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Recommended Citation
Klofstad, Casey A.; Sokhey, Anand; and McClurg, Scott D., "Disagreeing About Disagreement: How Conflict in Social Networks Affects Political Behavior" (2010). *Working Papers.* Paper 41.
http://opensiuc.lib.siu.edu/pn_wp/41

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Disagreeing About Disagreement:
How Conflict in Social Networks Affects Political Behavior

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Abstract

At the center of debates on deliberative democracy is the issue of how much real deliberation citizens experience on a regular basis in their core social networks. These "disagreements about disagreement" come in a variety of forms, with scholars advocating significantly different empirical approaches (e.g., Huckfeldt, Johnson, and Sprague 2004; Mutz 2006), and coming to significantly different substantive conclusions. In this paper, we tackle these discrepancies through methodological advances and an investigation into the effects that conceptual differences have on key findings relating interpersonal political disagreement to political attitudes and behaviors Drawing on the 2008 ANES panel study, we explore the consequences of making different assumptions about the definition and measurement of disagreement, ultimately speaking to the on-going debate over whether a deliberative society can also be a participatory one (Mutz 2006).

Prepared for presentation at the Annual Meeting of the Midwest Political Science Association, Chicago, IL, May 2010.

As suggested by Lasswell's (1936) classic definition of politics – who gets what, when, and how – conflict is inevitable in any political process. Nevertheless, conflict also seems to be the part of government and politics most disliked by average voters. At best, regular voters can be characterized as finding disagreement among elites distasteful (Hibbing and Theiss-Morse 2002), and with friends uncomfortable (Ulbig and Funk 1996). At worst, disdain for conflict stemming from clashing points of view may lead to withdrawal from the public sphere, diminishing the relationship between citizens and policy-makers (Mutz 2006).

In the realm of political behavior, a recent revival of interest in conflict and disagreement stems from normative theories of political deliberation; these promote a different view of how a representative democracy functions effectively. Though liberal theories emphasize the need for resource-endowed individuals to participate, deliberative theories focus on collective processes and exchange in viewpoints. As a consequence, empirical scholars have devoted significant time and attention to understanding the behavioral consequences of debate, deliberation, and disagreement between regular citizens.

Although we have learned that structured deliberative settings produce many of the benefits identified by normative theorists (Chambers 1996; Fishkin 1995; though see Delli Carpini et al. 2004 for a review and critiques), less is known about the role that everyday discussion – particularly discussion across lines of political difference – holds for political behavior. Some research indicates that this form of disagreement between citizens makes minority voters less likely to vote with their underlying partisanship (Huckfeldt and Sprague 1988; Sokhey and McClurg n.d.), increases opinion ambivalence (Mutz 2002), and decreases political participation (McClurg 2006a; Mutz 2002; 2006). Other research shows an opposite effect, suggesting that disagreement does not always disable engaged citizenship (Huckfeldt et al. 2004; McClurg 2006b; Nir 2005). At present, the literature sits at an important juncture, with many inconsistencies begging explanation.

At the core of this "disagreement about disagreement" are two analytic problems central to understanding the relevance of social communication for political behavior. One revolves around the inadequate conceptualization and measurement of the core concept, namely political disagreement. Although common practice has emerged from earlier research, almost no attention is given to outlining what is actually meant by disagreement, to developing adequate measures, and to examining the impact that alternative measurements have on our understandings of political behavior.

A second set of challenges center on the difficulties present in developing adequate causal estimates. Klofstad (2007) notes that cross-sectional studies of social communication and political behavior are likely biased; this can occur both through the *self-selection* of respondents into particular networks, and by *reciprocal causation* between behaviors and discussion. Nickerson (2005) and Klofstad (2007) lead a growing body of work in demonstrating that general estimates of political discussion effects are real, but that care must be exercised because of the aforementioned analytic biases. Unfortunately, the majority of data available for testing theoretical claims about political disagreement – particularly with nationally representative samples – are cross-sectional, and therefore not particularly well-suited for addressing these problems.

In the sections that follow, we tackle interpersonal disagreement with an eye on both issues; we aim to bring conformity to practice and order to previous results. Using matching to address causal inference, we employ two measures of disagreement that reflect general views about how to measure the concept: a general measure of how much people believe they disagree with members of their network, and a second one based on the perceived levels of partisanship of network members. Using both approaches, we examine how disagreement relates to vote choice and political

participation in a national sample of Americans from the 2008 American National Election Studies panel study.[1]

Social Communication, Political Disagreement, and Political Behavior

Why We Care About Political Disagreement.

Broadly conceived, political disagreement is defined as conversations where those engaged in discussion are exposed to political viewpoints that are different from their own. Such exchanges are particularly important for understanding dynamics in political behavior; without the possibility of learning new information or views, there is little opportunity for social communication to change past behavior – put another way, disagreement drives the social influence process (McPhee 1963; Sprague 1982). And, while it may be true that other forms of conversation may still influence behavior, it seems equally possibly that such discussions serve more in a reinforcing capacity.

More fundamentally, political disagreement is important because it may help us understand how individual preferences translate into citizen inputs into the political system. When there is no exchange of views between citizens, the lines of debate are hard and fast, and should inhibit compromise among representative officials. And, in such a situation, preferences are relatively fixed and the ability of governments to provide representation becomes largely a function of institutional design (Dahl 1963). Yet when there is some exchange of views between citizens, public representation becomes a matter not just of how we aggregate preferences through institutions, but of how the public reacts to different viewpoints. Indeed, multiple aggregate outcomes are possible, depending upon the behavioral consequences of encountering difference (Huckfeldt et al. 2004).

