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The overvaluing of expertise in discussion partner choice

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Abstract

Since the introduction of economic theory to political science, theorists have argued that discussion could serve as an effective information shortcut if individuals communicate with experts who have similar preferences. Previous experimental and survey studies have found mixed results for the efficacy of social communication, but they have not observed the process of discussion partner selection which is so central to the previous models. This paper presents the results of a group-based experiment that allows for discussion partner selection. We fail to find aggregate enlightenment through social communication: lesser informed subjects are helped by social communication, but better informed subjects are harmed. This result is caused in part because subjects are too willing to seek out more expert discussion partners who have different ex ante preferences.

Keywords

Discussion networks, correct voting, expertise

Two realities of political life are that many voters have low levels of general political knowledge (DelliCarpini and Keeter 1996) and that these voters do not live in isolation. The first reality is a problem and the second reality is a potential solution to that problem. More accurately, the solution lies in the heterogeneity of political knowledge and the possibility that the more informed will communicate with the

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less informed. Some people enjoy politics and for them the process of becoming informed provides a benefit rather than extracting a cost (Fiorina, 1990). The poorly informed may use these political experts as low cost information sources (Downs, 1957; Lupia and McCubbins, 1998; Lupia, 2006), thus explaining how a society with poorly informed individuals behaves sensibly in the aggregate (Page and Shapiro, 1992).

This theory of enlightenment via deliberation, however, has encountered mixed empirical evidence in its support. For example, using Lau and Redlawsk's (1997) measuring of a 'correct' vote, Richey (2008a) finds that citizens who discuss politics with more knowledgeable individuals vote correctly more often. Sokhey and McClurg (2012), however, counter that knowledge is less important than the preferences of the discussion partners. Individuals benefit from discussion partners who have similar issue positions, but are less likely to make vote decisions in line with their preferences if they talk politics with people on the other side of the issues.

Thus, the selection of informant is of paramount importance for the ability of political discussion to lead to better decision making. Unfortunately, the 'ego-centric' networks commonly studied are formed prior to the survey and thus researchers are unable to observe the process which produced them. Further, current experimental studies of correct voting do not allow subjects to choose from whom they will acquire information (Lupia and McCubbins, 1998; Jackman and Sniderman, 2006; Ryan, 2011a). These studies show political discussion does not increase the probability that individuals will make choices more consistent with their preferences in the aggregate (Jackman and Sniderman, 2006) unless certain institutions are put in place to govern the communication (Lupia and McCubbins, 1998) and may actually decrease the probability of a correct vote in certain conditions (Ryan, 2011a). If the subjects were allowed to choose their discussion partners, however, the subjects may have performed better because they would have avoided communication from people with incentives to lead them astray.

To overcome this shortcoming, we use a laboratory experiment in which subjects are allowed to choose their advisers. In the experiment, subjects choose between two 'candidates' with randomly chosen positions on an abstract policy scale. Subjects determine which candidate to support based on noisy private information they acquire and messages they receive from another subject. We find that the potential benefits of discussion are not fully realized because participants overvalue expertise when choosing a discussion partner. Voters seek out more expert informants even if those experts hold preferences that may conflict with their own and experts on the other side often distort information adversely affecting the information seeker's vote decisions.

1. An Information Shortcut

Since Downs (1957), scholars have noted that social communication is a potentially rational information shortcut that would allow individuals with high information costs to free ride off of the efforts of those with lower information costs (e.g., Mondak, 1995; Lupia and McCubbins, 1998). This process works most effectively when individuals choose discussion partners who share the individual's preferences. Preference similarity is important because political discussion can be seen as a form of strategic communication in which the informant wants to persuade others to adopt his or her position. This desire to persuade others would be present even if discussion partners realize that changing one voter's mind is not going to affect election outcomes. The discussion partner need only have the much smaller goal of having others agree with him or her for persuasion to be a goal of discussion.

As cheap talk models demonstrate, there is an incentive to misrepresent the positions of candidates when discussing politics with people with differing preferences (Crawford, 2003; Crawford and Sobel, 1982; Farrell and Rabin, 1996).[1] This misrepresentation of candidate positions need not involve an absolute distortion of the candidates' positions – e.g., saying a conservative is, in fact, a liberal. Rather, a potentially more persuasive message would involve *slanting* the facts. Slanting could be done by *pulling* the listener's otherwise less preferred candidate closer to what the listener thinks is optimal: for example, 'Obama's position on health care is much more moderate than what the conservatives say'. Or the slanting could be *pushing* the speaker's less preferred candidate away from the listener's ideal: 'the right-wing ideologues oppose reform because they are in the pockets of the insurance industry'.

This does not mean that signals from biased sources are never useful. For example, Calvert (1985) notes that an unbiased receiver can glean valuable information from biased sources when the source provides unexpected information (e.g., if in the USA a Republican endorsed a plan by President Obama). For receivers who tend to prefer one outcome or the other, however, signals from the other side are much less valuable. Imagine a Democrat who receives a signal from a Republican. A signal to vote Republican should be ignored as self-serving while a signal to vote Democratic will, at best, increase the Democrat's confidence in a decision that he or she would have made without discussion. Information from a fellow partisan can increase confidence in the correctness of a party vote or highlight the situations where the candidate from one's party is poor.

