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Abstract

Decades of research suggest that social interaction influences opinion formation and affects voting behavior. However, recent work concerning the nexus between deliberation and democratic practice—particularly in the American context—has re-focused attention on the normative consequences of socially-driven political behavior. Among the most common criticisms of interpersonal networks are that most people have very insular social circles, and that when they do not they are unlikely to engage in politics. In this paper we provide evidence that such pessimistic assessments are unwarranted, though for somewhat unexpected reasons. Using data from the American Component of the 1992 Cross-National Election Project and the 2000 American National Election Study, we examine whether and under what conditions social networks facilitate interest-based voting. Our findings indicate that when networks provide unambiguous signals regarding candidates, that they serve as potentially useful information shortcuts, facilitating connections between individuals' vote decisions and their underlying preferences. And, because many Americans reside in reasonably supportive social environments, networks often help citizens make "correct" voting decisions (Lau and Redlawsk 1997). In the end, social networks appear to help shoulder the demands of democratic theory, but *not* by helping people learn about politics in any traditional sense.

1 Introduction

A persistent theme in the study of American politics is that political behavior is deeply rooted in social interaction. Of particular interest is whether or not an individual's political decisions depend on the character of their interpersonal networks (Berelson, Lazarsfeld & McPhee 1954, Huckfeldt & Sprague 1995, Levine 2005). Although some argue that the observed relationships between networks and political behavior stem from how people select their discussion partners (MacKuen 1990, Finifter 1974), evidence from experiments and natural experiments (Nickerson 2008, Klofstad 2007b), panel studies (Klofstad 2007a, Sokhey 2007), and careful statistical analyses (Kenny 1992, Kenny 1994, Levine 2005) build a strong case that this is a causal phenomenon. The theoretical explanation for such effects focuses on the *content* of interaction, with the assumption being that political talk produces deliberative exchanges that lead to learning and persuasion.

With the debate over whether and how social networks influence political behavior now decades old, scholars have become increasingly interested in understanding the *normative* implications that our social relationships have for American democracy. To some degree this reflects age-old arguments between social determinism and free will, especially in America where the value of individualism is a highly prized cultural value. However, it also stems from the struggle to make sense of mounting empirical evidence about the political nature of Americans' social circles. Among the most contested points are whether or not people's networks are too insular to create real opportunities for learning about politics (Huckfeldt, Plutzer & Sprague 1993, Mutz 2006), and whether the experience of disagreement holds too many negative consequences to be valued for the learning that it may in fact spawn (Mutz 2002a, Mutz 2002b, McClurg 2006a, McClurg 2006b).

We contribute to this conversation about the normative consequences of social influence by examining how interpersonal networks affect the quality of voting decisions. Using Lau and Redlawsk's (1997; 2008) measure of correct voting as a baseline for this normative assessment, we specifically evaluate the contribution of two elements of social networks—socially-supplied disagreeement and socially-supplied expertise—to whether or not people cast "good" votes in presidential elections. Drawing on analysis of survey data from the American component of the 1992 Cross-National Election Project and the 2000 American National Election Study, we find that for many Americans—under two widely-divergent electoral settings—social networks create

conditions that promote voting in a manner that is consistent with one's preferences, the underlying standard of Lau and Redlawsk's measure. Interestingly, we find little indication that the process by which networks help people to "do the right thing" involves learning (in a conventional sense), and more evidence suggesting that this phenomenon has to do with the availability of a useful informational shortcut (Downs 1957). As this finding has substantial implications for multiple lines of research, our discussion situates the results in-between the established literature on social influence, more recent work examining the effectiveness of everyday deliberative discussion (Jackman & Sniderman 2006), and considerations of aggregate rationality (e.g., Page and Shapiro 1992). In the end, we argue that the findings paint a positive picture for democratic practice, as most of the American civic landscape is characterized by networks that have a little bit of political dissonance, but that are largely supportive.

2 The Demands of Citizenship

2.1 Evaluating Democratic Competence

Volumes of empirical research support a conception of individuals as cognitive misers who fail to live up to the demanding normative standards of democratic theory. It is widely accepted that citizens are limited in their ability to process information and are often constrained in the amount of time that they can give to politics (Fiske & Taylor 1991). The consequences of this have been ably listed in a large body of behavioral research noting the public's lack of ideological constraint in attitude formation (Converse 1964), its relatively low levels of political knowledge (Carpini & Keeter 1996), its diminished ability to recall vote choices (Wright 1990, Wright 1992), and its lack of interest in politics.

Yet voters do make frequent decisions regarding politics, and more recent studies of voting behavior have attempted to determine whether the actual strategies employed by voters work "well enough" for democratic politics to function effectively in America. In an early example of such work, V.O. Key, Jr.'s (1966) investigation of retrospective voting in the United States lowers the normative bar for citizens from one where they are actively engaged in politics to one where they are merely required to hold elected officials accountable for past actions. In his wake, a generation of research indicated

that individuals frequently employ a variety of similar shortcuts when making political decisions (Lupia 1994, Popkin 1994, Simon 1985, Lau & Redlawsk 2001). Whether such shortcuts are sufficient for ensuring quality decision-making, especially across different informational contexts, is still a matter of debate (Kuklinski & Quirk 2000, Kuklinski, Quirk, Jerit & Rich 2001, Kuklinski, Quirk, Jerit, Schweider & Rich 2000, Jerit, Barabas & Bolsen 2006). What is important in the context of this paper is that the normative debate has shifted to examining the eventual quality of decisions rather than the processes—ideal or otherwise—through which such choices are derived. It is from this perspective that we will evaluate the normative impact of social networks.

