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The Political Coorientation of Young Adults in Voluntary Associations and its Relation with Conversation

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Running Head: POLITICAL COORIENTATION AND CONVERSATION

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ABSTRACT

We employ social network data from 25 randomly sampled voluntary associations to understand the factors associated with accurate perceptions of the political preferences of fellow group members. We build upon research in communication, social psychology, and social networks to identify relevant predictors. We analyze relationships at the dyadic level, but we also consider the *aggregated accuracy of perceptions by ego of alters* ("perceptiveness") and the *aggregated accuracy of perception by alters of ego* ("explicitness") regarding political candidate preferences using a multilevel modeling approach. We find relatively low levels of accuracy on average, and in general the variables that predict perceptiveness are not the same variables that predict explicitness. However, there is a consistent and strong link between the frequency of communication (viewed as an indicator of network tie strength) and accuracy both at the dyadic and aggregate levels. However, this relationship is highly contingent on the homophily of political preferences within the group.

"*Accuracy*, the extent to which one person's estimate of the other person's cognitions matches what the other person really does think, seems an ideal criterion for communication in that it is (theoretically, at least) achievable through communication alone." (McLeod & Chaffee, 1973, p. 487)

The history of social research has been peppered with theories and evidence regarding the accuracy of social reality perceptions, and in particular perceptions of the thoughts, beliefs, and behaviors of individuals or collectives (see Eveland, 2002 for a review). Much of this work has brought the relative inaccuracy of many social reality perceptions to our attention, with an emphasis on motivational and cognitive biases that may produce these inaccuracies. However, there has been an increasing move toward understanding what factors produce accurate perceptions of others (see Funder, 1987).

In the present study, we employ social network data from 25 randomly sampled voluntary associations to understand the factors associated with accurate perceptions of the political preferences of fellow group members. We address this issue at the dyadic level, but we also consider the *aggregated accuracy of perceptions by ego of alters* ("perceptiveness") and the *aggregated accuracy of perception by alters of ego* ("explicitness") regarding political candidate preferences. We find relatively low levels of accuracy, and in general the variables that predict perceptiveness are not the same variables that predict explicitness. However, there is a consistent and strong link between the frequency of communication (viewed as an indicator of network tie strength) and accuracy both at the dyadic and aggregate levels. This relationship is highly contingent on the homophily of political preferences within the group, supporting the longstanding assertion that "even the most basic prediction – that communication leads to higher agreement, accuracy, and congruency – must be tempered with conditional terms." (O'Keefe, 1973, p. 528)

On the Importance of Accuracy in Political Perception

It is often claimed that "perception is reality," or more cautiously noted that "If men define situations as real, they are real in their consequences." (Thomas, 1927, as cited in McLeod & Chaffee, 1973, p. 47) Numerous studies have demonstrated the negative implications of inaccurate social perceptions for subsequent attitudes or behavior (e.g., Prentice & Miller, 1993). We do not directly take issue with claims of the real-world impact of perception over reality. However, we take the position that in many cases it is normatively preferable for perception to match reality – that is, for perceptions to be accurate – precisely because perceptions are powerful determinants of attitudes and behaviors.

On a practical level, McLeod and Chaffee (1972, p. 72) claim that "effective communication strategies require a fairly high degree of coorientational accuracy." Huckfeldt and colleagues seem to agree, defining "effective political communication" as accuracy of perception of political preferences by alters, independent of either social influence or actual agreement. In fact, they argue that "Accurately perceived communication becomes a defining ingredient of effective communication, and hence a defining ingredient of collective deliberation in democratic politics." (Huckfeldt, Johnson, & Sprague, 2004, p. 88) Wackman (1973) observes that communication scholarship has placed too much emphasis on persuasion and suggests that it refocus on accuracy as the primary outcome of communication. Goel, Mason, and Watts (2010, p. 619) echo the sentiments of those who preceded them by arguing that "If a necessary precondition for social influence is the awareness of the orientation of the influencer, and if, as our results suggest, when individuals contemplate the opinions of their peers, they are either seeing a reflection of their own opinions (i.e., projection) or of general stereotypes, then the

extent to which peers influence each other's political attitudes may be less than is sometimes claimed." In short, although individuals may be influenced most directly by their perceptions rather than reality, for communication to be effective in producing influence, and for democracy to function as it is expected to from a normative perspective, perceptions of the political beliefs of others must be accurate to at least some minimal degree.

The Role of Communication in Accuracy of Perceptions

Communication is typically considered a key determinant of accuracy of social reality perceptions. When perceptions of larger social collectives are considered, the mass media are often invoked as important sources of information that may lead to either accurate or inaccurate perceptions. That is, mass media may sometimes encourage accurate, and sometimes inaccurate, perceptions of the social world depending on the specific topic under consideration (see Eveland, 2002; Eveland & Glynn, 2008; Mutz, 1998 for summaries). Interpersonal interaction patterns are also believed to play a role in influencing perceptions of larger collectives (e.g., Noelle-Neumann, 1993) and are believed to be essential in producing perceptions in dyads and small groups (e.g., Funder, 1995).

Much of the research on accuracy in interpersonal perception can trace its roots to Newcomb's (1953) concept of coorientation, either directly or through the work of McLeod and Chaffee (1972, 1973) and their coorientation model or Kenny's (e.g., Kenny & Kashy, 1994) social relations model. Newcomb, building on balance theories of the day, conceived of two individuals (A and B) both orienting toward some object in their shared environment (X). He noted:

> To the degree that A's orientation either toward X or toward B is contingent upon B's orientation toward X, A is motivated to influence and/or inform himself about B's

> orientation toward X. Communication is the most common and usually the most effective means by which he does so. (Newcomb, 1953, p. 395)

McLeod and Chaffee (1972, 1973) expanded on this model by developing a measurement approach and explicating a number of important concepts that could be derived from that measurement model (Figure 1). Each individual in the dyad has his or her own orientations (i.e., beliefs or attitudes) toward the object, and each individual has a perception of the alter's orientation toward the object. Measurement of these – for both the ego and the alter – produce four variables that may be mathematically combined to measure five concepts.

Congruency is a purely individual-level concept, reflecting the match between ego's perception of alter and ego's own beliefs. If, for instance, the ego supports Obama for the 2008 presidential election, and the ego also believes that the alter supports Obama for the 2008 election, there is congruency. (A similar measure is available for the alter – whether the alter sees congruency with ego – and these need not correspond.)

