small part because it counteracts the negative effect of disagreement on ambivalence. The implication seems to be that if disagreement occurs in the context of politically sophisticated networks that the net effect is to reduce ambivalence and enhance the attitudinal foundations underlying involvement. To be clear, however, this evidence is preliminary and requires a more extensive examination than it receives here. Moreover, disagreement continues to be important in other ways that depress participation, such as stimulating conflict avoidance (Mutz 2002b; Ulbig and Funk 1999).

Conclusion

This article explores the impact of political expertise in social networks on participation, particularly in relation to the effect of network composition. Although the analysis buttresses earlier conclusions about the relevance of political preferences for explaining involvement, it goes further to show how network exchange enhances the probability of participation when it provides access to politically sophisticated discussants. And, while it is true that people do not randomly find themselves in networks with high levels of expertise, it is also the case that the factors that predict the structure of those networks explain only a small proportion of that variance. This indicates that there is benefit in having knowledgeable discussants that is independent of other characteristics. Finally, preliminary evidence suggests that politically sophisticated networks accomplish these gains by reducing ambiguity in respondent's perceptions of politics. Although full judgment must be withheld on this claim in the absence of a more direct and powerful empirical test, the immediate implication is that networks counteract one of the processes that lead cross-cutting social ties to decrease participation.

The broader importance of these results comes from what they imply about the potential for participatory politics in America. In an effort to promote workable democracy despite overwhelming evidence on the short-comings of individual citizens, some political theorists emphasize a model of democracy that prioritizes public deliberation (e.g., Elshtain 1995; Fishkin 1991). As the argument goes, public deliberation advances healthy democratic practices because it exposes people to the broader collection of information and viewpoints held by the public. Consequently, it can promote more reasoning

FIGURE 2 The Effect of Network Agreement and Network Political Knowledge on When Respondents Made a Choice Among Presidential Candidates



Source: Table 2.

Notes: For purpose of visual display, the average level of network political knowledge was rescaled to range from 0 to 1, rather than its original metric of 0 to 2.

by citizens and, hopefully, better public opinion (Barabas 2004). One central element of this interpretation, though, is a belief that political discussion must expose people to dissonant arguments and opposing points of view.

Although people do not often practice the kind of deliberation outlined by the theorists, there has been some interest in how the everyday elements of deliberation such as cross-cutting discussion—affect voting behavior. As far as this evidence goes, the record shows that such exchanges help people become more thoughtful and tolerant citizens (Barabas 2004; Mutz 2002b), but cause them to withdraw from politics (e.g., Mutz 2002a). From this, it seems a small jump to suggest that the deliberative elements of social life may work at cross-purposes with the high levels of political involvement that participatory theorists believe are central to good democratic governance (e.g., Dahl 1956). Are interconnected and deliberative citizens really tolerant and reasoning, but inactive and absent? The evidence here suggests not—in practice politically relevant conversations need not lead to an ambivalent public that refuses to act on their views in the electoral arena.

Appendix A

Variable Description, Survey Question Wording, and Coding

Education

Description: Respondent's self-reported education level. *Wording:* "What is the highest grade of school or level of education you have completed?"

Coding: 0 – less than high school, 1–high school diploma, 2–more than high school, 3–college degree, 4–more than college

Household Income

Description: Respondent's self-reported household income.

Wording: "Considering all sources of income and all salaries, was your household's total income last year, before taxes and other deductions, less than \$25,000 or was it \$25,000 or more? Was it less than \$15,000? Was it more than \$35,000? Was it more than \$75,000?"

Coding: Less than \$15,000 is coded as zero. More than \$75,000 is coded as five.

Age

Description: Respondent's age, in years.

Wording: "In what year were you born?"

Coding: Age was determined by subtracting respondent answers to this question from the year in which the survey was conducted (1996).

Respondent Knowledge

Description: Respondent's level of political knowledge, based on answers to three knowledge questions.

Wording: [Stem] "Finally, we are interested in knowing how well the media and the schools help people in understanding what's going on in politics. To help us do that, we'd like to ask you some questions about politics. Many people don't know the answers to these questions, so if there are some you don't know, just tell me and we'll go on.

[Question 1] First, whose responsibility is it to determine if a law is constitutional or not? Is it the President, the Congress, or the Supreme Court?

[Question 2] Next, what are the first 10 amendments in the Constitution called?

[Question 3] How much of a majority is required for the U.S. Senate and House to override a presidential veto?"

