

IS INFLUENCE MIGHTIER THAN SELECTION?

Forging agreement in discussion networks during a campaign

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Abstract

To what extent do social networks shape a person's vote choice? Using data on political networks gathered during a novel, multi-wave panel study conducted during the 2010 election cycle in the UK, we argue that although people may choose to discuss politics more often with those who hold similar political views, remaining disagreements in political discussion networks can still have a substantial impact on vote choice. Our study is the first large scale, general population sample survey to track changes in an individual's named political discussion partners over the course of an election campaign, and thus provides a unique opportunity to study the simultaneous processes of selection and influence in campaign-related political discussion. We use these data to identify two social processes at work during the 9 months prior to the election: "selection", or the likelihood that people choose discussion partners based on their political views, and "influence", the convergence of views between discussion partners. We find limited evidence that people select like-minded political discussants, but clear support for social influence on vote choice.

1 Introduction

Most people hold political views similar to those of friends and family members. In our research, survey respondents report that more than 75% of those with whom they discuss politics share the same partisan preferences, a proportion that cannot be due to chance alone. Nor is this high level of political agreement particularly surprising, given considerable evidence demonstrates that friends, family members and coworkers are likely to agree on political matters, including political partisanship (Jennings and Richard, 1981; Kenny, 1994), vote choice (Berelson, Lazarsfeld and McPhee, 1954; Huckfeldt and Sprague, 1995, 1991; Nieuwbeerta and Flap, 2000; Pattie and Johnston, 2000), and other political attitudes (Bienenstock, Bonacich and Oliver, 1990; Huckfeldt, Johnson and Sprague, 2004; Huckfeldt, Mendez and Osborn, 2004; Pattie and Johnston, 2000). The question is not *whether* people agree, it is *why* such high levels of agreement exist. More precisely stated, what mechanism(s) account for the high levels of observed political agreement: selection, influence or shared interests and preferences?

Previous attempts to address this question have often incorporated a cross-sectional sample survey design, in which main respondents are asked to give the names, political preferences, and other information about their own political discussion networks at a single point in time. Main

respondent vote choice is modelled as a function of the preferences of named political discussants, while statistically controlling for the impact of shared interests as captured by key demographic attributes and other factors relevant to vote choice. Studies of this kind, however, cannot control for the potential effects of selection: it may be that respondents have chosen to discuss politics only with others who already agree with them. Similar criticisms have also been levelled at research using aggregated contextual information to study the impact of the broader social context on individual vote choice (Huckfeldt, 1979; Pattie and Johnston, 2000).

Longitudinal survey data have proven more effective at teasing apart the impact of selection and influence, either alone or in combination with an experimental or quasi-experimental design. Klofstad (2007) finds social influence may drive increased participation among college students randomly assigned to dorms, while Nickerson (2005) finds evidence of spillover effects of voter mobilization experiments. However, neither of these studies addresses the impact of social context on partisan preferences. Two large survey studies with a panel component isolate the impact of social influence, but only amongst marital and familial dyads (Jennings and Richard, 1981; Zuckerman, Fitzgerald and Dasovic, 2005).

This paper takes advantage of a new multi-wave election study conducted during the 2010 British general election cycle as part of the Cooperative Campaign Analysis Project (CCAP). The British CCAP includes measures of vote choice and political discussion networks on four different waves of the survey conducted over a 9 month period. We use methods that allow us to isolate the dynamic impact of influence and selection during the election. We stress that our results apply only to the processes of selection and influence that operate during the campaign, and therefore undoubtedly underestimate the contribution of both processes to already high levels of political agreement in discussion networks prior to the study.

Surprisingly, we find evidence that while influence is clearly at work to actively forge agreement in discussion networks during the time of the study, respondents do not appear to actively select like-minded political discussants during the 9 month period of study. Respondents with strong partisan identities and high levels of political interest may be more likely to retain discussants with whom they agree, but this trend is balanced by respondents with weaker partisan identities and lower levels of political interest more likely to continue discussing politics with discussants who don't support the same party. Also contrary to expectations, we find that the family is an important source of persistent political disagreement. While people have more disagreements with peripheral contacts, these peripheral contacts are much more likely to drop out of the network than familial contacts. Finally, we find that political disagreement may in some cases encourage sustained interaction and political engagement, once again contrary to previous findings.

2 Reaching agreement: selection and influence

This paper focuses on two mechanisms believed to underlie the high levels of observed political agreement: selection and influence. People may *select* political discussion partners who already hold similar political views. Citizens may avoid undesirable discussants, and seek out compatible ones, in several ways. Directly, citizens may choose to associate or discuss politics only with those who share their political views. Selection of political discussants doesn't necessarily mean ending pre-existing

relationships or befriending all Liberal Democrats that one meets; it can be as simple as choosing to sit at the opposite end of the table from politically conservative Aunt Edna at family gatherings. Indirectly, people make many other choices that shape their pool of available discussants. For example, one might choose to live in a neighborhood or city with a reputation for being “conservative”, date only women who were opposed to abortion, or pursue an academic career in the hopes of spending time around other liberals.

Political agreement is not likely to be the foundation of most marriages, however, let alone most social interactions. Citizens who who don’t or can’t indirectly avoid dissent through choices of where to live and who to marry may instead try to avoid conflict by avoiding political discussion, either completely or at least with those who don’t share the same political views (Eliasoph, 1998; Fitton, 1973; Mansbridge, 1980; Ulbig and Funk, 1999). In focus groups, people have reported avoiding discussion because “people are gonna think you’re a terrible person if you don’t believe exactly what they believe” (Conover, Searing and Crewe, 2002). Selection of political discussants may be motivated by a general fear of revealing preferences to others who are not trusted: “I’m just not that brave” volunteered one participant (Conover, Searing and Crewe, 2002).

Even assuming some degree of selection of friends or discussion partners on the basis of political views, however, doesn’t preclude the possibility that people might be exposed to other views through social interaction. Relationships can rarely be turned on and off like a television, and it is much easier to change channels than to change discussion topics. As (Lazarsfeld, Berelson and Gaudet, 1968) point out, it is much easier to selectively choose media exposure on the basis of political agreement than it is to limit social relationships on the same basis, as politics often “comes up unexpectedly as a sideline or marginal topic in casual conversation.” The authors provided numerous examples of the pervasive nature of political discussion in everyday life, ranging from families influencing one another to a waitress who switched her vote after overhearing “bits of conversation that were not intended for her” (Lazarsfeld, Berelson and Gaudet, 1968, 153).

If two people do not see eye to eye on a political issue, then there is a chance that they may *influence* each other. One partner may introduce new information that serves to shape or change the other’s views. Both partners may seek a middle ground or compromise position to allow them to continue amicable discussions. Or combined social pressure may push one of the partners to a new political position even where reasoned discussion fails.

How often is observed agreement in political discussion networks the result of influence, and how often does it result from selection? In this section we outline the ways that influence and selection are expected to change agreement during the course of a single election campaign. Due to the limited time frame of the study, we cannot observe earlier events where influence and selection forged high levels of pre-existing agreement in political discussion networks. However, we can observe a series of decisions made by many individual citizens over the course of an election: decisions about both political discussion partners and partisan support. The discussion below traces the decision process of a single individual during the election, and identifies critical junctures at which we can test hypotheses derived from existing research about the mechanisms may impact individual decision-making.

2.1 Selection

Do people talk about politics to the same people throughout a campaign, or do they more actively select discussion partners from among those available? In our research, we find that people change who they talk to about politics (or at least remember talking to) fairly frequently during the course of a single election campaign. Just over half (53-59%) of the discussants named in the one survey re-appear in the following wave. What factors may affect the likelihood of retaining discussion partners for a longer period of time? People may select on political similarity, preferring to talk about politics only or primarily with those who prefer the same political party (or those whose partisan leanings are unclear.) Other aspects of the relationship, such as marital or familial ties, or shared close friends, may increase (or decrease) the likelihood of ongoing discussions.

Selection, as noted above, can consist of both direct and indirect choices that might impact political agreement. We may increase the availability of like-minded partners through choices of where to live, work or marry, and/or choose to discuss politics with the friends with whom we already agree. In the relatively short nine month campaign period under consideration, it is unlikely that many respondents are making major decisions (e.g., changing jobs, getting married) that will affect their pool of potential political discussants. Therefore, we expect that selection during a campaign will take the form of direct or active selection of discussants from amongst those available.

To identify the impact of selection on discussion networks, we will trace the hypothetical decision process of a single citizen, whom we will call Ken. Initially, Ken names up to five people with whom he discusses politics, likely the friends and family members with whom he discuss other important matters (Klofstad, McClurg and Rolfe, 2009). Ken may find that none of his discussants disagree with him, or at least that none make their agreement known. Ken may still name different people as political discussants during the next wave of the survey, but this change in discussants could not be attributed to selection on the basis of political similarity.

