Cross-Pressures and Political Participation

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ABSTRACT: Early researchers coined the term *cross-pressures* to describe conflicting influences on political preferences. In recent years, there has been a resurgence of interest in the relationship between cross-pressures and participation, but little consensus about their effects. Our paper aims to bring clarity to this debate by comparing a variety of proposed measures and mechanisms side-by-side. We consider the effects of both *social cross-pressures,* which stem from interactions in one's social network, and *issue cross-pressures,* which arise when one's policy preferences cut across traditional ideological lines. Looking at the 2000 US presidential election, we show that both types of cross-pressures are associated with decreased participation. Our evidence most strongly supports the notion that cross-pressures make individuals more indifferent between candidates and thus less motivated to participate, but also suggests that the potential social costs involved in more public forms of participation play a role in individuals' calculations as well.

Researchers have long been curious about the relationship between the myriad political influences facing citizens and their subsequent effects on participation. The term "cross-pressures" was used in early studies of political behavior to refer to an individual's experience of conflicting (rather than reinforcing) influences across a range of salient considerations. Berelson and colleagues pointed to the example of Republican-identifying voters in 1948: those who agreed with Truman's stances on most issues—and could thus be considered cross-pressured—reported substantially lower interest in the outcome of that year's election (1954, p. 27). These early studies found that cross-pressured citizens were less enthusiastic about politics, more uncertain about vote preferences, and less likely to participate than citizens who were subject to reinforcing political influences.

Despite these findings, the study of cross-pressures waned in the following decades, in large part due to the inability of researchers to replicate these results. Only with the rise of the study of social networks did the question receive renewed attention. More specifically, a multitude of recent studies have attempted to discern the role of cross-pressures in one's social network in determining political participation, but again have produced a set of conflicting results: some find negative effects, others no effect, and a few even suggest a positive effect of being cross-pressured on participation. Much of the blame for this inconsistency can be attributed to the lack of a common approach to conceptualizing, measuring, and using social cross-pressures in studies of participation. As such, the results of these analyses are difficult to compare with one another, and as a consequence there is no more consensus now about the effects of cross-pressures than there was half a century ago.

In addition, studies of cross-pressures in social networks concentrate on one particular type of cross-pressures—*social cross-pressures*—and one particular mechanism through which these cross-pressures exert their effects: conflicting influences from one's personal contacts. Returning to the earlier studies of political behavior suggests another possible type of cross-pressure, in which an individual's policy preferences across various issues push her in opposite directions politically. Such

issue cross-pressures are distinct from social cross-pressures, but have received less attention in recent years. An important exception is Hillygus and Shields (2008), who demonstrate that voters subject to issue cross-pressures are more likely to cross party lines when voting. As this suggests that such voters may not hold strong preferences for one party over another, it follows that their incentives to participate in elections could well be weaker than those of their less cross-pressured peers.

Our aim here is two-fold. First, we assess the extent to which being cross-pressured—either through exposure to disagreement in social networks or from holding conflicting policy attitudes—reduces political participation. We focus mainly on voter turnout, but the theoretical arguments we make are largely relevant (with appropriate caveats) to questions of political participation writ large. Second, we aim to clarify the mechanisms through which cross-pressures—both social and issue—may influence political participation, and test these propositions empirically. To do so, we draw on a unique data set, the 2000 American National Election Study, which both queried respondents about the political proclivities of their social networks and contained a panel component.

We find strong support for our primary hypothesis: both social and issue cross-pressures lower voter turnout. Unlike previous studies, however, we also contrast different forms of social and issue cross-pressures. Of the types of issue cross-pressures we examine, we find that holding positions which conflict with those held by one's preferred candidate (e.g., a pro-choice Bush voter) is a much stronger predictor of reduced participation than holding conflicting opinions generally (e.g., some liberal and conservative opinions). In terms of social cross-pressures, we find that the overall level of political heterogeneity across one's social network is more closely tied to decreased turnout than the level of political disagreement one has with other individuals in her social network. One pathway by which the effects of both forms of cross-pressures are felt most clearly is through heightened indifference between candidates. We find more less support than expected for a second proposed pathway: the frequency with which one discusses politics.

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We proceed as follows. We begin by briefly summarize the history of the study of cross-pressures, including our assessments of why interest in the topic initially declined and the consequences of the manner in which it has currently been reinvigorated. The subsequent section lays out the specific hypotheses to be tested, which are adapted from those proposed in previous stiudies. We next present our empirical analyses of cross-pressures' effects on turnout. The paper then expands our analysis to other forms of participation, exploring how cross-pressures' effects may vary between them, before concluding with a discussion of its implications for future research.

A Brief History of "Cross-Pressures"

The question of cross-pressures played a central role in many of the seminal studies in political behavior, including *The People's Choice* (Lazarsfeld et al 1944), *Voting* (Berelson et al 1954), and *The American Voter* (Campbell et al 1960), yet largely vanished in subsequent years. This development was primarily a result of disappointing empirical evidence: not only did other studies fail to confirm these findings with new data (Pool et al 1965), but the original relationships found by the Columbia researchers were argued to have been spurious (Horan 1971; Mutz 2002). Moreover, the original methodological approach of these early studies—using the intersections of salient demographic groups to identify voters as subject to either reinforcing or conflicting pressures—was ill-suited to fit the more advanced multivariate analytical techniques employed by their successors.

Beginning in the late 1970s, however, there was an increase in research on the relationship between social influence and political participation (Huckfeldt 1979). A large number of studies looked at the effects of interest, knowledge, and mobilization on participation (Delli Carpini and Keeter 1996, Putnam 2000, Verba et al 1995), but fewer addressed the question of cross-pressures specifically. Of those that did, most research employed data on self-reported social networks.

Within this context, there are a wide array of theories about how social cross-pressures work, along with an equally large number of ways to measure them. Among the more prominent views:

- Exposure to dissonant views of candidates could undermine individuals' certainty about their choices, and thus discourage them from acting on those preferences (Mutz 2002, Jang 2009, Scheufele et al 2006).

- To avoid conflict, individuals refrain from discussing politics in mixed social settings, which ultimately leads to lower levels of interest and political knowledge (Huckfeldt et al 2004, Jang 2009, McClurg 2006).

- Reduced discussion on account of cross-pressures may also affect the costs and benefits of voting directly, as social interaction can serve to educate citizens about how to participate as well as reinforce norms of participation (Leighley 1990, McClurg 2006).

- Individuals may avoid more overt forms of participation so as not to be held accountable for those actions by others who may disapprove (Mutz 2002).

In these studies and others, cross-pressures in individuals' social networks tend to be measured in one of two ways: (a) estimating the heterogeneity of the network by looking at the level of partisan disagreement *among discussants* named by the individual, or (b) estimating the level of partisan disagreement *between the individual and her discussants*. Likewise, the potential mechanisms through which these social cross-pressures act can be sorted into two broad categories: (a) those which affect individuals' party or candidate preferences, and (b) those which affect the level of discussion individuals are exposed to, thereby altering the costs or benefits of participation.

An important distinction that comes out of this research is the idea that cross-pressures' effects may vary across different forms of political participation. Mutz (2002, p.846), for example, breaks down participation into "confrontational participation", such as working on an actual campaign, and "non-confrontational participation", such as donating money to a candidate (an essentially private action). Thus we might suspect that cross-pressures—especially social cross-pressures—could have one effect on the types of public participation that are more likely to invite conflict, and another on the more private and less confrontational forms of participation.