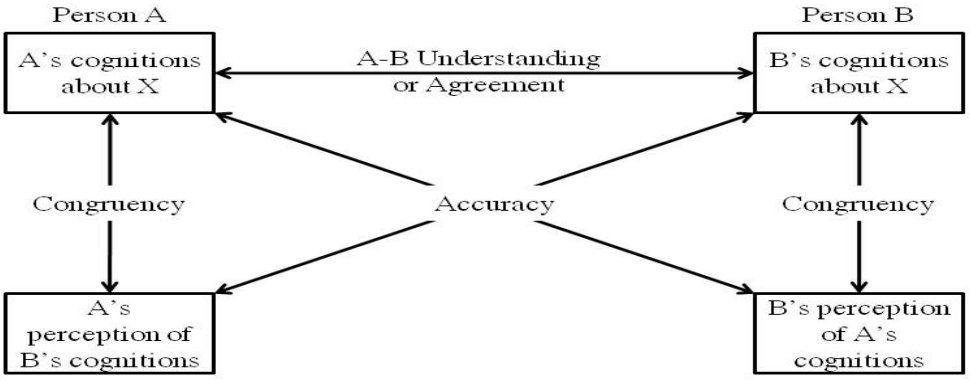

Figure 1. McLeod & Chaffee's (1973, p. 484) Coorientation Model

Agreement is a single, dyadic measure that assesses the extent of difference between the ego's self-reported beliefs about the object and the alter's self-reported beliefs about the object. If

these beliefs correspond, there is (objective) agreement. This is a symmetrical measure that is equivalent for ego and alter.

Finally, and most important for our present purposes, a measure of *accuracy* can be developed for both ego and alter. Ego is accurate if ego's perceptions of alter's orientation to the object matches alter's actual orientation to the object. Similarly, alter is accurate if alter's perception of ego's orientation to the object matches ego's actual orientation to the object. Accuracy thus is not necessarily symmetrical, so the two members of the dyad can have different accuracy scores.

McLeod and Chaffee's (1972) coorientation model has been tested in the context of dyads in families (see O'Keefe, 1973) and among corporate executives (Johnson & Lederer, 2005). It also has been extended to small group settings (Wackman, 1973) and even to perceptions beyond the dyadic level, such as between individuals and small groups (Steeves, 1984) and individuals and social collectives such as corporations (Christen, 2005). One common finding of coorientation research in this tradition is the important, but potentially complex, role that communication plays in producing accurate perceptions. As McLeod and Chaffee (1973, p. 482) note, "It is an unhappy commentary on the inadequacy of the human communication process that our perceptions of other people's cognitions are seldom accurate beyond chance, or beyond the level of accuracy that would be obtained had A simply projected his views onto B." Concerns about the accuracy of social perception have been repeatedly echoed before and since (see Eveland, 2002).

Modern social psychological research has also linked back to Newcomb's (1953) concept of coorientation (see Kenny & Kashy, 1994). This stream of research is intentionally distinct from the larger program of research on biases and heuristics in perception and decision-making

(see Funder, 1987). Funder's (1995) Realistic Accuracy Model (RAM), for instance, examines accuracy of personality assessments in real world settings. His model identifies four classes of variables that help produce accurate perceptions. "*Good judge*" factors are characteristics of the perceiver that facilitate accurate perceptions, such as knowledge about personality traits (the object of perception in the RAM), innate abilities such as intelligence, and motivation (such as motivation to be accurate). "*Good target*" factors include the general activity level of the target (i.e., alter) – which essentially increases the amount of behaviors that can be observed and thus used to evaluate the target – as well as target personality traits such as being low on self-monitoring, lack of effort at concealing relevant behaviors, and behavioral consistency. "*Good traits*" are those that are not value-laden (and thus don't lead to efforts to conceal or fake for social desirability reasons), and "*good information*" is effectively a measure of time or interaction to facilitate observation.

In this literature, there are often multiple assessments considered under the umbrella of accuracy. Kenny and West (2010) distinguish between "consensus" and "self-other agreement." Consensus is similarity in the judgment of ego and alter about a third person (e.g., both ego and alter agree that a patient is suffering from depression). Thus, consistency is effectively inter-coder reliability in the assessment of a third party. Self-other agreement more closely links to the coorientational notion of accuracy, in that it is defined as a match between the ego's assessment of him- or herself and an alter's assessment of the ego (or vice-versa). Kenny and West (2010) argue that there is considerable overlap in the variables that predict consistency and self-other agreement, suggesting that processes of self-perception and other-perception follow much the same pattern. However, here we focus entirely on what Kenny and West refer to as self-other agreement.

Research in social network analysis has also placed some emphasis on the accuracy of perception, especially in the context of cognitive social structures (CSS). Bondonio (1998), for instance, finds that one's position in the network communication structure (specifically, indegree centrality) significantly predicts consistency in perception of the network structure (see also Casciaro, 1998; Johnson & Orbach, 2002).

Although various labels are attached to it, communication broadly conceived is central to models of accurate perception, even if operationally communication may not be directly measured. Many studies examine the impact of frequency of interaction, observability of traits, degree of acquaintance, and time – all of which are likely determinants of or at least positively correlated with communication – on accuracy. Findings often are mixed, or conditional on complex interactions of variables, possibly in part due to ambiguity in measurement. Nonetheless, communication – either verbally or non-verbally, or as reflected in network position, and regardless of how it is labeled or operationalized – is seen as essential in producing accurate perceptions of others.

Accuracy of Political Perception

Compared to perceptions of collectives or reports of what the coorientation model would refer to as congruency, relatively few studies have examined the accuracy of dyadic political perceptions. This is likely the result of the heavy data requirements for such as assessment. Unlike measures of congruency, which can be gathered entirely at the individual level, accuracy requires at least dyadic-level data collection that is rare in political science and communication (Eveland, Hutchens, & Morey, in press). Nonetheless, both classic and contemporary studies

provide some evidence of the accuracy of political perceptions, and factors associated with accuracy.