Why then would an individual ever discuss politics with someone with conflicting preferences? Ideal informants – experts who share the individual's preference – may not be readily available and the search for these informants may be costly (Huckfeldt, 1983; Ahn et al., 2013). Individuals in this case may be forced to make compromises between political expertise and ideological proximity. Several studies of discussion patterns suggest that individuals value expertise over proximity (Huckfeldt, 2001; Huckfeldt et al., 2005). Unfortunately, the survey evidence cannot distinguish between whether individuals are seeking out expert informants or experts are constantly talking about politics. Surveys can show that experts play an outsized role in the social communication process with perceived experts having greater influence of the vote choices of their discussion partners (Ryan, 2011b; Richey, 2008b). Further, citizens often defect from their party when their social networks have members of the opposition party (Beck, 2002). Hence, it seems that voters place greater emphasis on expertise than shared preferences when evaluating social communicated messages which may lead citizens to cast votes for candidates they would not support if fully informed.

Not all citizens will be led astray by messages from experts who have conflicting preferences. The strategic sophistication of the speaker and the listener will affect the probability the speaker will try to mislead and the probability the listener will be led astray (Crawford, 2003). Discounting of communicated messages may be due to the listener's knowledge of the diverging underlying preferences between the listener and speaker, a fundamentally strategic consideration. Listeners may discount messages that differ from one's own prior beliefs (Ahn et al., 2010).[2] Therefore, depending on (1) the availability of ideal political discussants, (2) the intention of and communicated message from the chosen discussant, and (3) the belief of the listener about the usefulness of socially communicated information especially when it comes from someone with different political views, the consequences of social communication may differ at the individual and aggregate levels.

Currently survey and experimental research offer mixed evidence on the value of social communication as an information shortcut.[3] Both sides of this literature, however, are in agreement with the models that preceded it (e.g., Downs, 1957; Crawford and Sobel, 1982) in the importance of shared preferences when evaluating social messages. Our argument is that some individuals tend overvalue expertise in choosing discussion partners and undervalue the importance of shared preferences. This leads to negative consequences for those who follow the advice of these experts with conflicting opinions. Hence, individuals may understand the rational value of the information shortcut, but have less understanding regarding how to exercise that shortcut efficiently.

2. Experimental design and procedure

At the heart of this paper is a tension between what individuals *should* do according to formal models and what individuals *actually* do according to survey research.[4] Previous theories argue individuals should place greater emphasis on shared preferences when engaging in social communication; but citizens in surveys appear to place greater emphasis on expertise. We ask if individuals would choose based on shared preferences more frequently if we highlight the strategic considerations? Further, when subjects do choose based on shared preferences, do they make better decisions?

We answer these questions through an incentivized experiment. The experiment does not test if subjects behave rationally. Rather, it is in the style of what Vernon Smith (1982) calls 'heuristic' or 'exploratory' focusing on the consequences of experimental treatments that are previously unexplored. The experimental framework allows us to observe aspects of how interconnected voters make decisions in ways that researchers could not using traditional survey methods. While the experiment is too complicated to fully analyze as a non-cooperative game, it allows us to set some analytical benchmarks, observe the entire communications process and, set an objective measure of a correct decision. Hence, we can figure out which subjects make better choices and what decisions in the process lead to those choices.

Subjects in this experiment were recruited from political science classes at a public university in the United States. They participated via networked computers using zTree (Fischbacher, 2007). A total of 10 sessions were run using seven subjects in each session. In the experiment, subjects are choosing between two computer generated candidates with unknown positions on an abstract policy scale. We randomly assign: (1) the candidate's positions on the policy scale; (2) the subject's positions on the policy scale; (3) how much money the subjects will have to pay for information regarding the candidate's position on the scale.

Below, we describe the main elements of the experiment and then summarize the experimental procedure.[5]

2.1 Voters, candidates and positions

Each experimental session consisted of seven voters who participated in 15 rounds of elections. Each subject was assigned a unique, integer position on a seven-point scale such that one subject had position 1, one subject had position 2, and so on. Once assigned, subjects' positions remain unchanged for the duration of the experiment. The voters were choosing between two computer generated candidates: Candidate A and Candidate B. The candidates were simply positions on the seven point scale.

In each round of a session, the computer randomly and independently drew the positions of candidate A and B from uniform distributions. Candidate A's position was an integer between 1 and 6: candidate B's position was an integer between 2 and 7. Each of the candidates' six possible positions is equally likely and it is also possible for the two candidates to have the same position. This information concerning the potential candidate positions was known to all subjects.

At the end of each round, subjects cast a vote for one of the two candidates. Voting was costless and abstention was not allowed. Each subject earned 50 cents if the winning candidate's position was closer to the subject than the losing candidate's position. If the candidate whose position was closer to the subject lost the election, the subject lost 50 cents. If the two candidates' positions were equally distanced from a subject's position, including the cases in which the two candidates' positions were the same, the subject neither gained nor lost any money.

2.2 Information cost and purchase of private information

At the beginning of each period, each subject was given an endowment of 100 cents. Subjects were allowed to spend up to 50 cents from this endowment to obtain private information about the candidates' positions. The cost of this information varied among the subjects. At the beginning of each session, voters are assigned their cost of information such that two had zero cost, two had 5 cents per piece and three had 25 cents per piece of private information. Once assigned, the information cost for a voter remained the same for the duration of the experiment. The low and medium cost voters were allowed to purchase up to four pieces of private information. The 50 cent limit on the purchase of information implied a maximum of 2 pieces of private information for the high cost voters.