2.2   Correct Voting as a Measure of Decision Quality

To proceed in this manner, it is necessary to have a clear definition of what constitutes a "good" or "quality" decision. There are a number of ways to approach this issue, such as examining the informational content behind opinions, the movement of aggregate opinion, or the difference between electoral outcomes and simulated "fully informed" voter outcomes. For the purposes of this paper, we base our study on Lau and Redlawsk's concept of correct voting. In introducing their notion of "correct voting"—one based not on ideology or universal values, but on what an individual would have chosen under conditions of full information—they aimed to "set more realistic goals for democratic citizens" (1997: 593), arguing that visions of an apathetic and incapable American citizenry were at least partially based on the civic bar being set too high.

Lau and Redlaswk's conceptualization of correct voting is best understood by considering their method for developing it. Experimental subjects were exposed to a dynamic information environment that mimicked many of the features of a real campaign. After casting hypothetical ballots, individuals were then allowed full access to all information and were asked to reconsider their choice. Any subject who changed his or her mind was marked as having cast an "incorrect vote," while all others were marked as "correct." Since Lau and Redlawsk's ultimate purpose was to examine voting in real electoral contexts, they used this experimental setting to validate a "normative naive" measure derived from the American National Election Studies—this measure is essentially a prediction of which candidate a citizen *should* prefer given her views on partisanship, political issues, group endorsements, and

candidate personality. Lau and Redlawsk found a strong degree of correspondence (a 66% overlap) between this item and the experimental subjects' *own* assessments of how "good" their votes were in the hypothetical election.

Recognizing that this is but one way to define a quality decision, we use the Lau and Redlawsk standard for two reasons. First, unlike other well-regarded studies of how the electorate's lack of sophistication affects political behavior (Bartels 1996, Althaus 1998, Gilens 2001), this measure can be readily applied to the study of individuals. Although the question of how networks affect aggregate decision-making is also of interest (e.g., Ahn et al. 2007), both empirical and normative studies of network effects have focused principally on individuals, and we seek to add to that debate. Second, the correct voting measure was designed to be constructed and replicated using the American National Election Study series (or comparable data sets). Since several recent surveys—namely, the 2000 ANES and the independent, but similar 1992 CNEP—include variables that measure social networks, this makes it amenable to the type of study that we propose. Moreover, earlier research on social influence, voter sophistication and correct voting have deep roots in these data sets, thus giving us a nice pool of research against which to judge network effects.

3   The Democratic Value of Social Networks

Networks are often touted for their ability to reduce electoral information costs (Downs 1957), and consistent with this view, existing scholarship demonstrates that social information affects political calculations (Beck, Dalton, Greene & Huckfeldt 2002), attitudes and opinion formation (Huckfeldt & Sprague 1995), and the ability to process political information (Huckfeldt 2001, Huckfeldt 2007, McClurg 2006a). At the same time, it is well recognized that interpersonal networks regulate voters' exposure to broader information environments (Granovetter 1973, Huckfeldt, Beck, Dalton & Levine 1995), thereby insulating people from certain types of political stimuli and biasing their decisions. It is this contrast between the informational and insulating functions of networks that gives them complexity and leads to the widely-circulated conclusion that they have mixed normative consequences (Mutz 2006).

But how does this same set of defined network roles factor in when we consider the quality of vote decisions? Should we expect voters who are

exposed to multiple points of view to be in a better position to vote in a manner that is consistent with their underlying interests? Or, are more insular social networks actually better environments for nurturing well-defined connections between electoral choices and self-stated preferences? When it comes to socially-supplied expertise, do we find that people with access to sophisticated discussion partners do a better job of voting correctly? Or, are those with access to experts so susceptible to manipulation from their surrounding social environment that they make mistakes at the ballot box?

3.1 The Political Content of Networks & Correct Voting

The political content of discussion—that is, whether it is supportive or disagreeable—is by far the most debated element of social networks. The dilemma is most clearly outlined by Diana Mutz, who demonstrates that talking politics with people who have different points of view (an everyday approximation of deliberation) has both negative and positive consequences for American democracy. On the one hand, such conversations increase knowledge about opposing points of view, resulting in higher levels of political tolerance. On the other, they produce attitudinal ambivalence and lower the likelihood of political participation (Mutz 2002*a*, Mutz 2002*b*).

Informal political disagreement should also have negative consequences for correct voting. Although it is possible that the tolerance and learning that disagreement promotes would lead those involved in such discussions to gain a better grasp on their political choices, there are a number of reasons to expect the end result to be an "incorrect" decision. First, Mutz's own evidence points to *ambivalence* and not stronger attitudes as an end result of disagreement. While ambivalence may not be bad in and of itself, it should make it more difficult for a person to translate their predilections into a "correct" decision.

Second, agreeable networks can be effective information shortcuts because of their relatively high levels of political and demographic isomorphism (Mutz 2006, Marsden 1987). The basic idea here is consistent with Downs' original formulation how social connections influence votes—our family and friends likely have similar interests and views to us because of shared backgrounds. Thus, if someone wants to know how people like themselves "should" vote, then conducting an informal poll of their associates may be an effective,

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efficient way of figuring that out. However, this kind of approach will only be successful if a network provides a clear signal and an individual follows its lead.

On this basis we posit the following *political disagreement hypothesis*: the more people are exposed to political disagreement in their social networks, the less likely they are to cast a correct vote. We also try to examine and discern between, as best as we can with available data, the two different mechanisms which might produce this result: 1) attitudinal ambivalence surrounding the vote decision and 2) the network functioning as a simple informational shortcut—and in the case of disagreement, one that *fails* to provide a clear, unambiguous signal about candidate preference.