Laumann's (1969) classic egocentric network study of urban males in Detroit examined the accuracy of perceptions of several non-political characteristics, but also party identification, of close friends. He found that "it is in the cases of party preference and ethnic origin that the main respondents are least knowledgeable … and most inaccurate." (p. 59-61) His explanation was that these characteristics, unlike the others, were probably least "visible" to the observers. This finding is consistent with Funder's (1995) argument that personality trait characteristics that make them more visible (and less likely to be faked) will increase perceptual accuracy.

Huckfeldt and Sprague (1995) found varying levels of accuracy of perceptions of vote choice among their respondents in their snowball sample network study. In a finding echoed in more recent studies, they found that agreement in the dyad was related to accuracy. Individuals with the same candidate preference had accuracy rates of about 90%, whereas those with different preferences were only about 60% accurate. They also found that accuracy was greater for individuals with actual majority viewpoints rather than minority viewpoints.

In a more thorough and complex analysis of more recent name generator data, Huckfeldt et al. (2004) found that those with stronger opinions, those who agreed with the ego, and those who were in the majority were more likely to have their political preferences accurately perceived. They also demonstrated that accuracy increased as the election campaign progressed. However, they did not find a significant effect of self-reported communication on accuracy, although the theoretical explanation of all of their significant findings other than the agreement and majority effects would seem to depend on communication processes.

Levitan and Visser (2009) found that among fellow dorm members, accuracy in the valence of political attitudes was quite high – roughly 90%. Most recently, Goel, Mason and Watts (2010) examined the accuracy of perceptions of various political attitudes of Facebook friends. They found an overall accuracy rate of 74%, but they identified a number of variables that affected this overall accuracy rate. Perceptions were more accurate among "strong ties" (those with more shared Facebook friends), among those who reported discussing politics (although this effect was rather small), and when there was objective agreement. They conclude that "if the basis of a healthy polity is that ordinary people educate themselves politically through deliberation with their friends and neighbors, the observation that, in fact, little of this discussion is sufficiently detailed that friends know each other's views on matters like immigration, tax policy, or the Iraq war is one that is worth understanding better." (p. 619) Better understanding the accuracy of political perceptions by testing characteristics of the perceiver and the perceived, as moderated by contextual factors, is the task to which we now turn.

Measurement and Predictions

Lazer and colleagues (2010, p. 267-268) note that "there exists no ideally generalizable setting for the study of social influence." Studies of accuracy of political perception in social networks have been based on samples or settings such as urban men in Detroit (Laumann, 1969), residents of Indianapolis and St. Louis (Huckfeldt et al., 2004), residents of South Bend, Indiana (Huckfeldt & Sprague, 1995), graduate students in public policy (Lazer et al., 2010), a self-selected sample of Facebook users (Goel et al., 2010), and dormitory residents at the University of Chicago (Levitan & Visser, 2009).

For the present study, we gathered full sociometric social network data of a probability

sample (N = 25 groups, group response rate = 57%) of intact student activity groups from a large Midwest research university immediately following the 2008 presidential election. These groups varied in size from 13 to 36 members (M = 24.52, SD = 6.48) and included fraternal groups, sports groups, social groups, charitable groups, political groups, and academic associations. Response rates within each group were at least 50% and some were a full 100% (mean response rate = 82%, N = 502 individuals). We gathered data on multiple groups because of the potential idiosyncrasies in results that would be possible had we conducted a simple case study of a single group. However, we acknowledge that the groups from which we sampled represent a unique context and population, as in any other real world setting in which social influence might be studied.

For each member of these 25 groups (limited only by response rate within the group), we gathered data on ego's candidate choice or preference in the 2008 presidential election (Figure 2). Members were asked "If you voted in the 2008 presidential election, for which candidate did you vote?" with response options of Obama, McCain, Nader, Barr, or some other candidate. These results were collapsed to Obama, McCain, or other/missing. To estimate the missing data, we employed feeling thermometer results for the two major party candidates. Individuals who reported a more positive feeling thermometer for one major candidate over another were coded as preferring that candidate. Each respondent also reported – by name – their perceptions of each other group member's candidate support for president. Responses (which again included minor party candidates) were recoded to Obama (including definitely Obama and probably Obama), McCain (including definitely McCain and probably McCain), some other candidate, or unable to guess.

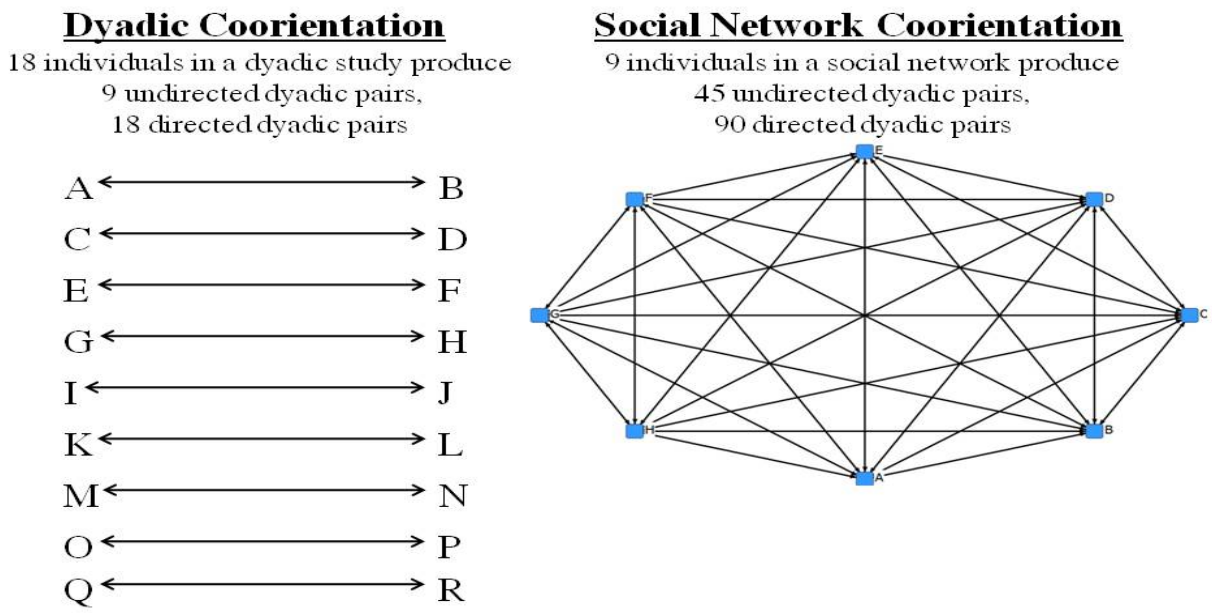

Figure 2. Dyadic Coorientation vs. Social Network Coorientation Data Collection Approach

Using these data, we developed a network data file in which the cells represented the accuracy relationship in a dyad. Each dyad had two values (one above the diagonal, one below), one for each direction of perception (from A to B, and from B to A). Cells were coded either "0" (i.e., inaccurate perception or "can't guess") or "1" (i.e., accurate perception). Respondents reported perceived candidate preference for all group members, but ultimately there was some non-response in most groups that led to a lack of corresponding candidate preference data.