With all of these different hypotheses about the forms and mechanisms of social cross-pressures (see Scheufele 2006 et al. for a review), it is little surprise then that the results found by scholars have been inconsistent. Null or perverse results (i.e., that social cross-pressures *increase* participation) may be due to ignoring other potential mechanisms. Nir (2005), for example, finds no effect for social cross-pressures, but does so using a model which controls for political interest, knowledge, and other forms of engagement; if these variables are mechanisms *through* which social cross-pressures operate, then the null result when these cross-pressures' mediators are controlled for means little. More generally, the failure of many studies to acknowledge the broader range of possible mechanisms has made reconciling their findings a substantial challenge.

Adding to this confusion, moreover, is that some measures of social cross-pressures are highly-correlated with potentially confounding factors such as network politicization (Eveland & Hively 2009, Huckfeldt et al 2005, Huckfeldt 2007). Some relationships result from the measurement process itself—respondents vary in their ability and willingness to identify others' positions for reasons that may be related to participation—but others are natural features of social networks. As Huckfeldt et al (2005) note, as the size of an individual's political network increases, the heterogeneity of views and the levels of disagreement to which one is exposed are likely to increase for purely statistical reasons (p.499). As more politicized social networks imply greater political involvement and thus higher participation, omitting measures of network politicization could lead to bias.

It is also dangerous to lose sight of the distinction between correlation and causation in studies of social networks and participation. There is much ongoing debate about the role of selection in such studies; while we know that individuals associate with politically like-minded peers (Huckfeldt et al 2004, McClurg 2006, Mutz & Mondak 2006, Theiss-Morse & Hibbing 2005), it is not clear how much this is intentional or significant to our research (Huckfeldt et al 2005, Klofstad et al 2009). Klofstad (2007, 2011) identifies three potential identification problems for social

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networks research: selection bias, reciprocal causation, and spurious causation. Under this framework, a person with a heterogeneous network could be found to participate less, for example, if she (a) deliberately chose to associate with people holding different preferences, (b) came to associate with a diverse group because previous disagreements had left her with a distaste for political involvement, (c) guessed her peers' preferences at random because she did not know enough about politics in general or about their preferences specifically, for reasons which also cause lower participation, or (d) actually participated less often because of the network's heterogeneity (through reduced discussion or some other mechanism). A number of other relationships could also exist in this example, but only under the last relationship would cross-pressures *cause* a change in participation. With this in mind, humility is paramount in any attempt to study participation and social networks using observational data.

Finally, it is worth noting the existing disconnect between two large literatures that has had consequences for the study of *issue cross-pressures*. Political science has a richly developed literature on the effect of policy preferences on voting behavior (i.e., spatial models of voting), as well as a substantial literature on the determinants of electoral turnout. Somewhat surprisingly, there is very little discussion of the effects of issue preferences on turnout, at least outside of the realm of formal models (Fiorina 1976, Uhlaner 1989). Reinvigorating the study of the effect of issue cross-pressures on political participation, therefore, could help to bridge this gap.

Pathways to Participation

To assess the effects of cross-pressures on participation—and the degree to which these cross-pressures work through the mechanisms proposed in previous studies—we begin with the classic model of rational turnout introduced by Downs (1957) and further developed by Riker and

Ordeshook (1968). In this model, there are three important components through which cross-pressures may influence the likelihood of participation:[1]

- the perceived difference in utilities from each candidate's election

- the costs of participation for the individual

- the benefits to the individual from the act of participation itself

Viewing the products of cross-pressures through these lenses, we propose the five potential pathways between cross-pressures and turnout shown in Figure 1.[2] While not an exhaustive set of theories, they do cover a wide swath of the hypotheses tested in previous research.[3]

[INSERT FIGURE 1 HERE]

In the first pathway, conflicting policy preferences lead to greater indifference between candidates on the part of the individual, and this indifference decreases the likelihood of participation by lowering its instrumental and expressive benefits.[4] In the second pathway,

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[1] Another component of this model—the probability of being pivotal—is less obviously related to cross-pressures. While a link may exist, it is not prominent in existing cross-pressures research.

[2] We use voter turnout as our primary form of participation because it is the most common and straightforward form, and has certainly received the most attention in previous research.

[3] One notable absence from this list is the potential social cost of actively supporting a candidate opposed by one's peers. As voting is a mostly private action, we do not believe it to be subject to substantial social costs, but do discuss their implications for other forms of participation later on.

[4] It is worth noting here that some researchers prefer the concept of ambivalence (Lavine 2001) to that of indifference. Ambivalence differs because it incorporates a second dimension of attitudes toward candidates: the strength of individuals' feelings. We prefer the simpler approach of using indifference for its more straightforward connection to models of turnout, and also because it is

individuals receive conflicting signals from discussants in their social networks: while some provide reasons to like candidate A and dislike candidate B, others tell the individual why she should dislike A and support B. The result is similar to that of pathway 1, with the individual becoming more indifferent and thus less likely to participate.

The third group of pathways is more intricate, with two intermediate steps connecting cross-pressures with participation. In each case, individuals whose acquaintances vary in their political preferences refrain from discussing politics in order to avoid social conflict. This reduced level of discussion leads to three potential outcomes. First, the dearth of political discussion may leave the individual less engaged and interested in politics generally; because of this decrease, she does not gain as much satisfaction from the act of participation, and is thus less likely to do so. In the next case, individuals who discuss politics less frequently may not be exposed to information about politics that would minimize the costs of participation. Finally, when political discussion is rare, this may lead to a decrease in the likelihood that an individual will be encouraged to participate by a peer. Such efforts at mobilization can both decrease the costs of participation (with the peer providing information or other support) and increase its benefits (by establishing a social norm).

To test these pathways, we begin by comparing various alternatives for measuring issue and social cross-pressures. As noted earlier, we use two general approaches to estimate social cross-pressures: the political heterogeneity of the social network; and the level of political disagreement between the individual and her peers. We take a similar approach to issue cross-pressures, estimating the level of conflict among the individual's policy preferences across issues, and the inconsistency of

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easier to quantify. Moreover, one recent study (Yoo 2010) suggests that indifference is more important in determining participation. While the two concepts produce highly-correlated measures, we acknowledge that they are not equivalent, and our results should be interpreted accordingly.

these policy preferences with the individual's overall candidate preference. Within each category, we evaluate the usefulness of the two measures to determine which shows the most promise (i.e., the best of the two issue cross-pressure measures *and* the best of the two social cross-pressure measures) as a predictor of behavior. We then individually introduce the mediating variables proposed in Figure 1. This allows us to better understand the degree to which the explanatory power of each measure of cross-pressures can be attributed to its correlation with each mediating variable.[5]

Policy Preferences, Social Networks, and Voter Turnout

Our first analysis aims to determine the best way to estimate each type of cross-pressure in order to predict turnout. We employ data from the 2000 American National Election Study. This data set is unique for two reasons. First, it includes a social networks module which asked respondents to identify up to four individuals with whom they discuss politics, as well as whom they believe each discussant voted for in the presidential election. This allows for measures of social cross-pressures to be constructed which closely mirror those used in previous studies with earlier data sets. The other important feature of this data is that the ANES recontacted the same respondents during the 2002 and 2004 election cycles to create a multi-year panel; we use this data in the following section to see how the effects of social cross-pressures may percolate over time.