For instance, if conflicting views create intolerance for others' preferences, it can delegitimize governing elites who do not share the ideas of majorities. Conversely, if disagreement causes some groups of voters (e.g., majority opinion holders) to express their opinions more

[1] Future versions of this paper will include data and analyses from the 2000 American National Election Study.

insistently, or to participate more than others groups (e.g., minority opinion holders), then government may be more responsive to some groups than others (and on the basis of something other than the extent to which their beliefs are widely held) (Noelle-Neuman 1993)). It is also possible that disagreement affects preferences themselves, suggesting that what is in the public's interest is a dynamic phenomenon that changes as we deliberate, potentially leading to "better" public opinion (Fishkin 1995) and policy outputs.

What We Know About Political Disagreement.

For all these reasons, there is acute interest in how much disagreement occurs between citizens in their everyday lives, and in the effects that disagreement has on a variety of political attitudes and behaviors. However, the answers to these questions have remained ambiguous.

For example, the fundamental question of how much disagreement exists between citizens is itself contested even in an era of sophisticated polling that allows us to clearly identify a survey respondent's discussants (Klofstad at el. 2009). Nevertheless, a real debate has emerged over the typical American's experience of disagreement. Huckfeldt et al. (2004) have argued that the modal condition is some disagreement (based upon average network size and various probabilities of disagreement between any two members); Mutz (2006) makes an argument for low levels of disagreement – she notes that not only are levels of disagreement between dyads very low in national probability samples, but that levels of communication in those dyads are also exceptionally low. In the end, Mutz and Huckfeldt and colleagues look at similar data, but draw largely opposite conclusions.

Another significant line of debate focuses on the consequences of disagreement. Mutz's seminal contributions (2002a, 2002b, 2006) on "cross cutting" discussion frame the question clearly: while disagreement leads to better understandings of and tolerance for different viewpoints, it leads to lower levels of political participation. In short, she suggests that levels of disagreement force a

choice between participatory and deliberative forms of democracy. Yet even while she makes this argument forcefully, there are indicators that the choice is perhaps not so stark. On the one hand, some scholars report that disagreement is either positively or statistically insignificantly related to participation (e.g., Nir 2005). On the other, some scholars suggest that the influence of disagreement is variable, subject to other elements in a person's network (e.g., Djupe, Sokhey, and Gilbert 2007; McClurg 2006a), or the broader social context in which that disagreement occurs (McClurg 2006b; Noelle-Neuman 1993).

Although the impact of disagreement on some political attitudes and behaviors – for example, tolerance or ambivalence towards candidates – is not the subject of heated debate, close examinations of the literature trend toward inconsistencies on these points as well. To a certain degree, this can be a consequence of different bases of evidence and varying theoretical predilections. However, as mentioned at the outset, there are two sorts of analytical problems that might also lead to such a state of affairs – inconsistent conceptualization and measurement of disagreement, and the problems that arise from cross-sectional, ego-centric data. We now discuss these problems in more detail.

Analytic Problems in the Study of Political Disagreement

Measuring Disagreement

We argue ambiguities in previous research stem in part from different approaches to the analysis of political disagreement. The first of these are different conceptualizations of disagreement and concomitant differences in measurement. Conceptually, almost all political science studies employ measures that focus on some level of discussion occurring across lines of political difference. However, this is where the agreement about disagreement ends. This is nicely illustrated by the measures used in two of the most well-cited studies in the field: Huckfeldt, Johnson, and Sprague's (2004) *Political Disagreement* and Mutz's (2006) *Hearing the Other Side*.

Huckfeldt et al. measure disagreement as the absence of agreement in the *vote choice* of a main respondent and her discussant. According to their approach, a person who prefers one presidential candidate encounters disagreement even if their discussant prefers *no presidential candidate*. There are many conceptual benefits to such a measurement approach; these include that it is anchored in political preferences, that it is about an individual's perceptions of their communication environment, and that we have a very good sense of what the disagreement is *about*. At the same time, the measurement may be appropriately conceived of as measuring the absence of agreement rather than the presence of disagreement. In turn, this may overstate the importance of social exchanges with low political salience – exchanges that do not really create significant opportunities for learning that are central to theories of disagreement and deliberative democracy.

The approach used by Mutz is similar in spirit as she seeks to measure survey respondents' perceptions of how much they disagree with their named discussants. In practice her measure is different and implies a different conceptualization of disagreement. Specifically, her approach is to create an *index of disagreement* that combines information on a variety of survey questions; these include shared vote preferences, shared partisan preferences, general perceptions of disagreement, general perceptions of shared opinions, and levels/frequencies of disagreement. The strength of this measure is that it does not rely solely on a transient political choice for determining whether disagreement exists; it focused instead on more *general* social exchange. Another potential strength is that this approach measures *exposure to disagreement* by including levels/the frequency of political talk in the index, rather than assuming that such disagreement is not reliant on how often interaction takes place. Nevertheless, we argue that this measure is weighted towards very intense

disagreements, while overlooking the more common, less intense discussions that may hold behavioral consequences for voters in the context of an election campaign.[2]

We see these two measurement approaches – and the conceptualizations that they imply – as brackets on a range of conversational possibilities that may hold different behavioral consequences. While the Huckfeldt et al. measure allows for disagreement to occur in any exchange where agreement is absent (albeit in the context of voting), the Mutz measure is more likely to weigh intense and persistent disagreements more heavily. Both measures capture political differences, but the range of conversations they capture (and their consequences) may vary dramatically. For example, while the Huckfeldt et al. measure would suggest that widespread opportunities for learning something about politics exist (because there is an absence of support), the more intense political disagreements that the Mutz measure identifies probably border on *conflict*, and are therefore less likely to occur. Additionally, intense disagreement may actually *inhibit* learning, as a long line of literature suggests that people seek to avoid it (e.g., Festinger 1957).

At base, we argue that the core difference is whether or not measures are inclusive of *non-intense* disagreement. Towards that end, we investigate the impact of disagreement through two measures that capture these elements – a partisanship difference measure (closer to the Huckfeldt and colleagues approach), and the general disagreement measure (closer to the Mutz approach).[3] Our examination is primarily focused on the extent to which these two different measures provide us with similar or divergent pictures of how disagreement influences political behavior. In short, we question whether measurement differences are potentially the root cause of the aforementioned, inconsistent findings in the literature.