What will happen to Ken if he runs into conflict while discussing politics? As noted above, it is possible that he may withdraw from political discussion altogether. If he withdraws completely, we would expect to see that either he named fewer discussants on subsequent waves of the surveys, or that he failed to participate in those waves altogether. Prior research has shown that disagreement can have a demobilizing effect on political engagement (Mutz, 2002), and it stands to reason that this might extend to actively avoiding political discussion to avoid a contentious conversation. Therefore, the engagement hypothesis is: ***main respondents who experience disagreement during discussion will withdraw from political discussion or drop out of the survey.***

Alternatively, Ken may continue to discuss politics, but try to avoid the people whose views are not the same as his own. If Ken doesn't name the discussants with whom he has an acknowledged disagreement during subsequent survey waves, it may be that Ken is actively selecting for shared political views. To assess the rate of selection, we will need to compare the retention rate of politically similar discussants to those with whom the respondent does not agree. Therefore, the primary selection hypothesis is: ***main respondents will be more likely to retain agreeable discussants than disagreeable ones.***

Citizens don't only choose the people with whom they will (or won't) discuss politics, they also choose which newspapers to read, television channels to watch and political actors to believe. Active selection of political messages takes place across a range of sources, including both media messages

and political discussants. Prior research has shown people can and do actively select media sources on the basis of political agreement (Bennett and Iyengar, 2008; Iyengar and Hahn, 2009; Stroud, 2008). Citizens who are more engaged in politics, as well as those with stronger political identities, are more likely to select to receive only messages from sources with which they already agree (see also Zaller (1992)). It may be that a similar process is at work in selection of political discussion partners, with ***stronger partisans and more politically engaged subjects more likely to choose to discuss politics only with like-minded alters***. This hypothesis is a modified version of the selection hypothesis above, in which only citizens who care about politics and/or have strong political identities actively select discussants.

Political agreement is not the only factor that affects the likelihood that Ken will retain a particular discussant in his political network, as the strength or closeness of the relationship is likely to also play a significant role. Prior evidence also suggests that strong ties are more likely than weak ties to persist over time (Brewer, 2000; Marin, 2004). In particular, the roles of spouse and family member are by definition relatively stable over time, and family members are more likely to be part of a stable core discussion network (Morgan, Neal and Carder, 1997). Additionally, dyadic ties that are embedded in a larger network of joint friendships are more persistent than relationships where those involved do not share other ties in common (Burt (2000); Hammer (1979)). The relationship status hypothesis asserts that relationship status will have an independent impact on discussant retention: ***main respondents will be more likely to retain spouses, family members and other close ties as political discussants, regardless of political agreement***.

Disagreement and closeness, then, are expected to work in opposite directions; disagreement decreasing the likelihood of ongoing political discussion and closeness increasing the chances that discussion continues. But what is likely to happen when someone's spouse or sibling support a different political party? Close ties, including spouses and family members, are generally more likely to agree with the main respondent than other members of the network (Huckfeldt and Sprague, 1995; Jacobs, Lomax Cook and Delli Carpini, 2009; Mutz and Mondak, 2006; Nieuwbeerta and Flap, 2000). But when there is disagreement among spouses, family members or close friends, the opposing forces may interact in distinct ways. In statistical terms, closeness of the relationship may change not only the intercept, but also the slope of disagreement. It may be that disagreement increases discussion in close relationships, as both people try to change the other person's mind. Alternatively, it could be that disagreement in close relationships is particularly objectionable, and thus discussion is more likely to be avoided.

Existing research provides little guidance as to what we might expect in this case, and therefore we develop several hypotheses applying the guiding insight that political discussion is risky. Perceived risk of damage to the dyadic relationship, and the larger network in which it is embedded, may moderate the relationship between political disagreement and the likelihood of continuing to discuss politics.¹ Focus group participants spoke of fear of the loss of social status or the esteem of others,

¹This might be thought of as an additional test of two leading models of diffusion: "cohesion" (Coleman, Katz and Menzel, 1957) vs "structural equivalence" (Burt, 1987). The cohesion model is based on the assumption that closeness of a relationship and frequency of engagement build trust and influence, and thus we might expect that selection out of discussing politics with close friends, family members and spouses would be low because trust is generally higher (while risk is lower). Burt (1987) argues that people imitate their structurally equivalent contacts because they perceive that the act is proper for a person of their social stature. Thus, we might expect a main respondent would want to avoid discussing politics with a peer holding inappropriate views, or a peer who might think poorly of the main respondent's own views.

and the fear of having someone avoid them in other settings. Even if these negative effects do not transpire, the fear of them can be real, and might affect how people respond to disagreement. It is possible that all close relationships, including spouses, family members and close friendships, are relatively safe, in which case: ***all close relationships may encourage more frequent expression of political disagreement.***

Alternatively, it may be that close relationships are not all the same, marital relationships might be felt to be a less risky dyad within which to discuss politics. If this is the case, then disagreement in a close or safe relationships may have a different impact from disagreement in a more delicate situation. Disagreeing with spouses is likely to be comparatively safe. The relationship is highly intimate and private, and for most couples, political disagreement is likely to be one of many discussion topics characterised by conflict. In fact, politics may even be safer ground for regular debate than the typical topics of disagreement such as money, sex, housework and children (Gottman, Markman and Notarius, 1977). Couples rarely, if ever, cite political squabbles as a major cause of conflict that might lead to divorce (Gottman, Markman and Notarius, 1977). ***Political disagreement may increase the amount of political discussion between spouses***, as each tries to convince the other to see a different point of view.

Political discussion with family members carries a more moderate risk, as family members who are not living together may not have other topics that provide space for underlying conflict to spill out. On the one hand, distant family members can easily be avoided or accommodated, much like other friends. Many of us are familiar with the caricature of the uncle who spouts on and on about politics at the family Christmas gathering. But year after year, this uncle is invited back. On the other hand, parents and their adult children may gravitate towards political debates as a means of working out conflict in other areas, although there is likely to be significant variation in the stability of such relationships across the broad definition of family members. Therefore, it is possible that ***disagreement with family members may sometimes lead to reduced discussion in the future.***

Disagreement with other close ties who are neither spouse nor family member is potentially the most fraught and delicate situation. Such relationships are clearly optional, and can be ended far more easily than a marriage or a long-standing family time. It is far easier to replace a close friend than it is to replace a mother or a husband. Secondly, close ties are generally embedded within a closeknit network, with multiple shared friendships. Therefore, any fallout between close friends is unlikely to be limited to the dyad, but will spillover and potentially fracture the larger network. Thus, disagreement carries a large risk of affecting the connection between the main respondent and her other contacts as well. Therefore, ***disagreement may increase the likelihood that the main respondent and discussant in close relationships will stop discussing politics*** (although they very likely still remain friends.)

2.2 Influence

Suppose, however, that some people continue to discuss politics with those who don't hold the same political views. Discussion and engagement with diverse viewpoints opens up the possibility of influence: one person may change his or her mind as a result of new information, social pressure, imitation of peers or some other psychological mechanism associated with making conditional choices (Rolfe, 2009). Influence does not flow only from discussant to main respondent, it can also flow the

other direction with the result that one, two or all members of a social network may shift their political views. However, given that we have only limited information about the large networks within which main respondents are embedded, we will focus our discussion on situations in which the main respondent is influenced (or not) by his or her discussants rather than vice versa.

How then, might we expect political disagreement to affect the main respondent's voting intention during a campaign, and what other factors might also effect a change of voting intentions? Influence may depend less on dyadic disagreement with a single discussant, and more on the distribution of attitudes within the larger political discussion network. It could be that many people are conditionally responsive to the voting decisions of others with a majority focal point (Huckfeldt, Johnson and Sprague, 2004; Latane, 1996; Rolfe, 2009), changing views to support the political party favoured by the majority of their discussants. Or it could be that conditional responsiveness takes on a more linear form, with main respondents increasingly likely to switch vote choice as a greater proportion of their friends support a different candidate. Regardless of functional form, the influence hypothesis holds that *as disagreement in a network grows, a respondent will be more likely to change her vote choice.*

Alternatively, the likelihood of influence may not depend solely on the sheer number of discussants with whom the respondent disagrees, as it may be that disagreement with particular individuals has a disproportionate impact on vote choice. It could be that influence works through cohesion, with *respondents more likely to alter their decision as a result of disagreement with those to whom he or she is particularly close, such as spouse and family members.* Alternatively, it could be that influence works primarily through structural equivalence (Huckfeldt and Sprague, 1995; Levine, 2005), with *respondents more likely to alter their decision as a result of disagreement with structurally equivalent peers.*

Political disagreement with network members is not the only factor that may cause people to change their minds during the course of an election. Previous studies have identified two factors in particular as important: awareness and partisan strength. *Committed partisans and politically engaged citizens will be less likely to change their vote choice than those who are less politically aware or with a weaker political identity.*

3 Data and measurement

Data for the paper comes from a longitudinal panel study of the UK general population.² Six waves of surveys were administered conducted over the internet by YouGov as part of the British Cooperative Campaign Analysis Project (BCCAP) during the period before and after the British general elections held on May 6, 2010. This paper uses data gathered by the Oxford/Saïd CCAP team during the final four waves: Wave 3 held just before the party conferences (September 2009), Wave 4 (January 2010), the pre-election Wave 5 (late April 2010) and the post-election Wave 6 (early June 2010.)

