

**PERSONAL CONNECTIONS TO THE POLITICAL WORLD:
SOCIAL INFLUENCES ON DEMOCRATIC COMPETENCE IN BRAZIL AND IN
COMPARATIVE CONTEXT**

by

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Amy Erica Smith, PhD

University of Pittsburgh, 2011

Conversation is at democracy's core. In this dissertation, I examine citizens' political discussion networks and their effects on *democratic competence*, meaning what citizens know about and how they interact with their political systems. I investigate how patterns of discussion and discussion's impacts vary across the world, paying particular attention to Brazil. Data come from panel studies spanning Brazil's 2002, 2006, and 2010 presidential elections, as well as a case study of the 2008 local elections; and from an eleven country study in the 1990s. I address three broad research questions.

First, does political discussion affect democratic competence, and for whom? While the claim that political discussion has democratic benefits is common, selection effects make demonstrating causal claims difficult, since politically knowledgeable and engaged citizens are likely to choose to discuss politics. Using fixed effects and instrumental variables models, I find strong evidence that conversation promotes knowledge and participation, and that it has a "leveling effect," helping citizens with lowest initial knowledge catch up with their neighbors. Moreover, spouses are particularly influential, and women give higher priority to spouses as their closest political discussants.

Second, how does knowing people with different political opinions affect democratic competence? The key to solving longstanding debates requires recognizing that divergent

preferences take two forms—the total preferences in the network (*diversity*) and the extent of disagreement with the reference person (*conflict*). Using multilevel models, I find that in systems with low numbers of candidates, conflict is demobilizing, but *only* when the network *homogeneously* disagrees with the reference person. Moreover, conflict combined with diversity promotes learning. In systems with more candidates, however, the effects of conflict disappear.

Third, how do the electoral and party systems shape networks? And what are the downstream consequences for democratic competence? The number of candidates in a political system strongly affects exposure to diverse and conflicting preferences as well as the probability of knowing candidates and activists. I estimate that three-quarters of respondents in the local election I study in Brazil knew personally a candidate; using matching, I find that such connections promoted political engagement, but also fostered clientelism.

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PREFACE

The analysis in this dissertation is based on a number of data sets. The first is a six-wave panel study conducted by Professors Barry Ames, Andy Baker, and Lúcio Rennó in two Brazilian cities during the presidential campaigns of 2002 and 2006. The first three waves were funded by a National Science Foundation grant to these three professors to study the presidential election campaign of 2002, while the fourth through sixth were funded under the research funds of the Andrew Mellon Chair at the University of Pittsburgh in 2004 and 2006. I am grateful to Professor Ames for allowing me use of data from Waves 4-6.

The second data set was collected in large part during my own field work in Brazil in March 2008 and September 2008-June 2009. Some follow-up data were also collected by research assistants during the late summer and fall of 2009, after I had already returned to the US. I gratefully acknowledge support from a Mellon Fellowship from the University of Pittsburgh for the 2008-2009 academic year, as well as from a National Science Foundation (NSF) Doctoral Dissertation Improvement Grant. The National Science Foundation does not endorse and bears no responsibility for any findings or conclusions from this research. The trip in March 2008 was funded by Professor Ames, again using research funds from the Andrew Mellon Chair.

Third, the NSF grant also enabled me to contribute to the Brazilian Electoral Panel Study (BEPS), a three-wave study of the 2010 presidential election in Brazil. Thanks to Lúcio Rennó

for conceiving and organizing BEPS; as well as to Barry Ames, Fabiana Machado, David Samuels, and especially César Zucco for a very friendly, productive, and collaborative working relationship.

Finally, I utilize publicly available data from the second round of the Comparative National Elections Project (CNEP II), collected by a large team of investigators. Again I am grateful to the investigators for making the data publicly available.

I owe tremendous thanks to a number of people who made my research in Brazil possible. In Juiz de Fora, I had a great deal of help from many people. Professor Tuim Botti provided advice and generously put the resources of the Center for Social Research (Centro de Pesquisas Sociais) at the Federal University of Juiz de Fora (UFJF) at the disposal of a poor gringa researcher. A large team of undergraduate student interviewers capably administered the survey. Thanks especially to Ana Paula Evangelista and Rafaela Reis, at the time of the study undergraduates at the UFJF, for excellent research assistance and for supervision of the research team. It continues to be a great pleasure to watch their academic development. In Caxias do Sul, I am grateful most of all to Andreia Ramos, Rodrigo Giacomet, and Simone Martins Rodrigues, at the then-Instituto Montserrat (in 2009 renamed the Faculdade Latino Americana) for their advice, support, and friendship. In both cities many public servants and civic and political activists generously invited into their workplaces and homes and shared their experiences with me. I am deeply grateful for their friendly welcome and for the information they shared with me.

Finally, in July-August 2007, before the dissertation research began, I stayed in Brasília for two months, researching community associations and ideology. While the interviews conducted during that stay are not used directly in this dissertation, what I learned during that visit informs my work here. I am grateful most of all to Lúcio Rennó, who welcomed me into

the Centro de Pesquisas e Pós-Graduação sobre as Américas (Ceppac) at the University of Brasília, and who, together with his wife Izabel, very generously invited me to stay in his home. More generally, Lúcio has been and continues to be a great friend and very valuable resource throughout this journey.

Parts of the larger project on social influence (including some papers that did not end up in the dissertation) have been presented in a number of places, including at the Political Networks Conferences of 2008, 2010, and 2011 at Harvard and Duke Universities and the University of Michigan at Ann Arbor; at the 2010 Annual Meeting of the Midwest Political Science Association in Chicago; at the 2010 and 2011 Annual Meetings of the American Political Science Associations, in Washington, D.C., and Seattle, respectively; at the 2010 Meeting of the Latin American Studies Association in Toronto; at the Brazilian Electoral Panel Study Workshop at the Inter-American Development Bank in Washington, D.C., in May 2011; in seminars and informal talks at Vanderbilt (Spring and Fall 2011); and in seminars at the University of Pittsburgh, the University of California at Merced, Notre Dame, and Florida State University in Fall 2011. Thanks to Despina Alexiadou, Barry Ames, Andy Baker, Jason Barabas, Larry Bartels, Taylor Boas, Josh Clinton, Michael Coppedge, Alejandro Díaz-Domínguez, Brad Gomez, Jon Hiskey, Haifeng Huang, Ted Jelen, Cindy Kam, George Krause, Casey Klofstad, Noam Lupu, Yonatan Lupu, Jay McCann, Mason Moseley, Aníbal Pérez-Liñán, Scott Mainwaring, Scott Morgenstern, Heather Rice, Sean Richey, Mitch Seligson, John Scholz, Betsy Sinclair, Anand Sokhey, Jessica Trounstine, Jenn Victor, Liz Zechmeister, L.J. Zigerell, and many other seminar participants for very helpful comments related to these presentations. With all of the fantastic feedback I have received, I am only sorry the dissertation is not better.

I owe great thanks to the members of this dissertation committee. Barry Ames and Steve Finkel have been excellent co-chairs—demanding, insightful, encouraging, and at key moments understanding of my weaknesses—as well as mentors, co-authors, and friends. Jon Hurwitz has been a fantastic friend and mentor throughout this journey, caring as much about my personal as my academic development. From my first days in the Ph.D. program, Scott Morgenstern has been enthusiastic and supportive, at key points asking difficult questions that have honed in on problems in research design. Finally, Jay McCann has gone far beyond the call of duty in his role as an outside member. I first met Jay when he was a discussant on two papers I presented at the Midwest Political Science Association’s annual meeting in the spring of 2008; I was immediately impressed by his thoughtful, detailed, and enthusiastic feedback. Throughout the dissertation process, he has been helpful, solicitous, insightful, and encouraging.

I wrote about half the dissertation in Nashville, where since August 2010 I have been working as a research coordinator at the Latin American Public Opinion Project at Vanderbilt University. I owe great thanks to Mitch Seligson and Liz Zechmeister for their encouragement and enthusiasm; they have been wonderful mentors, supportive, insightful, and full of good advice about everything from doctors and child care to research design and framing. I am also very grateful for their prioritizing my work on my dissertation, even when LAPOP and the dissertation have competed for my time.

In January 2011, I had the pleasure of helping to host Lisa Baldez at Vanderbilt. After she left, Lisa sent an email that served as a turning point: she told me to pick a realistic deadline for finishing a draft, to announce it to everyone I knew, and to reorganize my life to meet it. This five-line email motivated me during the last stretch of the marathon; the fact that I finished a draft by midnight on July 12, in advance of my July 13 deadline, is due in no small part to Lisa.

Thanks to a number of other friends and companions along this academic path. Juan Antonio Rodríguez was a great roommate during my first stay in Brazil, and back in Pittsburgh provided statistical advice with excellent humor. I met Penelope Morrison, a 2010 Pitt Ph.D. in anthropology, in Portuguese class during my first year; we continued our pursuit of things Brazilian over the next two years through an informal weekly Portuguese conversation and academic discussion group. Our academic paths intersected again for several months in Brazil when we lived together in Juiz de Fora. Thanks go to Penelope for advice, support, friendship, her fantastic sense of humor, and for inviting me (and my friends and family) into her home many times. My time in Brazil was much better in every way for the friendship and advice of several really smart young social scientists: Fabrício Mendes Fialho, Mariangeles Guerin, Natalia Borges, Luci Oliveira, Raphael Nishimura, and Elis Ramos. In Pittsburgh, my fellow dissertator Galina Zapryanova helped with deadline enforcement during the summer of 2010, under the auspices of the Dissertation Accountability Group (code-named DAGr). She bears no responsibility for my missed deadlines. Several friends helped me with coding the NCEP II data: Reynaldo Rojo, who put in many hours recoding variables; Will Daniel, who read a key document in German, and the lovely Fernanda Boidi and Majo Álvarez Rivadulla, who provided advice on the Uruguayan party system. Rey has also been a good friend, and very helpful in helping me manage things at Pitt from afar.

As always, I am grateful to my parents, Esther Berryhill Smith and Moreland Smith, for love and encouragement, as well as for raising a life-long learner. My mom, in particular, has provided a role model of such lifetime learning. I am also thankful to Diana and Shelley Smith and to Adina, Septimiu, and Liviu Chelcea for love and support. Septimiu, himself a professor of sociology and an advisor for many doctoral dissertations at the University of Bucharest, once

told me that my son was crying because he wanted his mom to finish her dissertation. While I am not sure about his understanding of child psychology, I am grateful for his nudging.