A piece of private information consists of two integer numbers a and b where a is an estimate of candidate A's true position and b is an estimate of candidate B's true position. The signal for any candidate lies within three points on either side of the candidate's true position and the subject purchasing private information was equally likely to receive any of the seven possible signals within the interval.[6] After subjects viewed the private signals they purchased, they were asked to estimate the candidates' true positions in relevant boxes on the computer screen.

2.3 Obtaining information from another subject

After reporting their estimates of the candidates' positions, each subject was allowed to request information from one other subject. Before subjects chose which other subject to ask for information, they were shown the position and the number of pieces of private information purchased by each of the six other subjects.[7] They then input the number of the subject from whom they would like to receive information.

After these decisions are made, subjects were shown the positions and information levels of the subjects who requested information from them. The subjects were not required to provide information and in cases where there are multiple requestors, they were not required to provide the same information to all. When a subject chooses to provide information, he or she types in two numbers (a, b), where $a(b)$ is meant to be the provider's estimate of candidate A's(B's) true position. The subject does this for each information request that he or she chooses to accept.

2.4 Voting

Subjects were reminded of their private information and were informed of the signal sent by the subjects from whom they requested information if the request for information was not denied. Based on this information, subjects were asked to vote for one of the two candidates. Subjects received no payoff for correctly voting for the candidate closer to their position. Doing so, however, did increase the probability that the candidate who wins the election will provide a positive payoff.

After subjects finish voting, the election outcome, the true positions of the candidates and the earning for the round were revealed to each of the subjects on the computer screen. The candidates' positions are reset and the experiment moves to the next round.

2.5 Summary

The following steps took place during each experimental period:

(1) The two candidates' positions were randomly and independently drawn from the respective interval;
(2) Subjects purchased private information;

(3) Subjects reported estimates of the candidates' true positions;
(4) Subjects requested social information;
(5) Subjects decided whether to provide social information to requestors and, if they did, they then provided information about both candidates;
(6) Subjects received this social information and voted; and, finally,
(7) The outcome of the election was revealed and payoffs were distributed.

A session lasted about an hour. The subjects received an attendance fee of US$5 and their additional performance-based earnings.

3. Making the right discussion partner choice

The experimental setting is too complicated to analyze in full as a non-cooperative game, but it is not devoid of an underlying theoretical framework. Thus, partial analyses on some aspects of the strategic incentives are possible based on the explicit assumptions of the setup.

In these analyses, we assume that subjects are self-interested – this assumption is common to all the previous models. As such, we do not account for concerns regarding fairness (Fehr and Schmidt, 1999) or reciprocity (Bolton and Ockenfels, 2000), although, some subjects likely do have these concerns. Further, we do not account for potential reputation effects that may occur due to the repeated nature of the experiment. Given the uncertainty about the information that subjects receive, it would very difficult for a receiver to judge whether a sender intentionally lied in sending a misleading message or simply truthfully reported the information gleaned from poor private information. Our analysis focuses only on expertise and shared preferences because the rational, experimental and survey literature regarding the efficacy of social communication has primarily examined the effects of these two factors.

We begin the analysis by determining the value of information. Recall that that candidate A's position is an integer between 1 and 6, candidate B's position is an integer between 2 and 7 and the candidates' positions are randomly and independently drawn from uniform distributions. Thus, there are 36 possible and equally likely configurations of the two candidates' positions with the two candidates' positions identical in 5 of the 36 configuration.

If the positions were known, voter 1(7) should vote for candidate A(B) in 21 cases, for B(A) in 10 cases, and the voter is indifferent in 5 cases. If voter 1(7) cast her vote with the public information only, she should vote for candidate A(B) and the probability that the vote is cast correctly is 26/36 or about 72%, counting the votes when indifferent as correct. Similar calculations show that the *ex ante* probability of voting correctly is 25/36 (about 69%) for voter 2 and 6, 24/36 (about 67%) for voter 3 and 5, and 23/36 (about 64%) for voter 4.[8] This analysis implies that if the cost of purchasing private information is the same, the middle voter (voter 4) has the largest incentive to purchase private information and the extreme voters (voter 1 and voter 7) have the smallest incentive.

More information increases a voter's likelihood of voting correctly which in turn increases the probability of victory for the voter's favored candidate but information is costly for the majority of the voters in our experimental setting. How much should one pay for information? We determine upper limits of the value of information assuming that one's vote is pivotal instead of a full equilibrium analysis.

We ran one million computer simulations for voters to assess the value of information.[9] Recall that one gains 50 cents if the candidate closer to the subject wins, loses 50 cents if the candidate further from the subject wins and a subject does not gain or lose any money if the two candidates care equally distanced. The marginal expected value of the first piece of information is about 11 cents, the second about 6 cents, the third about 4 cents and the fourth about 2 cents. Note that these are the maximum values assuming that a voter uses the private information fully and correctly and the voter is pivotal in determining the electoral outcome. The actual values would, thus, be smaller than these when voters do not use the correct Bayesian updating method (in which subjects use the information to narrow down the possible candidate positions) and/or when one's vote is not pivotal.