In Table 1, we present the results of models predicting voter turnout in the 2000 presidential election. (This table shows only the coefficients for our measures of cross-pressures, but the models also control for an extensive set of demographic variables as well as for the competitiveness of the

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[5] While this approach does not provide conclusive evidence on the causal direction of each relationship (as is also the case in most other studies employing observational data), the presence or absence of such correlations allows us to ascertain the *plausibility* of each proposed pathway.

presidential election in each respondent's state. Potential mediating variables such as interest and

indifference are introduced in subsequent models but not included in those presented in Table 1.)

[INSERT TABLE 1 HERE]

The first column in Table 1 presents the coefficients for two alternative measures of issue

cross-pressures. The first measure, internal policy conflict (IPC), is calculated by looking at the

respondent's policy preferences across 14 distinct issues. For each issue, a respondent's policy

preference is categorized as favoring Bush, favoring Gore, or neutral.[6] We divide the absolute

difference between the numbers of pro-Bush and pro-Gore preferences by the number of non-

neutral preferences offered, and then subtract this quantity from 1.[7] The resulting measure ranges

from 0 to 1, with 0 indicating that all non-neutral policy preferences favor the same candidate, and 1

indicating equal numbers of policy preferences favoring each candidate.[8]

The second measure, policy-vote conflict (PVC), uses the same policy preferences but also

accounts for respondents' candidate preferences.[9] PVC is calculated as the ratio of the number of

policy preferences favoring the non-preferred candidate to the number of non-neutral policy

preferences offered by the respondent. The resulting measure also ranges from 0 (indicating that all

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[6] These issues and their coding can be found in the Supporting Information, Appendix I.

[7] Every respondent gave at least one non-neutral preference, so there were no divide-by-zero errors.

[8] Thus, IPC = 1 - |(DemPrefs – RepPrefs)/(DemPrefs + RepPrefs)|.

[9] Candidate preference is determined using a multi-step process for nonvoters. We first use the

candidate each respondent indicated they would have voted for had they turned out. For

respondents who do not declare a preference, we assign preferences based on feeling thermometer

scores. Those whose preferences could still not be ascertained (less than 2%) were assigned to

candidates based on party identification; the remaining respondents (15 of 1555) were omitted.

non-neutral policy preferences favor the preferred candidate) to 1 (indicating that all non-neutral policy preferences favor of the non-preferred candidate.)[10]

These two measures are of course highly correlated; they differ in that two respondents with the same set of policy preferences but opposite candidate preferences would receive different PVC scores but identical IPC scores.[11] But looking at the results presented in Table 1, it is clear that PVC is a better predictor of voter turnout: both have negative coefficients, but the coefficient for IPC is much smaller and not significant, while the coefficient for PVC is larger and highly significant. When the IPC is dropped from the model (as shown in column 2), the coefficient for PVC grows even stronger; whatever predictive power IPC offered, much of it is retained in the second model through its correlation with PVC. This suggests that, going forward, issue cross-pressures can be largely accounted for using only one variable to measure them: the conflict between policy preferences held by the respondent and the positions of the respondent's preferred candidate.

In the third column, the same procedure is repeated for the two measures of social cross-pressures. Social network heterogeneity (SNH) is calculated in a similar manner to IPC, with the numbers of discussants (out of up to four named by the respondent) believed to support Bush and Gore substituted for the numbers of policy preferences favoring each candidate in the numerator, and the total number of discussants used in the denominator. As such, respondents who report that all of their discussants supported a single candidate receive SNH scores of 0, while those who report

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[10] Thus, PVC = DemPrefs/(DemPrefs + RepPrefs) for Bush supporters, RepPrefs/(DemPrefs + RepPrefs) for Gore supporters.

[11] The only exception would occur if these respondents held equal numbers of pro-Bush and -Gore policy preferences, in which case they would both receive IPC scores of 1 and PVC scores of 0.5.

equal numbers of supporters for each candidate receive SNH scores of 1.[12] Social network

disagreement (SND) is calculated as the number of discussants who supported the respondent's

non-preferred candidate; thus respondents who did not report any discussions with people with

conflicting candidate preferences receive SND scores of 0, while those reporting the maximum

number of conversation partners all supporting the non-preferred candidate receive scores of 4.[13]

For the model shown in column 3, we get a paradoxical result: those with higher SND show

significantly *increased* turnout. If we believe the cross-pressures should lead to lower turnout, not

higher, this suggests the presence of omitted variable bias. The most likely explanation for this is

that, as previously noted, exposure to disagreement has been shown to be highest among highly-

politicized social networks (those in which individuals discuss politics with a large number of

people). And indeed, when social network politicization (SNP) is controlled for in the model shown

in column 4, this paradoxical result disappears.[14] In this model, SNH has a highly-significant negative

coefficient (though much diminished in magnitude from that of the previous model), while the

coefficient for SND is almost 0. This suggests that the best way to model social cross-pressures is

with SNH; what matters to turnout is not whether the respondent agrees or disagrees with her peers,

but whether those in her social network agree or disagree with each other. In column 5, we omit

SND from the equation, which leaves the coefficients for SNH and SNP largely unchanged.

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[12] Thus, SNH = 1 - |(DemDiscs – RepDiscs)/AllDiscs|.

[13] 26% of respondents failed to name any discussants, making SNH calculation impossible. As this

likely says more about their survey-taking attitudes than their networks, we assign them the median

value for SNH; controlling for network size (see below) minimizes the risk that this introduces bias.

[14] SNP is measured as the number of discussants named whose preferences the respondent could

identify—in other words, the size of the respondent's *political* (as opposed to social) network.

The next step is to combine both issue and social cross-pressures in a single model. The results in column 6 include all of the measures described above, to ensure that the interplay between issue and social cross-pressures does not undermine the results in previous models. This concern is shown to be unfounded: PVC, SNH, and SNP all retain highly significant coefficients in the expected directions, while IPC and SND still appear insignificant to the model. Thus, in column 7, we exclude the latter measures, producing the results which will be used as a baseline for testing the hypothesized pathways through which cross-pressures may impact turnout.

[INSERT FIGURE 2 HERE]

Before proceeding, we offer estimates of the size of each effect in Figure 2. This figure plots estimates of the likelihood of turnout for individuals if they were subject to various levels of cross-pressures across the distributions of PVC and SNH, holding all other variables at their actual values. It is clear that the potential impact of cross-pressures is substantial: the estimated difference in the likelihood of turnout between those at the highest and lowest levels of issue cross-pressures is about 18%. The difference between those subject to the highest and lowest social cross-pressures is only about a third of that size, but we should be wary of comparing the relative importance of each type of cross-pressures; given the difficulty of estimating social cross-pressures based on four discussants at most, measurement error is to be expected. That said, Figure 2 clearly suggests that the magnitudes of the relationships being studied herein are substantively meaningful.