We now return to the distinction made by Funder (1995) in the RAM between variables associated with "good judges" and variables associated with "good targets" (see also Kenny & Kashy's [1994] distinction between "perceiver effect" and "target effect"). Using our social network data, we have assessments of multiple alters from each ego, each of which reflects directional accuracy in the dyad. By aggregating these assessments across alters, we can derive a summary score for each ego regarding his or her accuracy of perceiving the candidate choices of his or her alters. What we obtain is a summary measure of the extent to which an individual is a

good (or accurate) judge or perceiver, which we term "*perceptiveness*" (M = .27, SD = .26). Similarly, each ego's candidate preference was assessed by each alter. Aggregating across alters, we can determine how accurate alters are regarding a particular ego. This measure taps being a good target or effective communicator, or what we refer to as "*explicitness*" (M = .27, SD = .24). Distributions for perceptiveness and explicitness across groups are presented in Figure 3. Our ultimate goal, to which we now turn, is to identify individual-level and group-level variables associated with the characteristics of perceptiveness (i.e., accuracy of ego in perceiving alters) and explicitness (i.e., accuracy of alters in perceiving ego).

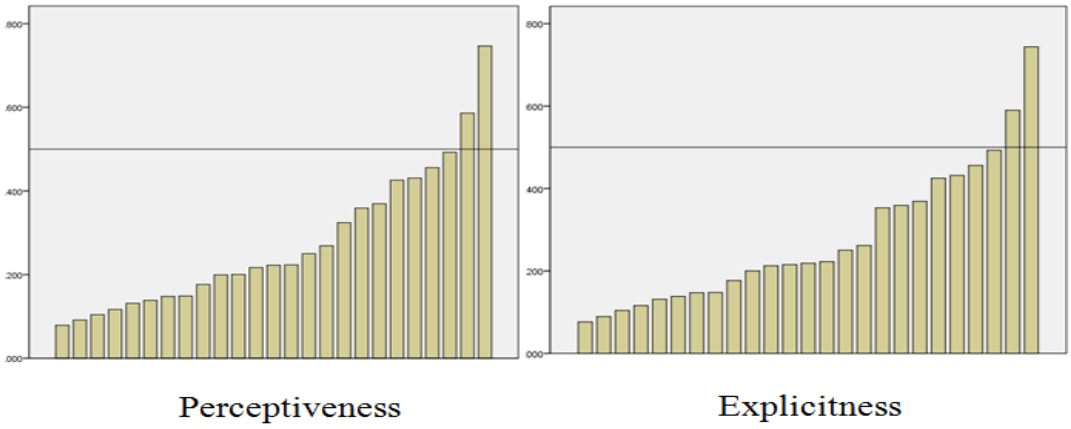

Figure 3. Distributions of Perceptiveness and Explicitness Across Groups.

First, there is reason to believe that highly visible demographic characteristics that are also closely associated with political preferences would offer cues that could be used as heuristics for accurately identifying candidate preference, at least in the aggregate. Race was coded with two dummy variables – white (77%) and black (4%) – derived from an ethnicity question that permitted respondents to check all ethnicities which they applied to themselves. African Americans typically strongly support Democratic candidates, and this would be expected

to be even truer in 2008 since the Democratic candidate was African American. In fact, among our respondents, 100% of black self-identifiers but only 59% of those who did not self-identify as black supported Obama. Comparing Obama support among white self-identifiers (60%) with those who do not self-identify as white (65%), however, the differences were minimal. Gender, with female coded high (56% of our sample), was the other obvious choice. Women also generally tend to support Democratic candidates at a higher rate than males, although among our respondents the difference was negligible (64% vs. 63%, respectively).

Huckfeldt and colleagues (2004) find that individuals with more extreme political viewpoints more accurately communicate their preferences. This is likely due to a lack of ambiguity of the communication cues they produce, in conjunction with a larger flow of cues in interaction. Moreover, Funder (1995) suggests that one characteristic of a good judge is to be motivated to make an accurate judgment, which we would argue is more likely among someone who was interested in and highly committed to politics and a particular political preference. To tap these concepts, we incorporate measures of campaign interest, strength of candidate preference, and political participation as predictors in our models. These three variables should capture the frequency and consistency of preference cues (both verbal and non-verbal) produced by ego – and the motivation to assess the viewpoints of others. Interest was measured by asking egos "How interested were you in the 2008 presidential campaign?" with response options of "not at all" (coded 1) to "a great deal" (coded 5) (M = 3.92, SD = .99). Strength of preference was measured by taking the absolute value of the difference between 101-point feeling thermometer scores for Obama and McCain (M = 42.74, SD = 29.65). Political participation was measured as the sum of three dichotomous indicators of participation in the 2008 campaign (working, protest attendance, and displaying a political sign) (M = .56, SD = .86).

Funder (1995) argues that one characteristic of a good judge is knowledge about personality. Given his emphasis on accuracy in personality trait perception, knowledge of this topic is sensible as a characteristic of a good judge. In the present context, it is more sensible to think about the level of political knowledge of the ego as assisting in accurate perception of alters. More knowledgeable egos are likely better able to interpret cues – either via communication or simple political stereotypes – and apply them to accurately judge political preferences. To measure political knowledge, we employed a six-item knowledge test regarding the stances and characteristics of Obama and McCain ($M = 2.45$, $SD = 1.74$).

Many theories of communication suggest that, especially in ambiguous or hostile opinion settings, individuals will disguise or withhold their true political preferences. Noelle-Neumann's (1993) spiral of silence theory suggests individuals will remain silent in the face of majority pressures. Morey, Eveland, and Hutchens (2012) examined variations of opinion expression avoidance across relationship types. Avoiding accurately communicating regarding one's political preferences is likely to reduce the ability of others to accurately perceive one's candidate preference; in fact, this is exactly what many individuals explicitly intend. We employed Hayes's (2007) measure of opinion expression avoidance, which is based on the mean of nine items ($\alpha = .74$) using a scale from 1 to 5 ($M = 2.33$, $SD = .47$).