With great pleasure I thank the two most important people in my life. Tiberiu Chelcea has been my constant companion and greatest support. He has provided humor, encouragement, love, and patience, and he has shown a great willingness to accompany me wherever this academic road leads: from the cold, damp winter in the *Serra Gaúcha* of Caxias do Sul, Brazil, to the hot and muggy summer of Nashville, Tennessee; from Juiz de Fora to Belo Horizonte to Rio to Chicago to Raleigh-Durham to DC to Ann Arbor. At the same time, Tibi has gracefully put up with my absences, as I sat in coffee shops dissertating rather than accompanying him and my son to the zoo or library or park. I had a hunch when I first met him that this good-humored man with feminist treatises by his bed might be a keeper; seven and a half years later, I am sure that this was perhaps the best choice I have ever made. I am forever grateful for Tibi's partnership and love. Finally, Oscar Chelcea joined Tibi and me in the middle of this road. He started his uterine life in Brazil and joined Tibi and me on the outside in Pittsburgh. Playing with Oscar, taking care of him and marveling at his development have been the greatest joy in my life and a fantastic distraction from the dissertation. Oscar has no clue what his mommy's been up to every night after he's gone to bed during the first two years of his life, and he may never read a word I've written here. Nonetheless, I feel compelled to record on paper my gratitude for his life and for his presence in mine. There doesn't appear to be room for a dedication in Pitt's dissertation template. This dissertation, though, belongs to Tibi and Oscar.

1.0 INTRODUCTION

Conversation is at democracy's core. At its most elemental level, the democratic process can be thought of as occurring in two moments: first, discussion; and second, the making of a collective decision, typically based on a voting rule. While the second moment often takes prominence in scholarly treatment of the democratic regime, discussion is critical for the quality of the process. Through conversation, people not only discover their fellow citizens' interests, but they also come to better understand and define their own interests and those of the collectivity. Through conversation, preferences change, the previously uninterested become engaged, and discussion partners learn about the political process. These two moments are most iconically embodied by the Greek citizens' assembly, and in contemporary representative democracies have ready equivalents in modern legislatures and policy processes. At the same time, though, modern democracy locates the Agora and Ecclesia not only in elite-driven institutions, but also in homes, workplaces, streets, and voting booths populated by ordinary citizens.

In this dissertation, I examine the patterns of political discussion networks among citizens, and their effects on what I term democratic competence, meaning what citizens know about and how they choose to interact with their political system. I investigate how the patterns of discussion and discussion's effects vary across the world, while paying particular attention to one new, middle-income democracy, Brazil. Scholars have made much progress in describing

and explaining networks of political discussion and their effects on citizens. This research, however, has left many questions, three of which I address in this dissertation.

First and most generally, how does political discussion affect democratic competence? The claim that both political discussion and the networks that foster it have democratic benefits is common (for some examples, see Delli Carpini et al. 2004; Druckman & Nelson 2003; Finkel & Smith 2011; Ikeda & Huckfeldt 2010; Klofstad 2010; McClurg 2003; McClurg & Sokhey 2009). However, demonstrating such claims effectively has proven difficult. This is because researchers widely recognize that citizens are active agents in constructing their own networks and discussion opportunities. To the extent that citizens are able to choose whether or not, and how actively, to discuss politics, any association between political conversation habits and democratic competence might result from selection effects. That is, citizens who are already most politically knowledgeable and engaged might be precisely the ones choosing political discussion. Moreover, it is not clear whether effects shown in one region in the world hold elsewhere. Demonstrating that discussion has a real causal impact on democratic competence requires careful research and analytical design. Yet this is not simply an academic debate driven by analysts on the hunt for ever more precise parameter estimates; it has real consequences for the design of democratic institutions. Scholars increasingly call for the creation of new spaces for democratic deliberation among citizens (Fishkin & Luskin 2005; Gastil & Dillard 1999; Gutmann & Thompson 1996; Neblo et al. 2010). These calls are in part premised on the belief that the creation of such spaces will have positive spillover effects on the democratic competence of the citizens who take part. It becomes imperative, then, to establish to what extent raising levels of political discussion might have the hoped for effects on citizens.

To the extent that discussion does help citizens engage and interact with their democratic systems, for that matter, one might wonder for whom discussion matters most. Focusing first on citizens' pre-existing levels of political engagement, I delineate two alternative hypotheses: the "leveling hypothesis," which would suggest that conversation helps most those who start off the least engaged; and the "accrual hypothesis," which would suggest that the citizens who are already most democratically endowed, so to speak, benefit the most from new information obtained from conversation. I find strong evidence in favor of the leveling hypothesis with respect to knowledge and in the Brazilian case; the evidence weakly supports the same hypothesis with respect to turnout.

Second, I consider differences in network influences by gender. There are a number of reasons to expect women to be more strongly affected than men by their closest personal discussants, and in particular by their spouses. Due in part to differences in labor force participation rates, men are likely to get political information from a greater variety of sources than are women; moreover, differences in intra-household power may lead women to privilege information coming from their spouses to a greater degree than do men. Last, the literature in cross-cultural psychology suggests that women – certainly in Western societies, and perhaps also in East Asian ones – have higher levels of collectivism and emotional connectedness to significant others than do men (Dion & Dion 1993; Kashima et al. 1995; Watkins et al. 1998). If so, women may be more attuned to cues coming from those significant others than are men. Indeed, tests show that conversation benefits both men and women in Brazil approximately equally, but that women are more strongly affected by their closest discussants. For that matter, women are much more likely to rank their spouses as their closest political discussants.

A close reading of the literature on social networks reveals a second major research question: does knowing people with different political opinions hurt or help democratic competence? The democratic promise of discussion requires that citizens be exposed to the opinions of others from whom they differ; otherwise, opportunities for learning and opinion change will be limited. However, an important body of research based largely on the US case suggests that disagreement is a double-edged sword. On the one hand (or blade), exposure to disagreement is found to boost both understanding and tolerance of others' opinions (Mutz 2002b; Price et al. 2002). On the other, disagreement can demotivate the people exposed to it, especially the conflict avoidant (Eliasoph 1999; Hibbing & Theiss-Morse 2002; Huckfeldt et al. 2004b; Mutz 2002a, 2006).

Still, can we assume that findings generated almost entirely through studies of US citizens apply everywhere in the world? Research at the nexus of decision science and politics suggests that as the choice and information environments become more complex, citizens may reach the limits of their abilities to retain new information (Barker & Hansen 2005; Lau & Redlawsk 2001, 2006; Miller 2011). If so, in more complex party systems the educative effects of disagreement may disappear. At the same time, in environments where disagreement is very common, it may be less demobilizing.

Solving this puzzle requires two steps. First, we need to recognize that divergent preferences take two forms, which at times have very different consequences for political behavior: *diversity* and *conflict*.¹ The former represents the number of unique preferences in a discussion network, regardless of whether they agree or disagree with the reference individual, typically called the *ego* or *main respondent* in the social network literature. The second

¹ A few recent scholars have noted this same distinction, though no standard terminology or measurement strategy has yet developed (Baker et al. 2006; Eveland & Hively 2009; Morales 2010; Nir 2005, 2011; Therriault et al. 2011).

represents the number of people who disagree with the *ego*, regardless of the distribution of preferences across the network.

The second step to solve the puzzle involves recognizing that the effects of *diversity* and *conflict* interact, and that they vary across party systems. In systems with fewer candidates, the probability of encountering people with whom one disagrees is lower, and citizens are better able to select into agreeing networks. Moreover, polarization as measured by the ideological distance between supporters of any two randomly selected candidates may tend to be higher when the ideological space contains fewer candidates. In these systems, *conflict* combined with *diversity* boosts knowledge by contributing new information, a resource citizens are able to put to effective use, but homogeneously disagreeing networks have no effect on knowledge. At the same time, in two-party systems the negative effects of disagreement on turnout occur only in homogeneous networks; *conflict* combined with *diversity* is compatible with high levels of turnout. As the number of candidates rises and the information environment becomes more complex, however, *diversity*'s positive association with knowledge disappears. Moreover, when the broader electorate is comprised of many minority groups and no majority, conflict becomes normalized, and its demobilizing effects also disappear.

The third research question is implicitly comparative: how do institutions affect and interact with citizen-level networks? I focus on two key national-level factors, party and electoral systems, as well as the consequent information and choice environments they structure. These institutions and contexts, I argue, not only shape opportunities for political discussion but also condition social networks' relationship to political behavior. First, the party and electoral systems are a major determinant of the extent to which citizens have politicians incorporated into their personal networks. Second, in democracies with higher effective numbers of candidates,

citizens have more diverse social networks and encounter higher levels of disagreement on a daily basis. Moreover, as I began to explain above, the effects of diversity and conflict vary across systems with different numbers of candidates. I will develop and explore these hypotheses primarily based on the case of Brazil, a multiparty system that provides important contrasts to the US case on which much of the theory on social networks has been based. In Chapter 7, however, I will also test the second set of hypotheses using cross-national data.

Why should party systems be incorporated into the study of social networks? I will pursue two major lines of argument. First, party systems – in particular, the number of parties and the distribution of support across them – affect the number of choices available to citizens, their relative prominence (in terms of the extent to which each choice is seen as viable), and the amount of information available about each. Such factors in turn affect the difficulty of making a decision and citizens' levels of engagement. But citizens do not simply absorb influences from this broad choice and information environment via osmosis; rather, these contextual influences are mediated by other sources, including the media, civil society groups, and especially social networks. The political effects of networks may be more strongly contingent on the nature of the party system than the effects of other sources of intermediation such as the media. This is because a much higher share of the political information coming from social network members is non-neutral; while the media around the world certainly do convey information that has strong partisan content, a greater proportion of the information supplied by media has the character of neutral factual information (Magalhães 2007; Richardson & Beck 2007; Schmitt-Beck & Voltmer 2007). This is not to say that most people who discuss politics are strong partisans, nor that most people discuss politics with the aim of persuasion; nonetheless, normative, partisan, and factual considerations tend to blend seamlessly in the conversations of ordinary citizens to a

greater extent than they do in media discourse.² Thus, political information coming from network members is shaped by the party system, and in turn shapes networks' political effects.³ In particular, and as discussed above, the party system affects the extent to which citizens are exposed to diverse and conflicting preferences, and it conditions the impact of such exposure on democratic competence. Hence, addressing the third question simultaneously helps to address the second one, showing how the effects of exposure to political difference vary across party contexts.