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[2] This is particularly true when we consider that most network questions on surveys solicit information on family and close friends, or people with whom we are likely biased against thinking that we "disagree" in any general sense. In other words, pressure towards believing that we are in harmonious relationships may lead to the underreporting of all but the most significant disagreements.

[3] Future work will include an analysis of the vote-difference measure (via the 2000 American National Election Study).

Disagreement and Causal Inference

Research on political disagreement is explicitly interested in its *consequences* for political behavior. However, as membership in social networks – and in particular, disagreeable exchanges – is not *forced* upon individuals, the nature of the relationships themselves are the product (to some degree) of individual choices. The implication of this is that any observed correlations between political behavior and the content of political discussions is analytically suspect; this is particularly true for cross-sectional data, where time cannot be leveraged against these processes.

Klofstad (2007) elaborates on this, noting three identification problems in social network research. The first is the problem of *selection bias*, where disagreement and discussion in networks is driven by individuals' political preferences and behaviors. The second is the problem of *reciprocal causation*, where disagreement may affect political behavior, but feedback exists those behaviors to disagreement. Finally, network researchers also have to be wary of *spurious* causation, where factors that lead to political behaviors – e.g., partisan intensity and/or educational level – also lead to the structure of a social network and certain levels of discussion.

Political scientists have adopted techniques to deal with these problems, and in the behavioral networks literature, scholars have responded with a combination of experimental design (Klofstad 2007; Nickerson 2005), and statistical techniques (Klofstad 2007). Here we employ matching (Ho et al. 2007 for a discussion) – a statistical procedure used to impose experimental control on observational data – to address several of these hurdles facing the literature. By conceptualizing disagreement as a treatment, we isolate its effects on behavioral outcomes of interest. Below we discuss the data, measures, and this methodological tack in more detail.

DATA AND METHOD

Our evidence comes from the January 2009 release of the 2008-2009 American National Election Studies (ANES) Panel Survey (ANES 2009).[4] This data set contains information collected at six different points in time over the course of the year 2008: January, February, June, September, October, and November. A nationally-representative sample of respondents was recruited to participate over the telephone, and completed each questionnaire over the Internet. Individuals without Internet access were supplied with a free web browsing device. Respondents received a $10 incentive for each completed questionnaire. Additional information on how this study was conducted is available in DeBell et al. (2009).

Independent Variables: Measure of Political Disagreement

In the September, 2008 questionnaire, respondents were asked to identify the members of their political discussion network through a "name generator" procedure (see Klofstad et al. 2009 for details on similar procedures; see Knoke and Yang 2008 for more on ego-centric data structures). Specifically, respondents were first asked, "During the last six months, did you talk with anyone face-to-face, on the phone, by email, or in any other way about government or elections, or did you not do this with anyone during the last six months?" Those responding in the affirmative (N = 1225) were asked to name up to four individuals with whom they engaged in such discussion. Respondents were then asked a series of follow-up questions about each named discussant.

We opertationalize exposure to interpersonal political disagreement in two ways. One measure is based on the respondent's perception of how much disagreement is occurring in his or her network (hereafter referred to as "perceived disagreement"). For each discussant, respondents were asked, "In general, how different are [DISCUSSANT NAME]'s opinions about government

[4] "Note that the 2008-2009 ANES Panel Study is entirely separate from the 2008 ANES Time Series study, which was conducted using the traditional ANES method of face-to-face interviews before and after the 2008 election. Although there are a few questions common to both studies, the samples and methods are different" (DeBell et al. 2009, p. 5).

and elections from your own views: extremely different, very different, moderately different, slightly different, or not at all different?" We first summed the disagreement scales for each member of the discussion network (i.e., we created a measure of the total amount of perceived disagreement in the network). The final disagreement scale is created by dividing the sum of the disagreement scales by the number of discussants mentioned by the respondent (this is done in order to make the scale comparable for respondents with differently-sized networks).

Our second measure of disagreement is based on the respondent's report of the partisan leanings of her discussants (hereafter referred to as "cross-cutting partisanship). In turn, this measure is based on the standard ANES battery of questions producing a 7-point partisanship scale runing from "Strong Democrat" to "Strong Republican." To construct this partisanship-based disagreement scale, we subtracted the mean partisanship score of the discussion network – (to get this we took the sum of the identification scores for all discussants in a network, and divided by the number of discussants mentioned by the respondent) – from the respondent's own partisanship score. Again, the mean of the network is used in order to make the scale comparable for respondents with differently sized networks. This yields a measure where both larger positive and negative numbers indicate greater levels of partisan disagreement between the respondent and his or her discussants. As such, we use the absolute value of this measure as the final scale, where higher positive values indicate greater disagreement.

Dependent Variables

In the following analyses, we examine the relationship between exposure to disagreement and a number of different measures of political preferences and behavior. Each of these dependent variable were gathered in waves of the panel survey subsequent to when the network data were collected in September, 2008. This temporal separation between the independent and dependent

variables (with disagreement measured prior to the dependent variables) increases the precision of our analysis.

Our first set of dependent variables captures the strength of respondents' political preferences. One variable measures how certain respondents were about their 2008 vote presidential vote choice in October of 2008. Respondents were first asked to predict their vote choice, after which they were asked, "How sure are you of that: extremely sure, very sure, moderate sure, slightly sure, or not sure at all?" A second variable measures the strength of respondents' partisanship in November of 2008, based on the standard ANES self-identification question that yields a 7-point scale running from "Strong Democrat" to "Strong Republican." Strength of partisanship is operationalized by "folding" the 7-point scale into a 4-point scale that runs from "Independent" to "Strong Partisan." Finally, we also examined the relationship between disagreement and strength of ideology, based on the standard ANES self-identification question that yields a 7-point scale running from "Very Liberal" to "Very Conservative." As with strength of partisanship, strength of ideology is operationalized by transforming the 7-point scale into a 4-point scale that runs from "Moderate" to "Strong Ideologue."