What does this suggest for how individuals should choose discussion partners? Subjects face a tradeoff that is a function of (1) the subject's information level (i.e., the ex post calculated probability of correct voting with private signals) and (2) the configuration of potential informants in terms of the preference similarity and the information level. The necessary condition is that by getting information from an informant the probability of correct voting should increase. The sufficient condition is that the informant is the best among the worthy informants (who pass the necessary condition).

The analysis suggests that in almost all cases subjects should place greater emphasis on choosing someone with shared preferences rather than someone who purchased more information for two reasons. First, the marginal value of additional information decreases rapidly – subjects would vote correctly two thirds of times even without private signals due to the availability of the public information and the cases in which two candidates are equally distanced.

Second, as Figure 1 shows, the probability of conflict rapidly increases as the distance between a pair of voters gets longer. In the figure, the light bars represent the probabilities of conflict for a citizen with a position of 1 while the darker bars represent the probabilities of conflict for a citizen with a position of 3. Figure 1 shows that as the distance between a pair of voters' ideal points increases the probability of conflict greatly increases when the two voters are on different sides of the midpoint. In almost all cases, therefore, a rational voter would choose one of the immediate neighbors as the source of information.[10]

Do the subjects behave as we would suggest? Table 1 shows the extent to which subjects use information levels and shared preferences in their discussion partner choice by comparing the characteristics of all subjects to the characteristics of the chosen subjects. As the table shows, egos (the subjects choosing an information source) put a premium on the information levels of their alters (the subjects chosen as an information source). About 29% of subjects purchase the maximum

Figure 1. Probability that two members of a dyad will be in conflict for different distributions of possible candidate positions.

Table 1. Choosing alters by information level and shared preferences.

A. Information level

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	All subjects	Chosen alters
0	13.9%	1.6%
1	24.6%	14.9%
2	28.2%	21.1%
3	4.8%	7.8%
4	28.6%	54.7%
N (Egos)	1050 (70)	

B. Distance between ego and alter

	All dyads	Chosen alters
1	28.6%	44.0%
2	23.8%	24.6%
3	19.1%	14.0%
4	14.3%	7.6%
5	9.5%	6.0%
6	4.8%	3.8%
N (Egos)	6300 (70)	1050 (70)

of four pieces of information, while subjects who purchase the maximum information levels make up about 55% of the chosen alters.

While a discussion partner with more information is better, if subjects are reaching for ideologically divergent alters in order to choose a better informed discussion partner, then they are likely making a mistake. To some extent subjects recognize this as the modal case is choosing the alter next to them on the ideological scale and the probability that an alter is chosen decreases with distance.

Nevertheless, we argue that subjects should choose an alter with the closest matching preferences *in almost all cases*. Subjects did not do this. Thirty-six percent of chosen ego-alter dyads lay more than two spaces away on the scale which means that many subjects crossed the median to choose an alter. As we have already shown, that means many subjects chose discussion partners with an incentive to mislead them.

4. How alters affect correct voting

In the experiment, subjects vote correctly 78% of the time. We say a subject votes correctly if the subject votes for the candidate that will offer them the larger payoff or if the subject was indifferent between the two candidates.[11] How then did an ego's choice of alter affect the likelihood he or she votes correctly? Table 2 presents the results of Heckman probit models which model alter choice in the first stage and then correct voting in the second stage. All possible ego-alter dyads are cases in the choice model while only dyads where an alter was asked and provided information are cases in the correct vote model.[12]

The alter choice model includes two independent variables, the potential alter's information level and the distance between ego and alter on the abstract scale, as well as, the interaction between these two variables. The results show that subjects placed most emphasis on alter information level, but were trying to follow the Downsian recommendation. If an alter purchased four pieces of information, then there is a 46% probability that the ego will choose that alter if he or she is one position away. That probability drops to 5% if the alter is six positions away. If a potential alter is uninformed, then the distance between ego and alter is irrelevant because there is very little chance that alter will be chosen.

While egos are unlikely to request information from alters with clearly competing preferences, they do not grasp the non-linearity in conflict either. There is a 24% probability that an ego chooses an alter who is three places away, even though, that discussion partner will prefer a different candidate at least half the time. Subjects would prefer not to cross the median, but they are willing to do so if it means finding an expert discussion partner. Theoretically, they would be better off sticking with a less informed partner with preferences that are more similar.

Empirically, this is the case as well, as the correct voting stage of the model in Table 2 shows. The distance between dyad members did not affect the probability of a correct vote, but being on the same side of the median did. For example, a subject at position 3 would have an 81.1% probability of voting correctly if he or she communicated with an alter at position 1. That probability drops to 73.3% if the alter is at position 5. In both cases, the alter is only two positions away, but in the second case the alter is on the other side of the median.

The other variables in the model measure the accuracy in the initial estimates of the candidate positions for egos and alters as well as the bias in the messages the alter sends. The error in estimates variables are measured by adding together the absolute differences between a subject's estimates of both candidates' positions and the candidates' actual positions. The bias in messages is measured in a similar

Table 2. How does a discussion partner affect a subject's ability to vote correctly? Selection model with standard errors corrected for clustering on subjects.