3.2 Social Expertise and Correct Voting

To the extent that discussant political sophistication is the subject of inquiry, it has been uniformly treated as a "good" normative trait for social networks to possess. McClurg (2006a) argues that people who have access to political experts in their social networks are more likely to participate, in part because they are able to draw on the knowledge of their friends and family to develop a clearer understanding of the context surrounding political choices. Consistent with this we offer the *political expertise hypothesis*: as the level of political sophistication in a voter's social network increases, she is more likely to cast a correct vote.

The logic here is straightforward. Voting correctly requires a citizen to identify differences between candidates with respect to issue positions, personalities, and group endorsements. It also requires citizens to take this knowledge about the candidates and to determine how it relates to their own positions. In both respects, having access to a social supply of political expertise is useful. Respondents who have more knowledgeable people in their network are more likely to have conversations in which differences are clarified and lingering questions answered.

4 Data

We investigate our hypotheses with data from the American component of the 1992 Cross-National Election Project and the 2000 American National Election Study, as these are the best available data for exploring the rela-

tionship between social networks and correct voting. As noted, the correct voting measure was developed so that it could be compiled from any typical ANES-like survey (Lau & Redlawsk 1997), and thus not only does this mean that the measure has been validated for (at least one of) our data sources, but that the multiple questions needed to compute it are generally available. Additionally, these are the only two nationally-representative studies that incorporate both social network questions *and* myriad political items.[1]

In the 2000 ANES study, respondents were asked to identify up to 4 discussion partners; they were then asked whether or not each named discussant voted for the same candidate they did, as well as how knowledgeable they felt each of their discussants was about politics. While the 2000 study provides a complete measure of correct voting and a full set of individual-level control variables, it yields a smaller set of social network questions. By comparison, the 1992 CNEP study provides more-detailed network data, with up to four "important matters" discussants and a separate question asking for an additional fifth, "political" discussant. However, the 1992 CNEP has fewer individual-level control variables (e.g., the "need for cognition" measure) and lacks a political knowledge battery—this makes our estimate of correct voting in 1992 only an approximation of the procedure used by Lau and Redlawsk (1997, 2008). In analyzing both data sets, we sum across respondent-discussant pairings to create network averages for network disagreement and network sophistication.

Importantly, however, using both data sets allows us to test the link between social networks and correct voting under the electoral condition of a three-party contest. Analyzing U.S. presidential elections between 1972 and 2004, Lau, Andersen, and Redlawsk (2008) demonstrate that the difficulty of casting a "correct" vote increases as a function of aggregate electoral factors, particularly situations in which there are more than two legitimate candidates. Responding to this aspect of their research design, we examine how networks facilitate correct voting under the more demanding condition of the 1992 election.[2]

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[1] In the past the General Social Survey has included network questions, but not nearly as many detailed political items as the ANES or the 1992 CNEP.

[2] In looking at aggregate rates of correct voting between 1972 and 2004, Lau et al. (2008) report that 1992 had the *second lowest* percentage of correct voting, and 2000 the *second highest*. Thus, although we only have two electoral "cases" to compare, we have good variation when it comes to the aggregate distribution of our dependent variable.

4.1 Measuring Correct Voting

The procedure for operationalizing a correct vote is fairly complicated, and involves the creation of a running count of which candidate is preferred by respondents on a variety of political factors: partisanship, views on salient groups, views on candidate personality, and issue positions. The most difficult aspect of creating the measure comes in determining the voter's candidate preferences with respect to issues; this is because the directional voting calculation requires an *objective* estimate of the candidates' positions on the issues.[3] Lau and Redlawsk measure the candidates' position by finding the average placement of the candidates by all voters who are *above* the median in political knowledge.[4] The normative naive expectation of this measure is that a voter *should* prefer the candidate whom they rate above all others, across all the aforementioned factors; a "correct vote" is one that is consistent with this expectation. We follow this procedure as closely as possible in 2000, but must make a handful of adjustments in 1992 due to differences in the items available.[5]

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[3]Lau and Redlawsk (1997) and Lau, Anderson, and Redlawsk (2008) use Rabinowitz and MacDonald's (1989) approach for estimating issue distance—a procedure we replicate as closely as possible.

[4]The ANES has released information indicating that some of the open-ended knowledge items included in recent years' studies have been mishandled, thereby providing incorrect estimates of the public's stock of political knowledge. However, we are confident that these errors would not change the results of Lau and Redlawsk's previous works (and that they do not affect our results in this paper). First, the preliminary investigation has revealed that only a few questions are involved—across various years—and that the result is an *under-* rather than over- estimate of what the public knows. Second, to create their political knowledge index for any particular year, Lau, Anderson and Redlawsk use *every* item in the relevant ANES study that has an objective, correct answer; for example, in the 2000 ANES, they use over 20 items to create the additive index, and we replicate this. While an incorrect count on one component of the index may result in a tiny bit of measurement error on the dependent variable in the 2000 data (the 1992 CNEP study is independent of the ANES series, and therefore unaffected), adjusting up the number of correct answers to one item should not alter the results in any meaningful way.

[5]Notably, as we have no political knowledge items in the 1992 study, we construct the measure using those who score above the median in formal education. Please see Appendix A for a full discussion.

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5   Networks and Correct Voting in 2000

We begin our analysis by examining data from the 2000 election. Roughly 85% of all respondents cast a correct vote, with 81% of Gore voters making a correct choice and 90% of Bush voters making the right decision.[6] We first estimate a baseline model of correct voting that only includes salient individual-level predictors identified in previous research (Lau, Andersen & Redlawsk 2008). We then add the network variables that are of central interest, evaluating both their direct impact on correct voting, as well as how their addition changes the model results.