Our second set of dependent variables are concerned with how civically engaged respondents were during the course of the 2008 election. One measure captures media use in October, 2008 by summing the number of days per week that respondents used television, radio, the Internet and newspapers for news consumption. A second measure gauges how interested respondents were in politics during November, 2008 based on the question, "How interested are you in information about what's going on in government and politics: extremely interested, very interested, moderately interested, slightly interested, or not interested at all?" We also examine two measures of political efficacy in November of 2008. The first measures external efficacy based on the question, "How much do government officials care what people like you think: a great deal, a

lot, a moderate amount, a little, or not at all?" The second measures internal efficacy based on the question, "How much can people like you affect what the government does: a great deal, a lot, a moderate amount, a little, or not at all?"

Finally, we also examine two additional measures of political engagement and participation. The first measures how frequently respondents engaged in political discussion in November, 2008, based on the question, "During a typical week, how many days do you talk about politics with family or friends?" Unlike the more detailed discussion network questions administered in September, 2008, this variable is a much simpler indicator of how actively respondents were engaged in political dialogue. Finally, we also look at voter turnout in the 2008 election, as self-reported in the November, 2008 wave of the panel.

Method: Data Preprocessing

In order to increase the precision of our analysis, we address the analytical biases discussed above by preprocessing the ANES data with a "matching" procedure (e.g., Dunning, 2008; Ho, King and Stuart, 2007a; Ho, King and Stuart, 2007b). Under this procedure the effect of being exposed to political disagreement is more accurately measured by comparing the attitudes and behaviors of survey respondents who are similar to one another, save the fact that one was exposed to disagreement and the other was not; in other words, the idea is that the researcher imposes some degree of "experimental" control on what is observational data. By comparing the attitudes and behaviors of similar individuals who were and were not exposed to disagreement, we can be confident that any observed difference in attitudes and behaviors between them is unrelated to the factors that the respondents were matched on, and as such, is a consequence of being exposed to

disagreement instead of some confounding factor.[5] More detail on how this procedure was conducted is included in the appendix.

RESULTS[6]

Who Is Exposed to Disagreement?

Before examining the effect that disagreement might have on one's political preferences and behaviors, we first examine what types of individuals are exposed to disagreeable dialogue. Tables 1-2 present variables that correlate with exposure to disagreement in one's political discussion network; again, these were collected in waves of the ANES Panel Study that occurred *before* the network battery was administered (i.e., "pre-treatment"). Disagreement is dichotomized at the mean disagreement score, where above mean indicates a disagreeable network (the treatment) and below the mean indicates an agreeable network (the control).

[TABLE 1 ABOUT HERE]

Table 1 shows the various covariates of perceived disagreement – measured in terms of general perceived disagreement – in one's political discussion network. Specifically, the percentages demonstrate that women are less likely to be embedded in disagreeable networks than men. Individuals in disagreeable networks are less partisan/ideological, and also have weaker attitudes about the Republicans and Democrats. However, while their weaker preferences might signal

[5] Matching is less precise than a controlled experiment because the procedure does not account for unobserved differences between individuals who were and were not exposed to disagreement (e.g., Arceneaux et al. 2006). However, given the extensive set of pre-treatment covariates that were used in the matching procedure (see the appendix), it is difficult to think of any meaningful unobserved factors that are not accounted for in the analysis. Moreover, unobserved differences between individuals who did and did not engage in civic talk are likely to correlate with observed differences, and as such are accounted for by proxy in the matching procedure (Stuart and Green 2008). As such, given that a true experiment is an extremely difficult (if not impossible) research design to execute for this research question, matching (in concert with panel data) is arguably a next best alternative.

[6] All results exclude individuals who did not report having any political discussants (N = 312, or 20% of the 1567 cases in the data set).

political disengagement, individuals in disagreeable networks consume more news media, are more knowledgeable about politics, are more likely to have donated money to a political or social organization, are more likely to have attended a meeting about political or social matters, and are more likely to have recruited someone else to attend such a meeting. As such, the data suggest that individuals in disagreeable networks are more politically engaged, but more agnostic about their political leanings when compared to individuals in agreeable networks.

[TABLE 2 ABOUT HERE]

Table 2 examines the correlates of exposure to our second measure, cross-cutting partisanship. In contrast to Table 1, these data show that individuals embedded in cross-cutting discussion networks have *stronger* political preferences than individuals in agreeable networks. As in Table 1, however, these data also indicate that individuals in cross-cutting networks are more likely to have engaged in protest behaviors, and are more likely to have distributed political information. Taken together then, the results in Tables 1 and 2 suggest that individuals who are exposed to disagreement tend to be more civically engaged and active compared to individuals in more agreeable networks. However, the data also suggest that general perceived disagreement and cross-cutting partisanship are capturing *different forms of disagreement*; individuals who perceive general disagreement have weaker political preferences, while individuals who experience measures by a lack of shared partisan preferences have stronger political preferences.

The Effect of Disagreement on Political Preferences and Behavior

The remaining tables present multivariate analyses of the relationship between exposure to disagreement in one's political discussion network, and various measures of political preferences and behavior. To reduce the analytical biases described in the data and methods section, each of these analyses incorporated the matching data preprocessing procedure (again, please see the appendix for a description). The precision of the analysis is also increased by the inclusion of a number of

variables that are known to be correlated with political preferences and behavior: demographic characteristics, strength of political preferences, past patterns of political behavior, and civic engagement. Each of these variables were measured months before the data on political disagreement were collected, allowing us to assess the effect of exposure to political disagreement while controlling for "who the respondent was" – i.e., at the "pre-treatment" stage – before they were or were not exposed to disagreement.