Second, the party system, in interaction with electoral institutions, is the major determinant of the ratio of politicians to citizens.⁴ This follows simply and logically from the nature of the institutions. I point out that in political systems with high numbers of candidates, citizens are more likely to have politicians within their own personal networks. Developing a case study of local elections in a medium-sized city in Brazil, elections conducted under an open list proportional representation system and in the context of extreme multipartism, I find that three-quarters of respondents *knew personally* someone running for city council. Deploying matching techniques to account for the fact that the people who know politicians are far from randomly selected, I show that the extent to which citizens know politicians has important effects on democratic competence. Knowing politicians helps citizens learn about politics and encourages them to take part in their political system. At the same time, though, in the Brazilian case citizens who know politicians and activists are more likely to be exposed to clientelism. Vote buying, by its nature, is a personal activity that requires a fair amount of manpower. While I do not in this dissertation have access to the kind of cross-national data that would enable me

² Excepting, of course, explicitly partisan media and commentators.

³ Ikeda (2010) makes a similar point when he argues that the social network should be considered in terms of the "Interpersonal Political Environment (IPE)."

⁴ The relationship between electoral systems and multipartism is not addressed here, though despite academic debate this is arguably one of the few laws known to political science (Duverger 1972).

definitively to address the relationship between numbers of candidates in a political system and vote buying, in the Brazilian case, at least, the high number of politicians appears to promote the development of clientelistic networks.

This third research question is embedded within a broader, comparative research agenda that aims to understand to what extent social networks look the same and have similar effects on political behavior across the world. Scholars with a comparative bent have in the past two decades produced a tremendous amount of research on the political networks of citizens throughout the globe, from the US and Brazil to Japan, Germany, Hungary, Spain, Chile, Uruguay, the United Kingdom, New Zealand, France, Belgium, Hong Kong, Greece, and Bulgaria (a recent edited volume gives a flavor of this research; see Wolf et al. 2010). Despite this proliferation of network studies and the amassing of ever more robust evidence of the social embeddedness of political behavior across democratic systems, surprisingly little knowledge has accumulated regarding system-level factors that might lead to variation in networks and their impacts. Most studies of networks and discussion focus on single countries, and typically offer little assessment of the way the case might fit into a comparative framework (important exceptions studying multiple cases include Anderson & Paskeviciute 2005; Conover et al. 2002; Huckfeldt & Ikeda 2001; Huckfeldt et al. 2005; Magalhães 2007; Richardson & Beck 2007). This is major gap in the literature, and addressing it could occupy many scholars over the course of a sustained research trajectory.

In showing the ways institutions shape citizens' networks and consequently their engagement with the political system, this dissertation helps to resolve a puzzle related to the effects of proportional representation. Two very different bodies of literature suggest very different assessments of these effects. The first body of literature, one centered on Brazil, argues

that the country's open-list proportional representation system and extreme multipartism contribute to elite-level political dysfunction as well as disengagement at the mass level (Almeida 2006; Ames 1995, 2001, 2002; Mainwaring 1999; Mainwaring & Pérez-Liñan 1997; Nicolau 2006; Rennó 2006a; Zucco 2009; but see Desposato 2006 for an important critique of this argument with respect to political elites). The second literature on the effects of proportional representation, based largely on wealthy democracies, argues that *majoritarianism* leads to lower democratic legitimacy among the losers of democratic contests, and that proportional representation encourages citizen engagement, particularly the engagement of historically disadvantaged groups (Anderson et al. 2005; Anderson & Guillory 2003; Kittilson & Schwindt-Bayer Forthcoming).

Both groups of scholars, however, have ignored networks. While Brazil's electoral and party systems may certainly have a number of negative consequences, scholars have overlooked their more mixed and ambiguous effects on the political content conveyed through citizens' networks. Bringing networks into the equation reveals that, consistent with the tone of the second literature, multipartism promotes exposure to countervailing preferences, and hence may create more spaces for democratic deliberation at the citizen level. Moreover, at least in the Brazilian case, the combination of proportional representation and multipartism promotes connections to politicians, which can help citizens develop some forms of democratic competence. At the same time, though, as the scholars in the first body of literature would suggest, these same political connections have some pernicious democratic consequences, potentially eroding citizen attachment to the party system and facilitating clientelistic exchanges.

Over the course of the dissertation I also make two contributions with implications for the conceptualization and measurement of citizen-level social networks around the world. First, I

take seriously the fact that citizens have multiple sites of political discussion, and that discussion in different contexts may take varying forms and have varying effects on democratic competence. This is not likely to be a controversial claim; network scholars are perhaps by personality disposed to appreciate the importance of context. Nonetheless, I would argue that the standard tools and measures used in much of the social network literature related to citizens' political behavior are poorly designed to deal with diversity in the contexts of political discussion. The most common strategy for measuring whom citizens know and with whom they discuss politics, known as the egocentric social network battery, consists of asking citizens to provide the names of people with whom they often talk about "politics" or "important matters." After eliciting the names of discussants, the interviewer proceeds to ask about these discussants' characteristics – for instance, sex, political knowledge, and political preferences. This battery has yielded a great deal of research producing many important insights. At the same time, however, it is clear that it leads to systematic underrepresentation of certain important types of political discussants. In particular, it leads researchers to miss most of citizens' weak ties (Bearman & Parigi 2004; Granovetter 1973; Klofstad et al. 2009). More complete measurement of the egocentric network should incorporate questions designed to stimulate respondents to report weak ties. Using the Brazilian case, the results presented in Chapter 8 show that certain types of weak ties—particularly, ties to politicians—have important political consequences.

I also make a second contribution with respect to the measurement of networks. Through in-depth examination of measured social networks over the course of a six-wave panel study of the Brazilian presidential elections of 2002 and 2006, I illuminate patterns of stability and change in network composition. The results reveal substantial fluctuation in response patterns,

and suggest that standard network measures may often be contaminated by high levels of measurement error.

I leverage a number of cases and data sets to address these three broad research questions. The bulk of the dissertation focuses on citizens' political discussion networks in a pair of medium-sized cities in Brazil, using two data sets covering three election campaigns. The first data set, the one used predominantly, is a longitudinal study covering the 2002 and 2006 presidential elections; the second is a cross-sectional survey of the local election campaign in one of the two cities. In addition, I leverage a national-level study of the 2010 Brazilian presidential election. I discuss these three data sets in greater detail below. In addition, I assess the comparative generalizability of results related to intimate egocentric networks using cross-national data. I develop multilevel models using in-depth social network data from eleven countries on four continents studied as part of the second round of the Comparative National Elections Project (CNEP II) in the 1990s: Bulgaria, Chile, Germany, Greece, Hungary, Hong Kong, Japan, Spain, the United Kingdom, the United States, and Uruguay.⁵ To the best of my knowledge, to date this analysis constitutes some of the most in-depth treatment of this project's social network data to incorporate these eleven countries.

⁵ CNEP II also included Italy, but I was unable to include this country in the data set due to serious problems in the publicly available data. The code book in no way corresponded to the database available online, and for that matter variable names and values were not labeled in a comprehensible fashion within the database. In addition, CNEP II surveyed both West and East in the at the time just-unified Germany. However, I use data only from West Germany because the German investigators chose not to ask questions about parties in East Germany, presumably due to concerns that the new democratic party system had little coherent meaning for the electorate in that half of the country. Given the importance of parties to my arguments, this exclusion seems justified.

1.1 THE BRAZILIAN CASE(S)

Brazil is an ideal case for beginning to address the three research questions described above, offering a significant counterpoint to the US case that has dominated theory and research. Most importantly, the country's multipartism provides fodder for rethinking and contextualizing previous findings based on the US. At the same time, Brazil offers many other interesting contrasts to the United States, contrasts which should affect the composition and political effects of social networks. Social network members may be more influential in Brazil for several reasons. Citizens' generally weaker ties to the party system mean that social networks may substitute for parties' roles in helping citizens navigate the electoral arena (Ames et al. Forthcoming; Baker et al. 2006; Kinzo 2004, 2005; Paiva et al. 2007; Samuels 2006). In addition, research in cross-cultural psychology identifies Brazilians as collectivists (as opposed to individualists); this should lead Brazilians to be more attuned and responsive to behavioral cues and information coming from ingroup members (Bontempo et al. 1990; Hofstede 2001; Hofstede et al. 2010). Moreover, Brazilians' higher levels of poverty, lower levels of education, and, in some circles, fewer opportunities to access media all suggest that they will have a harder time gathering information from sources other than networks. As Fleischer (2008) reports, data from Brazil's Tribunal Superior Eleitoral (highest electoral court) reveal worryingly low levels of education in the Brazilian electorate:

Some 58% of Brazilian voters could be considered functionally illiterate. This means that if they read something simple – a magazine article or newspaper story – they are unable to answer questions about such texts or reproduce the content [...] These voters are almost completely dependent for political and election campaign news (and interpretations) on TV and radio broadcasts. In the 2008 municipal elections, in many small towns there are no local radio stations and minimal access to TV stations in the state capital. In this situation, voters depend in large part on oral communications from family, neighbors, and colleagues at church, workplace and community events.

The Brazilian case also helps us rethink social networks' possible effects on democratic competence. Studies based in wealthy and relatively long-lived democracies have focused on the relationship between political conversation and a group of traits generally accepted as good things: political knowledge, political participation, and democratic values. Implicit in this has been a focus on relatively horizontal and equal relationships such as those between spouses, family members, friends, and neighbors. But many of the most politically relevant social networks in Brazil are characterized by disparities in political power and material resources. A moment of reflection on the literature on political behavior in Latin America, and in particular in Brazil, reveals that such networks may have some pernicious democratic effects even if *at the same time* they also promote political knowledge and participation. Thus, I argue that connections to politicians and activists simultaneously promote political engagement, clientelism, and quite possibly the erosion of party ties.

This dissertation makes several contributions to scholarship on Brazilian politics. First, it sheds new light on the determinants of Brazilian electoral behavior, and more specifically on the importance of social networks. While research has shown the importance of networks for the political behavior of elites, policymakers, and activists (Candler 2000; Frank 2001; Keck & Hochstetler 2007; Leeds 1965; Lemos & de Oliveira 2004; Sugiyama 2008), scholars have for the most part ignored the social embeddedness of the political behavior of ordinary citizens in Brazil (but see Ames et al. Forthcoming; Baker et al. 2006; Rennó & Ames 2010). The assumption that Brazilians' political behavior and attitudes can be explained by a combination of personal and broad societal factors fundamentally limits most research to date. This dissertation contributes to an incipient literature on social networks at the citizen level by showing that such

networks affect not only vote choice, but also democratic competence more generally: both what citizens know about politics, and how they participate.