A number of studies have demonstrated that actual agreement increases accuracy of perception (Goel at el., 2010; Huckfeldt et al., 2004; Huckfeldt & Sprague, 1995). Much of this effect is likely a product of social projection (Goel et al., 2010), which can produce either accuracy or inaccuracy in any given case, but would seem to produce accurate perceptions in the aggregate (see Hoch, 1987; Jones, 2004). Similarly, holding a minority viewpoint makes one's opinion harder to perceive accurately (Huckfeldt et al., 2004; Huckfeldt & Sprague, 1995). This

may also be a product of projection, such that majority members will be more accurate when projecting their opinions than will minority members. These are contexts in which Funder (1987) would note that accuracy does not imply that a suitable decision-making process was followed to become accurate, and thus the importance of distinguishing between decision-making biases (such a projection) and objective accuracy (independent of the process through which accuracy was achieved). That is, it is not entirely clear that accuracy based on agreement and majority position reflects characteristics of a "good judge," but it is accuracy nonetheless. We assess Obama vote preference, which is the majority decision in both the country and among our respondents (61%) and thus reflects majority status except possibly within the activity group itself.

The final individual-level variable in our models is in some sense also the most central to our endeavor and was implied long ago by Newcomb (1953). Opportunities for communication and actual communication should be a primary determinant of accurate perceptions, and in one form or another communication (or its correlates such as time available for interaction or strength of acquaintanceship) has proven to be significant and positive predictor of accuracy (Goel et al., 2010; Huckfeldt et al., 2004; Paunonen, 1989). Nonetheless, it certainly is possible to use communication to produce inaccurate perceptions via deception. Research suggests that "lying is a fact of daily life" and that "in everyday life, people lie about what they are really like and how they really do feel" (DePaulo & Kashy, 1998, p. 63; see also Buller & Burgoon, 1996). It is also possible to produce errors unintentionally through miscommunication via processes such as those Prentice and Miller (1993) refer to as *differential interpretation* and *illusion of transparency*. We address the impact of communication on accuracy of perceptions in the present study via the reported the frequency of general discussion ("How often you talk in general").

Response options were “not at all,” “once or twice a month,” “about once a week,” “a couple of times a week,” and “almost every day” – coded 0 through 4 respectively. We summed these dyadic measures across all group members, then took the log(10) of this value because of the highly skewed distribution (logged communication frequency M = 1.16, SD = .45). Given variations in the number of dyads from which such measures were derived, we included the number of individuals in the data file for the group (M = 18.76, SD = 6.11) as a control variable in models with this measure of general discussion frequency.

In addition to these individual-level variables, we employed four group-level variables either for control purposes or because we believed that contextual factors would moderate individual-level processes (e.g., see Casciaro, 1998; Kenny & West, 2010). First, as previously discussed, we controlled the size of the network (as defined by the number of valid social network responses in our data) since this could produce considerable cross-group variation in the summed measure of general discussion frequency.

We also incorporated a measure of the “actual” size of each of the groups (M = 24.52, SD = 6.48). Group leaders provided a list of all group members, but not all group members responded to our survey. Network measures were developed based only on individuals within the groups who responded to our survey, because we could not develop suitable measures without information on, for instance, vote preferences, for non-respondents. Therefore, actual group size is a value at least equal to, and normally larger, than network size, and the difference between the two is inversely proportional to group response rate. Group size truly reflects the nature of the group in which individual-level processes are operating and so is the key measure theoretically (Kenny & West, 2010). However, since it is network size that determines the maximum possible score on the general discussion measure, both measures must be included.

Group leaders also reported the degree to which their groups had a political emphasis. We would expect that membership in a political group would facilitate accuracy of perception of political viewpoints simply by membership alone, and also by the increased salience of politics within the group. We did not actively select for political groups in our sampling process, nor did we exclude explicitly political groups. Our random sampling process produced groups that were primarily non-political on a four-point scale, with 24 of 25 groups being rated on one of the two lowest values – "not at all political" or "slightly political" (M = 1.40, SD = .58).

Finally, we created a measure of group homophily based on the distribution of candidate preferences within the group. Operationally, this was defined as a deviation from 50% support for Obama in the group, with higher values indicating less equal division regarding candidate choice within the group (M = .20, SD = .14), regardless of direction. Of course, social projection would lead to greater accuracy in groups that are highly homophilous, presuming the overall orientation of the group itself were known. More importantly for our purposes, group homophily is a key measure that is likely to affect the efficacy of communication in producing greater accuracy. In a heterogeneous setting (i.e., low numeric values), individuals may be reticent to offer their true opinions in interaction, and may even intentionally deceive others about their preferences. In more homophilous settings (i.e., high numeric values), political preferences (presuming they are majority preferences) may be, in a social sense, communicated more freely and clearly. Thus, we would expect that group homophily would moderate the impact of communication variables on accuracy.

Analysis Strategy

Our analyses were conducted in two phases (see Figure 4). First, we employ the dyadic-

level data we have by correlating the discussion network matrix and the accuracy matrix within each group using the quadratic assignment procedure (QAP; see Krackhardt, 1988). These analyses retain the dyadic *and* directional nature of our data, and permit us to examine possible differences in these correlations across the 25 groups from which we have data. They also help us avoid engaging in an ecological fallacy in our later, aggregated results, by demonstrating that the link between communication and accuracy exists at the operative, dyadic level and not merely due to the process of aggregation.