Strength of Political Preferences

In Table 3 we begin our analysis by estimating the effect of exposure to disagreement on our measures of strength of political preferences; for each dependent variable, results are presented side-by-side for general disagreement and partisanship-based disagreement. The data in the first two columns show a positive relationship between exposure to disagreement and being uncertain about one's impending vote choice for president, regardless of which measure is used. Substantively, for example, individuals who perceived general disagreement in their social network are estimated to be thirteen percentage points less likely to "extremely" certain about their vote choice (a decrease from 72% among those who did not perceive general disagreement, to 59% among those who did so).[7] The second measure, cross-cutting partisanship, is estimated to have decreased the likelihood of a respondent being "extremely" certain about her vote choice by five percentage points (a decrease from 68% among those who are not in cross-cutting partisan networks, to 63% among those in cross-cutting networks).

[TABLE 3 ABOUT HERE]

The next four columns in Table 3 show the relationship between disagreement and strength of partisan and ideological preferences, respectively. The data show that while we cannot detect a systematic relationship between exposure to cross-cutting partisanship and strength of political

[7] All substantive interpretations of coefficients are estimated holding all other factors in the model at their means. These estimates were derived using the "setx" and "sim" procedures in the "Zelig" package for R (Imai et al. 2007a and b).

preferences, we find a significant negative relationship for perceived general disagreement.[8] Substantively, individuals who perceived general disagreement in their social network are estimated to be twelve percentage points less likely to be "strong" partisans (a decrease from 50% among those who did not perceived disagreement, to 38% among those who did perceive disagreement); they are estimated to be four percentage points less likely to be "strong" ideologues (a decrease from 20% among those who did not perceive general disagreement, to 16% among those who did perceive disagreement).

Civic Engagement

Using the same model specification presented in Table 3, Table 4 presents the estimated relationship between the two measures exposure to disagreement and various measures of civic engagement. The first two columns of the table show that while we are unable to detect a relationship between perceived general disagreement and news media usage, individuals in cross-cutting partisan networks consumed less news media on the eve of the election in October of 2008. Substantively, however, the relationship between exposure to partisan cross-pressuring and media use is quite small – individuals embedded in cross-pressured social networks only consumed six percent less media content (a decrease from a score of 15.8 on the 28-point consumption scale among those who were not cross-pressured, to a score of 14.9 for those who were cross-pressured).

[TABLE 4 ABOUT HERE]

The next two columns of Table 4 show a negative relationship between perceived general disagreement and interest in politics; we do not detect such a relationship with partisan cross-pressuring.[9] Substantively, however, the effect of perceptions of general disagreement on political interest is very meager. For example, individuals who perceived disagreement in their social network

[8] Substituting measures of partisan and ideological strength collected in October, 2008 instead of November 2008 produces comparable results, with the exception of the relationship between perceived disagreement and ideological strength; the coefficient is negative, but not statistically significant (b = -.14, s.e. = .08; p = .11).
[9] The October, 2008 measure of political interest produces comparable results.

are estimated to be only one percentage point less likely to be "extremely" or "very" interested in politics (a decrease from 76% among those who did not perceive disagreement, to 74% among those who did perceive disagreement).[10] In the last four columns we do not detect any systematic relationships between exposure to disagreement and either form of political efficacy.[11]

Political Discussion and Voter Turnout

Finally, again using the same modeling scheme, we examine the effect that political disagreement has on rates of political discussion and voter turnout. The first two columns demonstrate that perceived general disagreement predicts less frequent instances of political discussion; we do not detect a systematic relationship between partisan cross-pressure disagreement and political discussion.[12] Substantively, the relationship between perceived disagreement and political discussion is quite small. Individuals who perceived general disagreement in their social network were only five percent less talkative about politics with their friends and family (a decrease from 3.8 days per week among those who did not perceive disagreement, to 3.6 days per week among those who did perceive disagreement). Importantly, in the last two columns of Table 5 we do not detect any relationship between political disagreement and voter turnout in the 2008 election.

[TABLE 5 ABOUT HERE]

DISCUSSION AND CONCLUSION

The two measures of interpersonal disagreement from the 2008-09 ANES panel do not map perfectly onto those used by Mutz (e.g., 2006) and Huckfeldt and colleagues (e.g., 2004). However, each does capture their essential elements; the general disagreement measure shares much with the index-based approach of Mutz; the partisanship-based item is similar to the vote-based method. To

[10] If we substitute the October measure of political interest for the November, 2008 measure, the result is insignificant (b = .12, s.e. = .08; p = .13).

[11] The same is true is we use October, 2008 measures of efficacy (with the exception of the relationship between cross-pressuring partisanship and internal efficacy (b = .16, s.e. = .08; p = .05)_.

[12] The October, 2008 measure of political discussion produces comparable results for perceived disagreement, but not for partisan cross-pressuring (b = -.07, s.e. = .03; p = .03).

reiterate, we view the essential difference between these two sides as revolving around the extent to which measures of general disagreement weigh particularly intense conflicts over the more casual exchanges that are a part of many people's everyday lives.

Our initial analysis demonstrated that these measures are picking up on different processes – while the more civically engaged are more likely to experience both types of political disagreement, those individuals who are exposed to general political disagreement tend to have weaker political preferences, while those who experience partisanship-based interpersonal political disagreement tend to have stronger political preferences.

[TABLE 6 ABOUT HERE]

Moreover, as table 6 demonstrates, these two types of disagreement also have distinct effects across a range of political outcomes. Having pre-processed our data to account for a host of confounding factors – and using identical specifications for each set of models – we find that the two "treatments" do not match on direction 1/3 of the time (i.e., for 3 of 9 dependent variables); they do not match in terms of their statistical significance/insignificance over ½ of the time (i.e., for 5 of 9 models). And, even when the two measures do match in terms of directionality and statistical significance, they do not match in terms of the size of their effects. For example, we find that general disagreement has a much larger effect when it comes to decreasing vote certainty relative to partisanship-based disagreement.