In each wave, respondents were asked to provide the initials of up to five people with whom they had discussed politics in the previous month. This question (or name generator) was designed to elicit only the names recent political discussants, not a list of political discussants in general. The one month time window is smaller than that used in previous studies of political discussion, including the

²For more on the YouGov sample and procedures, see Twyman (2008). For more on the CCAP project, see Jackman and Vavreck (2010).

Comparative National Election Project, the British Election Studies, the General Social Survey, and the South Bend study. The repeated use of this name generator over a 9 month period allows us to investigate changes in political discussion partners over time. Table 1 gives an example of how the original data looks from the perspective of the main respondent who provided the initials of up to 5 discussants recorded during each wave of the survey.

Table 1: Data structure with main respondent as primary unit of analysis

Main Respondent ID	Wave 3			Wave 4		
	Discussant 1	...	Discussant 5	Discussant 1	...	Discussant 5
1	SD	...	JT	SD	...	AR
2	ML	...	PF		...	
3	HY	...		CW	...	BP

1405 respondents responded to the team portion of the initial CCAP wave, and all of those respondents were invited to participate in each of the subsequent waves included in this analysis. Not all respondents participated in every wave, and not all respondents who participated in a particular wave provided valid information about at least one discussant. 1211 respondents in at least one of the four waves, and just under a 1000 of these respondents provided network information on at least one of the waves. A total of 1042 respondents participated in at least two of the four chosen waves, almost three-quarters of whom ($n = 738$) provided valid discussant information on both of these waves.³

In order to study changes in the network, we must identify the discussants that were named more than once by a main respondent. The provided initials of discussants were matched across multiple waves of the study, and each unique discussant was identified.⁴ Thus, it is possible to trace both whether a discussant was named at a later date during the election, and how the presence of acknowledged disagreement within the dyad changes over time. The matching also allows the dataset to be transformed to focus on the dyadic relationship between main respondents and their named discussants, as indicated in Table 2. The transformed dataset includes 990 main respondents who named at least one discussant, 885 of whom participated in at least two waves and 738 of whom named discussants in at least two of the four waves. Main respondents participating in at least two waves named an average of 6.8 unique discussants, for a total of over 5000 unique dyads recorded.⁵

Acknowledged disagreement

After naming up to five discussants, respondents were then asked to indicate characteristics of the discussants, including whether their discussants are “likely to vote for a different political party.” Unlike the other large-scale surveys mentioned above, main respondents were not asked to indicate specifically which party or candidate is supported by the named discussant. This procedure was intended to significantly reduce respondent burden (Rolfe, 2010),⁶ and is less error-prone than the traditional approach. On one prior study, respondents failed to correctly identify the partisanship of more than 30% of named discussants (Huckfeldt and Sprague, 1987). However, the mistakes were almost exclusively one-sided: respondents made overly optimistic assessments of how likely their

³Note: $n = 468$ respondents participated in three waves, and $n = 180$ participated in all four waves.

⁴These matches were reviewed carefully, with the final match taking into account inconsistent use of initials or capitalization (e.g., J.S. vs jbs) and inalterable characteristics of the discussants (e.g., female, family member, foreign-born).

⁵5797 unique dyads altogether, 5418 involve respondents who participated on two or more survey waves, and 5012 involved respondents who named discussants on two or more waves.

⁶It was quite successful in this respect, reducing the time required to provide basic political discussion network information from around 15 minutes to around 90 seconds on average.

Table 2: Data structure with discussion dyad as primary unit of analysis

Discussant name	Main Respondent ID	Appears in wave 3	Appears in wave 4
SD	1	yes	yes
JT	1	yes	no
AR	1	no	yes
ML	2	yes	no
PF	2	yes	no
HY	3	yes	no
CW	3	no	yes
BP	3	no	yes

discussants were to support the same political party, but almost never reported that discussants with similar preferences actually preferred a different party. Thus, our measure asks only about disagreement, which respondents do not over-estimate, but does not distinguish between agreement and uncertainty, as respondents themselves often mistakenly assume agreement when they are uncertain.

Another point to note is that the rate of acknowledged disagreement is expected to increase closer to the election, as political discussion increases and party preferences solidify. Thus, aggregate levels of acknowledged disagreement observed at a point in time are not particularly informative about the relative impact of selection and influence. Increased awareness of disagreement works against selection and influence, with the net result being that acknowledged disagreement levels on average vary little over the course of the campaign. In line with previous research (Huckfeldt, Johnson and Sprague, 2004), we find that disagreement in discussion networks does not decrease during the campaign, but characterizes between 20 and 24% of all dyads reported on each of the survey waves. The postelection wave actually has the highest level of acknowledged political disagreement. This does not mean that influence and selection are not occurring. It more likely means that there are oppositional processes at work that mask the effect of influence and selection.⁷ These countervailing trends highlight the importance of using the correct techniques and model to parse out the effects of selection and influence during the campaign, a point to which we return repeatedly later in the paper.

Relationship with discussants

Respondents are also asked to indicate whether the discussant is a spouse, a family member, or a close friend of someone else on the list.⁸ The spouse and family member designations are coded as either 1 (the discussant is a spouse, or the discussant is a family member) or 0. The designation of a “close friend of someone else on the list” might indicate that the relationship between the respondent and named alter is particularly cohesive, as it is embedded in a larger network of ties Hammer (1979). It might also indicate that the two individuals are structurally equivalent, or are friends with the same people. As noted earlier, it is difficult to disentangle the concepts of cohesion and structural equivalence in an egocentric network, and thus we use indicators of all three types of close relationships: marital, familial, and embedded friendships. All three relationship variables were coded as mutually exclusive (i.e., spouses are not also family members, and neither spouses nor family members are coded as close friends.)

⁷A re-analysis of Huckfeldt, Johnson and Sprague (2004)’s results using an alternative method reveals an aggregate decrease in disagreement over time (Bello, 2011)

⁸13% of the discussants are spouses, 28% are other family members, and 18% are good friends with someone else on the list.

Main respondent characteristics

Finally, the data contain important measures of main respondent characteristics collected as part of the study. Main respondent vote choice is measured on each wave of the survey, with respondents asked to indicate which party they plan to vote for in the coming election. Respondents who had not yet made up their mind were asked if they were leaning towards a particular party, and this information was also incorporated into the vote choice variable.

The binary distinction between respondents who had already decided which party they would support and those who were merely leaning towards a party is used as the basic measure of political identity strength. Two additional measures of strength of political identity were also collected and used in robustness tests: strength of their partisan identification (recorded on a three point scale), and a folded ideology scale (with 5 as extreme liberal or conservative, and 0 as middle of the scale) Iyengar and Hahn (2009). Both have been used in prior research, but the latter may not translate to the multi-party European context.

Political engagement, like strength of political identity, may affect both selection and influence. Previous studies of similar topics have employed a variety of measures for this construct, including education, political interest, political knowledge, and media use. While it is not appropriate to use more than one of these indicators for a single estimate, all are available in the CCAP data. Not all questions were asked on all survey waves. To maximize variation and minimize missing data, we use as a primary measure on average of political interest rated by the respondent on a four point scale; a question asked on all waves of the survey. Other measures of political engagement are used only for tests of model robustness.

Finally, we control for the mechanical effects of participation and network size at the individual level. Some respondents do not name any discussants on a given wave, although this may not be an accurate indication of whether the respondent discussed politics in the previous month (Bearman and Parigi, 2004) Additionally, the average number of discussants named in each wave may affect the likelihood that a discussant is retained in the network. It may be that a discussant named by someone with a larger network has a greater chance of re-appearing simply by chance. Alternatively, it could be that people with larger networks are more likely to forget alters (Brewer, 2000).

Methods

The analysis of the data proceeds in three steps. First, we use a combination of descriptive statistics and standard multiple regression (i.e., logistic regression with non-participation as the dependent variable) to assess whether respondents who disagree with their discussants are more likely to withdraw from political engagement, either by reducing their reported number of political discussants or by dropping out of the survey altogether. This step also allows us to make an informed assessment of whether survey attrition (or drop-out) is non-random in a way that is likely to bias our other results, and informs our treatment of attrition in the remainder of the analysis.