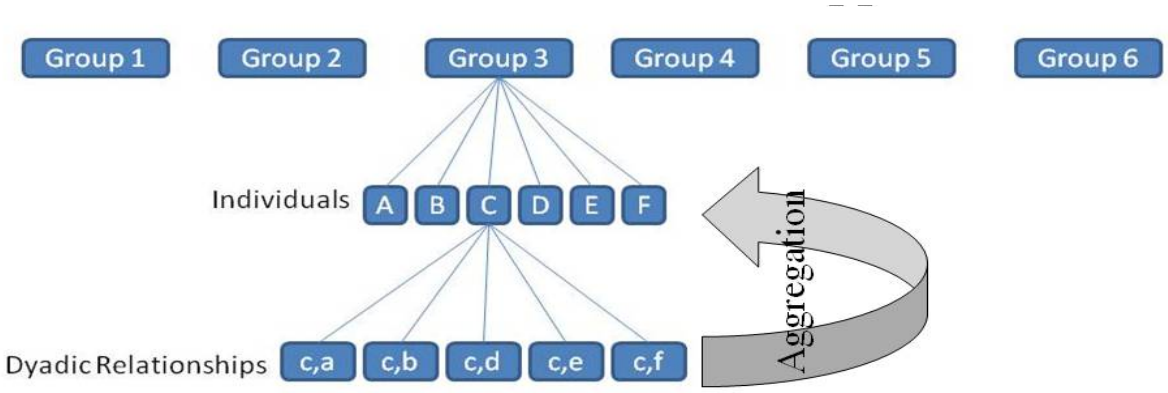

Figure 4. Data Structure.

Then, to assess the extent to which individual- and group-level variables are related to perceptiveness or explicitness, we used multilevel modeling with HLM 6 to predict our aggregated individual-level outcomes with variables from the individual-level ("Level 1") and the group-level ("Level 2"). For each of the two dependent variables, four models were estimated: an empty model, a model with only individual-level variables (plus network-based group size control), a model with all individual-level and group-level variables included, and a model with all individual- and group-level variables included plus a cross-level interaction

between frequency of discussion and group homophily. All reported results utilize robust standard errors.

Results

Preliminary Dyadic Analyses

We begin by computing the QAP correlation between the directed and valued matrix of general discussion frequency and the directed but dichotomous matrix of perceptual accuracy. In these analyses, because the matrices are directed from ego to alter, these analyses addresses only the impact of communication on perceptiveness. Figure 5 presents the correlations by group. Twenty-three of the twenty-five analyses produced a statistically significant zero-order correlation between communication frequency and accuracy of perception (blue bars), with significant correlation values ranging from the mid-teens to nearly .70. There are two conclusions to be drawn from these results. First, in general increased communication increases perceptual accuracy, regardless of the group. Second, there is significant variation in the strength of this relationship across groups. This second conclusion motivates the multilevel model approach to which we now turn.

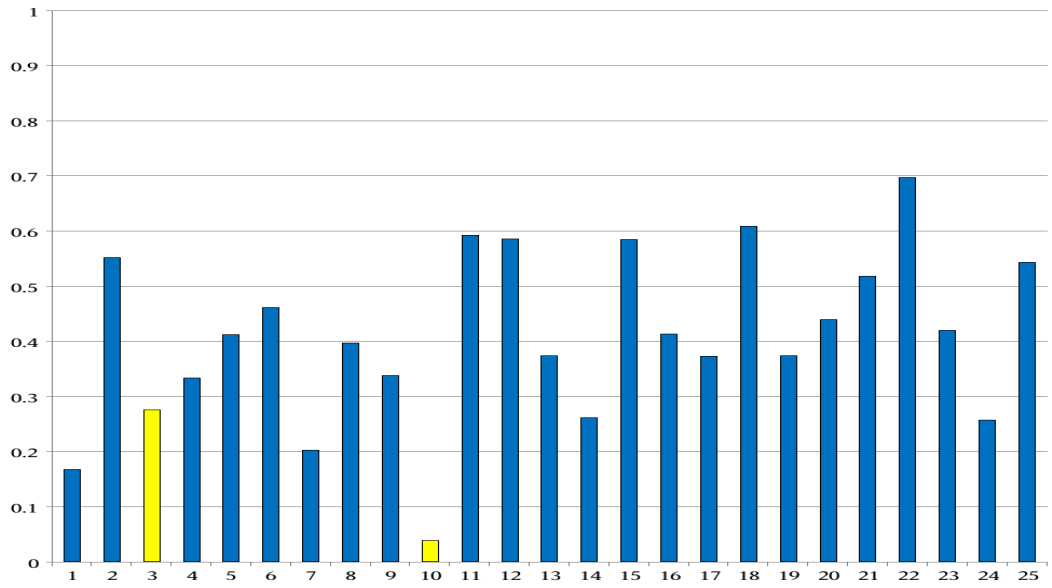

Figure 5. Within Group Dyadic Discussion to Accuracy QAP Correlations (yellow bars are non-significant)

Predicting Perceptiveness

Moving to our multilevel modeling approach, we first examine the results for perceptiveness, that is, being able to accurately assess the political position of alters in the network. From the empty model, presented in the first column of Table 1, we can ascertain the intraclass correlation coefficient (ICC), which indicates that 36.6% of the variance in perceptiveness can be attributed to being associated with different voluntary activity groups (implying, of course, that the remaining 63.4% of variance is at the individual level).

The results when considering only the individual-level variables in the predictive model (Column 2 of Table 1) indicate that identifying as black was associated with being less perceptive than other ethnicities. White self-identifiers were also marginally less perceptive, but gender was not a significant predictor. Among the motivational variables – political interest, the relative strength of support for a given candidate, and political participation – only political

interest was a significant predictor of perceptiveness. Political knowledge, expression avoidance, and being a member of the majority also were unrelated to perceptiveness. However, how often egos talk to alters in their network does have a strong positive relationship with being perceptive, as we would expect from the coorientation model. Utilizing the variance components to assess the proportion reduction in variance at Level 1 (i.e., the individual level), defined as $\frac{\sigma^2_{empty} - \sigma^2_{individual}}{\sigma^2_{empty}}$, indicates that all of our individual-level variables together accounted for 24.4% of the Level 1 variance (or 15.5% of the total variance). Estimating the individual-level model again, but excluding frequency of discussion, results in a σ^2 value of .040. This indicates that frequency of discussion alone accounts for 15% of the individual level variance in perceptiveness above and 9.4% of the Level 1 variance was accounted for by the other individual-level variables.

Adding the group-level variables does not reveal any significant main effects (Column 3 of Table 1). Utilizing the variance components to assess the proportion reduction in variance at Level 2 (group level), defined as $\frac{\pi_{empty} - \pi_{individual\,\&\,group}}{\pi_{empty}}$, indicates that incorporating the group-level variables into the model actually increased the variance at the group level. However, there is a significant cross-level interaction between group homophily and general discussion frequency (Column 4 of Table 1). As can be seen in Figure 6, in groups that are more homophilous the relationship between discussion and accuracy of political perception is stronger than in heterogeneous groups. These results confirm our earlier QAP findings (Figure 5) after the incorporation of a stringent set of controls at both the individual and group levels.