One finding that is particularly noteworthy in-light of the recent debate over disagreement is the result regarding turnout in the 2008 presidential election. While Mutz (2002; 2006) argues that disagreement leads to decreased participation (through mechanisms of ambivalence and social accountability), we find no evidence of such a relationship after accounting for the factors that potentially select people into certain types of micro-social environments. Moreover, not only are the

estimates non-significant across both measures of disagreement, but we find that general disagreement predicts casting a vote, while partisanship based disagreement predicts the opposite.

Taken together, the results reaffirm that networks do produce real political effects independent of other factors. At the same time, they remind us of a fundamental lesson that has largely escaped the study of political networks: how we measure concepts matters. Different types of disagreement not only reflect different social processes (Tables 1 and 2), but appear to have different effects when it comes to individuals' political preferences, their patterns of political engagement, and their likelihoods of political participation. Disagreement does not have simple, easily characterized effects, and therefore may not be a double-edged sword for democratic practice. In turn, this suggests that our focus should not be on keeping the good parts of disagreement (i.e., those that produce tolerance) while changing or ameliorating the bad (i.e., those that suppress participation). Rather, we should modify the often-asked question of who experiences disagreement to consider who experiences what kinds of disagreement.

APPENDIX

For this analysis, a "full matching" procedure was used (Gu and Rosenbaum, 1993; Hansen 2004; Ho, King and Stuart, 2007a; Ho, King and Stuart, 2007b; Rosenbaum, 1991; Stuart and Green 2008). The procedure was conducted using the "MatchIt" package for *R* (Ho, Imai, King and Stuart, 2007a; Ho, Imai, King and Stuart, 2007b), which makes use of the "optmatch" package (Hansen, 2004). The ANES Panel Survey data set is tailor-made for matching because subjects were surveyed about various attitudes and behaviors in waves of the panel (January, February, and June, 2009) that occurred *before* they were asked about their political discussion network (September, 2009). Based on the results presented in Tables 1 and 2, each of the pre-treatment variables that correlated with a given measure of exposure to disagreement were included in the matching procedure.

The full matching procedure involved three steps. First, study subjects were classified as either having been "treated" or "untreated" with disagreement. Respondents who were exposed to an above-average amount of disagreement were classified as having been treated, while those who were exposed to a below-average amount of disagreement were classified as untreated.[13] Second, the variables included in the matching procedure were used to estimate a score of one's propensity to be exposed to disagreement (Hansen, 2004; Ho, King and Stuart, 2007a; Ho, King and Stuart, 2007b). Third, at least one untreated subject was matched to at least one treated subject based on how close the propensity scores were between treated and untreated subjects (i.e., a process of creating "subclasses," where more than one treated subject could be matched to an untreated subject, and vice-versa). Each untreated subject was only matched to one treated subject, and vice-versa (i.e., matching without replacement). Also, after a subject was initially matched he or she could have been moved and matched to a different subject before the procedure concluded in order to improve the

[13] For the average level of perceived disagreement, this resulted in the classification of 633 treated subjects, and 622 untreated subjects. For cross-cutting partisanship, this resulted in the classification of 517 treated subjects, and 738 untreated subjects.

overall similarity between the treated and untreated subjects in the data set (i.e., the process is "optimal" not "greedy").

The results of the matching procedure were incorporated into the analysis by weighting the regression models. All treated subjects were given a weight of 1. Untreated subjects were assigned a weight equal to the number of treated subjects in the subclass that they were assigned to, divided by the number of untreated subjects in the subclass that they were assigned to. For example, an untreated subject who was assigned to a subclass with 10 treated subjects and 1 untreated subject was assigned a weight of 10, while an untreated subject who was assigned to a subclass with 1 treated subject and 10 untreated subject was assigned a weight of .10. Consequently, an untreated subject who is similar to many treated subjects is given more weight in the analysis than an untreated subject who was similar to only a few treated subjects. Otherwise stated, applying this weight causes the regression models to pay more attention to untreated subjects who are similar to treated subjects, and less attention to untreated subjects who are dissimilar to treated subjects – this makes the analysis a better comparison between the treated and untreated subjects than if the data were not weighted.

Table A.1: Improvement in Balance Between Treated and Untreated Cases

	Average Perceived Disagreement	**Total Perceived Disagreement**	**Cross-Cutting Partisanship**
Overall	99.6%	99.6%	100.0%
QQ Plot Summary Statistics			
Median	95.3%	92.7%	96.7%
Mean	93.3%	91.4%	95.5%
Max	85.3%	85.6%	91.7%

Source: 2008-2009 ANES Panel Study

The results presented in Table A.1 illustrate how the matching procedure increased the similarity, or "balance" (Ho et al. 2007a and 2007b), between subjects who did and did not engage in disagreement. The first row in the table shows the overall improvement in similarity between treated

and untreated subjects, as measured by the subject's estimated propensity to be exposed to disagreement (i.e., the propensity score created by the matching procedure). Overall, the similarity in the propensity to be exposed to disagreement between the "treated" and "untreated" increased by around 100 percent as a result of the matching procedure. The remaining rows of the table show the summary statistics from "QQ plots." QQ plots are two-dimensional graphs which plot the empirical distribution of a variable among treated subjects on one axis against the empirical distribution of that same variable among untreated subjects on the other axis. The closer this plotted line is to the 45-dergee line on the graph, the closer treated and untreated subjects are to being perfectly balanced on that variable. The results in Table A.1 show that the median, mean and maximum distance of the propensity score QQ plot from the 45-degree line were all greatly improved due to the matching procedure.