Correct vote model	Coefficient	*Z*-Value
Distance between dyad members	0.066	1.30
Dyad members on same side of median	0.446	3.73
Logged error in ego's estimates	–0.518	–4.51
Logged error in alter's estimates	0.006	0.06
Logged bias in alter's messages	–0.212	–2.51
Constant	1.594	7.99
Selection model	**Coefficient**	***Z*-Value**
Alter information level	0.541	7.36
Distance between dyad members	0.051	0.69
Distance*information level	–0.090	–3.81
Constant	–1.944	–8.76
ρ (Standard Error)	–0.253 (0.147)	
AIC	5330.108	
N	6153	
Uncensored observations	903	
Number of subjects	70	

manner by calculating the absolute differences between the alter's initial estimates and the signals the alter sent to the ego. These values are logged because effects of the mistakes should diminish as the errors are larger.[13]

Unsurprisingly, egos who made larger mistakes in their initial estimates were less likely to vote correctly. Interestingly, the accuracy of an alter's initial estimate did not affect correct voting. The bias in an alter's messages, however, did. This suggests how much an alter knows is less important than whether or not the alter is willing to lie. Because the subjects act anonymously, egos cannot use personality traits to judge the honesty of a potential alter. They can use the alter's information level, however. Better informed alters should be more certain of the candidates' positions and correspondingly be more confident in which candidate they support and which their egos support. This will allow better informed alters to send more biased messages.

This is shown in the OLS model in Table 3 which has the (unlogged) bias in alter messages as the dependent variable. If an alter has no information, then, on average, the alter will send signals that results in a total bias of about 1.3. That value increases, to 2 if the alter has four pieces of information. The information level of the ego had an effect of a similar size. Alters sent more unbiased messages to better informed egos because the egos could verify the accuracy of the alters' signals (Lupia and McCubbins, 1998).

The largest effect on bias relates to the differences between ego and alter's positions on the scale. The amount of bias increases as the dyad's positions are further apart, but this increase is decidedly non-linear as shown in Figure 2. Figure 2

Table 3. Total bias in messages sent to egos by alters. OLS model with standard errors corrected for clustering on egos.

	Coefficient	*Z*-Value
Distance between dyad members	0.237	2.27
Dyad members on same side of median	–0.612	–2.71
Ego information level	–0.199	–2.13
Alter information level	0.181	1.73
Constant	1.480	3.87
N (Subjects)	903 (70)	
R^2	0.08	

takes subjects with ideal points of 1 (the darker points) and 3 (the lighter points) and shows the predicted bias in messages sent by all other subjects. As the figure shows, the amount of bias jumps if ego and alter are on opposite sides of the median. For example, if a subject has an ideal point of 3, then they would expect to see an average bias of 2.1 points on the scale from an alter with an ideal point of 5 and an average bias of 1.4 from an alter with an ideal point of 1. Both alters are two points away on the scale, but only subject 1 is on the same side of the issues as subject 3.

It should be noted that overall, the biases in the messages sent are fairly small. About 71% sent had a total bias of two points or less – either one point for each candidate or two for one candidate and an unbiased message for the other – with no bias at all in more than a third of the signals. Still, about a quarter of social messages misrepresented the alter's beliefs about which candidate the ego should support. Often, there was no need to send a largely biased message to tell an ego that he or she should support a different candidate than the alter believes. Further, a message that is only slightly biased might be more persuasive to an ego who has some idea about where the candidates are placed.

5. Changing the ego's mind

We can use the ego's initial estimates to determine which candidate the ego would have chosen prior to social messages by determining which candidate the ego believes is closer to him or her. An ego is persuaded by social messages when the ego changes his or her vote from the vote implied by their initial estimates of the candidates' positions. In some cases, the change will be helpful – the ego was persuaded to vote for the candidate closer to him or her – but in other the change will be harmful – the ego was going to vote for the right candidate if the social messages had not changed his or her mind.

Most subjects stuck with the candidate they were supporting prior to social information. About 75% of subjects did not change their vote following social information and in 89% of those cases they voted correctly. When a subject did switch his or her mind, that decision was equally likely to be correct as incorrect.

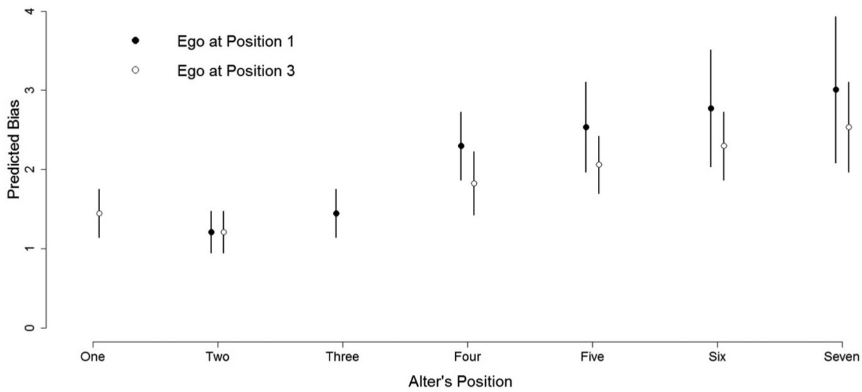

Figure 2. Predicted bias for different ego/alter pairs based on OLS model in Table 3.
Error bars display 95% confidence intervals.