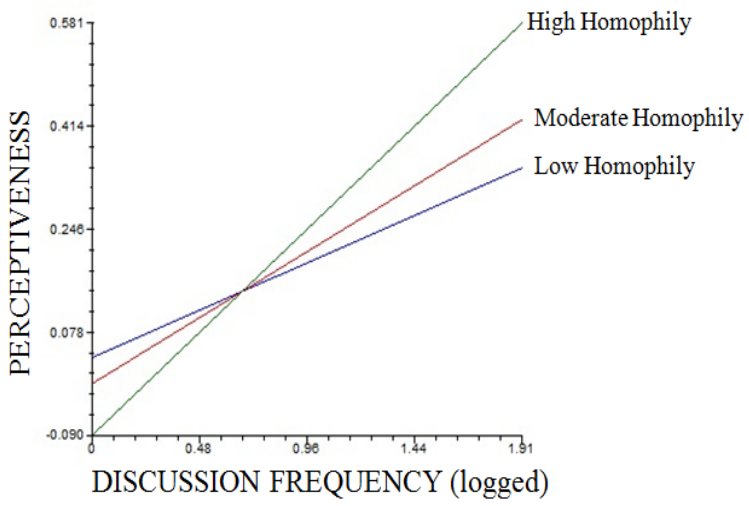

Figure 6. Cross-level Interaction Between Discussion Frequency and Group Homophily for Perceptiveness.

Predicting Explicitness

We turn now to multilevel models predicting explicitness, which is the ability of alters to accurately report the ego's political views. The ICC obtained in the empty model (Column 1 of Table 2) reveals that 47.4% of the variance in explicitness can be attributed to being associated with different voluntary activity groups (and thus 52.6% of the variance is across individuals within groups). This finding suggests that explicitness is even more heavily a function of group properties than was perceptiveness.

As can be seen in the second column of Table 2, again ethnicity did not predict as expected. Identifying as white was negatively associated with explicitness, and identifying as black was not significantly associated with explicitness. Unlike perceptiveness, being female was significantly associated with increased levels of explicitness. The motivational variables also showed opposite patterns of significance for explicitness in comparison to perceptiveness. Strength of support for one's chosen candidate was positively associated with explicitness, but

political interest and political participation were not significantly related to explicitness. Increased political knowledge was marginally associated with increased levels of explicitness; however, avoiding expressing opinions was not significantly associated with reduced explicitness. Individuals who were in the overall majority (because they supported Obama) were more likely to have their political views accurately identified by alters as we expected. The final individual-level variable, frequency of discussion, was associated with increased levels of explicitness as we expected. The proportional reduction of variance at Level 1 indicates that the individual-level variables account for 43.3% of the individual-level variance (or 22.8% of the total variance). Of this, discussion frequency accounts for 10.5% of the Level 1 variance and all other individual-level variables 32.8% (σ^2 = .019 without discussion frequency included).

At the group level, group homophily was the only significant predictor. The results indicate that more homophilous groups are associated with increased levels of explicitness, as expected (Column 3 of Table 2). The proportion reduction in variance indicated that the group variables account for 74.1% of the variance at the group level (or 35.1% of the total variance). Group homophily also significantly interacted with frequency of discussion (Column 4 of Table 2). As can be seen in Figure 7, in groups that are more homophilous the relationship between discussion frequency and how accurate alters are at reporting the ego's political preference is stronger than in heterophilous groups.

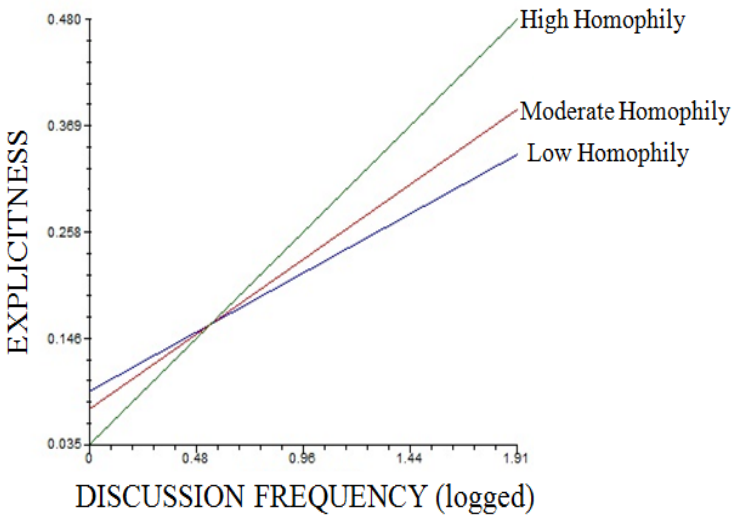

Figure 7. Crosslevel Interaction Between Discussion Frequency and Group Homophily for Explicitness.

Discussion

Our results suggest that the level of accuracy in perceiving the candidate preferences of one's fellow voluntary association members is, in a word, abysmal. On average, only about one in every four group members' preferences are accurately perceived. This is particularly surprising given that the decision was effectively a dichotomous one of Obama vs. McCain, meaning that a simple coin toss in this environment in which Obama was favored would have produced considerably greater accuracy. And, given the tendency for younger adults across the nation to support Obama (or even because Obama led in national polls prior to, and ultimately won, the election), had respondents uniformly selected "Obama" they could have improved their aggregate accuracy to greater than 50%.

Some characteristics of individuals and groups did help increase the accuracy of perceptions. A few groups reached accuracy levels higher than 50%, and the frequency of discussion among group members was the strongest single individual predictor of accurate

perceptions. Most interestingly, more frequent communication was most effective at increasing accuracy in group contexts in which there was a solid majority in favor of a particular candidate. Frequent discussion was considerably less effective at improving accuracy when members of the group were, in fact, evenly divided between Obama and his opponents.