Mechanisms of Cross-Pressures

The next step in understanding the relationship between cross-pressures and participation is to investigate the potential mechanisms for cross-pressures' effects. We do this by analyzing how the predictive power of our measures of issue and social cross-pressures is affected by the introduction of mediating variables (Baron and Kenny 1986, Judd and Kenny 1981). Using this method, for a

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given mechanism to be plausible, the introduction of a mediating variable (such as indifference for pathways 1 and 2 from Figure 1) should result in (a) a coefficient for the mediator which is significant in the predicted direction and (b) a coefficient for the cross-pressure measure which is smaller in magnitude than the coefficient produced when the mediator is omitted.[15]

The results of this analysis are presented in Table 2.[16] Column 1 repeats the analysis of the final model of the previous table, with the same cross-pressure measures included (and still controlling for network politicization) but no mediating variables. These results serve as the baseline with which other models may be compared. In column 2, we test the plausibility of pathways 1 and 2 from Figure 1. This is done by introducing to the model measures of indifference between presidential candidates (calculated by subtracting the absolute difference in respondents' thermometer scores for Bush and Gore from the maximum possible difference, then rescaling these values from 0 to 1). The indifference measure receives a highly-significant negative coefficient as predicted: individuals who are more indifferent between the candidates are less likely to turn out to vote. We also see that the introduction of this variable diminishes the coefficients of both PVC and

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[15] Baron and Kenny (1986) also include a third criterion for mediation: a significant relationship between the independent and mediating variables. Our analysis looked at these relationships as well, and we explicitly address the one case where this criterion is not met; in all others it is satisfied. (A fourth criterion for *complete* mediation is not relevant to this analysis.)

[16] Again, this procedure does not conclusively establish a causal relationship. But for such a causal relationship to be plausible, we should expect to see the predicted pattern. We are careful to note when we suspect that a relationship could have a spurious component, but such scenarios are kept to a minimum because our analysis follows pathways through each of their stages, to parse out the effects of cross-pressures from spurious correlations between participation and our measures.

SNH, each by about 15%. Both criteria for indifference being a viable mediator of each type of cross-pressure are met, so this analysis suggests that both pathways 1 and 2 are plausible explanations for how cross-pressures may influence participation.[17]

[INSERT TABLE 2 HERE]

In column 3, our model adds a measure of political discussion frequency to the baseline model, testing the first component of pathways 3A, 3B, and 3C (the prediction that social cross-pressures lead to reduced political discussion). The coefficient for the discussion variable is as predicted—increased discussion correlates with increased turnout at a highly significant level—but the second criterion is not met. Rather than diminishing the effect of SNH (relative to that seen in column 1) as we would expect, controlling for discussion actually *strengthens* the predictive power of social cross-pressures, with the coefficient of SNH increasing in magnitude by about 20% (from -0.48 to -0.58).[18] This paradoxical result suggests that SNH is not correlated with reduced discussion as predicted, calling into question the first part of pathways 3A through 3C. Indeed, as the graph in Figure 3a demonstrates, the relationship between SNH and discussion frequency does not show the expected monotonic pattern.[19] (For comparison, Figure 3b shows the relationship between both types of cross-pressures and indifference, which is as predicted.)

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[17] Sobel tests of indifference as a mediator for PVC and SNH (which evaluate whether the indirect effects of independent variables such as PVC on outcomes are significant) produced test statistics of -3.68 and -2.96, respectively—both of which are highly significant ($p < 0.01$).

[18] Moreover, a Sobel test of discussion as a mediator for SNH produced insignificant results ($t = 1.59$).

[19] The statistics presented in this and subsequent figures for respondents at each level of cross-pressures are generated by modeling the dependent variable (discussion frequency in Figures 3a and 4, indifference in 3b) as a function of the same set of controls used to model participation and the

[INSERT FIGURE 3 HERE]

This result casts doubt upon the validity of the first steps proposed in pathways 3A, 3B, and 3C. The same phenomenon holds once indifference is controlled for along with discussion frequency, as shown in column 4. This surprising finding led us to explore whether there could be a lag between the experience of social cross-pressures and their effects on discussion frequency. This seemed particularly appropriate given the changing political context in the United States between 2000, which was not a remarkably polarizing election, and 2004, by which point the country had become mired in two wars, the economy had gone stagnant, and the animosity for George W. Bush among Democrats had reached stratospheric levels. Perhaps, then, individuals who supported different presidential candidates in 2000 might be more hesitant to talk about politics in 2002 and 2004 than they had been in the halcyon days of 2000.[20]

We therefore show, in Figure 4, the relationship between SNH in 2000 and discussion frequency in 2000, 2002, and 2004.[21] This graph presents the discussion frequency of the groups

specified measure of cross-pressures. The cross-pressures measures used in these models are categorical, sorting respondents into top, middle, and bottom thirds of each distribution; the results are then used to estimate the average level of discussion or indifference across the population were every respondent's cross-pressures at the given level (high, medium, or low).

[20] An alternative explanation for this phenomenon could involve measurement error. Because discussion is the most common way for individuals to learn about others' political views, perhaps those with low discussion frequency reported the composition of their networks as less heterogeneous than they really were. This possibility leaves open the door for the first steps of pathways 3A–C to still be valid, but more study would be required to support it empirically.

[21] Unfortunately, the ANES did not repeat the social networks questions in later waves.

with high and low social cross-pressures relative to that of the middle group (who showed the lowest discussion frequency in 2000, as we saw in Figure 3a).[22] The 2000 estimates are the same as those in Figure 3a: both the low- and high-SNH groups are estimated to discuss politics 14% more than their medium-SNH peers. Between 2000 and 2002, however, the highly cross-pressured group showed the steepest decline in discussion frequency: their 14% higher discussion rate relative to the middle group became just over 5%; and they now showed distinctly lower discussion frequency than the low-SNH group. Continuing to 2004, this pattern holds once more: relative to both other groups, the high-SNH respondents again showed a diminished rate of discussion.

[INSERT FIGURE 4 HERE]

As noted above, this finding might be somewhat idiosyncratic to this particular span of time in American history. An alternative explanation, however, would suggest that perhaps social cross-pressures' effects on discussion take time to materialize—that when observed in 2000, the heterogeneity of respondents' networks hadn't yet resulted in less frequent discussion, because the impulse to avoid contentious interactions first requires repeated conflict to be ingrained.[23] Unfortunately, without data on additional elections or on the evolution of social networks over time, we are unable to readily distinguish between these alternatives. But importantly, the observation that the frequency of discussion by individuals facing social cross-pressures declines substantially over time gives us justification to continue testing the second steps in these pathways in the remaining

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[22] We choose to present the relative differences in discussion frequency rather than absolute levels because the year-to-year differences in overall levels of discussion (especially in 2002, a midterm election) made the differences between levels in each year more difficult to perceive.

[23] Note too that the social network questions were asked after the election, so it is unclear how long respondents were exposed to cross-pressures based on 2000 preferences prior to election day.

columns of Table 2—that decreased discussion reduces participation by diminishing interest, knowledge, and the mobilization of individuals by their peers.

In column 5, we control for political interest. As expected, interest has a highly significant positive effect on turnout; meanwhile, the coefficient on discussion frequency is diminished by more than 50% from the previous model and crosses the threshold into insignificance.[24] This suggests that the second step of pathway 3A is highly plausible: much of the observed effect of discussion is explained by its correlation with increased political interest. A similar pattern holds in column 6 for political knowledge. Measuring respondents' ability to recognize important political figures and identify background information about the presidential candidates, these knowledge scales are associated with significantly higher turnout, and their inclusion reduces the coefficient on discussion frequency by about 20%.[25] Testing pathway 3C, however, is not as successful. Though mobilization is shown (in column 7) to be an effective predictor of turnout as expected, its inclusion has negligible effects on the predictive power of discussion frequency. This pathway as such turns out to be the least plausible of those tested herein, as both its steps are unsupported by this analysis.