Coding: A correct response to each question was coded with a one and incorrect answers were assigned a zero. The variable was created by then summing across all three questions.

Interest

Description: Respondent's self-reported level of interest in the election campaign.

Wording: "Some people don't pay much attention to political campaigns. How about you? Are you very much interested, somewhat interested, or not much interested in the 1996 political campaigns?"

Coding: 0–not very much, 1–somewhat interested, 2–very much interested

Strength of Partisanship

Description: Strength of the respondent's self-reported level of partisanship. Based on the 7-point scale measuring partisanship, but folded over to discount the direction of partisanship.

Wording: "[Stem] Generally speaking, do you usually think of yourself as a Republican, a Democrat, an Independent, or what?

[Partisan Branch] Would you call yourself a strong [Republican/Democrat], or a not very strong [Republican/Democrat]?

[Independent Branch] Do you think of yourself as closer to the [Republican/Democratic] party?"

Coding: 0-independent, 1-independent leaner, 2-weak partisan, 3-strong partisan

Political Contact

Description: Number of political contacts reported by respondent.

Wording: "[Stem] Now I'd like to ask about any contact you have had with the political parties or candidates during the current election campaigns.

[Question 1] Have you been contacted either by phone or in person by a political party or candidate representative? [Question 2] Have you received any materials, such as letters, flyers, or brochures, from any party or candidate representative?"

Coding: Answers to each question were coded one if the respondent had been contacted and a zero if the respondent reported no contact. The variable was then created by summing across the two questions.

Network Size

Description: The number of discussants reported in the respondent's social network. The original progenitors of the data collected the first name of each discussant, but these are not part of the publicly available data file. I therefore determine the size of the network by examining the first question asked about discussant after names are solicited. This question is about the respondent's relationship with the discussant. Two different questions were used to elicit discussant names, with respondents being randomly assigned to each of these name generators. Up to five names were accepted in each case.

Wording: "[Stem #1] Now let's shift our attention to another area. From time to time, people discuss government, elections, and politics with other people. I'd like to know the people you talk with about these matters. These people might or might not be relatives. Can you think of anyone? [Stem #2] Now let's shift our attention to another area. From time to time, people discuss important matters with other people. Looking back over the last few months, I'd like to know the people you talked with about matters that are important to you. These people might or might not be relatives. Can you think of anyone?

[Question] Is [fill in name of discussant] a spouse or partner, other relative, or unrelated by blood or marriage?"

Coding: Any response to this question was coded one, while missing data were coded zero. The variable is derived by summing across the five possible discussant questions.

²⁴This practice may underestimate the size of social networks if respondent's refuse to characterize the nature of their relationship with the discussant. There is no evidence, however, to suggest that such a missing data bias is severe.

Average Political Talk

Description: The average level of political discussion that the respondent reports having with all people in his or her network.

Wording: "When you talk with [fill in name of discussant], do you discuss political matters often, sometimes, rarely, or never?

Coding: Responses to each individual question were coded as follows: 0—never, 1—rarely, 2—sometimes, 3—never. The average was determined by summing respondent answers to each individual political discussion question and dividing by the number of network respondents.

Percentage of Agreeing Discussants

Description: The proportion of dyads in a respondent's discussion network that he or she believes share his or her vote choice in the 1996 election.

Respondent vote choice wording: In talking with people about elections, we often find that a lot of people are not able to vote because they aren't registered, they're sick, or they just do not have the time. How about you? Will you vote in the upcoming November election?

Thinking about the presidential election, will you vote for Bill Clinton, Bob Dole, some other candidate, or haven't you decided?"

Discussant vote choice wording: "As things currently stand, how do you think [fill in name of discussant] will vote in the 1996 presidential election? Do you think [fill in name of discussant] will vote for Bill Clinton, Bob Dole, some other candidate, or do you think [fill in name of discussant] probably won't vote?"

Coding: Agreement in each discussion dyad is determined by comparing the respondent's self-reported vote choice and the respondent's perception of each discussant's vote choice. Agreement occurred when answers to these questions matched exactly (e.g., both respondent's reported preferring Bob Dole) and was coded as a one. Any mismatch between the discussant and respondent was coded zero. The variable is creating by examining the proportion of a respondent's dyads that he or she perceives to be in agreement with his or her own reported vote choice.

Average Political Knowledge in Network

Description: The average level of political knowledge that respondents perceive in their network discussants.