What does it mean to be inaccurate in perceiving candidate preferences? In this manuscript, we equated saying "don't know" when asked to report a fellow group member's candidate choice with being inaccurate. That is, we made the assumption that an inability or unwillingness to make a guess is equivalent with taking a guess and being wrong. This is a common approach when dealing with other forms of political knowledge (see Mondak & Davis, 2001). That is, when asked what office is held by Joseph Biden, answering "don't know" is typically considered to be the same as answering "Secretary of State." It is possible, however, that different individual characteristics may contribute to low levels of perceptiveness and explicitness in the form of actual misperceptions compared to an unwillingness to guess. Future research should consider treating accuracy as a trichotomous variable composed of an accurate selection, an inaccurate selection, and the failure to make a selection altogether to assess whether communication and our other predictors can also help distinguish between not knowing and thinking one knows but being wrong.

Another avenue for future research is to contrast the effects of general discussion on accuracy – as we have done here – against the effects of political discussion in particular. For this manuscript, we chose to emphasize general discussion as the key predictor for several reasons. First, the mean level of political discussion among our respondents was very low and the distribution was highly skewed. We had little variation in political discussion, with most respondents reporting no political discussion or only very infrequent political discussion.

Second, we know from prior research that general discussion and political discussion within a dyad are highly correlated and that political discussion is by necessity limited by general discussion (see Eveland & Kleinman, in press), so that general discussion could possibly be used as a meaningful proxy for the potential of political discussion. Third, we know that different individuals have different definitions of "political" and that these idiosyncratic definitions of what is political influence their responses regarding the frequency of political discussion (Morey, 2010) – making it a potentially less reliable measure than general discussion. Finally, we know that individuals may use many different cues available in interaction – not all based on explicit political discussion – to decipher the political preferences of others (see Rule & Ambady, 2010; Samochowiec, Wänke, & Fiedler, 2010). Even if politics is not discussed between two individuals, information gained about the more general values, background, and opinions of others can provide important clues to their political beliefs (e.g., the union membership of their parents, their preference for various forms of music, their academic major, the type of clothes they wear).

Nonetheless, it would be useful to explicitly compare and address possible differences in topic-specific discussion (which could be either intentionally clarifying or intentionally deceptive) and general discussion (which is likely to be somewhat ambiguous, but unlikely to be motivated by efforts at deception regarding political preferences) in producing accurate political perceptions.

Finally, we close by noting that we have been assuming that accuracy in political perception is a valuable goal. Nonetheless, McLeod and Chaffee (1973, p. 496-497) note "when agreement is very low, a social system may well be better maintained via restricted communication; more 'open' communication, with its attendant increase in accuracy of both

persons, can exacerbate interpersonal conflict unnecessarily." Thus, it may be that the disappointingly low levels of accuracy we observed among our respondents may have positive functions for the particular dyadic relationships or the cohesion of the groups themselves.

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Table 1. Multilevel Models Predicting Perceptiveness

	Empty	**Individual**	**Individual & Group**	**Interaction**
Fixed Components				
Intercept γ_{00}	.276 (.03)*	-.115 (.08)	-.199 (.11)	-.018 (.12)
Network Size γ_{01}	--	-.001 (.00)	-.004 (.01)	-.003 (.00)
Group Size γ_{02}	--	--	.004 (.00)	.002 (.00)
Politicalness of Group γ_{03}	--	--	-.006 (.04)	.002 (.04)
Homophily of Group γ_{04}	--	--	.193 (.13)	-.63 (.27)*
White γ_{10}	--	-.037 (.02)#	-.037 (.02)#	-.039 (.02)#
Black γ_{20}	--	-.049 (.02)*	-.058 (.02)*	-.048 (.02)*
Gender γ_{30}	--	-.032 (.02)	-.035 (.02)	-.027 (.02)
Political Interest γ_{40}	--	.039 (.01)*	.039 (.01)*	.042 (.01)*
Strength of Support γ_{60}	--	.001 (.00)	.001 (.00)	.000 (.00)
Political Participation γ_{70}	--	-.002 (.01)	-.003 (.01)	-.004 (.01)
Political Knowledge γ_{50}	--	-.004 (.01)	-.005 (.01)	-.004 (.01)
Opinion Expression Avoidance γ_{80}	--	.008 (.02)	.007 (.02)	.007 (.02)
Obama Supporter γ_{90}	--	.037 (.03)	.040 (.03)	.032 (.03)
Frequency of Discussion γ_{100}	--	.249 (.04)*	.253 (.05)*	.067 (.06)
Frequency x Homophily γ_{101}	--	--	--	.947 (.24)*
Variance Components				
τ_{00}	.026	.041	.044	.034
σ^2	.045	.034	.034	.034
ICC	.366	--	--	--

Table 2. Multilevel Models Predicting for Explicitness

	Empty	Individual	Individual & Group	Interaction
Fixed Components				
Intercept γ_{00}	.277 (.03)*	.065 (.09)	.014 (.10)	.114 (.11)
Network Size γ_{01}	--	-.003 (.00)	-.001 (.00)	-.001 (.00)
Group Size γ_{02}	--	--	.001 (.00)	.0001 (.00)
Politicalness of Group γ_{03}	--	--	.001 (.00)	-.049 (.03)
Homophily of Group γ_{04}	--	--	.272 (.12)*	-.279 (.17)
White γ_{10}	--	-.052 (.03)#	-.051 (.02)#	-.053 (.02)*
Black γ_{20}	--	.078 (.07)	.040 (.06)	.038 (.06)
Gender γ_{30}	--	-.035 (.01)*	-.036 (.01)*	-.033 (.01)*
Political Interest γ_{40}	--	.008 (.01)	.008 (.01)	.009 (.01)
Strength of Support γ_{60}	--	.001 (.00)*	.001 (.00)*	.001 (.00)*
Political Participation γ_{70}	--	.004 (.01)	.005 (.01)	.006 (.01)
Political Knowledge γ_{50}	--	.008 (.00)#	.008 (.01)#	.009 (.00)
Opinion Expression Avoidance γ_{80}	--	-.001 (.01)	-.002 (.01)	.001 (.01)
Obama Supporter γ_{90}	--	.101 (.03)*	.099 (.03)*	.096 (.03)*
Frequency of Discussion γ_{100}	--	.167 (.02)*	.165 (.02)*	.078 (.03)*
Frequency x Homophily γ_{101}	--	--	--	.514 (.15)*
Variance Components				
τ_{00}	.027	.009	.007	.006
σ^2	.030	.017	.017	.017
ICC	.474	--	--	--