Second, as discussed above, the dissertation provides a new perspective on the longstanding debate over the consequences of Brazil's system of open list proportional representation. While this system may indeed, as many scholars suggest, limit accountability, weaken party ties, and foster personalism, clientelism, and corruption, it may also, at least under some circumstances, promote social networks characterized by high levels of exposure both to political diversity and to activists and politicians.

Third, in this dissertation I provide a new analytical framework for understanding clientelism in Brazil. Clientelism has long been recognized as a central feature of Brazilian political life (one arguably even more important historically than in present times), and has been amply studied by prominent scholars (Bezerra 1999; DaMatta 1984; Vilaça & Albuquerque 2003). Nonetheless, this is the first research on Brazilians' electoral behavior of which I am aware to approach clientelism from a social network perspective.

Fourth, the evidence presented here helps to resolve a paradox of participation in Brazil (Rennó et al. Forthcoming). Quantitative, cross-national studies show that in the population at large, interpersonal trust and involvement in non-political community organizations (except for religious groups and, perhaps sports associations) are quite low in Brazil in a comparative perspective.⁶ At the same time, though, cross-national survey evidence also reveals that

⁶ For evidence on interpersonal trust, see Norris's data from the World Values Study (2002) and Seligson and Smith's data from the AmericasBarometer (Seligson & Smith 2010); also see the latter for evidence related to civil society participation. Note that these findings regarding civil society participation differ from those of two older studies based on cross-national survey data: McDonough, Shin, and Moisés (1998), who conclude that Brazil has medium levels of associational activity, when compared with Korea (high activity) and Spain (low activity); and Norris (2002), who finds that in the mid-1990s Brazil was ranked tenth among the 47 countries studied in the World Values Study on an index of voluntary activity. Careful examination of the conflicting results indicates that two factors may jointly produce these differences. First, the indices developed by these two groups of researchers include measures of religious and political party activity; as Rennó et al. (Forthcoming) show, Brazilians are much

participation in many forms of electoral politics is quite high. Data on turnout in the most recent election for president (in presidential systems) or parliament (in parliamentary systems) put Brazil in third place among the 26 countries studied in North and South America, after only Uruguay and Ecuador.⁷ In fact, turnout is high in Brazil even when this country is compared to others with enforced, compulsory voting (Rennó et al. Forthcoming). Moreover, Brazil is also in an advantaged position on other measures of electoral engagement. In addition, a generation of scholars of Brazilian democratization and democratic consolidation has argued for the robustness of Brazilian civil society, based largely on qualitative studies of activists involved in organized political activities such as the participatory budgeting process and in civil society organizations (Abers 2000; Baiocchi 2005; Friedman & Hochstetler 2002; Hochstetler & Friedman 2008; Keck & Hochstetler 2007; Nylen 2002; Wampler & Avritzer 2004).

The disconnect between Brazilians' levels of non-political civil society and political engagement runs counter to the predictions of an important strain of social capital theory. Putnam has famously argued that the social connections and trust built through participation in casual social groups and recreational activities make democracy work by facilitating citizen involvement in more explicitly political activities (1993, 2000). I suggest that a social network approach helps to resolve this paradox. When we reconceptualize social capital in terms of informal interpersonal networks, rather than as a syndrome of civic participation and interpersonal trust, we see more clearly the source of Brazilians' high levels of political engagement.

more active on these two measures. When these two types of activity are added into the civil society index developed in Rennó et al., however, Brazil's relative ranking rises only to fourth from the bottom. In addition, these other authors also include measures of participation in sports associations, which are very popular in Brazil, but for which data are not available in the AmericasBarometer. Second, associational activity appears to have dropped in Brazil between 1993 and 2010, based on a comparison of the percentage reporting any participation in a variety of types of organizations, as reported in McDonough, Shin, and Moisés (1998) and as found in the 2010 AmericasBarometer.

⁷ Data are from International IDEA, <http://www.idea.int/vt/>.

1.1.1 Two Cities, Three Studies, Three Election Campaigns

1.1.1.1 The Three Studies: ABR, NNBP, and BEPS

The Brazilian component of the empirical analysis is based on three separate studies. The first is a six wave panel data study (henceforth the ABR Study) that interviewed 6,970 Brazilians in two medium-sized cities, Juiz de Fora and Caxias do Sul, between March 2002 and October 2006. The study was conducted by Professors Barry Ames of the University of Pittsburgh, Andrew Baker, (now) of the University of Colorado, and Lúcio Rennó, (now) of the University of Brasília. The first three waves, in March/April, August, and October, 2002, were conducted under the a grant from the National Science Foundation to Professors Ames and Baker, while May 2004 and July and October 2006 waves were conducted with research funds from Professor Ames' Andrew Mellon Chair. What makes this study particularly valuable for this dissertation is the fact that respondents were asked about the people with whom they most frequently discussed politics in the August and October waves in both 2002 and 2006. Moreover, in October 2002 many respondents had at least one discussant interviewed in a snowball sample.

The second data set is from the Networks and Neighborhoods in Brazilian Politics (henceforth NNBP) study, which I conducted in October-November 2008, during and after the local election campaign in Juiz de Fora. The NNBP study was supported by a National Science Foundation Doctoral Dissertation Improvement Grant, with on-the-ground assistance provided by the Center for Social Research (*Centro de Pesquisas Sociais*) at the Federal University of Juiz de Fora (UFJF). In total, UFJF students interviewed 1,089 randomly selected residents of 22 neighborhoods in the period immediately following the second round local election. In addition, during the campaign I interviewed neighborhood association presidents in 19 of the 22

neighborhoods, as well as local activists and politicians, and I attended rallies and campaign meetings.⁸ As in the ABR study, the resident interviews included a series of questions related to immediate personal discussion networks; in addition, I asked about ties to local politicians and activists, churches, neighborhood leaders, and other associations.

The third study, which contributes a small amount of data for the final analytical chapter, is the Brazilian Electoral Panel Study, a three-wave, nationally representative panel study examining the 2010 presidential election. The 2010 round of the Latin American Public Opinion Project's AmericasBarometer survey, for which 2,482 Brazilians were interviewed in April, serves as the first wave. The second wave, conducted in August, involved reinterviews with 903 of the first-wave respondents. Finally, the third wave, conducted in early November following the second round presidential election, involved interviews with 751 respondents from both prior waves, with 283 people who had been interviewed only in Wave 1, and with another 187 completely new respondents. This study was financed by a number of sources, including the Brazilian *Conselho Nacional de Desenvolvimento Científico e Tecnológico* (CNPq), the Inter-American Development Bank, and the Mellon Chair of the University of Pittsburgh Department of Political Science. Importantly, funds from the National Science Foundation Doctoral Dissertation Improvement Grant for this dissertation enabled the inclusion of some questions related to respondents' social ties, though not the administration of a full egocentric social network battery.

1.1.1.2 The Two Cities: Juiz de Fora and Caxias do Sul

The two cities of the study are Juiz de Fora and Caxias do Sul. The former is located in the state of Minas Gerais in the southeast region of the country, while the latter is located in the

⁸ The other three neighborhoods did not have neighborhood associations.

state of Rio Grande do Sul in the southern region. Both cities have populations around half a million people and thriving industrial bases, and both rank quite highly among Brazilian municipalities in their Municipal Human Development Indices.⁹ Politically, however, they are distinct. Juiz de Fora, like many other Brazilian municipalities, has weakly organized parties and went very strongly for Luíz Inácio Lula da Silva (henceforth Lula), the eventual nationwide winner, in both 2002 and 2006. Caxias do Sul features much higher levels of party organization, with the Workers' Party (*Partido dos Trabalhadores*, or PT) representing the left and the PMDB organizing a right-of-center bloc. Voters in Caxias do Sul defied national trends, largely voting against Lula in both 2002 and 2006. While measurement of these constructs is difficult, both clientelism and corruption may also be higher in Juiz de Fora; during the 2008 election campaign, the incumbent mayor, José Araújo, was a stand-in for the previous mayor, Alberto Bejani, who had been unseated in a major corruption scandal earlier that year.

Does using a study of two cities affect the ability to understand social networks throughout Brazil? There are certain limitations to the two-city study, of course. Most importantly, social networks in these urban areas may function quite differently from ones in rural areas, particularly such areas in the predominantly Afro-Brazilian and indigenous north and northeastern regions. However, this limitation is not crippling, given that 81% of Brazilians lived in urban areas at the 2000 Census, and that the percent urban has only continued to increase in the ensuing decade. And a two-city study provides certain advantages, as well, enabling a deeper understanding of local context. Respondents were clustered in 50 neighborhoods, enabling me to capture contextual effects at the neighborhood level as well as within social networks.

⁹ For Municipal Human Development Indices in Brazil, see [http://www.pnud.org.br/atlas/ranking/IDH-M%2091%2000%20Ranking%20decrecente%20\(pelos%20dados%20de%202000\).htm](http://www.pnud.org.br/atlas/ranking/IDH-M%2091%2000%20Ranking%20decrecente%20(pelos%20dados%20de%202000).htm).

1.1.1.3 The Three Election Campaigns¹⁰

The ABR data set focuses on the presidential election campaigns of 2002 and 2006. In both years, Lula of the Workers' Party took the highest percentage of the vote in the first round runoff elections of early October, but failed to garner the 50% + 1 votes needed to win the presidency outright; and in both years, he won the presidency in the second round runoff elections of late October.¹¹ Similarly, Lula's major competitor in both campaigns was from the Party of Brazilian Social Democracy (*Partido da Democracia Social Brasileira*, or PSDB): José Serra in 2002, and Geraldo Alckmin in 2006. Table 1 describes the numbers of candidates in which respondents expressed interest in first round voting over the course of the 2002 and 2006 campaigns. It depicts a field that was in the process of consolidation and gradual elimination of players over the course of the 2002 campaign. While Lula was consistently in first place throughout the 2002 campaign, by the third wave, the percentage of the electorate supporting him had more than doubled over their Wave 1 levels. Likewise, vote intentions for Serra had risen to 170% of their Wave 1 levels. Meanwhile, two prominent pre-candidates, Itamar Franco and Roseana Sarney dropped out before the second wave, and by the third wave the vote had very solidly consolidated around four major candidates, even though tiny percentages of voters still expressed intentions to vote for other candidates. The process of consolidation is clearly demonstrated by the fact that the effective number of candidates fell by half between the first and the third waves.

¹⁰ Here, I focus only on the election campaigns examined in the ABR and NNBP data sets.