Wording: "Generally speaking, how much do you think [fill in discussant name] knows about politics? Would you say a great deal, an average amount, or not much at all?" *Coding:* The respondent was asked the above question for every discussant he or she named. Answers were coded as follows: 0–not much at all, 1–an average amount, 2–a

great deal. The variable was created by averaging across all dyads in the respondent's network.

Timing of Vote Decision

Description: The moment in the election season when the respondent chose a presidential candidate.

Wording: "When did you make your decision to vote for [fill in candidate name]? Did you decide sometime in the week before the election, in the fall campaign, during the summer, or before the summer?"

Coding: 0-before the summer, 1-during the summer, 2-in the fall, 3-week before. All "did not vote" responses were coded as missing.

Number of Group Memberships

Description: The number of groups to which the respondent reports belonging.

Wording: "Next, I am going to mention various types of groups and organizations that people might belong to. For each category, please tell me whether you belong to any organization of that general type."

Coding: For each group mentioned, the respondent was given a 0 if he or she did not belong and a 1 is he or she did. The variable is the sum of those values. The groups used for this question are as follows: business, religious, environmental, fraternal, sports, veterans, neighborhood, civic, and "other groups not mentioned." Excluded from this variable is membership in unions and public interest groups.

TABLE A Descriptive Statistics for Variables not Included in Table 1 This table displays the summary statistics for each variable for all respondents who had *at least one* person in their social network.

		Standard			
Variable	Mean	Deviation	Min	Max	N
Education	2.40	1.16	0	4	1282
Household					
income	3.06	1.58	0	5	1173
Age	52.71	15.37	18	93	1279
Respondent					
knowledge	2.00	1.01	0		1280
Interest	1.31	0.69	0	2	1275
Strength of					
partisanship	2.14	0.93	0	3	1254
Political					
contact	1.39	0.69	0	2	1271
Timing of					
vote	1.26	1.60	0	4	641
Campaign					
participation	0.49	0.91	0	4	1281
Number of					
group memberships	2.47	1.79	0	8	1537

Appendix B

Estimating the Potential Impact of Selection Bias

TABLE B-1 A Heckman Selection Model.

	Probability of Having a Network (Probit)		Level of Political Activi (Least Squares)	
	β	Std. Error	β	Std. Error
Variables Impacting Network				
Currently employed	0.43	0.10***		
Married	-0.05	0.10		
Number of group memberships	0.10	0.03***		
Religious attendance	-0.00	0.03		
Years in the metropolitan area	-0.00	0.002		
Education	0.13	0.05***	0.01	0.03
Household income			0.06	0.02***
Age			0.004	0.002*
Respondent knowledge	0.20	0.05***	0.01	0.03
Interest	0.14	0.06**	0.19	0.04***
Strength of partisanship	0.09	0.05^{*}	0.07	0.03**
Network name generator	-0.15	0.09^{*}		
Volume of political discussion			0.03	0.001***
% agreeing respondents			0.16	0.07**
Average political knowledge			0.20	0.07***
Constant	-0.44	0.22**	-1.14	0.19***
ρ	$-0.28 (0.12)^{1}$			
σ	0.84 (0.02)			
λ	-0.23(0.11)			
N	1166			
Wald χ^2	171.76***			
LR χ^2 of Independent Equations	1.74			

 $^{^{1}}$ Standard error.

TABLE B-2 "Zero" Model Specification.

	Missing Network Data Coded as Zero	
	β	Std. Error
Control Variables	-	
Education	-0.01	0.06
Household income	0.09	0.04^{**}
Age	0.005	0.004
Number of group memberships	0.16	0.03***
Respondent knowledge	0.08	$0.06^{\#}$
Interest	0.45	0.09***
Strength of partisanship	0.22	0.06***
Political contact	0.78	0.09
Network Variables		
Respondent has a network	-0.40	0.27#
Volume of political talk	0.04	0.02***
% agreeing discussants	0.30	0.13**
Avg. political knowledge	0.34	0.14**
	-4.79	0.39***
$lpha^*$	0.47***	
Likelihood Ratio χ ²	283.10***	
N	1198	

^{***} p < .01, ** p < .05, * p < .10 for two-tailed tests. $^{\#}$ p < .10, one-tailed test.

 $^{^{***}}p < .01, ^{**}p < .05, ^{*}p < .10$ for two-tailed tests.

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