Next, we assess the various selection hypotheses described above. Selection of political discussants may take place in many ways, but our focus is on the active selection of political discussants during the campaign season. Following Snijders and Bosker (1999), we investigate change in ties within personal networks; in particular whether a discussant named by a respondent during one wave of the survey is named in one or more subsequent waves. Analysis of the selection process uses a transformed dataset where the unit of analysis is a unique discussant/respondent dyad, as described

in Table 2 above.⁹ The analysis follows the multilevel or hierarchical modeling strategy (Snijders and Bosker, 1999), nesting discussants (or dyads) within main respondents to account for respondent-level variation in the likelihood of renaming discussants on multiple survey waves. The persistence of dyadic ties (i.e., whether or not a discussant is named again on a later wave) is a binary variable, which we model using logistic regression (Feld, Sutor and Hoegh, 2007).

Finally, a mixed effects logistic regression is used to assess the influence hypotheses, with changes in vote choice from one survey wave to the next as the dependent variable. The influence test follows Kenny (1998) in using vote choice as a proxy for social influence, but his analysis was limited to two points in time. Our data, however, have a more complicated structure as respondents are asked about both discussants and vote choice at up to 4 different points in time.

To understand our approach and how it differs from prior research, it is useful to consider the hypothetical networks of main respondent, Ken. Ken’s networks appear in Figure 1, with dark circles representing friends of one party (e.g. Labour) and white circles represent friends who support a different party (e.g. Conservative). Thick lines between the individuals represents political agreement, while thin lines represent disagreement. The percentage of thick lines is the percentage of agreement in the network. Ken starts out as a Labour supporter, and three-fifths of his network concur. This means Ken agrees with 60% of his network. In Wave 4, Joe and Vince change their support to the Conservative party. Now Ken agrees with just one of the five discussants, Ben. In the final wave, Ken changes his support to Conservative, meaning that now he agrees with 80 per cent of his discussants—Ben is the sole remaining supporter of the Labour party in Ken’s network.

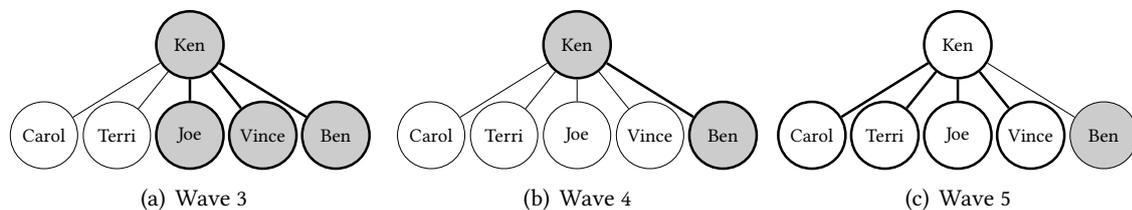


Figure 1: Sample vote choice distribution in a network at three time points

What happens to disagreement in Ken’s network from wave to wave and how do these changes relate to Ken’s own vote switch from wave 4 to wave 5? Let’s simply walk through what we observed. Ken reports 40% disagreement in wave 3 ($t = 1$), 80% disagreement in wave 4 ($t = 2$), and only 20% disagreement in wave 5 ($t = 3$). His vote choice does not change between waves 3 and 4, but does change between waves 4 and 5.

In our models of social influence, the dependent variable is whether the main respondent’s vote choice in the present (time t) differs from that provided on the previous wave ($t - 1$). This model isolates information from two subsequent waves of the survey, and allows us to assess whether disagreement in one wave ($t - 1$) predicts a vote change on the following wave. Ken’s record would consist of two unique observations: the first using disagreement from wave 3 to predict vote change between waves 3 and 4, and the second using disagreement from wave 4 to predict vote change between waves 4 and 5. In the example above, we can see that Ken did not change his vote when the majority of his network agreed with him, but changed it when faced with broad disagreement.

⁹Discussants who are named in the final wave and discussants named by main respondents who only participate in one wave of the survey have no opportunity to appear at least twice, and are therefore excluded from the analysis.

Thus, our approach is similar to previous research (Huckfeldt and Sprague, 1995; Kenny, 1998) in focusing on changes between only two points in time, but allows us to control for other unobserved sources of individual variation in the propensity to switch parties.

Looking only at change in vote choice within subjects (instead of differences in party preference between subjects) eliminates many issues that might arise when using cross-sectional panel data, particularly as we look only at the binary outcome of vote switching instead of transitions to and from one party choice to another Jackman and Vavreck (2010). However, there may still be some unobserved factors that make some main respondents more likely to switch parties than others, and we therefore include a term for random effects associated with each respondent. There may also be unobserved factors that make all respondents more likely to change their mind at certain points in the election. Therefore, we directly incorporate the impact of time by including fixed effects for each panel wave.¹⁰

4 Results: Engagement (Dropout and Network Size)

It may be that main respondents who experience political disagreement during political discussion do not merely choose to avoid future conversations with particular discussants, but instead stop discussing politics altogether. Previous work suggests that political conflict may have a more generally depressing impact on political engagement and subsequent willingness to discuss politics with anyone (Mutz, 2002). If conflict drives political disengagement, by increasing either the likelihood of survey attrition or the likelihood of naming fewer discussants in the future, any estimates of the impact of disagreement on selection and influence may be biased. Non-random survey dropout (including intermittent cases where respondents later return to the panel) is one of the most significant threats to the use of panel data, although we find no evidence that non-random is likely to be an issue in the remainder of the analysis.

Figure 2(a) provides some basic insight into the process, describing the distribution of respondents who disengage (either by dropping out of the survey or naming fewer discussants) conditional on the amount of political disagreement they reported in the previous wave (none, low or high).¹¹ Based on respondent-level data, suggests that respondent engagement is affected by the experience of political disagreement with discussion partners, but that the the impact does not run in the expected direction, nor is the impact necessarily linear.

Respondents who report no political disagreement with their discussants are on average almost 50% (9 percentage points) more likely to name fewer discussants on the following wave than those who experience high levels of political disagreement. In other words, disagreement can encourage sustained political discussion instead of discouraging it. Respondents who experience only moderate levels of acknowledged disagreement (less than half of named discussants), are less likely than those who experience either no or high levels of disagreement to name more discussants in the following

¹⁰Although it is possible that there is a time trend, linear or otherwise, we had observations from only a few points in time and therefore the categorical approach is more suitable. Including a linear time trend decreases the explanatory power of the model, and treating survey wave as a fixed category outperforms a crossed random effects model with both survey wave and respondent.

¹¹This measure is computed as the number of discussants who disagree divided by the total number of discussants named on the prior wave. Respondents who name no discussants or report that no discussants disagree fall into the category *none*, Rs who report that half or fewer of their discussants disagree are in the category *some*, while the remainder of Rs are coded as experiencing *high* disagreement.

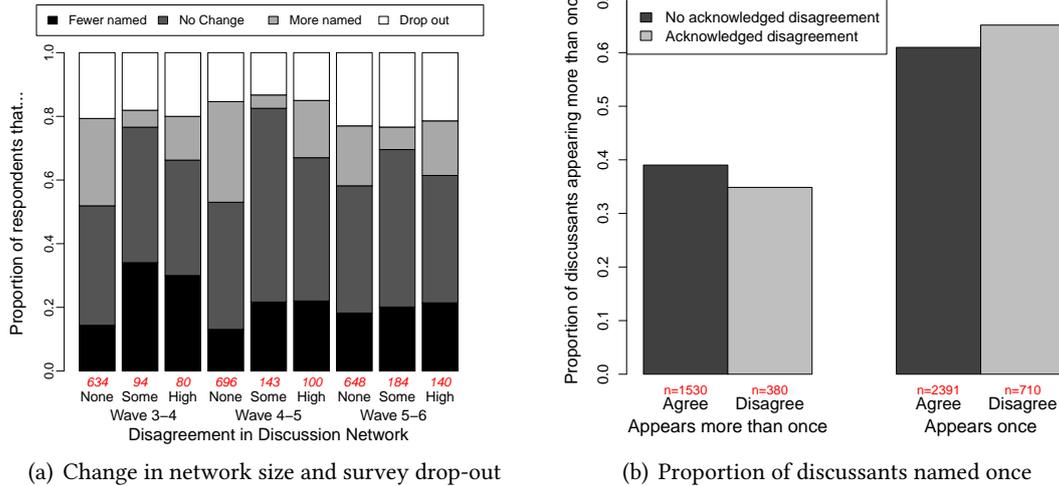


Figure 2: The impact of disagreement on network size, attrition, and discussant retention

wave of the survey. Thus, it would appear in the simple bivariate analysis that high levels of political disagreement actually encourage discussion relative to purely consensual political contexts, although there is a non-linear trend and there may be a slight negative impact of more moderate levels of disagreement.

Also reported in Figure 2(a), it is very easy to see that disagreement has no significant impact on survey drop out rate. Drop out (including intermittent drop-out) rates are relatively steady at around 20% across all levels of reported political disagreement and on all survey waves. YouGov works hard to recruit intermittent drop-outs back into the panel for future waves, a practice that was largely successful and that may contribute to the lack of a relationship between disagreement and future survey participation.