Table 4. Whether it benefitted subjects to change their vote following social communication by private information levels.

	No information	Low information (1 or 2 pieces)	High information (3 or 4 pieces)	Total
Helpful change	26.17%	13.19%	8.90%	13.18%
Harmful change	16.82%	14.47%	8.90%	12.74%
No change	57.01%	72.34%	82.21%	74.09%
N	107	470	326	903

Who then is aided and who is hurt by social information? The most basic question to address concerns the effect of an ego's information level. Table 4 presents cross tabulation between information level and a three category dependent variable: (1) helpful change, (2) harmful change and (3) no change.

It is important to notice three things. First, information level is directly tied to whether or not a subject changed their vote: subjects with less information were more likely to change their vote. Second, information level is not as strongly tied to whether or not that change was a good idea. When uninformed subjects switched their vote, this led to a better vote choice more often than not. For subjects with any information, changing their vote was equally likely to be a good or a bad decision. Finally, in the aggregate harmful switches were as likely as helpful switches since most subjects had some information. This suggests that even if egos are able to choose their alters purely on the basis of the expertise and preferences of the alter, social communication may not lead to more 'enlightened' voting in the aggregate.

The multinomial logit model in Table 5 examines the factors that determined helpful and harmful vote switching in greater detail. The dependent variable is the

Table 5. Did social information aid the subject? Multinomial logit model with standard errors adjusted for clustering on subjects. Baseline category is when the subject did not change his or her vote following social information.

	Harmful change		Helpful change	
	Coefficient	*Z*-Value	Coefficient	*Z*-Value
Distance between dyad members	–0.115	–1.26	–0.265	–2.32
Dyad members on same side of median	–1.191	–3.87	–0.468	–1.58
Logged error in ego's estimates	0.282	1.30	1.710	6.90
Logged error in alter's estimates	0.035	0.17	–0.101	–0.40
Logged bias in alter's messages	0.285	1.36	–0.208	–1.21
Constant	–1.721	–4.46	–2.810	–5.21
N (subjects)	903 (70)			
AIC	1280.04			

same as in Table 4 with no change as the baseline category. The independent variables are the same as in the correct voting model in Table 2: the distance between the ego and alter, a dummy variable coded 1 if the ego and alter are on the same side of the median, the logged error in the initial estimates for both the ego and the alter and the bias in the alter's messages.

The best predictor of helpful change is the accuracy of the ego's initial estimates. Egos who made larger mistakes in estimating the candidates' positions were more likely to change their mind following social communication and make a correct vote. The initial estimates of the alter and the absolute bias in the alter's messages did not have a statically discernible effect. Recall, that the bias in the alter's messages were typically not very large. So, a subject who was very mistaken about the placements of the candidates would be aided by social messages that were slightly biased because they still may better reflect reality than what the subject believed.

None of the alter level variables affect probability of change in either direction, but the dyadic distance variables do. As the distance between ego and alter increases, the probability that the subject makes a helpful change decreases. Further, egos are also less likely to make a harmful change if they talk with an individual on the same side of the median. The sizes of these effects are displayed in Figure 3. The light bars in the top graph in Figure 3 display the probability that a particular alter will help a subject at position 1 while the dark bars display the same probabilities for a subject at position 3. The bottom graph in Figure 3 displays the probabilities that alters will lead to a harmful vote switch.

The top graph shows egos who select alters on the opposite end of the policy scale have a decreased probability of a helpful change. There is an 11% probability that an alter at position 2 will help an ego at position 1 vote correctly. That probability drops to 4% if the alter is at position 7. For egos at position 3 – and hence, closer to the middle of the scale – there is no relationship between the position of the alter and the probability of helpful change because the distance between ego