¹¹ In Brazil, races for executive office—mayor, governor, and president—are conducted using a two-round plurality system, where if no candidate gets a majority in the first round, the top two candidates go to a second round runoff. Most legislative races—for city councils, state legislatures, and the lower house of the national congress—are conducted using open-list proportional representation, a complicated system in which voters typically vote for a single candidate, but their votes serve simultaneously to rank parties and to rank candidates within parties. Finally, elections for the national senate are conducted using plurality rules. For further discussion of voting rules for the legislatures, see Desposato (2006).

Table 1. Raw and Effective Numbers of Candidates in the Brazilian Data Sets

	Effective Number of Candidates	Raw Number of Candidates
ABR Data (First-Round Presidential Elections)		
Wave 1 (March/April 2002)	5.27	7
Wave 2 (August 2002)	3.10	6
Wave 3 (October 2002)	2.61	6
Wave 4 (May 2004)	2.82	4
Wave 5 (July 2006)	2.96	6
Wave 6 (October 2006)	3.08	6
NNBP Data		
First-Round Mayoral Election	3.02	6
City Council Election	81.97	222

Note: Effective number of candidates (ENC) is calculated following Laakso and Taagepera (1979). ENC in Wave 4 of ABR data is based on a question asking which of the 2002 candidates the respondent would vote for if the election were held today. Numbers of candidates in the ABR data are calculated based only on those who responded in all six waves.

The 2006 election, by contrast, presented a much more stable electoral field, as evidenced by the lack of change in the numbers of first round candidates in which respondents expressed interest. Again, in both waves Lula maintained the lead; however, in the last wave of the study, vote intention for his opponent Geraldo Alckmin rose to nearly the same level as support for Lula. Meanwhile, a few other prominent politicians managed to peel off vote intentions in the last wave, including former president Fernando Henrique Cardoso and Senator Heloisa Helena.¹²

The NNBP study examines Juiz de Fora's 2008 local elections. Elections for city council and for the first round of the mayoral election in Juiz de Fora were held on October 5, 2008. Since no candidate took a majority of the first-round mayoral vote, the race went to a second-round runoff election on October 26. The first round race featured six candidates; the two who went to the runoff were from the PT and PSDB. Thus, while there are many local races around Brazil in which these two parties do *not* dominate contests for executive office, in this particular

¹² I follow Brazilian convention of referring to most politicians by their first names.

case the patterns of party competition at the local level mirrored national trends. The PT's candidate, Margarida Salomão, was a lesbian linguistics professor and former rector of the Federal University of Juiz de Fora with a PhD from UC Berkeley. Her rival, Custódio Mattos, was a former mayor and the choice of most of the local political establishment. Though Margarida had come in on top in the first round election, Custódio managed to turn his campaign around and won with a comfortable margin three weeks later.

These data thus suggest that multipartism in Brazil in these three executive races in the 2000's was moderate, with only around 3.0 effective candidates in each race. This is perhaps surprising, given Brazil's reputation for party fragmentation. However, data from the Juiz de Fora city council elections present a very different story. While the two-round plurality electoral system for executive office might be associated with consolidation in the electoral field, the open-list proportional representation (PR) system used at the local and state levels and in the federal Chamber of Deputies appears to do just the opposite; the effect may be most extreme at the local level.¹³ Brazil's open-list PR system allows voters to cast a single vote in a legislative race; this vote may be either for a candidate or for a party. In practice, the great majority of voters choose to vote for a candidate, rather than for a party (Almeida 2006; Bezerra 1999; Nicolau 2006). These personal votes simultaneously contribute to parties' vote totals, affecting the total number of candidates elected from each party; and rank candidates within parties, affecting the order of the party list. The perverse effect of this electoral system is that it puts a premium on competition between candidates within a given party, since small differences in vote totals may have bigger impacts on the relative rankings of candidates within a party than on the relative rankings of parties (Ames 2001; Desposato 2006; Mainwaring 1999).

¹³ However, some research indicates that two-round plurality systems are associated with more presidential candidates than straight plurality systems, and also promote outsider candidates (Carreras, Forthcoming; Jones 1994, 1999). Still, for whatever reason, these three executive races have relatively low numbers of effective candidates.

When asked about their votes in the 2008 local elections, 99% of Juiz de Fora respondents who told the interviewer their city council vote listed a person, rather than a party.¹⁴ Using conservative counting rules, I estimate that these voters provided the names of 222 different candidates, with 82 effective candidates, following Laakso and Taagepera's famous formula (1979).¹⁵ Official-level data to be discussed in detail in Chapter 3 reveal, furthermore, that there were many candidates whom no NNBP respondents named; this is to be expected in a sample of approximately 1,000 respondents, given the small number of voters per candidate in the population at large.¹⁶ Thus, the data from the NNBP study provide a fascinating opportunity to examine the consequences for social networks of electoral systems with extremely high numbers of candidates.

1.2 ORGANIZATION OF THE DISSERTATION

The remainder of the dissertation is organized as follows. The second chapter reviews previous literature that may illuminate the three research questions laid out above, while providing a brief overview of the components of the social network and Brazilianist literatures to which this dissertation contributes. The third chapter begins by explaining what I mean by democratic competence and discussing some concerns related to the conceptualization and

¹⁴ 64% of Juiz de Fora respondents told the interviewer the name of a party or person for whom they had voted in the city council race; non-respondents include those who did not go to the polls, those who voted for mayor but not for city council, and those who chose not to provide the names of their candidates to the interviewer.

¹⁵ When in doubt about whether two named candidates were the same person (e.g., due to differences in nicknames or to inconsistencies in the spellings of last names), I coded them as being the same. Thus, there may well be more than 222 different candidates in the data.

¹⁶ How can the organizers of elections even keep track of so many candidates? Voting occurs by number, rather than name, in Brazil. City council candidates have five digit numbers which voters must remember and type in; the first two digits refer to the party, and the last three to the candidate.

measurement of social networks. It then presents in greater depth the theoretical framework I have described here. Chapter 4 describes the four major data sets used in this dissertation.

The next four chapters dive into the data, testing hypotheses and drawing conclusions related to the patterns and effects of social networks in Brazil and cross-nationally. The fifth chapter takes up the first research question motivating this dissertation. I assess the effects of discussions of politics within immediate egocentric networks on Brazilians' democratic competence, leveraging the longitudinal nature of the ABR data and instrumental variables models to draw more accurate conclusions related to causality. I find strong evidence that political conversation promotes democratic competence, evidence which is robust to fixed effects and some preliminary two-stage least squares analysis. The *size* of the intimate egocentric political discussion network may not be as important, though I also uncover evidence that measurement error substantially attenuates the measured impact of network size.

I also examine what kinds of discussants matter most, and for whom. Using data from snowball interviews with discussants, I find that respondents are very strongly affected by the democratic competence of their closest network members, after controlling for their own lagged levels of competence and other characteristics. Spouses are particularly influential, perhaps more so for women than for men. But respondents do not only choose to talk with their closest family members; they appear to prioritize political discussion with those who are highly knowledgeable about politics. Finally, I find that political conversation has the strongest impact for those who start off with the lowest levels of knowledge.

The following chapter begins to address the second research question, regarding how social networks containing divergent preferences affect democratic competence. Briefly exploring the ABR data, I show that divergent preferences have two distinct manifestations in

Brazilians' social networks, *diversity* and *conflict*, and I examine how these two network features evolve over time. Finally, I show that they have independent effects on democratic competence around the world, though I leave fuller tests for the following chapter.

Chapter 7 brings in the data from the CNEP II to put these results in a comparative context and to draw together more completely the answers to the second and third questions posed in the outset of the current chapter. First, I show that social network composition and the frequency of discussion varies in important ways around the world. Citizens in Brazil, the US, UK, Greece, and Bulgaria have high levels of access to political discussion, while citizens in Japan and Hong Kong report low levels of political discussion within their intimate egocentric networks. Exposure to diversity and conflict follows similar patterns. Moreover, I show that this variation is related to party systems. More specifically, exposure both to diversity and to conflict within one's social network is more common in countries with higher effective numbers of candidates/parties. It is also more common for citizens who support less popular candidates. Unexpectedly, however, I discover a curvilinear relationship between the percentage of the population supporting a candidate and the extent to which supporters are exposed to diversity and conflict. That is, diversity is most common in the networks of supporters of moderately popular candidates.

Second, I find that the effects of diversity and conflict vary across systems with different numbers of candidates. In two party systems, *conflict without diversity* depresses turnout, while *conflict with diversity* promotes political knowledge. As the number of parties/candidates rises, however, the effects are attenuated.

In the final empirical chapter I continue to address the third research question. I show that Brazil's unusual combination of extreme multipartism and open list proportional

representation leads to a situation in which very high numbers of citizens know local level politicians and candidates. In fact, three quarters of my respondents knew personally someone running for city council, and two-thirds knew personally the candidate for whom they ended up voting. These connections, moreover, have important ramifications for political behavior. On the one hand, they help citizens learn about and mobilize them to participate in the election campaign. On the other hand, they also expose citizens to clientelistic offers.

In the ninth and concluding chapter, I summarize the findings and draw out the implications for our understanding of the political behavior of citizens around the world, as well as of Brazilian politics. I then lay out an agenda for future research. One important next step will be to seek data on numbers of candidates and on social ties to politicians in countries around the world, in order to provide cross-national context for the findings of the eighth chapter. A second step will involve developing experiments that test the impact of discussion on subjects' ability to process campaign information. I am interested in how two factors condition the effect of discussion: first, the availability of clientelistic "gifts"; and second, the number of candidates being considered.

2.0 SOCIAL INFLUENCES ON DEMOCRATIC COMPETENCE: LITERATURE REVIEW

In the previous chapter, I explained that in this dissertation I seek to understand how social networks affect democratic competence in Brazil and in comparative perspective. I then discussed three research questions related to this broad theme. First, does discussion have a causal impact on democratic competence? While much research shows the association between the two, it is far from settled that the former produces the latter. Second, how does exposure to divergent preferences within one's social network affect democratic competence? I suggest that the answer involves recognizing that there are two components of divergent preferences, *diversity* and *conflict*, each of which has distinct impacts on democratic competence, and that these effects vary across systems with different numbers of parties. Third, what factors lead to cross-national variation in networks and in network effects? Though a growing literature assesses the patterns and effects of social networks around the world, there is little comparative literature seeking to explain cross-national variation. In this dissertation, I argue that party systems affect social network characteristics and condition their effects on democratic competence.