No relationship between disagreement and engagement can be found even in more rigorous multivariate tests including controls for other factors such as political interest, strength of partisanship and demographics such as gender, age and education. There is some evidence that attrition may be conditional on strength of political identity, as leaners are more likely to dropout of one or more survey waves although the difference is only marginally significant (p 0.10). However, the substantive impact of identity strength is relatively small, with 42% of non-participants having reported that they were only leaning towards a party in the previous round, compared to 37% of respondents who did return for the following wave.

Finally, we checked for systematic differences in our ability to predict selection and influence (as described in the following sections) between respondents who failed to participate in the following survey wave and those who continued to take part. We could find no difference in the average residuals between the two groups of respondents, further confirmation that estimates of the social selection and influence process are unlikely to be biased by panel attrition.

5 Results: Selection

Having seen that political disagreement does not have a negative impact on the main respondent's level of political engagement (and may even have a positive impact on discussion network size),

we move on to consider selection, or the impact of political disagreement on the likelihood that a particular discussant is named on a later wave of the survey. Figure 2(b) provides basic statistics showing the initial likelihood that a discussant has an acknowledged partisan difference, and conditional on (dis)agreement, the probability that a discussant will be named more than once. Over three-quarters of discussants do not have acknowledged disagreement with the main respondent, and just under half of those (49%) are named as a discussant at a later date. The smaller number (22%) of discussants who are initially acknowledged as having a different partisan preference are slightly less likely to be named at a later date (63%), although this difference is only borderline statistically significant. Thus, initial analysis suggests that respondents do actively select discussants who do not disagree with them during a campaign, although the impact is relatively small, and unlikely to survive once we control for the nature of the relationship between respondent and discussant.

However, there may be additional differences that contribute to this observed pattern. Perhaps discussants who disagree with the main respondents are less likely to be close friends, and therefore less likely to be named in the future because they are not as close to the main respondent. Or perhaps main respondents whose friends and family disagreed with them simply dropped out of the survey, and thus had fewer opportunities to name their discussants on other waves of the study. To control for these other explanations, we first transform the basic discussant dataset to align information on whether the dyad appears at each of three time period, t , (i.e., waves 4, 5 and 6) with information about whether dyadic disagreement was acknowledged during the previous time period, $t - 1$ (i.e., waves 3, 4 and 5). We then use a multilevel modelling strategy to account for characteristics of the dyadic relationship and attributes of the main respondent (de Miguel Luken and Tranmer, 2010; Lubbers, Molina, Lerner, Brandes, Ávila and McCarty, 2010; Snijders and Bosker, 1999). Results appear in Table 3.

The first column of Table 3 presents results from the basic model involving no interactions. As expected, political discussion with spouses and family members is less likely to be ended than discussion with other friends, even close friendships. None of the political indicators, including dyadic disagreement, had any discernible effect on the likelihood of naming a political discussant again on the subsequent wave of the survey however. While it is surprising to see so little evidence of selection, this may be attributable to the relatively close nature of the relationships involved. It may also be due to the fact that selection, even if strong, is expected to be a rare event. We only expect selection to occur in new relations, or when a new disagreement becomes salient in an existing relationship. In this way, we can think as networks being close to an equilibrium at any point. When it is disrupted by small shocks like new relationships, selection can re-equilibrate the network. Therefore, we must focus in on cases where selection is less likely to be such a rare phenomenon. We propose to take a close look at the interactions of disagreement with both political and relationship variables to see if there are some situations in which selection may be at work.

The middle column of the table models the interaction between relationship status and disagreement. Are respondents more or less likely to continue discussing politics with spouses, family members and close friends with whom they disagree? For the first time, political disagreement does have a significant impact on the likelihood of selection, but in one case it is in the wrong direction. Instead of dropping all discussants with different partisan preferences, respondents clearly discriminate among discussants based on the nature of their relationship. Respondents are more likely

Table 3: Effect of disagreement on the likelihood of repeated presence in the network

	No interactions		Dyad interactions		Political interactions	
	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
Relationship variables						
Spouse	2.082*	(0.131)	2.027*	(0.139)	2.037*	(0.14)
Family	0.919*	(0.092)	0.996*	(0.105)	0.997*	(0.105)
Friend of others	0.228*	(0.108)	0.279*	(0.125)	0.271*	(0.126)
Dyadic disagreement	-0.062	(0.093)	0.038	(0.137)	0.513 ⁺	(0.299)
Main respondent attributes						
Political interest	0.005	(0.156)	-0.002	(0.156)	0.147	(0.172)
Party strength (weak)	(Omitted)		(Omitted)		(Omitted)	
Party strength (moderate)	0.015	(0.091)	0.021	(0.091)	-0.087	(0.102)
Party strength (strong)	-0.025	(0.156)	-0.025	(0.156)	0.009	(0.173)
Relationship interactions						
Spouse*Disagreement			0.718 ⁺	(0.427)	0.764 ⁺	(0.428)
Family*Disagreement			-0.373 ⁺	(0.22)	-0.353	(0.22)
Friend of others*Disagreement			-0.2	(0.242)	-0.21	(0.243)
Political interactions						
Political interest*Disagreement					-0.849*	(0.358)
Party strength (moderate)*Disagreement					0.536*	(0.207)
Party strength (strong)*Disagreement					-0.183	(0.355)
Controls						
First wave discussant appears	-0.544*	(0.05)	-0.543*	(0.05)	-0.546*	(0.05)
Ave. number of discussants named per wave	0.39*	(0.036)	0.392*	(0.036)	0.397*	(0.036)
Total waves main respondent participates in	0.261*	(0.059)	0.263*	(0.059)	0.257*	(0.06)
Constant	-0.915*	(0.352)	-0.955*	(0.352)	-1.016*	(0.356)
Dyads	3649		3649		3649	
Main respondents	723		723		723	
AIC	4414		4413		4406	

⁺ Significant at the 90% level

*Significant at the 95% level

to continue discussing politics with spouses who hold different political views when compared to spouses who hold the same view. Spouses who do not support different parties are expected to re-appear in the network 80% of the time, while those who disagree with their partners are named again 93% of the time. The substantive impact of relationship status on the possibility of retention is graphically presented in Figure 3, based on predicted probabilities from the third and final selection model

Respondents are less like to continue discussing politics with other family members who support an opposing party, but the substantive impact is small: 58% of family members with an acknowledged disagreement are retained vs 61% of those who agree. The estimated substantive impact of disagreement within close relationship is about twice as large as that for family members (40% vs. 47%), however the impact is not statistically significant even in a relatively large sample. This suggests that respondents may not respond as uniformly to disagreement in close friendships; with some respondents treating close friends more like partners and others responding as if disagreement with close friends was more like disagreement with family members. Overall, it appears that respondents continue to discuss politics with close friends, spouses and family members, regardless of whether or not they disagree with them. Optimistically, this suggests that people may enjoy and pursue political discussion involving disagreement when it is a relatively safe topic of conversation.

The final column of of Table 3 presents results from a model involving political interactions, with the substantive effects appearing in Figure 3. Are respondents who are more political engaged or

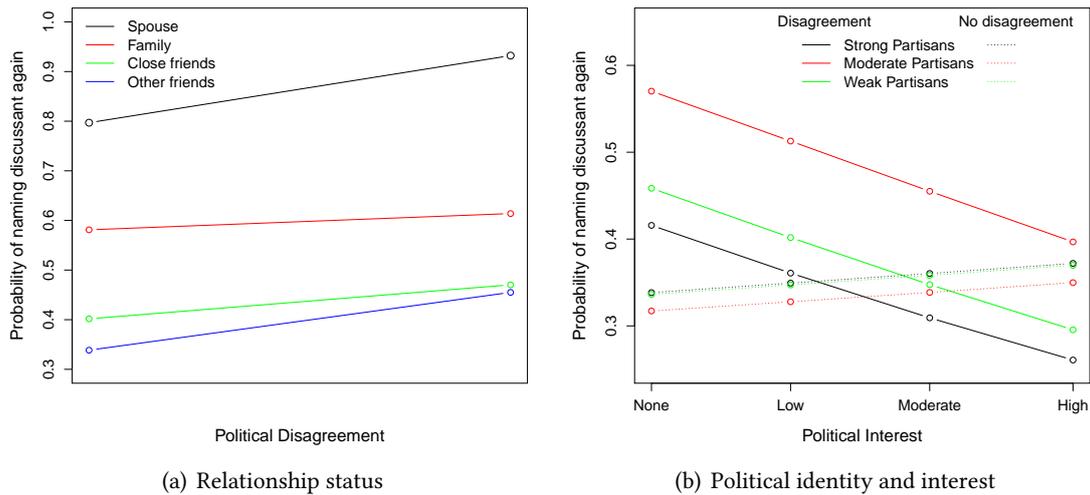


Figure 3: Impact of relationship status and individual political attributes on discussant retention

committed more willing and able to select like-minded discussants? The answer is a fairly strong yes: strong partisans with high levels of political interest are more likely to retain political discussants with whom they agree. On their own, political engagement and political identity strength continue to have no independent impact on the likelihood of retaining discussants. However, both political attributes of the main respondent work in combination to affect the selection of discussants based on whether or not they disagree with the main respondent.