Individual-level variables fall into three categories—motivation, expertise, and heuristics (Lau, Andersen & Redlawsk 2008). For *motivation*, we include the respondent's answer to a question about how closely s/he followed the election. We also include a measure of policy distinctiveness which examines the extent to which the voter perceives issue differences between the two candidates. This is computed by first finding the directional voting score for the respondent on *each* issue for both candidates, averaging those scores by candidate, and then taking the absolute difference in the two candidate's scores. *Expertise* is measured with the typical ANES categorical measure of education, a knowledge index based on answers to eight factual questions, and a measure of how much respondents like complex problems (the "need for cognition" battery). Finally, informational *heuristics* are measured by including how strongly a respondent identifies with a political party.[7]

As shown in Table 1, the first model is consistent with previous research by Lau and Redlawsk. Voters who pay more attention to the election, who are stronger partisans, who have higher levels of education, and who see clearer differences between the candidates are more likely to cast votes consistent with their underlying preferences. Surprisingly, we find that political knowledge has no effect on correct voting. Additionally, we discover that voters who score high on the "need for cognition" measure are actually less likely to cast a correct vote (the coefficient is marginally significant; $p = .054$).

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[6]Lau, Anderson, and Redlawsk (2008) report a slightly lower rate (just over 80%) of correct voting in 2000, though their estimates are based on the mean of four slightly different measures of correct voting.

[7]Although Lau et al. (2008) include a number of additional demographic variables in their model—variables that emerge as statistically significant—none of them reach standard levels of statistical significance in our models. We believe this is at least partly due to the differences in sample sizes between their study ($n = 5865$) and ours ($n = 1072$).

Table 1: Individual and Social Predictors of Correct Voting in 2000, Logit Model

| Variables	Model #1		Model #2	
	β^*	Std. Err.	β^*	Std. Err.
Network Measures				
Network Disagreement			-0.98	0.30***
Network Sophistication			0.33	0.17#
Motivation				
Followed Election	0.30	0.13*	0.26	0.13*
Policy Distinctiveness	0.33	0.12**	0.34	0.12**
Expertise				
Education	0.24	0.07***	0.22	0.07**
Knowledge	-0.04	0.05	-0.03	0.05
Need for Cognition	-0.69	0.36#	-0.70	0.36#
Heuristics				
Party Strength	0.69	0.10***	0.69	0.10***
Constant	-0.87	0.39*	-0.69	0.39
N	1080		1072	
Wald χ^2	96.99***		97.76***	

$<$p.10,*p$<$.05, **p$<$.01, ***p$<$.001 all two-tailed tests.

Inclusion of the network variables has no effect on these variables. In fact, most of them have similar estimates for their coefficients and standard deviations, attesting to the fact that social networks have consequences above and beyond the individual-level determinants of "correct" voting previously identified in the literature.

Consistent with our hypotheses, people who cast presidential ballots that are different from those that are cast by their family, friends, and associates are less likely to make a correct decision. Whether this reflects ambivalence about the candidates or shows what happens when people ignore a readily available information shortcut is not clear at this point (we will turn to this shortly). The evidence that network sophistication bolsters correct voting is weaker. The relationship is in the expected direction, but the p-value ($p = .054$) is only slightly above typically accepted levels of statistical significance and is very sensitive to model specification—accordingly, we are hesitant to

put too much stock in this finding.[8]

Figure 1: Effect of Significant Variables Across Full Range of Values, 2000
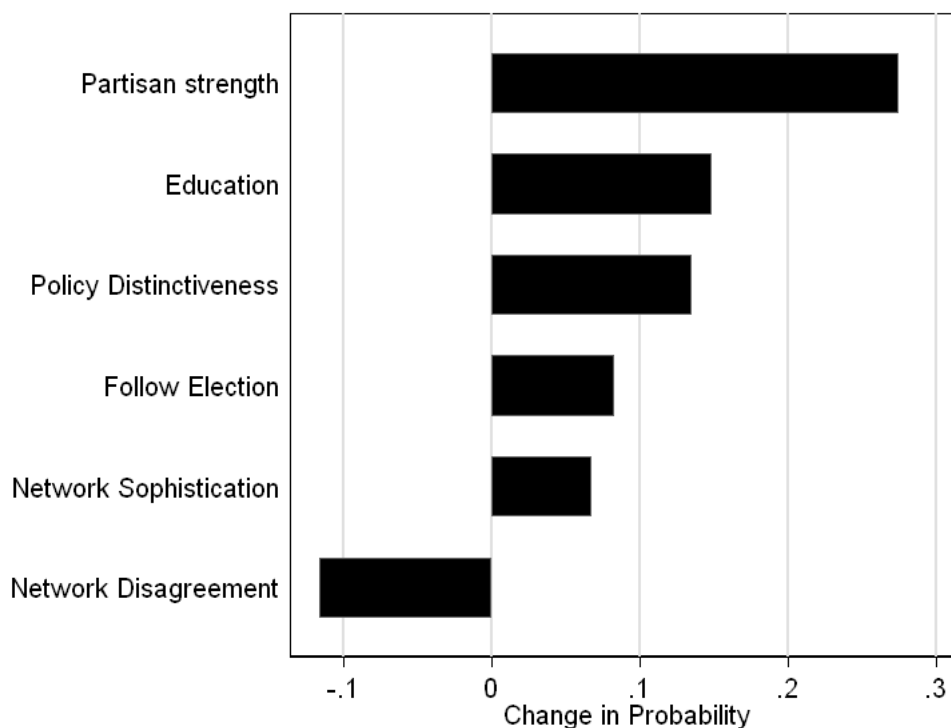
In Figure 1 we estimate the effect of our significant variables by showing how much the probability of a correct vote changes for their full range of values. Although we observe that the social network variables have less of an effect on correct voting than partisan strength, they still have important consequences. Network disagreement has an effect that is greater than ten percentage points and is similar in impact to both education and policy distinctiveness. And, while network sophistication has the smallest effect at around 6%, it compares favorably to the effect of interest in the election.