In this chapter, I review the literature that bears on these topics and questions. The first section discusses the use of the term "democratic competence" in previous literature. The second deals with literature that may shed light on the causal impact of social networks on

democratic competence. The third examines the substantial literature on the effects of divergent preferences within networks on democratic competence. Throughout these first three sections, I discuss work across the globe and attempt to contextualize findings when appropriate. Finally, in the last major substantive section I provide a brief overview of the scope of the cross-national literature on social networks in political science, and then I discuss more systematically a number of factors that might lead to cross-national variation in networks and their effects.

2.1 WHAT IS DEMOCRATIC COMPETENCE?

This dissertation is centered around the notion of “democratic competence.” But what does this term mean? Very generally, scholars use it to refer to a range of mental traits and behaviors that enable citizens to fulfill the roles required of citizens in democratic polities. As Weissberg (2001) suggests, “one could define ‘civic competence’ as being qualified at the obligations imposed by civil society. Ditto for ‘democratic competence’—one is a deft democrat.” Similarly, Sołtan (1999) defines citizen competence as “the mental qualities required for successful participation in governance” (2). Of course, such a general definition leads to further questions, and to a demand for greater precision. The first such question is broad and normative. *What*, in particular, do democratic polities require of citizens? This leads to an even more fundamental question: what kind of democracy are we interested in?

Scholars have variously implied that democracy demands a great many things from citizens. Sołtan (1999) indicates that competence is the possession of a set of *mental* attributes. Citizenship, he says, can be construed alternatively as a bundle of rights and as a “state of mind,” one defined by the “knowledge, motives, ideals, abilities, and skills” associated with membership

in the collectivity (2). Competence, then, would be the possession of these traits. But competence might also include behaviors. Beyond voting, which might be considered the minimum requirement in a representative democracy, citizens might, for instance, be expected to deliberate with others (e.g., Gutmann & Thompson 1996; Neblo et al. 2010); to demonstrate critical consciousness (e.g., Eliasoph 1999); or to tolerate the participation of fellow citizens with whom they strongly disagree, or even whom they consider potentially dangerous (e.g., Sullivan et al. 1982). And arguably much of the empirical (especially quantitative) research on the citizen side of democratic politics has been concerned with evaluating or explaining citizen competence of one form or another. This literature assesses a great range of traits: from belief systems and ideology in the line of Converse (1964), to political knowledge or sophistication along the lines of Delli Carpini and Keeter (1996) and Zaller (1992), to macro-level public opinion (Page & Shapiro 1992; Stimson 1999), to “correct voting” or voting based on one’s assumed or revealed interests (Bartels 1996; Lau & Redlawsk 2006).

Weissberg (2001) finds fault with this literature, arguing that many supposed democratic competencies are not actually necessary to democratic stability, and might in fact undermine it. Of course, the obvious rejoinder is that scholars are not only concerned about the *stability* of democracy; they may also be interested in promoting system features such as responsiveness, accountability, or inclusiveness. Such features might be generally grouped under the heading of democratic “quality,” as opposed to “stability.” Nonetheless, Weissberg’s broader point is well-taken: any attempt to enumerate the traits citizens need in order to be competent is normatively laden and brings with it assumptions about what type of political system should be promoted.

Kuklinski and Quirk (2001) review the empirical efforts at evaluating citizen competence, arguing that evaluating competency in any domain, but especially in politics, is

much more difficult than is often appreciated. They develop a framework for competence evaluations that goes beyond the broad normative and theoretical questions related to the type of democracy and competencies that should be promoted, to the empirical criteria by which one would evaluate such topics.

We propose that there are four principal conceptual elements in any evaluation of performance. First, one must identify the task that the actor is asked to undertake. Because some actors perform multiple tasks and tasks can be divided and combined in various ways, the choice of a task need not be straightforward. Second, one must state a criterion by which the performance is to be evaluated—that is, the property or attribute that is taken to constitute the quality of performance. Third, one must select at least one empirical indicator of that criterion. Finally, to categorize levels of performance, one must identify standards with respect to the indicator. Standards map levels of the indicator onto a set of evaluative categories: satisfactory or unsatisfactory; very good, good, fair, or poor; or the like. In some contexts, standards are entirely comparative; in others, they reflect independent notions of success in the task. (Kuklinski & Quirk 2001, 287)

Reviewing prominent works that assess components of citizen competence, including belief systems, general political knowledge, and correct voting, Kuklinski and Quirk argue that few authors think through the logic of their competence evaluations. Prominent works often fail to discuss the normative implications, measurement, and evaluative standards behind their assumptions about what constitutes citizen competence.

In the following chapter I discuss the meaning of democratic competence in this dissertation. In the meantime, however, I use the phrase as a catch-all category for all the many different personal qualities that might make a person a good democrat. Such qualities include political knowledge, sophistication, and participation, as well as democratic values such as tolerance and opposition to clientelism.

2.2 HOW DO DISCUSSION NETWORKS AFFECT DEMOCRATIC COMPETENCE?

The first major question this dissertation explores is how political discussion networks affect democratic competence, most importantly political knowledge and turnout. Downs (2005) famously observed that a rational voter would economize on the costs of information gathering by seeking information from the members of his or her social network. Empirical studies of voting behavior soon noted such an effect. The “two-step” model of social network influence posits that certain social network members—typically ones with higher levels of political information and other social and political resources, and who are more politically engaged—receive stimuli from the broader environment, and then transmit this stimulus to the other members of their networks (Katz & Lazarsfeld 2005). While the original stimuli are typically thought to come from the media, they may come from other sources such as civic education programs or NGO-run voter education campaigns (Fafchamps & Vicente 2009; Finkel & Smith 2011). At the same time, though, it is also possible that people who explain political matters to others themselves learn from this communicative activity (Pingree 2007).

Much of the social network literature in political science has been devoted to the ways networks influence public opinion or vote choice, rather than democratic competence (Berelson et al. 1954; Lazarsfeld et al. 1948). Nonetheless, many studies of interpersonal persuasion and political discussion during campaigns use opinion change—or even more problematically, simply agreement between network members—as evidence of both deliberation and information transfer within the social network (Baker et al. 2006; Clough 2007; Huckfeldt et al. 2002, 2004a; Huckfeldt & Sprague 1995; Pan et al. 2006). Often the untested (and at times implicit) assumption is that information is the chief commodity exchanged in political discussions,

particularly ones among people who disagree. Thus, Baker, Ames, and Rennó (2006) speculate about how discussion during the 2002 Brazilian presidential campaign may have led to vote change: “citizens deliberated and reflected...in conversations with others.... A substantial number of voters were tolerant, willing to be countervailed and, perhaps most crucially for advocates of deliberative democracy, prone to reconsider their political preferences.”

Still, discussion and persuasion are both poor proxies for learning. Discussion might always involve some type of information, at least in the loose, nonneutral sense in which information is indistinguishable from argumentation (Zaller 1992, 22). And persuasion does require that the persuadee know the persuader’s opinion. However, such nonneutral information does not necessarily educate voters or help them make choices aligned with their issue preferences. Some US-based research casts doubt on the persuasion-information link: Huckfeldt and Sprague (1995) found that discussants’ education did not affect the extent of their influence on vote choice, but that the closeness of the relationship was highly important.

To settle this issue, we need to examine social networks’ association with learning *per se*. Scholars, primarily ones of American politics, have shown that political discussion is associated with general political information (Bennett et al. 2000; Delli Carpini & Keeter 1996; Eveland et al. 2005; Kwak et al. 2005; Toka 2010). Moreover, discussion and deliberation may also be associated with other forms of political sophistication, including attitude constraint and certainty (Gastil & Dillard 1999), “correct voting” (Richey 2008; Sokhey and McClurg 2008), understanding of others’ views (Mutz 2002a; Price et al. 2002), resistance to framing effects (Duckman 2004; Druckman & Nelson 2003), and ability to use ideological labels (Ames & Smith 2010). Social network discussions are also associated with political participation (Kenny 1992; Klostad 2007, 2009; Lake & Huckfeldt 1998; Lup 2010; McClurg 2003, 2006b;

Nickerson 2008; Opp & Gern 1993; Panagopoulos 2011; Toka 2010). Last, some work shows an association between tolerance and discussion across lines of political difference (Ikeda & Richey 2009; Mutz 2002a).

This literature has several important gaps. First, there has been little study of the ways social networks' influence on democratic competence might vary around the world. While most scholars seem to imply that discussions should have similar effects everywhere, almost all of the literature on how discussion networks affect democratic competence has until now has been based in the US. There are a few exceptions, including studies based in the UK (Bello and Rolfe 2011; Bennett et al. 2000; Conover et al. 2002); Spain (Morales 2010); Hungary (Lup 2010; Toka 2010); and Japan (Ikeda 2010; Ikeda and Richey 2005, 2009; Richey 2009). Nonetheless, these studies generally offer little clue regarding whether, how, and why the associations between network variables and democratic dispositions might vary around the world.

Second, much of the literature is silent on issues of causality. Any association between knowledge or participation and political discussion might result from some third factor, or in fact from a causal arrow running in the reverse direction, from knowledge and participation to discussion. The amount of political discussion in which a person engages seems clearly and intuitively to be a function of a number of personal traits, including attitudinal and behavioral variables. One of the most obvious is political interest, but the level of political discussion might also be affected by factors such as political knowledge or even participation. Contesting such arguments, Huckfeldt and Sprague maintain that social networks are largely determined by social structures such as workplaces and neighborhoods, and that "political preferences are ancillary to most of the significant life choices...that locate individuals within the social structure" (1987, 1199-1200). However, they also acknowledge that "it is not that choice is absent, but rather that

associational choice is contingent—a locationally specific response to a particular social mix” (1200). Social structure certainly affects possibilities for conversation; even so, admitting that personal traits, attitudes and behaviors have any effect on social network characteristics leaves open the door to problems in establishing causality.

Scholars of political discussion networks have been very interested in the causal question in recent years (e.g., Fowler et al. 2011). A few authors have used instrumental variable approaches to develop social network measures that should be exogenous to the dependent variables they aim to explain (Ikeda and Baose Forthcoming; Ikeda & Richey 2009; Mutz 2002a; Stoker & Jennings 2005). However, such models based on single point-in-time data inevitably must make dubious assumptions about the exogeneity of the instrument.