The impact of the most potent combination in favour of selection is fairly substantial: a strong partisan with high political interest who disagrees with a weak-tie discussant is predicted to have a 26% chance of naming that discussant later, as compared to a 38% chance if he or she did not acknowledge a disagreement with the same discussant. At last, we find clear evidence that people do select discussants based on political preferences. However, there is a major caveat: not all respondents select for political agreement. Instead, many respondents appear to select for political disagreement, and are actually more likely to retain discussants with whom they disagree. Fairly strong (moderate) partisan supporters are more likely to retain discussants with whom they disagree. Moderate partisans with no or low political interest are estimated to be almost twice as likely to retain a discussant with whom they disagree as opposed to one with whom they agree (57% vs. 32% and 51% vs. 33%).

Overall, we find some evidence of selection, but our analysis reaffirms the need for additional work in this area. More broadly, these findings call into question previous work finding that disagreement is most common among peripheral contacts, like co-workers (Mutz and Mondak, 2006). Faas and Schmitt-Beck (2010, 110) concludes:

By discussing politics with family or friends, people can weave themselves into a protective cocoon where their views tend to be confirmed rather than challenged. Quite the contrary is the case for secondary relations: discussing politics more often with co-workers or neighbors leads to intensified experiences of disagreement.

Strictly speaking, these claims are true. At any given moment, people are more likely to agree with close friends and family than with more peripheral contacts. But a single snapshot of political discussion obscures the nature of political discussion over time, and the important role played by core

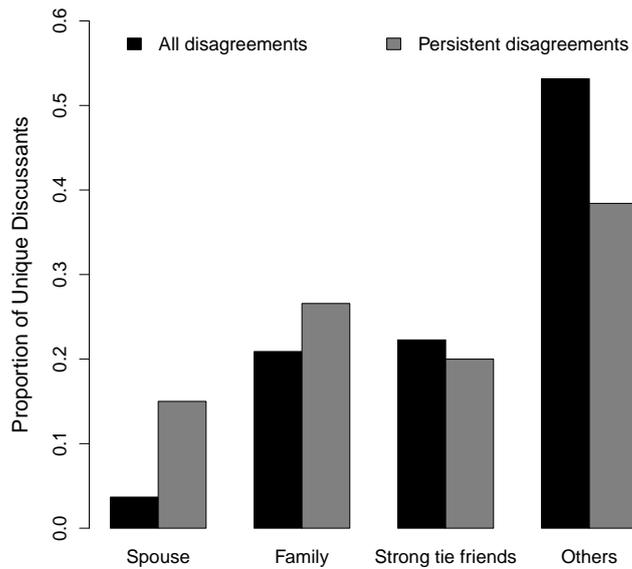


Figure 4: Sources of overall and persistent disagreement in political discussion networks

network members in the maintenance of democratic diversity and disagreement. Close friends and family are the overwhelming source of *persistent* disagreement in political networks. Even though family members are less likely to disagree, they are more likely to re-appear in the network over time.

Figure 4 breaks down sources of disagreement among all discussants named at least once, and compares this to sources of disagreement among discussants who are named more than once. Non-family contacts make up 70% of unique discussants who disagree with the main respondent, and weak tie friendships comprise almost half of all discussants with an acknowledged disagreement. Now, compare this to the sources of persistent disagreement, or disagreement with contacts that appear in the discussion network more than once. Family contacts are the single largest source of persistent disagreement, with the combined categories of spouse and family comprising over 40% of discussants who disagree with the respondent yet are still named more than once. Spouses comprise only 7% of all discussants who disagree at any given point, but over 15% of persistent discussants who disagree with the main respondent. Meanwhile, weak tie friendships are the source of persistent disagreements in less than 40% of all cases, largely because weak ties are less likely to be retained as active political discussants.

6 Results: Influence

Moving on, we consider what happens to main respondents who are exposed to political disagreement: does exposure to disagreement increase the chances of the main respondent changing his or her vote choice? If respondents who are exposed to disagreement are more likely to switch parties, all else being equal, this would substantiate claims that friends and family members may influence each other's political choices. Our analysis of the influence process uses the dataset where the unit of analysis is a single main respondent interviewed on more than one occasion, as described in Table 1 above.¹² These data are then transformed to align the party choice of the respondent at time t (waves

¹²Main respondents who only participate in one wave of the survey have no opportunity to change their mind and are therefore excluded from the analysis.

4, 5 and 6), with respondent party choice, network disagreement and political identity strength at time $t - 1$ (waves 3, 4 and 5).¹³

Are respondent's who report that they disagree with one or more of their discussants more likely to change their vote choice at a later point in time? Approximately 1 in 4 respondents changed their vote choice during the study.¹⁴ Respondents who reported at least some disagreement in their political networks at any point in time were more likely to switch party than those who never reported any disagreement (28% vs. 21.5%). However, this statistic does not take into account the temporal nature of social influence, as influence requires that disagreement come before vote change and not after.

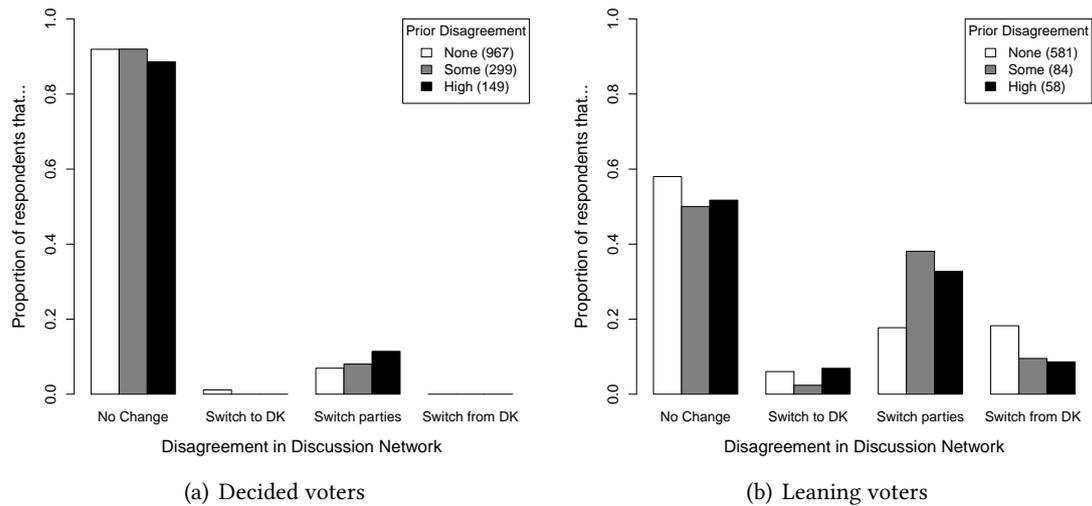


Figure 5: Change in respondent vote choice following experience of disagreement

The temporal nature of influence is partially addressed by Figure 5, describing what proportion of respondents change their vote between one wave (at time t) and the following wave (at time $t + 1$), dependent on the number of discussants they named with whom they had an acknowledged disagreement in the first time period (t). As can be seen, respondents who claim to have already decided who they will support in the election are less likely to change their minds than respondents who indicate they are merely leaning towards one party or the other. Nonetheless, even decided voters are more likely to change their vote choice when facing high levels of political disagreement, while leaning voters facing both moderate and high levels of disagreement are more likely to switch parties. On average across both decided and leaning voters, respondents who report high levels of disagreement with their discussants are significantly more likely to switch party choice in the following period than respondents who report no disagreement with their discussants (11% vs. 16%). Also noteworthy is the fact that indecisive respondents (i.e., those who do not indicate which party they are leaning towards) who do not disagree with any of their discussants are more likely than those who do not agree with one or more of their discussants to have made a definite party choice by the next survey wave.

¹³All results were also checked for robustness to inclusion of respondents who intermittently dropped out of Wave 4 or Wave 5 and then returned the following wave are also included, with change assessed between the two waves participated in (i.e., changes between Waves 3 and 5 or Waves 4 and 6.)

¹⁴Including only respondents who participate in at least two waves of the survey; party switchers are those who indicate an intention to vote for a particular party, or who indicate that they are leaning towards a particular party, and later indicate a different party.