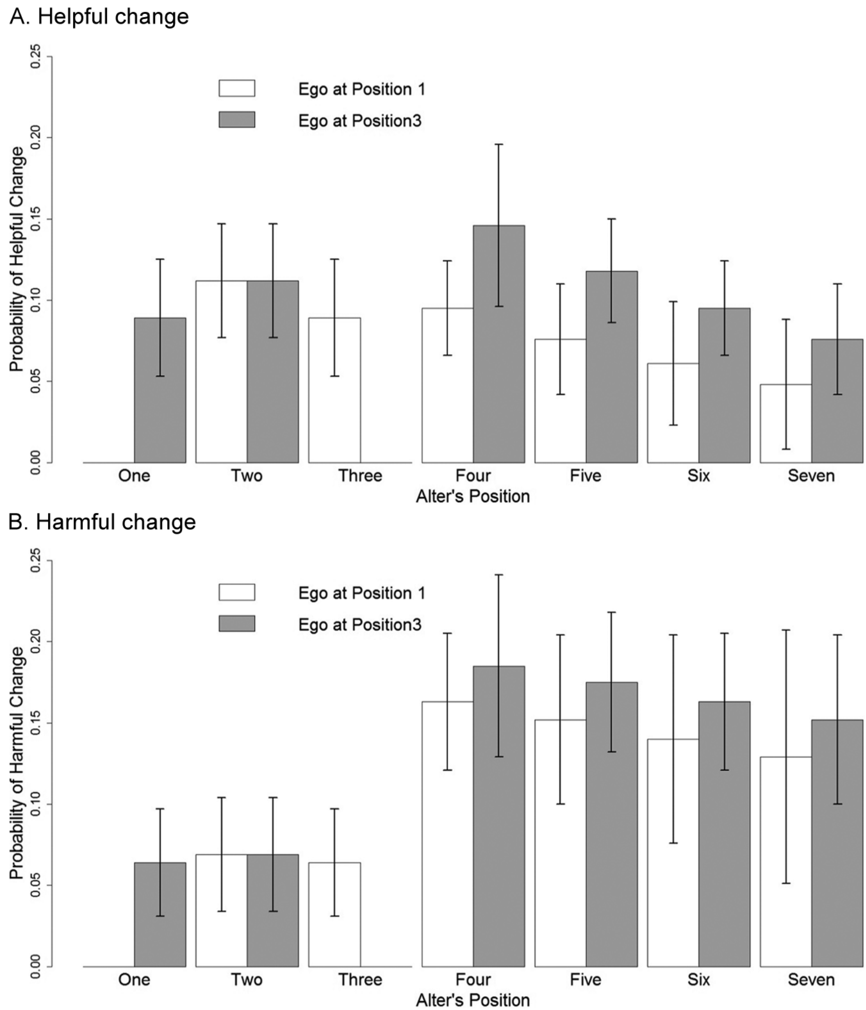

Figure 3. The probability of helpful and harmful changes for different ego/alter pairs based on the multinomial logit model in Table 5.
Error bars display 95% confidence intervals.

and alter is never wide enough for the probability of helpful change to decrease substantially.

While dyadic distance only affects the probability of helpful change for those with extreme positions, the likelihood of vote conflict affects the probability of harmful change for all subjects. As the bottom graph in Figure 3 shows, subjects are less likely to change their vote to the wrong candidate if they choose an alter on the same side of the median. There is less than a 7% chance that an alter on the same side of the median will lead a subject astray. The probability of a harmful change increases by as much as 12 percentage points if the alter is on the other side of the median.

What accounts for this difference? The vast majority of egos are going to vote for the correct candidate without social information: only 15% of subjects with any information are going to make a mistake based on their estimates of the candidates' positions. If a subject chooses an alter on the same side of the median, the alter's signals will typically suggest to the ego that they are making the right choice. Hence, they will rarely change their vote at all meaning there is little chance that they will make a harmful switch, but they are unlikely to make a helpful switch either. Egos who choose alters on the other side of the median will receive signals suggesting that they are making a mistake. Most egos, aware the signals may be biased, will ignore this information (Ahn et al., 2010; Lupia and McCubbins, 1998), but some will update their beliefs about the candidate positions and switch their vote to a candidate that benefits the alter, but not the ego.

6. The external validity of the experiment

There are two different ways to consider the external validity of this experiment: (1) the realism of the design; and (2) the comparability of the results to findings outside of the experimental laboratory. Starting with the design, the most glaring omission is party. The public information regarding the possible candidate positions provides similar information to party regarding which candidate the subjects should typically support and the probability that two subjects would support the same candidate. It does not take into account that individuals might dislike individuals once they discover they support a different party and thus will cease speaking with those on the other side of the issues (Brady and Sniderman, 1985; Buttice et al., 2009; Iyengar et al., 2012). We might, therefore, be overestimating how much individuals weigh expertise in discussion partner choice. On the other hand, the 'affective' polarization documented by Iyengar et al. (2012) is driven by exposure to political information and the experimental subjects most likely to be harmed by discussion are those exposed to the least information. Hence, our argument may be restricted to the group most in need of the discussion shortcut: those who do not regularly follow politics (Mondak, 1995).

How do these findings compare to results involving voters in actual elections? Like our experimental subjects, survey respondents discuss politics more frequently with those they believe are better informed about politics (Huckfeldt, 2001), but the best predictors of vote choice are the biases of the discussion partner (Beck, 2002; Ryan, 2010). Further, those survey respondents who report discussing politics with people with differing viewpoints vote correctly less frequently (Sokhey and McClurg, 2012). In the experiment, this result is driven primarily by small lies that the subjects tell regarding candidate positions. It is difficult to know how much lying takes place in actual political conversations because the researcher needs to know exactly what information the subject held in order to judge the truthfulness of a statement. Outside of the lab, individuals could send accurate messages about their beliefs regarding candidates, but those messages may be misleading due to partisan or ideological biases (Bartels, 2002). Hence, the mechanism we identify might not explain in all cases why individuals who speak with those on the other side vote frequently less often, but the larger conclusion would hold.

7. Conclusions

The experimental results presented here cast doubt on the ability of social communication to lead to more instances of correct voting in the aggregate. For every subject that voted correctly because of messages sent by their informant, there was a subject who switched to an incorrect vote following social information. Egos chose their alters based on two factors: the alters's expertise and the distance between the alters's position and their own position. Only the subject/informant distance, however, affected whether or not the subject voted correctly because informants sent biased messages to those on the other side of the policy scale. Hence, subjects who valued expertise over preference proximity in choosing informants increased the odds that they would make a poor voting decision.