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[8]In alternative specifications, we examined network size and the frequency of political discussion, finding neither to be significant predictors of correct voting (or factors that altered the results presented). Additionally, we considered the possibility of an interactive, conditional relationship between network expertise and network disagreement, but found no evidence to support this—the interaction was *insignificant* across the full range of the variables (Brambor, Clark & Golder 2006).

6   Networks and Correct Voting in 1992

We now move to examine the relationship between networks and correct voting under the more demanding conditions of the 1992 presidential election. Of course, the 1992 contest introduced America to a previously unknown governor from Arkansas, and most importantly, presented citizens with an extra, non-partisan choice: a Texas billionaire whose money bought him ballot access and news coverage (Rosenstone et al. 1996), but who managed to cloud his candidacy and potentially confuse the electorate by jumping in and out of the race.

Under exceptional circumstances such as these, we might expect a greater portion of the American electorate to get it *wrong*, and indeed, we find this to be the case: our estimate of correct voting indicates that only 59% of all respondents cast a correct vote.[9] Fortunately, our CNEP estimate jells with that of Lau, Anderson, and Redlawsk's (2008), who find that only 60% of the public voted correctly in 1992 (they use the 1992 ANES).

Our operationalization for *heuristics* (in the form of strength of partisanship) is identical to that used in 2000, and we include the same two factors under the category of *motivation*, though the policy distinctiveness measure is calculated using a different (and smaller) set of items (please see Appendix A for details). Unfortunately, because we lack several of the measures that are common to the ANES, we are forced to present a much more limited test of the category of expertise—specifically, we have no knowledge battery or items tapping respondents' "need for cognition."[10]

Table 2 presents our results, and the findings in Model 1 comport with those of both Lau et al. (2008) and the results of the 2000 analysis. Those who pay more attention to the election and who are stronger partisans are more likely to cast votes consistent with their underlying preferences. Curiously, neither education nor the policy distinctiveness measure emerge as significant predictors, though we speculate that in the case of the latter it is because the measure is constructed from a fairly limited number of items. In Model 2 we introduce our network measures, and as before their inclusion does not affect the relative impact of the other variables. That is, even under

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[9]Looking at correct voting by candidate choice, we estimate that Democrats made the right decision in the highest percentage (85%), followed by Republicans (44%) and Perot voters (22%).

[10]To be clear, the 1992 CNEP was different from the 1992 ANES—the 1992 ANES has knowledge questions, but no social network battery.

Table 2: Individual and Social Predictors of Correct Voting in 1992, Logit Model

Variables	Model #1		Model #2	
	β^*	Std. Err.	β^*	Std. Err.
Network Measures				
Network Candidate Disagreement			-1.00	0.29***
Network Freq.of Disagreement			0.13	0.13
Network Sophistication			0.14	0.17
Motivation				
Followed Election	0.25	0.12*	0.23	0.12#
Policy Distinctiveness	-0.02	0.03	-0.02	0.03
Expertise				
Education	0.00	0.03	-0.00	0.03
Heuristics				
Party Strength	0.49	0.07***	0.48	0.08***
Constant	-1.46	0.47**	-1.30	0.48**
N	857		857	
Wald χ^2	53.75***		65.56***	

# <p.10,*p<.05, **p<.01, ***p<.001 all two-tailed tests.

the more demanding aggregate electoral condition of a three party contest, again we find added value by looking to social influence.[11]

Figure 2 plots the change in the probability of correct voting for statistically significant variables. Like Lau et al. (2008), we observe the largest single effect for partisan strength; it produces a change in the probability of correct voting of over 30%. Importantly, however, in the 1992 data political disagreement emerges as an even larger effect than it did in 2000 (it

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[11]As in the previous analysis, we tested alternative specifications, finding frequency of discussion to have no bearing upon correct voting, and no support for a potential conditional relationship between network expertise and network disagreement (the interaction is insignificant across the full range of values (Brambor et al. 2006)). Interestingly, network size does exhibit a significant, positive relationship in 1992, with respondents in larger networks being more likely to cast a correct vote. However, the findings for network candidate disagreement, following the election, and strength of partisanship remain robust to its inclusion. We suspect that network size's significance in 1992 relative to its insignificance in 2000 is largely due to the extra variance introduced through the CNEP's request for an additional, fifth, discussant.

produces a change of nearly 25%)—thus, this network measure stacks up favorably against the significant individual-level variables, beginning to rival partisan strength while quickly outpacing the motivational factor of interest in the election (the effect for this item is about 10%). When viewed against the 2000 results, these findings suggest that the signals regarding candidate support sent by unambiguous, supportive networks may be even more important in complex information environments.