All three of these variables are included in the final model, shown in column 8. It is interesting to note that in this model, discussion frequency has less than a third of its original

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[24] To check the robustness of our proposed pathways, we tested whether modeling discussion as a mediating variable between interest and turnout would give similar results; if so, it would suggest that these variables were simply correlated in a coincidental fashion. Our results suggest otherwise: while introducing interest as a mediator reduces discussion's coefficient by nearly 60%, introducing discussion as the mediator reduces interest's coefficient by under 10%. This supports the hypothesis that the relationships between discussion, interest, and turnout are in the posited direction.

[25] Sobel tests of interest and knowledge as discussion mediators were highly significant (p < 0.01).

magnitude and is no longer significant in predicting turnout; this suggests that nearly all of its relationship with turnout acts by way of associated changes in interest and knowledge. Interestingly, though, both measures of cross-pressures (PVC and SNH) retain plenty of explanatory power even when all of the proposed mediating variables are controlled for. We suggest three possible explanations for the lingering significance of these variables. First, measurement error in our mediating variables could limit the model's ability to recognize the effects of cross-pressures on these variables. This could also come about as an artifact of selection: there may be links between our measures of cross-pressures and reported turnout in which participation influences attitudes or associations, or in which both cross-pressures and participation are affected by some other unobserved variable. Finally, there may be other pathways through which cross-pressures affect participation aside from those proposed herein. Though we cannot distinguish between these possibilities here, the results offer interesting potential for future research.

Ultimately, our analysis most strongly supports the first two of the proposed pathways through which cross-pressures may affect participation: both social and issue cross-pressures are associated with greater indifference, which is in turn linked to lower voter turnout. Pathways 3A and 3B give mixed results: our models confirm that reduced discussion frequency is associated with lower interest and knowledge and thereby inhibits turnout, but the evidence presented so far does not give much support to the hypothesis that social cross-pressures reduce discussion. Finally, pathway 3C is wholly unsupported: there is little evidence that either cross-pressures reduce discussion or reduced discussion leads to lower levels of mobilization. With these findings in hand, a logical next question is to what extent cross-pressures can suppress other forms of political participation, and it is to this topic that we turn in the following section.

Other Forms of Participation

The results of our analysis offer plenty of insight about the role of cross-pressures in predicting turnout. But what about other forms of participation? Though it is beyond the scope of this paper to repeat the full set of tests for other behaviors, it is useful to consider how the various measures of cross-pressures introduced in the first analysis predict other forms of participation. Rather than simply providing additional tests of our measures of cross-pressures, however, these tests offer another means to view how our basic framework for understanding cross-pressures' effects—in which cross-pressures may affect voters' perceived differences between candidates as well as the costs and benefits of participation itself—applies to behaviors other than turnout.

We model how our various measures of cross-pressures (along with the same set of control variables used in the previous models) relate to three other forms of participation:

(1)   attempting to influence others' votes

(2)   public involvement in a campaign (displaying signs and stickers, attending campaign events, or working for the campaign)

(3)   private campaign involvement (donations to candidates, parties, or other groups).

These categories are inspired by the distinction made by Mutz (2002) between "confrontational" and "nonconfrontational" participation, though our typology is somewhat different.[26]

The first two categories could be considered public forms of participation, in that they both involve the individual openly announcing her political preferences to others; as such, we expect both behaviors to be strongly influenced by both issue and social cross-pressures (with the individual deciding whether the benefits of supporting her preferred candidate outweigh potential social costs). The differences between them, however, is that the first category (attempting to influence others

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[26] These variables come from questions B2 through B8 in the 2000 post-election wave. Our tests of advocacy use a binary logit model; the other models use additive scales and ordered logit.

directly) involves a more personal and strategic choice than the second. In directly attempting to influence other individuals, the potential benefits come from winning over specific people in one's social network, rather than abstract "potential voters"; as such, the anticipated receptivity of an individual's discussants is a far more relevant consideration than for other forms of participation.[27] At the same time, advocacy for a candidate carries with it far more potential for social conflict than less direct campaign involvement, and so the two categories involve different social costs as well.

The third category (private involvement) differs from either of the first two in that the individual is *not* faced with substantial social costs from supporting her candidate. (While large contributions are publicly reported, the vast majority of individual donations are not made public, and even large contributions would be discovered only long after the fact and by those who sought them out specifically.) Because the social costs of such participation are negligible, the calculation made by the individual (so far as cross-pressures are concerned) focuses primarily on the strength of her candidate support. Thus we would expect a greater role for issue cross-pressures in predicting private campaign involvement than we would in predicting advocacy or public campaigning.

Table 3 shows the results of our models for each form of participation. In contrast to our models of turnout shown earlier, respondents with heterogeneous social networks show an *increased* likelihood of attempting to influence others. While this might seem paradoxical at first glance, the individual's calculation in deciding whether to engage in such advocacy is unique (as we discussed earlier in this section), and we imagine that much of this result stems from the context in which individuals would have the opportunity to influence others. For those whose associates

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[27] While we imagine that most advocacy comes about from instrumental motivations, it's also possible that one could enjoy trying to convert others for its own sake. In this case, however, the individual would still be likely to get greater satisfaction from successful advocacy than from failure.

overwhelmingly share their candidate preferences (wherein SND would be very low), there's little need for an individual to attempt to influence others. But conversely, in the other extreme (where the individuals' peers are uniformly of the opposite viewpoint, and thus SND is very high), the environment for advocacy would not be very inviting.

[INSERT TABLE 3 HERE]

In a uniformly Republican social network, for example, a Democrat who attempted to persuade her peers would risk serious social repercussions. And moreover, a Republican-dominated social network could suggest that those Republicans have stronger partisan attachments than Republicans in mixed networks, making conversion a much more daunting task. In light of these considerations, mixed networks (where SNH is high but SND is average) would appear to be the most conducive to advocacy. And in Table 3, this is exactly what we see in the first model: there is no significant relationship between disagreement and advocacy, and while heterogeneity may well negatively impact the individual's desire to influence others, any such effect is drowned out by the increased utility of such attempts in heterogeneous networks. This result persists when we exclude disagreement from the model (column 2), dispelling any concerns that this result is the artificial byproduct of collinearity between the two measures.

The results for measures of issue cross-pressures, meanwhile, are in the negative direction as we would expect, and significant when the model is restricted to the most promising measure (PVC, shown in column 2). Issue cross-pressures appear to diminish the individual's motivation to influence others, and since the special social costs of advocacy are unrelated to individual policy preferences, their overall effects are similar to those seen in the turnout models shown earlier.

The results for public campaign involvement are more in line with our original expectations: all four measures are associated with lower public campaign involvement (column 3). When restricted to the most promising measure of each type (column 4), both social and issue cross-pressures show

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significant negative coefficients.[28] These results become more even more interesting, however, when they are compared to those for private campaign involvement (columns 5 and 6). We noted above that because the social costs of private campaigning are negligible, the impacts of social cross-pressures (especially interpersonal disagreement) should be smaller than they are for public campaigning. This is indeed the case: while the effect of heterogeneity is essentially unchanged between columns 3 and 5 (and not significant in any of the models shown), the coefficient for disagreement (which is significant in the restricted specification used in column 4) plummets to almost 0 when used to predict private donation (column 5). Issue cross-pressures continue, meanwhile, to exhibit very strong negative effects across both forms of campaign involvement.