Table 4: Models of Party Switching

	Test 1		Test 2		Test 3	
	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
Main respondent attributes						
Political interest	1.15*	(0.48)	0.82 ⁺	(0.47)	0.50	(0.52)
Leaning voter	1.78**	(0.22)	1.74**	(0.22)	1.57**	(0.25)
Political network attributes						
Prior wave network disagreement (0-1)			2.72*	(1.12)	0.38	(1.77)
Prior wave network disagreement ²			-2.58*	(1.27)	-2.75*	(1.32)
Interaction terms						
Interest * Disagreement					2.88	(1.85)
Leaner * Disagreement					1.11	(0.72)
Survey Wave						
Wave 5 Pre-Election	0.61**	(0.22)	0.65**	(0.22)	0.66**	(0.22)
Wave 6 Post-Election	0.60*	(0.24)	0.59*	(0.24)	0.59*	(0.25)
Constant	-5.06**	(0.40)	-4.92**	(0.38)	-4.72**	(0.41)
Random Effects						
	Std. Dev.	Std. Error	Std. Dev.	Std. Error		
Main Respondents	4.29	2.07	3.75	1.94	4.2	2.00
	<i>n</i> =961		<i>n</i> =957		<i>n</i> =957	
AIC	1460		1438		1437	
<i>n</i>	2152		2128		2128	

⁺Significant at the 90% level

*Significant at the 95% level

**Significant at the 99% level

This simple relationship may be misleading, however, as it does not take into account other factors such as political engagement and political identity strength that may also affect the likelihood that a respondent changes his or vote choice prior to the election. Table 4 provides estimates of three versions of the social influence model controlling for other factors that may be important. The first model, in the far left column, simply confirms that the typical predictors of vote switching do perform as expected. Committed partisans are far less likely to switch their vote choice than respondents who are only leaning towards a particular party. After taking political identity strength into account, however, political engagement increases (rather than decreases) the probability that a respondent will support a different party on the next wave of the survey.

Does political discussion also impact vote choice, with disagreement increasing the probability of switching parties? The middle column of Table 4 addresses this question, incorporating a non-linear specification of prior wave network disagreement. Respondents who report having one or more discussants who hold different partisan preferences on one wave of the survey are clearly more likely to switch the vote choice by the next wave of the survey. This effect is not a strictly linear response to the proportion of discussants who disagree with the respondent, but peaks around the majority focal point of 50% disagreement.¹⁵

Are some respondents more resistant to influence than others, or does disagreement affect all respondents in the same way? This question is taken up by the third model in Table 4, and the answer is a resounding yes. The third model incorporates interaction terms between political disagreement and political engagement and identity commitment, and both interaction terms are positive. Politically engaged respondents are more likely to shift their party choice in response to disagreement with discussants than those who are less interested in politics. Furthermore, less politically committed

¹⁵Comparisons of the two disagreement response functions confirm that that the non-linear specification is preferable.

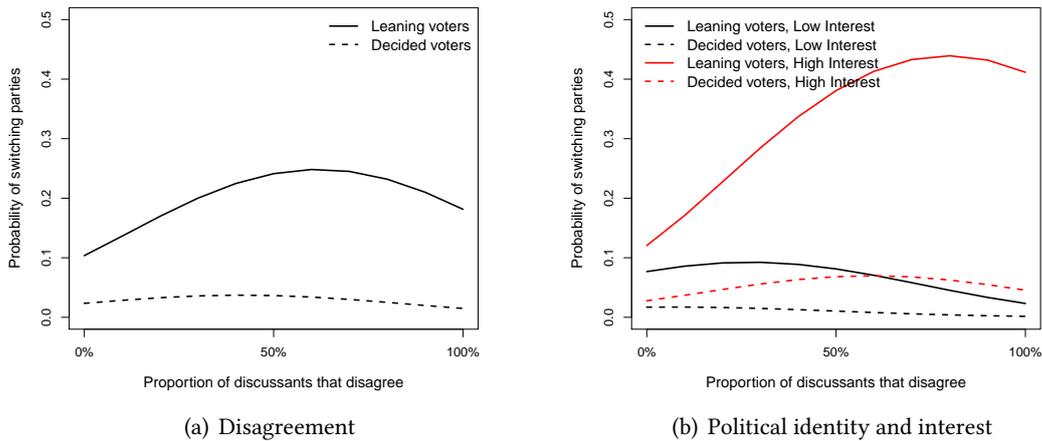


Figure 6: Impact of disagreement and individual political attributes on vote switching

respondents who are only leaning one direction or the other are also more influenced by their discussants than stronger partisans. Disagreement actually strengthens the resolve of respondents who are strongly committed to their party of choice, or those who are not particularly interested in politics anyway. Political interest no longer has a significant independent impact on party switching once we account for how interest mediates the impact of social influence and disagreement.

These results are strong support for the operation of social influence on political attitudes and vote choice, even during the short time span of the 9 month period leading up to an election. The experience of disagreement in political discussion networks drives some people to change their views to eliminate that disagreement. The social influence process can be observed even after accounting for the main respondent's own level of political engagement and commitment, and is particularly strong among those with less firm political identities and high levels of political interest.

7 Conclusion

When we started this paper, we expected to find that both selection and influence contributed to forging agreement during the months prior to an election. We were aware from the beginning that our exclusive focus on the dynamic operation of influence and selection during the 9 month period prior to an election was likely to vastly underestimate the prevalence of both processes in the co-evolution of political opinions and political discussion networks. Nonetheless, the results in this paper have surprised us, and call into question several aspects of the conventional wisdom about political disagreement, selection and influence.

We expected to find that selection and influence were both contributing to agreement in political discussion networks, but were able to find at best limited evidence that people selected discussion partners based on political preferences. Using a novel data collection, we were able to isolate the process of social influence on vote choice, and confirmed that people can influence each other during the campaign season. These data were also used to isolate the process of selection of like-minded discussants (Ulbig and Funk, 1999), but the results were quite unexpected. People did not choose political discussion partners based on political considerations, they instead chose to discuss politics

more frequently with their spouses, close friends and family members.

Strikingly, we found that political disagreement within some close relationships actually encouraged sustained political discussion instead of squelching it. As a result, spouses and family members contribute far more to exposure to sustained disagreement with political discussants than would be suggested by a cross-sectional survey. Workplace discussion may be the most frequent source of disagreement at any single point in time (Mutz, 2002), but such studies may miss the crucial insight that political disagreements in close relationships are persistent and encourage high levels of political discussion. Yes people in the workplace and other peripheral contacts are more likely to disagree with the main respondent, but they are much more likely to drop out of the network as well. The value of disagreement in these ties is not to be understated. Thus, we find that political disagreement with spouses and intimates is actually the primary source of *persistent* disagreement.

Our findings also call into question the previously reported relationship between disagreement and participation. It may be possible to reconcile these differences, however, by recognizing that we employ a unique measure of political disagreement. Many studies ask respondents about more general perceptions of conflict and disagreement in political conversation, opening up the possibility that a general sense of fear and inefficacy might color reported levels of disagreement. As noted earlier, political discussion is often felt to be dangerous. In a democratic society, political discussion and debate is a ritual that is intended to take the place of more violent forms of war and conflict. Psychologists have found that people in weaker positions are more likely to perceive conflict, and also to avoid discussion and interaction with more powerful people Fiske and Apret (1996). Thus, it isn't particularly surprising that subjective perceptions of conflict and participation are negatively related. Our measure, however, is better suited to avoiding this issue of tapping into subjective conflict perceptions by asking only about acknowledged partisan disagreement. More research is needed to fully explore the relationship, and assess more fully whether objective measures of political disagreement have a uniformly demobilising impact.

Finally, there is little doubt that people are influencing one another during the campaign. A respondent and a discussant who have a disagreement acknowledged at one point in time are highly likely to eliminate that disagreement at a later point. Approximately a fourth of the time, disagreements are eliminated when a respondent switches parties. While main respondents are likely overestimating their own impact on their discussants, there is nonetheless a clear case to be made for social influence running in both directions.

Perhaps surprisingly, the net result of all the individual-level influence we observed is not increased levels of political agreement at the aggregate level, however. As soon as disagreement in one dyad is eliminated, new disagreements emerge and become acknowledged. It appears that social influence may contribute a great deal towards the forging of agreement in discussion networks, but neither selection nor influence eliminates exposure to political disagreement in close relationships during the campaign season.

References

- Bearman, Peter and Paolo Parigi. 2004. "Cloning Headless Frogs and Other Important Matters: Conversation Topics and Network Structure." *Social Forces* 83(2):535-557.