Figure 2: Effect of Significant Variables Across Full Range of Values, 1992
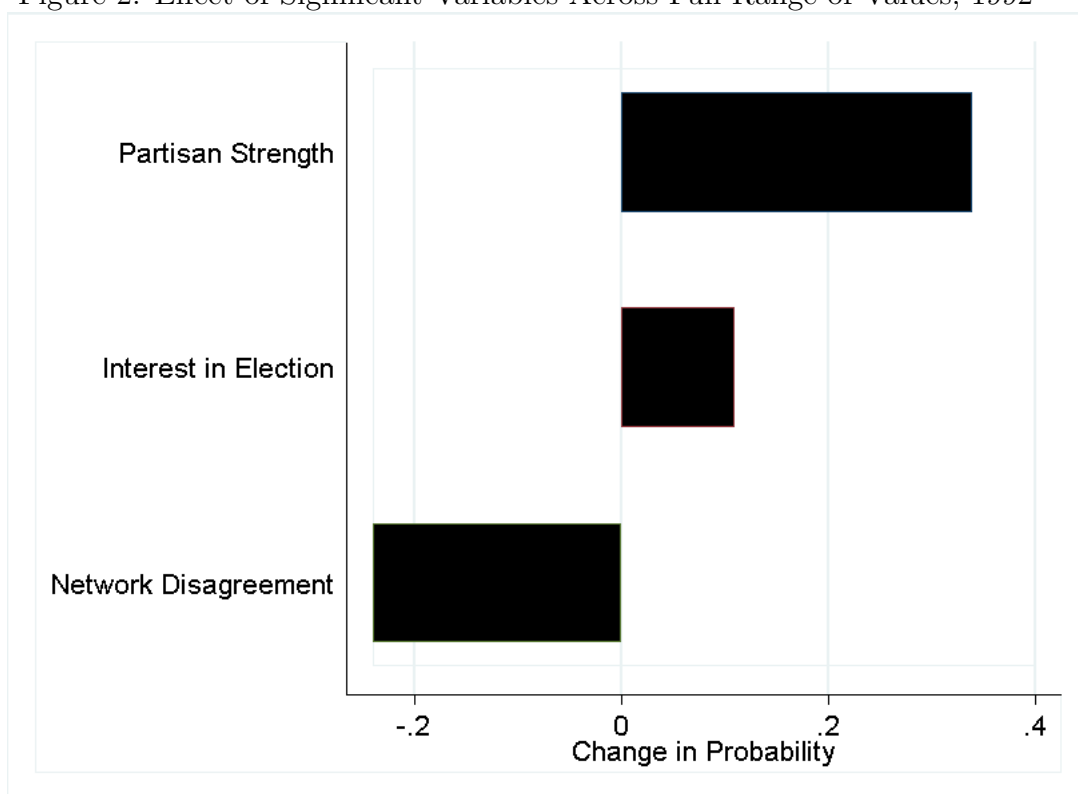
7 Unpacking the Impact of Network Disagreement

Thus far the results strongly support the notion that network sophistication is relatively *unimportant* for correct voting, while disagreement has an influ-

ence that is only consistently surpassed by the strength of a person's party identification. As we suggested previously, there may be two separate reasons why network disagreement might be related to correct voting. The first possibility is that voters who are exposed to multiple points of view learn about different arguments for and against candidates, potentially creating ambivalence and making their final decision more difficult. Under such circumstances, we suggest, they are less likely to make a "correct" decision as it is defined by the Lau and Redlawsk measure. The second possibility is that networks can serve as a useful information shortcut for voters, particularly when they are unambiguous, pointing clearly in one direction. When all of one's networked family, friends, and associates are planning to vote the same way—our argument goes—then a strong signal is sent that voting that way is consistent with one's underlying interests. This is based on the fact that social networks have a great amount of social and political similarity built into them.

To start sorting out these different mechanisms, we directly measure the impact of the first—ambivalence about the candidates—while still controlling for network disagreement; we use these results to assess the possibilities. This creates four scenarios for interpreting our findings: If both measures are statistically *in*significant, it implies that there is some other mechanism at work that we have not yet identified. If both are significant, then it implies that both mechanisms are at work, and the relative strength of the coefficients may shed some light on how important each is to correct voting. If only the ambivalence measure is significant it lends weight to the learning-only explanation, while if only the disagreement measure is significant it would indicate the opposite, meaning that it is the informational shortcut mechanism.

Our measures of ambivalence differ somewhat between the 1992 and 2000 data. In 2000 we can directly measure ambivalence towards the candidates based on the likes and dislikes of both Gore and Bush (Lavine 2001). This measure ranges from a possible low of -7.5, indicating a strong and polarized reaction to the candidates, to a high of 5.0, where reactions to both candidates are weak and ambivalent. Unfortunately, these open ended questions were not asked in the CNEP, preventing us from taking a similar approach with those data. However, Lavine (2001) demonstrates that one of the principal results of candidate ambivalence is to delay making a voting decision, indicating that we can use a timing question as an indirect measure. This item is available in both data sets, and is coded such that higher values

represent later decision dates and, consequently, more ambivalence.

Table 3: Political Disagreement, Ambivalence, and Correct Voting, Logit Models

Variables	2000 ANES				1992 CNEP	
	β^*	Std. Err.	β^*	Std. Err.	β^*	Std. Err.
Ambivalence Measure						
Candidate Ambivalence	-0.06	0.05				
Timing of Vote Decision			-0.21	0.06***	-0.09	0.07
Network Measures						
Network Cand. Disagreement	-0.97	0.26***	-0.86	0.31**	-0.94	0.30**
Sophistication	0.36	0.18*	0.28	0.19	0.14	0.17
Frequency of Disagreement					0.12	0.13
Motivation						
Followed Election	0.27	0.13*	0.22	0.13#	0.25	0.12*
Policy Distinctiveness	0.33	0.12**	0.29	0.13*	-0.02	0.03
Expertise						
Education	0.23	0.07***	0.23	0.08**	-0.01	0.03
Knowledge	-0.02	0.05	-0.03	0.05		
Need for Cognition	-0.69	0.36#	-0.74	0.37*		
Heuristics						
Party Strength	0.70	0.11***	0.59	0.11***	0.45	0.08***
Constant	-0.77	0.40#	0.09	0.45	-1.05	0.51***
N	1061		1066		849	
LR χ^2	99.74***		117.13***		65.60***	

<p.10,*p<.05, **p<.01, ***p<.001 all two-tailed tests.