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TABLES

Table 1: Who is Exposed To Disagreement? (Perceived Disagreement)			
	Type of Network (09/2008)		**Difference**
	Agreeable	*Disagreeable*	
Gender (Female)	59.9%	52.4%	-7.5% (t = 2.66, p < .01)
Strength of Partisanship (01/2008)	3.1	2.9	-.2 (t = 5.31, p < .01)
Strength of Ideology (01/2008)	2.7	2.6	-.1 (t = 2.02, p = .05)
Strength of Likes/Dislikes About Democrats (01/2008)	2.7	2.4	-.3 (t = 4.15, p = > .01)
Strength of Likes/Dislikes About Republicans (01/2008)	2.6	2.3	-.3 (t = 4.72, p = > .01)
Media Use (01/2008)	15.1	15.8	+.7 (t = -2.01, p = .05)
Political Knowledge (02/2008)	4.0	4.3	+.3 (t = -3.28, p < .01)
Has Ever Given Money to Organization Concerned with Political or Social Issue (06/2008)	62%	68%	+6% (t = -2.72, p = .08)
Has Ever Attended a Meeting About Political/Social Concerns (06/2008)	54%	61%	+7% (t = -2.72, p = .01)
Has Ever Invited Someone to a Meeting About Political/Social Concerns (06/2008)	29%	34%	+5% (t = -2.00, p = .08)
Source: 2008-2009 ANES Panel Study			

Table 2: Who is Exposed To Disagreement? (Cross-Cutting Partisanship)			
	Type of Network (09/08)		**Difference**
	Agreeable	Disagreeable	
Strength of Partisanship (01/08)	2.7	3.4	+.7 (t = -12.82, p < .01)
Strength of Ideology (01/08)	2.6	2.8	+.2 (t = -3.80, p < .01)
Strength of Likes/Dislikes About Democrats (01/08)	2.4	2.7	+.3 (t = -5.25, p = > .01)
Strength of Likes/Dislikes About Republicans (01/08)	2.3	2.6	+.3 (t = -3.88, p = > .01)
Ever Joined a Protest, Rally, Demonstration (06/08)	28%	33%	+5% (t = -1.82, p = .08)
Has Ever Distributed Political Information or Advertisements (06/08)	32%	37%	+5% (t = -1.71, p = .09)
Source: 2008-2009 ANES Panel Study			

Table 3: The Effect of Disagreement on Strength of Political Preferences						
	Vote Certainty (10/08)		**Strength of Party ID (11/08)**		**Strength of Ideology (11/08)**	
	Perceived Disagreement	X-Cutting Partisanship	Perceived Disagreement	X-Cutting Partisanship	Perceived Disagreement	X-Cutting Partisanship
Exposed to Disagreement (09/08)	-.32** (.12)	-.16* (.09)	-.21*** (.07)	.02 (.08)	-.20** (.08)	-.06 (.11)
Demographics						
Gender (Female)	.02 (.10)	.11 (.10)	.13 (.08)	.17** (.08)	-.001 (.07)	-.10 (.10)
Age	.003 (.003)	> -.001 (.003)	-.003 (.01)	-.004 (.003)	-.006 (.003)	-.003 (.004)
Race (Non-White)	.11 (.14)	-.03 (.15)	.08 (.14)	.05 (.15)	-.19 (.13)	-.19 (.17)
Education	.02 (05)	.04 (.06)	-.04 (.05)	-.04 (.05)	-.03 (.04)	-.03 (.04)
Income	-.003 (.01)	-.006 (.01)	-.01 (.01)	-.003 (.01)	.008 (.01)	.02 (.01)
Strength of Preferences (01/08)						
Strength of Partisanship	.21*** (.05)	.34*** (.05)	.87*** (.05)	.86*** (.07)	.23*** (.05)	.26*** (.06)
Strength of Ideology	.20*** (.04)	.21*** (.05)	.22*** (.05)	.21*** (.05)	.64*** (.04)	.63*** (.06)
Direction of Preferences (01/08)						
Partisanship (Democrat-Republican)	-.01 (.02)	-.005 (.02)	-.01 (.02)	-.005 (.02)	.03 (.02)	.02 (.02)
Ideology (Liberal-Conservative)	-.06*** (.02)	-.09*** (.02)	-.04 (.03)	-.04 (.02)	.05* (.02)	.04* (.02)
Past Patterns of Political Behavior						
Voted in 2004	-.23 (.19)	-.15 (.14)	.31 (.18)	.46** (.18)	.22 (.17)	.15 (.16)
Civic Engagement						
Political Interest (01/08)	.18*** (.05)	.20*** (.04)	.09* (.05)	.12* (.06)	.12*** (.04)	.10* (.05)
Political Knowledge (02/08)	.06* (.04)	.03 (.03)	-.03 (.04)	-.07 (.04)	.08* (.04)	.03 (.05)
Akaike's Information Criterion (AIC)	2644	2366	2473	2115	2773	2763
N	1225	1225	1225	1225	1225	1225

*p < .10, **p < .05, ***p < .01 (standard errors in parentheses)
Model Type: Ordered Probit (Imai et al. 2007c)
Note: Estimated cut points are not presented.
Source: 2008-2009 ANES Panel Study