- Bello, Jason. 2011. "The Making of Everyday Political Discussion and its Effects." Unpublished doctoral dissertation, Oxford University.
- Bennett, W.L. and S. Iyengar. 2008. "A new era of minimal effects? The changing foundations of political communication." *Journal of Communication* 58(4):707–731.
- Berelson, Bernard R., Paul Felix Lazarsfeld and William N. McPhee. 1954. *Voting : a study of opinion formation in a presidential campaign*. 1st ed. Chicago: University of Chicago Press.
- Bienenstock, Elisa Jayne, Phillip Bonacich and Melvin Oliver. 1990. "The effect of network density and homogeneity on attitude polarization." *Social Networks* 12(2):153 – 172.
- Brewer, D.D. 2000. "Forgetting in the recall-based elicitation of personal and social networks." *Social Networks* 22(1):29–44.
- Burt, Ronald S. 1987. "Social Contagion and Innovation: Cohesion Versus Structural Equivalence." *The American Journal of Sociology* 92(6):1287–1335.
- Burt, Ronald S. 2000. "Decay functions." *Social Networks* 22(1):1 – 28.
- Coleman, James, Elihu Katz and Herbert Menzel. 1957. "The Diffusion of an Innovation Among Physicians." *Sociometry* 20(4):253–270.
- Conover, Pamela J., Donald D. Searing and Ivor M Crewe. 2002. "The Deliberative Potential of Political Discussion." *British Journal of Political Science* 32(01):21–62.
- de Miguel Luken, Verónica and Mark Tranmer. 2010. "Personal support networks of immigrants to Spain: A multilevel analysis." *Social Networks* 32(4):253 – 262.
- Eliasoph, Nina. 1998. *Avoiding politics: how Americans produce apathy in everyday life*. Cambridge: Cambridge University Press.
- Faas, Thorsten and Rudgier Schmitt-Beck. 2010. "Voters' Political Conversations During the 2005 German Parliamentary Election Campaign". In *Political Discussion in Modern Democracies: A Comparative Perspective*, ed. Michael Wolf, Laura Morales and Ken'ichi Ikeda. Abingdon: Routledge pp. 99–116.
- Feld, Scott L., J. Jill Sutor and Jordana Gartner Hoegh. 2007. "Describing Changes in Personal Networks over Time." *Field Methods* 19(2):218–236.
- Fiske, S. T. and E. D. Apret. 1996. "Control, Interdependence and Power: Understanding Social Cognition in Its Social Context." *European Review of Social Psychology* 7:31–61.
- Fitton, Martin. 1973. "Neighbourhood and Voting: A Sociometric Examination." *British Journal of Political Science* 3(4):445–472.
- Gottman, John, Howard Markman and Cliff Notarius. 1977. "The topography of marital conflict: A sequential analysis of verbal and nonverbal behavior." *Journal of Marriage & the Family* 39(3):461–477.
- Hammer, M. 1979. "Predictability of social connections over time." *Social Networks* 2(2):165–180.
- Huckfeldt, R. Robert. 1979. "Political Participation and the Neighborhood Social Context." *American Journal of Political Science* 23(3):579–592.
- Huckfeldt, R. Robert and John D. Sprague. 1995. *Citizens, politics, and social communication: information and influence in an election campaign*. Cambridge: Cambridge University Press.

- Huckfeldt, R. Robert, P. E. Johnson and John D. Sprague. 2004. *Political disagreement : the survival of diverse opinions within communication networks*. Cambridge studies in political psychology and public opinion Cambridge: Cambridge University Press.
- Huckfeldt, Robert, Jeanette Morehouse Mendez and Tracy Osborn. 2004. "Disagreement, Ambivalence, and Engagement: The Political Consequences of Heterogeneous Networks." *Political Psychology* 25(1):65–95.
- Huckfeldt, Robert and John Sprague. 1987. "Networks in Context: The Social Flow of Political Information." *The American Political Science Review* 81(4):1197–1216.
- Huckfeldt, Robert and John Sprague. 1991. "Discussant Effects on Vote Choice: Intimacy, Structure, and Interdependence." *The Journal of Politics* 53(1):122–158.
- Iyengar, S. and K.S. Hahn. 2009. "Red media, blue media: Evidence of ideological selectivity in media use." *Journal of Communication* 59(1):19–39.
- Jackman, Simon and Lynn Vavreck. 2010. "Primary Politics: Race, Gender and Age in the 2008 Democratic Primary." *Journal of Elections, Public Opinion & Parties* 20(2):153–186.
- Jacobs, Lawrence, Fay Lomax Cook and Michael X. Delli Carpini. 2009. *Talking Together: Public Deliberation and Political Participation in America*. Chicago: University of Chicago Press.
- Jennings, Kent and Niemi Richard. 1981. *Generations and politics : a panel study of young adults and their parents*. Princeton University Press.
- Kenny, Christopher. 1998. "The Behavioral Consequences of Political Discussion: Another Look at Discussant Effects on Vote Choice." *The Journal of Politics* 60(1):231–244.
- Kenny, Christopher B. 1994. "The Microenvironment of Attitude Change." *The Journal of Politics* 56(03):715–728.
- Klofstad, Casey A. 2007. "Talk Leads to Recruitment: How Discussions about Politics and Current Events Increase Civic Participation." *Political Research Quarterly* 60(2):180–191.
- Klofstad, Casey A., Scott D. McClurg and Meredith Rolfe. 2009. "Measurement of Political Discussion Networks: A Comparison of Two "Name Generator" Procedures." *Public Opinion Quarterly* 73(3):462–483.
- Latane, Bibb. 1996. "Dynamic Social Impact: The Creation of Culture by Communication." *Journal of communication* 46:13.
- Lazarsfeld, Paul Felix, Bernard Berelson and Hazel Gaudet. 1968. *The people's choice : how the voter makes up his mind in a presidential campaign*. 3rd ed. New York ; London: Columbia University Press.
- Levine, Jeffrey. 2005. "Choosing alone? The social network basis of modern political choice". In *The social logic of politics : personal networks as contexts for political behavior*, ed. Alan S. Zuckerman. Philadelphia: Temple University Press chapter 7, pp. 132–151.
- Lubbers, Miranda J., José Luis Molina, Jurgen Lerner, Ulrik Brandes, Javier Ávila and Christopher McCarty. 2010. "Longitudinal analysis of personal networks. The case of Argentinean migrants in Spain." *Social Networks* 32(1):91 – 104.
- Mansbridge, Jane J. 1980. *Beyond adversary democracy*. New York: Basic Books.
- Marin, A. 2004. "Are respondents more likely to list alters with certain characteristics? Implications for name generator data." *Social Networks* 26(4):289–307.

- Morgan, D.L., M.B. Neal and P. Carder. 1997. "The stability of core and peripheral networks over time." *Social Networks* 19(1):9–25.
- Mutz, Diana C. 2002. "The Consequences of Cross-Cutting Networks for Political Participation." *American Journal of Political Science* 46(4):838–855.
- Mutz, Diana C. and Jeffery J. Mondak. 2006. "The Workplace as a Context for Cross-Cutting Political Discourse." *The Journal of Politics* 68(01):140–155.
- Nickerson, David W. 2005. "Partisan Mobilization Using Volunteer Phone Banks and Door Hangers." *Annals of the American Academy of Political and Social Science* 601:10–27.
- Nieuwebeerta, Paul and Henk Flap. 2000. "Crosscutting social circles and political choice: Effects of personal network composition on voting behavior in The Netherlands." *Social Networks* 22(4):313 – 335.
- Pattie, C. and R. Johnston. 2000. "People Who Talk Together Vote Together: An Exploration of Contextual Effects in Great Britain." *Annals of the Association of American Geographers* 90:41–66(26).
- Rolfe, Meredith. 2009. "Conditional Choice Processes". In *Oxford Handbook of Analytical Sociology*, ed. Peter Bearman and Peter Hedström. Oxford University Press.
- Rolfe, Meredith. 2010. "Sample Survey Measurement of Social Networks in Theory and in Practice". In *2010 Meeting, Duke University*. Political Networks Annual Meeting.
- Snijders, T. A. B. and R. J. Bosker. 1999. *Multilevel analysis : an introduction to basic and advanced multilevel modeling*. London: SAGE. Tom A.B. Snijders and Roel J. Bosker. ill. ; 24 cm. Includes bibliography (p. 252-260) and index.
- Stroud, N.J. 2008. "Media use and political predispositions: Revisiting the concept of selective exposure." *Political Behavior* 30(3):341–366.
- Twyman, Joe. 2008. "Getting It Right: YouGov and Online Survey Research in Britain." *Journal of Elections, Public Opinion & Parties* 18(4):343–354.
- Ulbig, Stacy G. and Carolyn L. Funk. 1999. "Conflict Avoidance and Political Participation." *Political Behavior* 21(3):265–282.
- Zaller, J. 1992. *The nature and origins of mass opinion*. Cambridge University Press.
- Zuckerman, Alan S., Jennifer Fitzgerald and Josip Dasovic. 2005. "Do couples support the same political parties? Sometimes: Evidence from British and German Household Panel Studies". In *The social logic of politics : personal networks as contexts for political behavior*, ed. Alan S. Zuckerman. Philadelphia: Temple University Press chapter 4, pp. 75–94.