A number of new studies use experimental designs to randomize and exogenize social network stimuli. For instance, Druckman & Nelson (2003) assess how lab-based discussion groups mitigate framing effects; Visser & Mirabile (2004) and Mutz (2002a) simulate social influences using messages created by the investigator and administered within the lab; Jackman & Sniderman (2006) simulate deliberation via counterarguments within a survey experiment; and Lupia & McCubbins (2000) study a confederate’s ability to persuade a subject regarding the result of a coin flip. Clearly, such studies have weaknesses with respect to the external validity of the network stimuli, and the last study in particular has dubious applicability to political persuasion. A few innovative experiments have attempted to leverage “real world” networks and political discussion. Nickerson (2008), for instance, shows that “Get Out the Vote” campaigns affect not only the individuals contacted, but also other adults in the same house. And in a study straddling the line between a survey experiment and a field experiment, Parker et al. (2008) show that receiving information from a friend about risks associated with public policies affects

knowledge and risk assessments. Klofstad (2007; 2009) takes advantage of the “natural experiment” of freshmen’s random assignment to dorm rooms and roommates in a longitudinal study of how discussions with roommates affect college students’ political socialization over the course of their undergraduate careers. In Nigeria, Fafchamps and Vicente (2009) examine how networks within randomly selected treatment and control villages diffused messages from an anti-violence campaign.

One of the most promising ways to examine causality while preserving external validity is to use longitudinal data. One needs repeated measures of both social networks and political information and participation to assess the extent to which the amount of political discussion to which individuals are exposed is a stable personal trait. Such data also enable one to control for such personal factors to assess how the *change* in social network discussion leads to a change in knowledge and participation. In the ANES 2000 panel study, social networks were measured only in the final, post-election wave (Huckfeldt et al. 2004b; Nir 2005).¹⁷ This is also the case with the Indiana study of the 1984 presidential election, on which much early work on social networks was based (Huckfeldt & Sprague 1995). Nonetheless, a few studies in American politics have developed such panel data. In a mail study of Ohio Republican primary voters, Sokhey (2009) examined how divisive primaries affected the social network interactions of supporters of winning and losing candidates. A panel study of college students in dorms, meanwhile, shows that political discussion with roommates has long term effects on civic engagement (Klofstad 2007; 2009). And a nationally representative mail panel survey in 2000

¹⁷ However, the 1996 Indianapolis-St. Louis study interviewed social network members in both the pre-election and the post-election wave (Huckfeldt et al. 2002; McClurg 2006b). Another exception is a recent study assessing factors affecting change in the social network composition of Ohio voters over multiple waves in 2006 and 2008 (Sokhey 2008).

examines the links between discussion and political knowledge, showing that the former affects the latter (Eveland et al. 2005; Eveland and Thompson 2006).

Outside the US, Bello and Rolfe (2011), studying the British 2010 general elections, map changes in networks and in political engagement over the course of the campaign, and find little evidence of selection, but strong evidence of social network influence on vote choice. Lup (2010) uses 2003-2006 panel data from Hungary to show that network size and non-electoral participation each have a cross-lagged impact on the other, but that networks have a much stronger impact on participation than the reverse (see also Toka 2010 for similar analysis of these data). Finkel and Smith (2011) examine one particular form of discussion, diffusion of civic education messages in Kenya surrounding the democratic transition of 2002. Still, there is relatively little evidence on how these dynamics might travel cross-nationally.

Related to the longitudinal data approach is the issue that there is almost no evidence regarding levels of stability and change in networks (but see Bello & Rolfe 2011). Not only would such data be useful and interesting in their own right, facilitating a deeper understanding of the phenomena of interest, but they could help establish expectations for causal analysis. On the one hand, if networks are highly stable, one might expect some methods of panel data analysis such as fixed effects or first difference models to be less useful in examining networks' impact. On the other hand, if networks are highly unstable, this may be an indication of measurement error, which would contaminate both cross-sectional and longitudinal analysis of networks' impacts on democratic competence.

Finally, one more strategy for dealing with causal questions using real world data is matching, which attempts to ensure that those "treated" with social network stimuli are similar in all relevant and measurable ways to those who are "untreated." A few studies (Klofstad 2007,

2009; Klofstad et al. 2010) have used matching techniques to improve causal inference. While the strategy is more flexible in that it does not require longitudinal data, it also requires the often difficult assumption that no unmeasured factors simultaneously affect assignment to the treatment and the outcome variables in question.

While many of these studies suggest promising avenues for addressing questions of causality in social networks, note again that in nearly all cases they are based in the US. A handful of studies previously mentioned do deal with non-US cases, but these authors provide little guide to the reader regarding why one might or might not expect effects to vary across settings.

A third gap relates to the question of whether some types of people are more influential, or perhaps more readily influenced. In keeping with the “two step” model, conversation’s effect on learning and participation may be conditional on the personal characteristics of discussion partners. Since the ability to supply information to discussants varies as a function of one’s own knowledge, we might expect to find greater information transfer in relationships characterized by larger initial differences in knowledge. A few US-based studies show that discussants’ political knowledge, as reported by main respondents, conditions their influence on main respondent participation (McClurg 2003, 2006a). However, studies also show that while perceptions of discussants’ political knowledge are related to actual knowledge, they are also a function of the amount of political agreement between discussion partners (Huckfeldt 2001; McClurg 2006a) and of the discussion partners’ political engagement (Ryan 2011). This makes it difficult to know to what extent the conditional effect of discussant knowledge on main respondent participation actually results from persuasion and political agreement, rather than information

transfer. To solve this problem, we need to use measures of discussants' actual, rather than perceived, knowledge.

Beyond discussants' political knowledge, a few other projects examine how network effects are conditional on other traits of the discussion partners. For instance, in the American context McClurg (2003) demonstrates that those with higher educational levels benefit more from political discussion. Finkel and Smith (2011), however, find that Kenyans with *fewer* resources, as measured by rural status, civic group memberships, and education, benefit most from discussion. With respect to the relationship between discussants, Huckfeldt and Sprague (1995) show that spouses have a particularly strong influence on each other's behavior (see also Nickerson 2008; Pattie & Johnston 1999; Stoker & Jennings 2005; Zuckerman et al. 2005).

A fourth gap relates to the other side of the coin: the fact that nearly all of the studies discussed here are based on measures of social networks emphasizing close ties to a limited number of significant others. In the mass politics tradition, citizens' social networks have typically been measured using one of two general types of question batteries, often known as "network name generators." The first battery reads something along the lines of, "From time to time people discuss important matters. Can you tell me the name of one person with whom you often discuss important matters?" Respondents who name a discussant then receive subsequent requests for other discussants, with the battery ending at around three, four, or five discussants. This battery has been used in the US General Social Survey, but it has also had a prominent place in more politically-oriented surveys. The second type of social network battery replaces the words "important matters" with "politics." In either case, respondents then receive follow-up questions about the characteristics of their network members: for instance, education, levels of political knowledge, and candidate preferences. The groups reported in response to both types of

batteries are often known as *egocentric networks* because they are comprised of an *ego* (the main respondent) and a series of *alters* each linked to the ego, forming a hub and spoke diagram with the ego as the hub and alters at the ends of the spokes. At least in the American context, though, studies show that both types of name generators tend to produce the names of people known very well, and that political outcomes vary little across the two types of batteries (Bailey and Marsden 1999; Bearman and Parigi 2004; Huckfeldt and Sprague 1995; Klofstad et al. 2009). As a result, throughout this dissertation I call such networks “intimate egocentric networks,” to distinguish them from the broader egocentric network comprised of *all* of the people a citizen knows, whether strong or weak ties.

Beyond studies examining causal relationships in informal discussions in social networks, there are a number of longitudinal and field experimental studies of organized deliberative processes. These studies reveal that such groups can help participants understand politics and can stimulate participation (Barabas 2004; Gastil and Dillard 1999; Gastil et al. 2002, 2008; Wantchekon 2009). At the same time, though, two experiments also show that in hierarchical settings the results of group deliberation may also be highly dependent on leaders’ attitudes (Humphreys et al. 2007; Richey and Brosnan 2011). Interestingly, both the Wantchekon and Humphreys studies focus on African politics. And using longitudinal data from Brazil, Rennó and Ames (2010) found that participation in the deliberative forums of the participatory budgeting process had no impact on knowledge or political engagement. Moreover, the Richey and Brosnan study is an experimental extension of survey-based work on Japan. Thus, research on organized deliberative processes may take a more explicitly comparative approach than that on intimate egocentric networks.

2.3 HOW DOES DISAGREEMENT AFFECT DEMOCRATIC COMPETENCE?

Another major question this dissertation explores relates to how divergent political preferences within social networks affect democratic competence. Democracy would be boring and arguably unnecessary without disagreement. Much of the democratic potential of political discussion requires that this discussion expose citizens to opinions that differ from their own. Moreover, from its earliest beginnings, the literature on social influence has been premised on the idea that citizens are, at least at times, exposed to people with opinions that do not entirely coincide with their own in the course of their daily interactions (Berelson et al. 1954; Katz & Lazarsfeld 2005; Lazarsfeld et al. 1948). Yet these longstanding views of disagreement as a central and positive force in democratic discussion were challenged in important ways in a series of contributions by scholars of American political behavior (Eliasoph 1999; Hibbing & Theiss-Morse 2002; Mutz 2002a, 2002b, 2006). The problem, as Mutz puts it, is that deliberative and participatory democracy are fundamentally incompatible at the citizen level; the conditions that foster the one inhibit the other (2006). Using survey and experimental data from the US, Mutz (2002a, 2006) shows, first, that discussing politics with people with whom one disagrees promotes tolerance and increases awareness of the reasons behind opposing viewpoints. At the same time, though, it also depresses political interest and participation by causing internal ambivalence and activating the desire to avoid social offense (Mutz 2002b, 2006). Similarly, Hibbing and Theiss-Morse (2002) and Eliasoph (1999) argue based on qualitative field work and focus groups that most Americans fundamentally dislike political debate and conflict. Thus, Mutz (2006) concludes the kinds of social environments conducive to political participation are ones comprised of like-minded copartisans; at the citizen level, bipartisanship and political diversity are demobilizing.

Mutz's contributions, in particular, have had a remarkable impact on the direction of social network research over the ensuing near-decade. Many scholars have revisited her findings, seeking to establish more completely the impacts of disagreement on varying components of democratic competence. Subsequent studies have provided mixed evidence regarding her original conclusions. McClurg (2006a), analyzing US data, and Morales (2010), analyzing Spanish data, both generally confirm the original study. They find that, controlling for network size, *agreement* boosts participation.¹⁸ Similarly, Valenzuela et al. (Forthcoming) conclude that political disagreement experienced within face-to-face social networks depresses online political participation in the US. Analyzing 2005 data from the UK, Pattie shows that exposure to disagreement depresses turnout, but boosts volunteering and self-reported "potential" for future participation. However, Huckfeldt and coauthors (2004b), in another US-based study, show that disagreement actually boosts political interest, and is unassociated with turnout. Klofstad et al. (2010), using 2008 ANES data, attempt to bring order to the debate, showing that different measures of disagreement produce different results. While exposure to substantial perceived disagreement within the network is demobilizing on a number of measures, simply having people from the opposite party within one's network has little to no demobilizing effect on various measures of engagement.