Table 4: The Effect of Disagreement on Civic Engagement								
	Media Use (10/08)[a]		**Political Interest (11/08)[b]**		**External Efficacy (11/08)[b]**		**Internal Efficacy (11/08)[b]**	
	Perceived Disagreement	X-Cutting Partisanship	Perceived Disagreement	X-Cutting Partisanship	Perceived Disagreement	X-Cutting Partisanship	Perceived Disagreement	X-Cutting Partisanship
Exposed to Disagreement (09/08)	-.33 (.42)	-.90** (.36)	-.12* (.07)	-.14 (.10)	-.01 (.10)	-.01 (.08)	.01 (.07)	-.08 (.09)
Demographics								
Gender (Female)	-.48 (.39)	-.65 (.47)	.08 (.10)	.13 (.10)	.23*** (.08)	.24*** (.08)	.18** (.08)	.14** (.07)
Age	.08*** (.02)	.08*** (.01)	.01* (.003)	.01* (.003)	.001 (.002)	.002 (.002)	-.003 (.002)	-.003 (.003)
Race (Non-White)	.08 (.49)	.34 (.49)	.28** (.13)	.10 (.10)	.16* (.09)	.15 (.09)	.39*** (.10)	.42*** (.10)
Education	-.05 (.27)	-.14 (.19)	.02 (.07)	.02 (.05)	.10** (.04)	.08 (.05)	.07* (.04)	.03 (.03)
Income	.18*** (.05)	.16*** (.05)	.01 (.01)	.01 (.01)	.002 (.01)	-.01 (.01)	-.001 (.01)	-.02 (.01)
Strength of Preferences (01/08)								
Strength of Partisanship	.22 (.20)	.30 (.28)	.08 (.05)	.13*** (.05)	.10 (.05)	.14**(.06)	.09** (.04)	.08 (.06)
Strength of Ideology	-.11 (.21)	-.21 (.26)	.11*** (.04)	.10* (.06)	.03 (.04)	.01 (.04)	.06 (.05)	.04 (.04)
Direction of Preferences (01/08)								
Partisanship (Democrat-Republican)	-.07 (.10)	-.11 (.07)	-.03 (.02)	-.01 (.02)	-.002 (.02)	.002 (.02)	-.02 (.02)	-.02 (.02)
Ideology (Liberal-Conservative)	-.06 (.13)	-.14 (.10)	-.05* (.02)	-.05** (.02)	-.08 (.02)	-.08** (.03)	-.05* (.03)	-.06** (.02)
Past Patterns of Pol. Behavior								
Voted in 2004	1.24 (.88)	1.29 (.84)	.44** (.17)	.31 (.24)	.34** (.13)	.19 (.17)	.27** (.12)	.24* (.13)
Civic Engagement								
Political Interest (01/08)	1.45*** (.22)	1.42*** (.24)	.73*** (.05)	.76*** (.07)	.13** (.05)	.13*** (.04)	.22*** (.06)	.24*** (.04)
Political Knowledge (02/08)	.58*** (.14)	.64*** (.19)	.03 (.03)	.02 (.05)	.01 (.03)	.01 (.05)	-.02 (.05)	-.002 (.03)
Intercept	.47 (1.63)	1.63 (1.53)	---	---	---	---	---	---
Adjusted R^2	.21	.22	---	---	---	---	---	---
Akaike's Information Criterion	---	---	2730	2657	3173	3193	3388	3384
N	1225	1225	1225	1225	1225	1225	1225	1225

*p < .10, **p < .05, ***p < .01 (standard errors in parentheses)
Model Type: [a]Ordinary Least Squares (Imai et al. 2007d); [b]Ordered Probit (Imai et al. 2007c); [c]Poisson (Imai et al. 2007e)
Note: Estimated cut points are not presented.
Source: 2008-2009 ANES Panel Study

Table 5: The Effect of Disagreement on Political Discussion and Voter Turnout				
	Political Discussion (11/2008)[a]		**2008 Voter Turnout[b]**	
	Perceived Disagreement	X-Cutting Partisanship	Perceived Disagreement	X-Cutting Partisanship
Exposed to Disagreement (09/2008)	-.06*(.03)	-.02 (.04)	.32 (.27)	-.32 (.24)
Demographics				
Gender (Female)	.06 (.04)	.07** (.03)	.38 (.26)	.45 (.33)
Age	> .001 (.001)	> .001 (.001)	.02 (.01)	.02* (.01)
Race (Non-White)	-.01 (.06)	-.03 (.09)	-.02 (.30)	-.14 (.41)
Education	.003 (.02)	.03 (.02)	.22 (.16)	.23* (.13)
Income	.02*** (.004)	.01** (.01)	.02 (.04)	.04 (.04)
Strength of Preferences (01/2008)				
Strength of Partisanship	.02 (.02)	.07*** (.02)	.06 (.15)	.07 (.14)
Strength of Ideology	.02 (.02)	.02 (.02)	.22 (.17)	.20 (.16)
Direction of Preferences (01/2008)				
Partisanship (Democrat-Republican)	-.01* (.007)	-.01** (.01)	-.09 (.06)	-.08 (.06)
Ideology (Liberal-Conservative)	-.01 (.01)	-.01 (.01)	-.05 (.08)	-.03 (.08)
Past Patterns of Political Behavior				
Voted in 2004	.12 (.08)	.11 (.09)	2.11*** (.51)	1.79*** (.51)
Civic Engagement				
Political Interest (01/2008)	.25*** (.02)	.24*** (.04)	.21 (.14)	.30** (.13)
Political Knowledge (02/2008)	.03*** (.01)	.03 (.03)	.14* (.08)	-.02 (.10)
Intercept	-.16 (.14)	-.34** (.14)	-3.21*** (.90)	-2.82*** (.88)
Akaike's Information Criterion (AIC)	5158	5157	639	596
N	1225	1225	1225	1225

*p < .10, **p < .05, ***p < .01 (standard errors in parentheses)
Model Type: [a]Poisson (Imai et al. 2007e); [b]Logitistic (Imai et al. 2007f)
Source: 2008-2009 ANES Panel Study

Table 6: Summary of Findings by Types of Political Outcomes				
	Treatment			
Outcome	*General Political Disagreement*	*Partisanship-based Disagreement*	Directional Match?	Both Significant/ Insignificant?
Strength of Political Preferences				
Vote Certainty	Negative*	Negative*	Y	Y
Strength of Party Identification	Negative*	Positive	N	N
Strength of Ideology	Negative*	Negative	Y	N
Civic Engagement				
Media Use	Negative	Negative*	Y	N
Political Interest	Negative*	Negative	Y	N
External Efficacy	Negative	Negative	Y	Y
Internal Efficacy	Positive	Negative	N	Y
Other Participatory Activities				
Political Discussion	Negative*	Negative	Y	N
2008 Turnout	Positive	Negative	N	Y

Source: 2008-09 ANES Panel Study
Note: *=statistically significant finding
All results come from models estimated on matched data. Please see Appendix A for details.