The evidence in Table 3 is somewhat mixed, but points in the direction of ambivalence *not* being the principal mechanism. First, in two of three cases our measure of ambivalence is statistically insignificant, including when we can directly measure the respondent's underlying attitudes towards the candidates. Second, in all three cases the direct measure of political disagreement remains statistically significant and in the expected direction. Third, in analyses not shown here, the statistical significance of the 2000 candidate ambivalence measure and the 1992 timing of vote measure depend *not* on the exclusion of network disagreement, but on the exclusion of strength of partisanship. In other words, our findings indicate that it is the relationship

between partisanship and ambivalence that matters most.

To be fair, we do find limited evidence in support of the ambivalence mechanism. Not only is the timing of vote decision significant in the 2000 ANES, but the size of the political disagreement coefficient is reduced by approximately 14%. Nevertheless, this is weak evidence. This particular result holds even when we simultaneously include the candidate ambivalence variable in the model, suggesting that is the portion of variance in the timing of vote variable that is *unrelated* to ambivalence that is affecting correct voting in 2000. Moreover, we cannot rule out the possibility that the second mechanism—the clarity of the social network as an information shortcut—drives the timing of vote decision as well. Most importantly, the network disagreement measure remains statistically robust and a strong predictor of correct voting even when this (indirect) measure of ambivalence is significant.

In sum, across two nationally-representative data sets and using multiple measures of candidate ambivalence, we find that political disagreement remains a robust predictor of correct voting. And to the best of our knowledge, for this particular outcome this reflects people leaning on their networks as simple informational shortcuts rather than as sources of learning and persuasion. Moreover, this finding comes despite robust evidence—even in our own data—that network sophsitication and disagreement both influence candidate ambivalence and the timing of the vote decision. Although we would be remiss if we did not point out that a stronger test of this mechanism is necessary, the evidence clearly points in this direction.

8 Discussion and Conclusion

The sociologists of the Columbia school recognized the tendency of individuals to affiliate with people like themselves (Lazarsfeld and Merton 1954), and argued that social circles trend toward political homogeneity over the course of electoral campaigns (Berelson et al. 1954). Since that time, scholars have concerned themselves with interpersonal political disagreement, investigating the factors that permit its survival (Huckfeldt et al. 2004) while noting its attitudinal and behavioral consequences (e.g., Mutz 2002a; 2002b). Bringing together various strands of research on social influence, this paper advances the literature by focusing on the relationship between networks and the *quality* of the most common form of political participation, voting.

Looking at the American context, some have questioned whether net-

works are too insular to help people learn about politics. However, given the results of these analyses, we see the question as not being about whether networks inhibit learning, but about determining *what kind* of learning they facilitate, and under what conditions. An important part of our story is the finding that the relationship between network disagreement and correct voting appears to be driven by the presence of an informational shortcut. Although future work—particularly in the experimental laboratory—should pursue this further, we take this as strong evidence that when it comes to their capacity to help votes match self-stated preferences, networks do not operate by providing in-depth learning opportunities. Networks have in a certain sense always been touted as informational shortcuts (Downs 1957; Huckfeldt and Sprague 1995), and the classic formulation relied on the discussion and persuasion taking place therein. However, our work suggests that while social circles potentially cut cognitive costs, that individuals may be able to glean important information from their discussion networks about how they should vote *without actually engaging in meaningful political discussion*. In other words, when it comes to matching votes to self-interest, "cross-cutting talk," or what people do in networks, may be of less consequence than whether the network sends clear, unambiguous signals about candidate preference.

That being said, we wish to be clear about what we are and are not arguing relative to others studying political talk, deliberation, and democratic practice. For example, Jackman and Sniderman (2006) suggest that "deliberation is for naught" because they find that it often leads individuals to ideologically inconsistent positions (272). We emphasize that we are *not* suggesting that the deliberation obtained through everyday interpersonal political disagreement is bad per se, or that more traditional learning and persuasion can not or does not occur through networks. Rather, our findings indicate that when it comes to structuring "correct" voting behavior, discussion 1) may not be necessary and 2) does not appear to be doing the heavy lifting. Whether this social-mechanism applies to other outcomes of interest is an empirical question, though we suspect that it is likely limited to the ever-important, but limited, condition of vote choice.

Of course, we have also found a consistent relationship between networks and correct voting across multiple presidential elections. In one simple sense, this gives us confidence in the robustness of our results. More importantly, however, it helps us to begin to tease out the broader contextual determinants of network effects, in this case suggesting that networks facilitate "correct"

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decision-making even when the electoral system places greater cognitive demands on individuals. In 1992 voters were faced with a legitimate third party candidate; Perot was well-financed, and took positions close to the other two candidates on a variety of issues. The fact that network disagreement produces a much larger effect in 1992 than in 2000 suggests that interpersonal networks may be especially important resources in times when voters' usual way of organizing the political world—their partisanship—either fails them or is rendered less effective. Future work should explore the link between networks and correct voting in lower-ticket races and non-presidential election years.

Finally, one of the more surprising findings from previous research on democratic competence is the seeming rationality of electorates, in contrast to the lack of constraint and knowledge that is often observed at the individual-level (Page and Shapiro 1992) Typical explanations for this tend to emphasize the so-called "miracle of aggregation," where individual errors cancel out in the aggregate. Our findings concerning the social fabric of American voters suggest that networks are more than just efficient channels for information distribution (Huckfeldt et al. 2004), but that they actually promote *more* individual rationality—here in the form of correct voting—than we would see if people were truly isolated decision-makers. While much remains to be done in the testing and unpacking of this dynamic, our results suggest that previous conceptions of "the rational public" have been misspecified, overlooking the important role that networks play as links between individual behavior and aggregate rationality.