Finally, when considering these categories more generally, it would make the most sense to classify turnout as a form of private campaign involvement. And indeed, comparing the results of models 5 and 6 in Table 3 with the corresponding models in Table 1, we see remarkably similar results: PVC and SNH are better predictors than their counterparts, with PVC appearing most significant overall. In light of the patterns seen above, this gives further support to the notion that our proposed framework for understanding cross-pressures (the pathways introduced in Figure 1)

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[28] The question of why IPC appears the better measure in this model is one for which we do not have a firm answer, but suspect this some of its power may come from the relationship between ideological consistency and political sophistication; that is, the correlation between sophistication and campaign involvement is stronger than the same relationship with regard to turnout. This would of course be non-causal, a hazard of assuming the directions of relationships observed in data without testing their precise mechanisms. That said, both measures show substantial negative coefficients (column 3), so this caveat should not lead readers to presume that the entire relationship is due to endogeneity, only that endogeneity is one possible factor contributing to these results.

offers guidance for studying both turnout and other forms of participation. Yet we also once again acknowledge the perils of endogeneity in these sorts of analyses. Without further evidence showing *how* cross-pressures affect these various forms of participation (as was done to an extent in the earlier mediation analysis), the results only prove the existence of a correlation and the potential for future study. But with that caveat, these results provide the clearest look at the relationships between cross-pressures and participation of any study to date.

Discussion

There is little consensus in the extant literature about the effects of cross-pressures on political participation. Previous researchers have proposed a variety of ways to conceptualize and measure cross-pressures and suggested a wide range of potential mechanisms. As a consequence, such studies offer an assortment of often-conflicting results. We sought in this paper to better understand how cross-pressures affect participation. In doing so, we looked first to seminal studies of political behavior. We then built upon the wealth of recent research on social cross-pressures in political networks, while also revisiting the less-covered topic of issue cross-pressures. Because of the strong correlations between various measures of cross-pressures, as well as between possible mediating variables, we believe it is vital to consider multiple measures and mechanisms side-by-side, to be able to distinguish those which are most supported by empirical evidence.

We examined five pathways through which cross-pressures might affect participation—each rooted in traditional models of rational participation—which together encompass many (if not most) of the mechanisms suggested in previous research. In each, cross-pressures influence participation by affecting either perceptions of the candidates' relative merits, the costs of participation, or the benefits of participation irrespective of the election's outcome. Our results bring renewed clarity to the understanding of cross-pressures' effects. The analysis of voter turnout showed that, for issue

cross-pressures, conflicts between policy and candidate preferences are better predictors of turnout than ideological inconsistency across issues. For social cross-pressures, heterogeneity among discussants in social networks matters more than the level of disagreement between individuals and their peers. In both cases, those who are highly cross-pressured are much less likely to vote.

Next, we tested the five proposed pathways by introducing measures of indifference, discussion frequency, political interest, knowledge, and mobilization into our turnout models, and then by observing the evolution of social cross-pressures' effects on discussion between the 2000 and 2004 elections. The first two proposed pathways show themselves to be the most plausible: both issue and social cross-pressures are associated with increased indifference, which in turn predicts lower turnout. The remaining pathways share a common first step—social cross-pressures lead to less frequent discussion of politics—and the evidence for this relationship was mixed. Social cross-pressures were not associated with a decrease in discussion frequency in 2000, but those subject to the highest social cross-pressures showed a substantial decline in discussion frequency in subsequent years. The second steps of each of these three pathways provided clearer results. Reduced discussion is associated with lower interest and knowledge, and each of these is then reflected in lower turnout. Lower rates of mobilization also predict lower turnout, but we found no evidence that mobilization mediates the relationship between discussion frequency and turnout.

Finally, looking at other forms of participation, we showed that the best measures of cross-pressures—and their associated mechanisms—can vary for different forms of political behavior. Moving beyond turnout, there may be other considerations involved, such as the greater social costs one might face when publicly demonstrating her support for her preferred candidate. We showed in our analysis that while the relationship between cross-pressures and campaign contributions mimics the results found for voter turnout, more public displays of campaign involvement show a stronger link to social cross-pressures, particularly those arising from disagreement with one's peers. When

considering the likelihood of an individual attempting to influence others' votes directly, social factors were still quite important, but manifested themselves in a surprising way: because heterogeneous networks offer the greatest opportunity for advocacy, they were associated with higher participation instead of lower. This example illustrates once again the importance of carefully addressing the mechanisms involved in studying the effects of cross-pressures: the relationships between various forms of both cross-pressures and participation are multifaceted and defy previous researchers' attempts to apply a single, simple explanation.

So what, ultimately, does this all mean for the study of cross-pressures? First, we have shown in this paper that it is important to consider multiple alternatives for both measures and mechanisms side-by-side, to avoid misleading conclusions. We have also shown that the much-neglected "issue" type of cross-pressures deserves greater attention in studies of participation. In bringing various measures of cross-pressures together, we demonstrated which of these best predict participation. Far from just a methodological exercise, these findings also provide insight into the processes at work both within and between individual citizens. Our study of potential pathways suggested the most promising avenues in which future researchers might watch more closely for signs of cross-pressures' effects. We hope that these contributions will provide new vigor to this long-studied topic, and offer a framework through which many of the questions surrounding cross-pressures may eventually be resolved.

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Appendix I: Coding of Issues and Party Preferences

The following table notes the 14 issues used to construct our measures of cross-pressures, the corresponding question in the ANES 2000–2002–2004 panel dataset, and which responses were coded as favoring the Democratic and Republican candidates. These issues were chosen to cover a broad spectrum of policy questions, and because they are ones on which the parties are largely polarized, the parties' positions are well known, and the candidates were ideologically in sync with their parties.

Issue	Question	Democratic Responses	Republican Responses
Defense spending	p000587	Decrease a little / a lot	Increase a little / a lot
Public/private healthcare	p000614	Support government plan strongly / not strongly	Support individual insurance plans strongly / not strongly
Job and standard of living guarantees	p000620	Support strongly / not strongly	Oppose strongly / not strongly
Affirmative action	p000674	Favor	Oppose
Welfare programs	p000676	Increase	Decrease / Eliminate
Foreign aid	p000678	Increase	Decrease / Eliminate
Social Security	p000681	Increase	Decrease / Eliminate
Use surplus for tax cuts	p000688	Oppose	Favor
Abortion	p000694	Always permitted	Never permitted / Banned except for rape, incest, health reasons
Gays in military	p000724	Favor	Oppose
Gun control	p000728	More difficult to buy	Less difficult to buy
School vouchers	p000742	Oppose	Favor
English as official language	p000745	Oppose	Favor
Environmental regulations	p000776	Need to be toughened a little / a lot	Somewhat of a burden / too much of a burden

Table 1: Using Social and Issue Cross-Pressures to Predict Turnout

Dependent variable: self-reported turnout in 2000 presidential election (measured in post-election 2000 wave of panel)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Internal Policy Conflict	-0.41					-0.32	
	(0.33)					(0.35)	
Policy-Vote Conflict	-1.63**	-1.90**				-1.42**	-1.63**
	(0.44)	(0.38)				(0.47)	(0.40)
Social Network Heterogeneity			-1.12**	-0.51*	-0.54**	-0.46*	-0.48*
			(0.23)	(0.23)	(0.21)	(0.23)	(0.21)
Social Network Disagreement			0.80**	-0.07		-0.03	
			(0.18)	(0.19)		(0.18)	
Social Network Politicization				0.66**	0.64**	0.63**	0.62**
				(0.09)	(0.07)	(0.09)	(0.07)
n				1540			

Cell entries are binary logit coefficients, with robust SEs in parentheses; * = significant at 0.05 level (one-tailed), ** = 0.01 level. Control variables not shown: age, education, income, gender, race, length of residency, religious denomination, presidential vote margin. Full results available from authors upon request.