This experiment is not meant to mimic the entire communication process that takes place when people discuss politics. Rather, it isolates two of the key variables in political communication and demonstrates the role those variables play in correct voting. Still, it can provide a mechanism to explain the findings of research that uses surveys to study similar questions. For example, Huckfeldt (2001) shows that people report speaking more frequently with better informed political informants and acknowledge expertise in people who have divergent political preferences. It is possible that it is the informants who want to talk about politics, but these results suggest that individuals would look to the experts for guidance if the experts did not offer unsolicited advice.

This study echoes previous research that questions the efficacy of discussion as an information shortcut for anyone except the truly uninformed (e.g., Mondak, 1995; Sokhey and McClurg, 2012). It advances previous studies by demonstrating that even when individuals are allowed to choose their discussion partners and the incentives to mislead are clear, social communication does not lead to an aggregate increase in correct voting. We argue that egos should choose alters on the same side of the median because they are less likely to be led astray by social signals. When subjects do this, however, they typically receive a signal telling them to vote for the candidate they were planning on voting for before social information. For this reason, there is little benefit from social communication in the context of our experiment and other experiments on social communication (e.g., Jackman and Sniderman, 2006; Ryan, 2011a).

That conclusion might change if our experiment included a costly vote choice. In that case, subjects may become more confident that they have chosen the better candidate because of the signals sent by likeminded alters (Levitan and Visser, 2009). Individuals who are more confident that their chosen candidate is the correct choice are more likely to pay the costs of voting (Krupnikov, 2011). Hence, the next step for experiments on correct voting is incorporating insights from the literature on social networks and participation (e.g., McClurg, 2006; Nickerson, 2008; Siegel, 2009) to consider all of the elements that go into casting a correct vote.

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Notes

1. One cannot rule out the possibility that a well-informed fellow citizen will not distort political information even when the listener has different political leanings. It is possible that the expert will take into account the listener's beliefs and report information that is relevant to listener. In this case, it will be as if the less informed citizen spoke with someone who has the exact same political views but is much better informed. This helpful communication may be due to the speaker's lack of strategic sophistication or due to a desire to be genuinely helpful.
2. We note that, from a rational choice perspective, discounting information and anchoring on the privately held information defeats the very purpose of getting information from social sources unless the speaker has divergent preferences or is less informed than the listener.
3. More optimistic assessments on the use of social communication can be found in Lupia and McCubbins (1998) and Richey (2008a), while Jackman and Sniderman (2006), Ryan (2011a; 1013) and Sokhey and McClurg (2012) note situations where social communication leads to poorer voting decisions.
4. Camerer (2003) writes that this is the distinction between classical game theory and behavioral game theory, but we are not making any arguments regarding the rationality of subject behavior. The experiment is too complex to expect any subject to 'solve' it. The act of attempting to solve the game could be seen as irrational because the time that it would take would outweigh the marginal improvement in payoffs.
5. The instructions and screen shots of the experiment are available in the online appendix.
6. The signals can fall out of the bounds of a candidate's position. For example, if candidate A's true position is 1, the signal could be any integer number between −2 and 4.
7. Analysis of responses from snowball surveys show that individuals do a fairly good job of identifying the preferences of their political discussion partners with two caveats: (1) the preferences of strong partisans are more accessible (Huckfeldt et al., 1998) and (2) frequent discussion is necessary for accurate perceptions (Huckfeldt, 2007; Eveland and Hutchens, 2013). Individuals are also fairly good at recognizing who are the political experts in their discussion groups (Huckfeldt, 2001), although, there are some factors that bias those perceptions of expertise (Mendez and Osborn, 2010; Ryan 2011b).
8. In these calculations, a subject votes correctly when the two candidates are equally distanced from a voter regardless of which candidate the subject chooses. Voter 4 is ex-ante indifferent between the two candidates, but would vote correctly at a rate higher

than 0.5 because of the situations when the candidates are equally distanced from voter 4.

9. The simulation follows the experimental procedure, but omits the social exchange of information. First, two candidates' positions are generated from the respective interval. Second, once the positions are fixed, four signals are generated for each of the two candidates. Then, for each voter, the belief update and voting decisions are made incrementally from one piece to four pieces of information. Because of the symmetry simulations for voters 5, 6, and 7 are not separately done but imputed from the simulations for voters 1, 2, and 3.
10. A potentially rational case of choosing informant who is not an immediate neighbor is when a voter has no private signals and her immediate neighbors also have not purchased any private signals. Among our subjects, only 8% experienced such a situation. Further, as we have shown earlier, choosing a neighbor who is two places away on the policy scale is especially suboptimal if it means crossing the median of the scale.
11. Alternatively, we could have dropped subjects who were indifferent from the analysis. With that measure 72% of subjects' votes are correct votes. We use the measure that counts indifferent subjects as correct because that is the operationalization used in Ryan (2011a).
12. We do not run a model such as an exponential random graph model (Robins et al., 2007) in these analyses because all of the dyadic choices are independent. That is, if subject 1 chooses subject 2 and subject 2 choose subject 3, that does nothing to the probability that subject 3 will choose subject 1. Further, information flows only from one subject to another subject; it does not spread to the rest of the subjects as the information would in the experiment by Huckfeldt et al. (2014). There are repeated observations on subjects and the models do account for that clustering.
13. One is added to all values because some values are zero and the natural log of zero is undefined.

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