Appendix: Variable Coding

2000 ANES

Voting Correctly The correct voting measure has three components: party identification (re-scaled to run between -1 and 1), candidate placement on a series of 7 issues, and candidate-group linkages. The measure is created by taking every item in the survey that has an objectively correct answer (we use 20 items), and forming an additive index. Respondents who rank above the median on this index of political knowledge are then used to determine the placement of each of the candidates on each of the issues, and which candidates are associated with which groups. Rabinowitz and MacDonald's (1989) directional calculation (candidate location-neutral point)*(voter location-neutral point)) is used to determine how much each voter agrees with each candidate on each of the seven issues.

For candidate-group linkages, the ANES asked respondents whether they felt close to 13 different groups (1=close; 0=not close). Crosstabulations were calculated from among the politically knowledgeable to determine which groups were associated with each of the candidates (if there was no statistically significant relationship, neither candidate was assigned to the group).

The final equation for each respondent, for each of the candidates, involves summing the following and dividing by the total number of items: the individual's score on the rescaled party identification measure, her scores for whether or not she reported feeling close to each of the groups assigned to the candidates (again, the assignment of groups to equations depends on the crosstabulations), and her seven directional issue scores for each of the candidates.

A respondent is considered to have voted "correctly" if she votes for the candidate who receives the highest score.

Note: The remaining variables are presented in the order in which they are listed in Table 1
Network Political Disagreement: 0-1, averaged across the network; a respondent and discussant are coded as being in disagreement if they voted for different candidates.
Network Political Sophistication: 0-2, averaged across the network; a respondent ranks each discussant as either knowing little (0), some (1), or a great deal (2) about politics.

Followed Election: 0-3, where 0 is "hardly" following the election, and 3 is "most of the time"

Policy Distinctiveness:A measure of how distinct the candidates were on the major issues of the election. We use nine issue items, and modify Lau and Redlawsk's measure—instead of using the Rabinowitz and MacDonald measure (1989), we multiply a respondent's position on an issue * their rating of a candidate on that issue. We then sum across all issues, and take the absolute difference of the scores for each candidate. Higher scores on this measure = greater perceived policy distinctiveness between the candidates.

Education: formal education, in 7 categories.

Political Knowledge: 0-10, an additive index based on answers to 10 factual items

Need for Cognition: A measure running between 0 and .875, created by adding an item asking about the extent to which a respondents like thinking, and a dichotomous item asking respondents whether they like complex problems; this result is then divided by 2.

Partisan Strength: 1-4; 1=independent, 4=strong partisan

1992 CNEP

Voting Correctly The 1992 version of the correct voting measure contains the same three components as in the 2000 calculation, though the 1992 data did not include a political knowledge battery (and no more than a couple of items that had "objectively" correct answers); it also contains fewer issue questions (4 instead of 7), and fewer group items (11 rather than 13). Critically, however, it *does* contain evaluative information on all three major candidates.

Because there are no political knowledge items, respondents who rank above the median on formal education are used to determine the placement of each of the three candidates on each of the four issues, as well as on the candidate-group linkages. Rabinowitz and MacDonald's (1989) directional calculation (candidate location-neutral point)*(voter location-neutral point)) is used to determine how much each voter agrees with each candidate on each of the four issues.

For candidate-group linkages, the CNES asked respondents whether they felt close to 11 different groups (1=close; 0=not close). Crosstabulations were calculated (among those above the median in formal education) to determine

which groups were associated with each of the three candidates (if there was no statistically significant relationship, no candidate was assigned the group; Perot was not associated with any group).

The final equations for each respondent, for each of the candidates, involve summing over the score on the rescaled party identification measure (we also include an "anti-party identification" measure for Perot that runs from 0-2), the scores for whether or not the respondent reported feeling close to each of the groups assigned to each of the candidates (again, this is dichotomous (1=close), and which groups go into which equation depends on the crosstabulations), and the four directional issue scores for each of the candidates. As before, this sum is divided by the total number of items.

A respondent is considered to have voted "correctly" if she voted for the candidate who received the highest score (and in this case, the highest score among the three candidates).

Note: The remaining variables are presented in the order in which they are listed in Table 2

Network Candidate Disagreement: 0-1, averaged across the (up to) 5 members of the network; a respondent and discussant are coded as being in disagreement if they voted for different candidates.

Network Frequency of Disagreement: 0-3, averaged across the network; a respondent reports disagreeing with each discussant (0) never, rarely (1), sometimes (2), often (3).

Network Political Sophistication: 0-2, averaged across the network; a respondent ranks each discussant as either knowing little (0), some (1), or a great deal (2) about politics.

Followed Election: (technically "interest in the campaign"): 0=not much; 1=some; 2=very much.

Policy Distinctiveness:A measure of how distinct the candidates were on the major issues of the election. We use four issue items (these are the only four items for which we have both respondents' self-identified positions, and their ratings of the three candidates), and modify Lau and Redlawsk's measure—instead of using the Rabinowitz and MacDonald (1989) directional calculation, we multiply a respondent's position on an issue * their rating of the candidate on that issue. We then sum across all issues, and take the absolute difference of the scores for each candidate. Higher scores on this measure = greater perceived policy distinctiveness between the candidates.

Education: formal education, 1-20 years.

Partisan Strength:1-4; 1=independent, 4=strong partisan

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