Table 2: Cross-Pressures, Mediating Variables, and Voter Turnout

Dependent variable: self-reported turnout in 2000 presidential election (measured in post-election 2000 wave of panel)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Policy-Vote Conflict	-1.63**	-1.41**	-1.52**	-1.34**	-1.18**	-1.18**	-1.35**	-1.08**
	(0.40)	(0.41)	(0.41)	(0.42)	(0.44)	(0.43)	(0.42)	(0.44)
Social Network Heterogeneity	-0.48*	-0.41*	-0.58**	-0.50**	-0.41*	-0.49*	-0.50**	-0.42*
	(0.21)	(0.21)	(0.21)	(0.21)	(0.22)	(0.22)	(0.22)	(0.22)
Indifference		-1.23**		-1.12**	-0.95**	-1.06**	-1.12**	-0.92**
		(0.29)		(0.30)	(0.30)	(0.30)	(0.30)	(0.30)
Discussion Frequency			0.28**	0.25**	0.11	0.20**	0.24**	0.08
			(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)
Political Interest					0.74**			0.61**
					(0.12)			(0.13)
Political Knowledge						0.40**		0.33**
						(0.07)		(0.07)
Mobilization							0.32*	0.34*
							(0.16)	(0.16)
n				1540				

Cell entries are binary logit coefficients, with robust SEs in parentheses; * = significant at 0.05 level (one-tailed), ** = 0.01 level. Control variables not shown: age, education, income, gender, race, length of residency, religious denomination, presidential vote margin, social network politicization. Full results available from authors upon request.

Table 3: Predicting Other Forms of Participation

Dependent variables: Action listed at column head, measured in post-election 2000 wave with regard to 2000 campaign

	Attempting to Influence Others		Public Campaign Involvement		Private Campaign Involvement	
	(1)	(2)	(3)	(4)	(5)	(6)
Internal Policy Conflict	-0.25		-0.62	-0.83**	-0.49	
	(0.27)		(0.38)	(0.27)	(0.44)	
Policy-Vote Conflict	-0.40	-0.64*	-0.40		-1.15*	-1.74**
	(0.39)	(0.31)	(0.55)		(0.68)	(0.48)
Social Network Heterogeneity	0.46**	0.42**	-0.19		-0.21	-0.25
	(0.18)	(0.16)	(0.25)		(0.27)	(0.24)
Social Network Disagreement	-0.04		-0.17	-0.23*	-0.03	
	(0.10)		(0.14)	(0.13)	(0.14)	
n			1540			

Cell entries are binary logit coefficients (columns 1 and 2) or ordered logit coefficients (remaining columns), with robust SEs in parentheses; * = significant at 0.05 level (one-tailed), ** = 0.01 level. Control variables not shown: age, education, income, gender, race, length of residency, religious denomination, presidential vote margin, social network politicization. Public campaign involvement is an additive scale ranging from 0-3, wherein respondents receive one point for (a) displaying a yard sign or bumper sticker, (b) attending a political meeting or rally, and (c) working for a campaign. Private campaign involvement is a similarly-constructed scale, points assigned for donating money to (a) a candidate, (b) a political party, and (c) an outside political organization which supported or opposed particular candidates. Full results available from authors upon request.
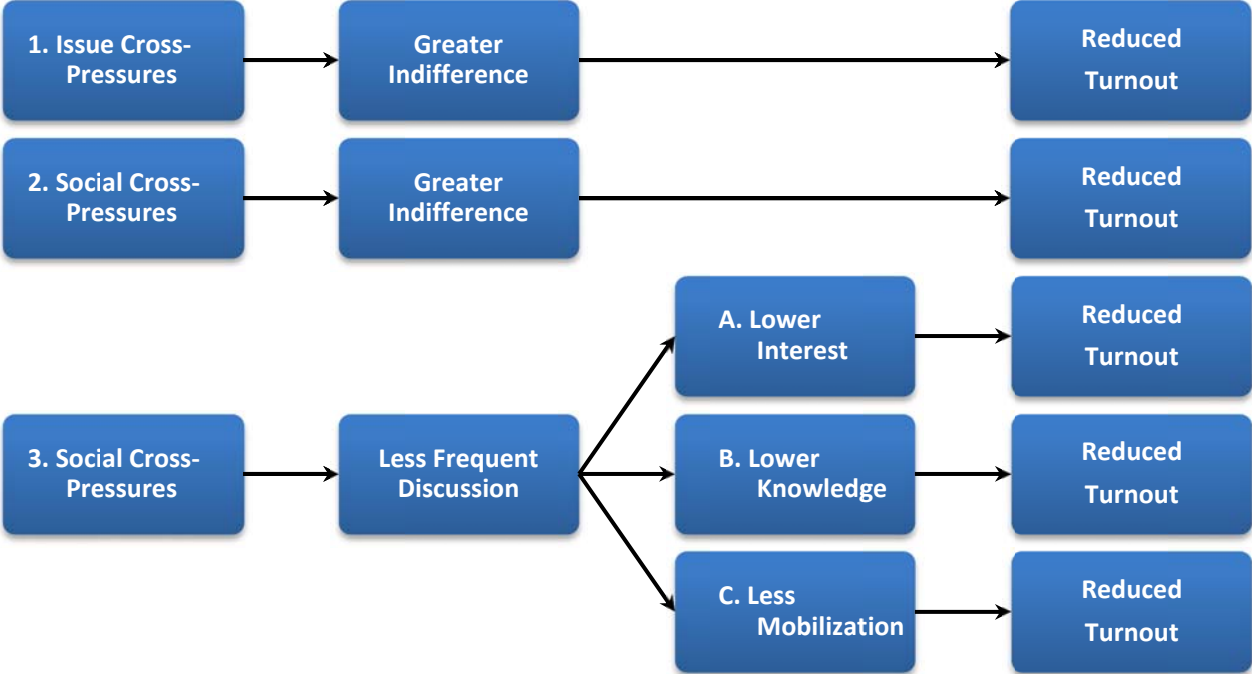
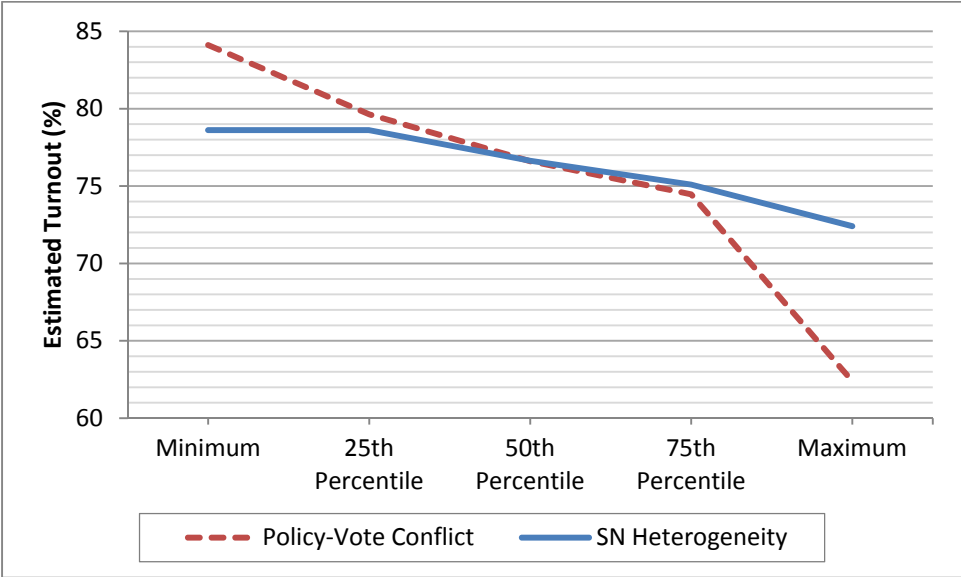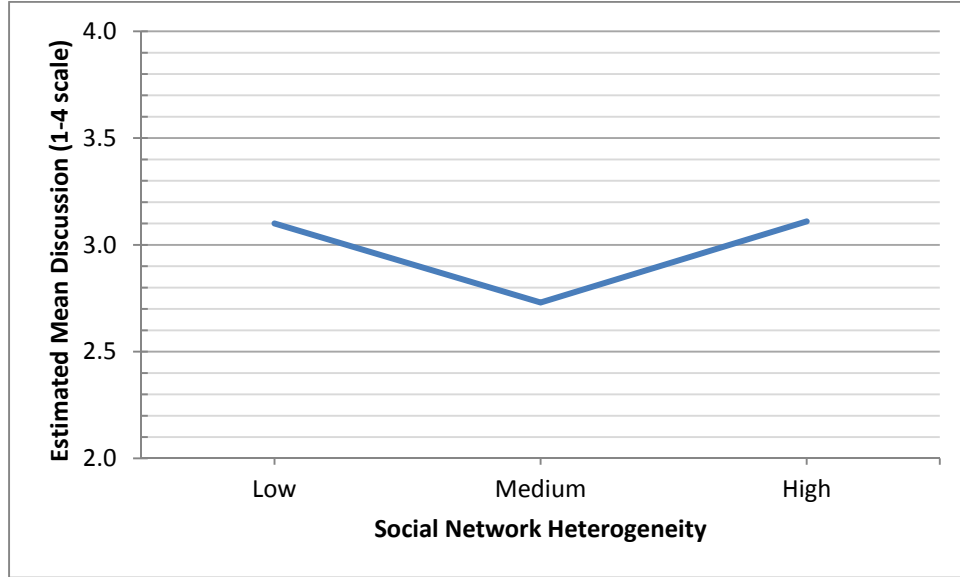**Figure 1: Pathways to Participation**

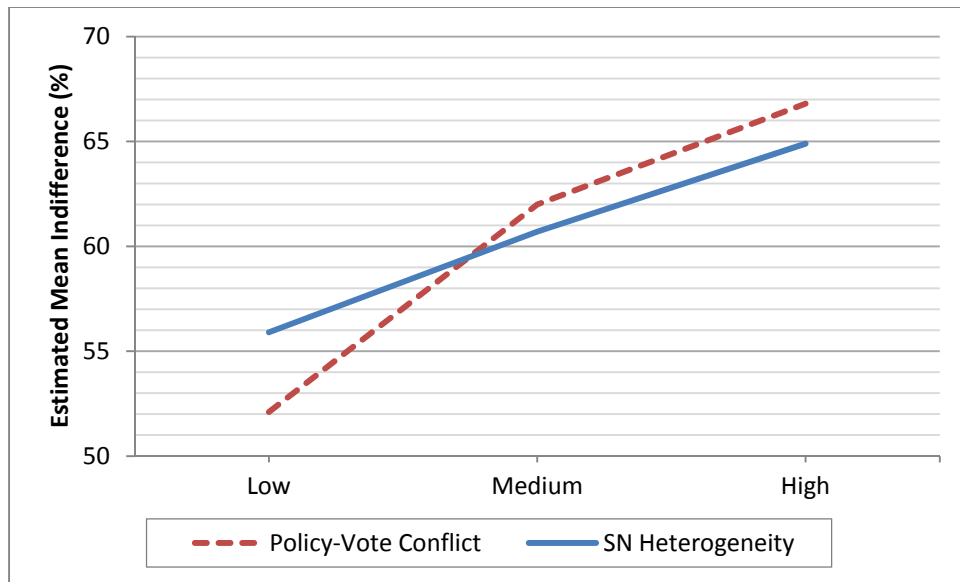## Figure 2: Estimated Effects of Cross-Pressuredness on Turnout

Estimates based on results of model shown in last column of Table 1.

Figure 3: Discussion Frequency and Indifference by Cross-Pressuredness in 2000

(a) Discussion Frequency

(b) Indifference between Bush and Gore

Estimates derived from OLS models of discussion frequency / indifference which include the explanatory variable listed (PVC or SNH), along with controls for age, education, income, gender, race, length of residency, religious denomination, presidential vote margin, and social network politicization (SNH models only). Full model results available from authors upon request.

Figure 4: Differences in Discussion Frequency by Social Network Heterogeneity, 2000 to 2004
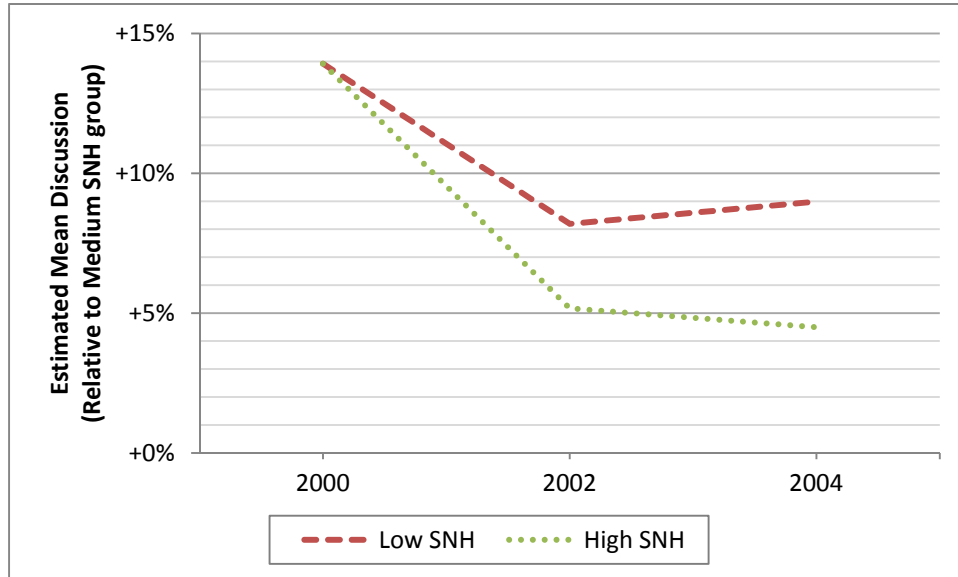

Figure shows the predicted difference in mean discussion frequency on 1-4 scale for respondents with low- and high-heterogeneity social networks, relative to the frequency predicted for the medium-heterogeneity group in each year (relative values are used to eliminate noise from year-to-year difference in overall discussion frequency). Estimates derived from OLS models of discussion frequency which include controls for age, education, income, gender, race, length of residency, religious denomination, presidential vote margin (2002 model uses margin from 2000; 2000 and 2004 use same-year margin), and social network politicization. Full model results available from authors upon request.