Further, other scholars argue that, at least under some circumstances, exposure to disagreement might actually *promote* turnout and other forms of participation. Ikeda and Boase (Forthcoming) examine political discussion that occurs incidental to other life activities in Japan. They show that disagreement within this kind of low intensity political discussion *increases* political participation, though they fail to control for the total amount of discussion, and they

¹⁸ *Agreement* is not necessarily the exact opposite of *disagreement* since, as will be discussed below, many discussants' preferences are unknown or are known to be neutral.

note that instrumental variables models not presented in the paper provide only “modest” support for a flow of causality from discussion to participation.¹⁹ And Jang (2009) finds based on the ANES 2000 that exposure to disagreement matters only for those with polarized views; for those who are highly indifferent or alienated, exposure to disagreement can actually boost participation.²⁰

To complicate the matter further, a few scholars have turned their attention to the *distribution* of political preferences among the discussants reported by the main respondent, or *ego* at the center of the network, rather than the extent to which each one disagrees with the ego. Nir (2005, 2011), for instance, uses survey data from the US to assess the effect of receiving mixed messages. She shows that only completely oppositional networks decrease participation, while mixed networks are compatible with high levels of participation (2011); in earlier (2005) work, moreover, network “ambivalence,” a measure of the balance of supportive and oppositional preferences, has no unmediated effect on participation. Puzzlingly, however, three other studies point in the opposite direction. Huckfeldt et al. (2004) find that respondents who have discussants supporting *both Gore and Bush* are more ambivalent, have less polarized

¹⁹ Controlling for the amount of discussion or for social network size is very important, since this variable has a very strong independent association with various measures of political engagement, and it is also by definition a determinant of the amount of discussion experienced in the network. Eveland and Hively (2009) rightly point out that some of the puzzling discrepancies in the findings of this body of literature may be due to some authors’ failure to control for network size.

²⁰ In addition, a series of papers within the field of communication argues (and seems to show) that network “heterogeneity” boosts participation and knowledge, based on the US case (Kwak et al. 2005; McLeod et al. 1999; Scheufele et al. 2004, 2006). However, the operationalization of this construct is very different from that in the rest of the works cited here. First, disagreement is based on general self-reported discussion habits, rather than a network generator; respondents may be asked, for instance, how often on a scale from 1 to 10 they talk about politics with people in a series of demographic and political categories. Second and more importantly, the researchers are interested in a very general notion of heterogeneity, along both demographic and political lines. Scheufele et al. (2004, 2006), for instance, average together responses regarding frequency of political discussion with people that differ from the main respondent in age, gender, ethnicity, and location on the “extreme right” and “extreme left.” Indicators of demographic diversity typically outnumber measures political diversity in the construction of these indices, making them poor measures of political disagreement. Moreover, one might wonder whether discussing politics with people on the political extremes is a true measure of the extent of exposure to political disagreement for most people.

attitudes, and are less interested in politics, than are those with similarly sized but homogeneously oppositional networks. And two other recent papers find that, controlling for network size, the extent to which network members disagree with the main respondent has no effect on turnout, while measures of the political “diversity” (Eveland & Hively 2009) or “heterogeneity” (Therriault 2011) of the network are negatively associated with participation.

At a somewhat higher level of social aggregation such as the high school, neighborhood, or suburb, US-based studies show that conflict within the immediate social context depresses participation; the effect is particularly severe for the political minority (Bélanger & Eagles 2007; Gimpel et al. 2004; Gimpel & Lay 2005; McClurg 2006b; Scheufele et al. 2004, 2006).

To the extent that disagreement is demobilizing, a number of mechanisms appear to be at play. For one thing, experimental (Visser & Mirabile 2004) and longitudinal (Binder et al. 2009) studies in the US find that immersion within homogeneous discussion networks leads to attitude strength and extremity; thus, *homogeneity* is associated with increased mobilization. For another, using survey data from the US Parsons (2010) shows that exposure to disagreement increases negative emotions associated with the in-party and depresses such emotions associated with the out-party candidate. For a third, conflict avoidance and disposition to self-censor appear to demobilize citizens, particularly when they are confronted with disagreement (Hayes et al. 2006; Ulbig and Funk 1999).

At the same time, a smaller body of literature finds generally positive effects of exposure to disagreement on other measures of democratic competence. At the aggregate level, Page (2007) argues that diversity of opinions helps groups make better collective decisions. Price, Capella, and Nir (2002) confirm that exposure to disagreement increases awareness of the reasons behind opposing viewpoints, using US-based survey data. And experiments show that

disagreement with discussants can help people originally in error develop more well-reasoned and correct opinions (Druckman 2004; Jackman & Sniderman 2006). Moreover, Ikeda and Richey (2009) use an instrumental variables model to show that politically diverse networks boost tolerance among the Japanese.

Nonetheless, research outside of this immediate field suggests that exposure to a high level of heterogeneity might have some pernicious effects on political learning and participation. A large body of research within psychology and marketing shows that when choice environments become more complicated, decisions become more difficult, and the likelihood of making no decision at all rises (Dhar 1997a, 1997b; Kahneman et al. 1982; Palma et al. 1994; Payne 1976; Payne et al. 1993; Swait & Adamowicz 2001). A key element of “decision task complexity” is the number of choices in the information environment, as well as the amount of information available about each one. This suggests that when social networks offer too much information about too many candidates, they might even lead to cognitive processing difficulties and demobilization. Within American politics, experimental studies show that people who thoroughly consider a wide range of political options through computer-based information searches or decision-making protocols exhibit confusion, lower levels of voting in line with their interests, and lower inclination to vote at all (Barker & Hansen 2005; Lau & Redlawsk 2006). And Sokhey and McClurg (2008) find that ANES respondents with more heterogeneous social networks are less likely to vote correctly.

But the body of research on social network disagreement suffers from a couple of measurement-related problems. The first relates to how to code agreement or disagreement

within individual respondent-discussant dyads.²¹ The problem is in part that agreement and disagreement are not the only two options within any given dyad. Assume there are two candidates, A and B. The options for combinations of preferences within a dyad are, not completely exhaustively: both support A (*agreement*); both support B (*agreement*); one supports A and the other B (*disagreement*); one supports A (or B) and the other supports no one (coding ambiguous); one supports A (or B) and the other's preference is unknown (coding ambiguous); neither supports any candidate, or both have unknown preferences (coding again ambiguous). Since a great many dyads fall into the latter categories, *disagreement* is far from a perfect linear function of the number of network members and the amount of *agreement*. This becomes a problem because some researchers code for disagreement, others for agreement, and yet others for both. These differences in coding may have important bearing on discrepancies in results.

The second measurement problem relates to how to aggregate preferences from dyads to networks to create measures of divergent preferences. The problem is that there are really two distinct dimensions of such divergence: the extent to which network members all disagree with the main respondent, or the *ego* at the center of the network; and the extent to which they disagree among themselves. This distinction becomes yet more important in multi-party contexts. For instance, take the example of a network in a four-party system in which a main respondent has three discussants. Even if every member of a network disagrees with the main respondent, it will be unclear whether they all support a single party, or alternatively each supports a different party.

In general, most scholars have considered only one of the two components of divergent preferences. Perhaps due to the strong influence of the studies cited at the beginning of the

²¹ These problems are also discussed by Mutz (2006) and Klofstad et al. (2011). These coding differences are in part responsible for an almost puzzlingly vociferous debate over the simple question of how much disagreement the average American experiences within his or her social network (Huckfeldt et al. 2004; Mutz 2006).

chapter, most scholars have focused simply on the number of discussants conflicting with the main respondent. However, Ikeda and Richey (2009) have instead coded for the diversity of preferences represented within the network, without coding for the extent to which network members are in conflict with the main respondent.

Several recent papers, ones examining both comparative (multi-party) contexts and the US, appreciate these distinctions. Baker et al. (2006) and Morales (2010) develop separate measures for these two distinct components in analyses of the Brazilian and Spanish multi-party contexts. Like Ikeda and Richey, the authors simply count the number of parties represented in the network; to measure disagreement with the *ego*, they count the number of preferences that conflict with that person. In the American case, operationalization of the *diversity* of political preferences in a network has tended towards more complicated indices, though *conflict* is typically measured with a simple count of the number of disagreeing members. Nir (2005) develops a measure of “network ambivalence” paralleling the Griffin measure of internal ambivalence. Nir (2011), meanwhile, simply codes whether networks contain mixed preferences. Eveland and Hively (2009) use a measure developed for studies of biodiversity, while in a very recent conference paper, Therriault et al. (2011) develop a similar measure of cross-pressures. Importantly, the formulas used in these last two papers result in indices with missing values for those who have no network members with known preferences. Eveland and Hively (2009) exclude these people, while Therriault et al. impute the mean value to these respondents. Finally, Huckfeldt et al. (2004) estimated the effect of mixed preferences on political engagement using an interaction term between variables for the number of discussants supporting each party.

Table 2 explores these measurement issues. In the left portion of the table, I list all possible configurations of preferences in a two-party system, given a network with up to four members. In the right portion, I list the way various scholars' indices of what I am terming *diversity* would score the configuration. The bottom half of Table 2 reveals that these measures are all fairly highly intercorrelated, but that the correlation among them is far from perfect.

Table 2. Measures of Network Diversity in Studies Based on the American (Two-Party) Case

<i>Possible Configurations</i>			Count of parties	<i>Americanist Indices of Diversity</i>				
Known Preferences	Support for Party A	Support for Party B		Nir 2005	Nir 2011	Eveland & Hively 2009	Therriault et al. 2011	Huckfeldt et al. 2004
0	0	0	0	0	0	missing	set to mean (0.4)	0
1	1	0	1	-0.5	0	0	0	0
2	2	0	1	-1	0	0	0	0
2	1	1	2	1	1	0.5	1	1
3	3	0	1	-1.5	0	0	0	0
3	2	1	2	0.5	1	0.44	0.67	2
4	4	0	1	-2	0	0	0	0
4	3	1	2	0	1	0.38	0.5	3
4	2	2	2	2	1	0.5	1	4
<i>Correlation with party count</i>				0.57	0.89	0.99	0.93	0.77
<i>Correlation with Nir 2005</i>					0.79	0.90	0.93	0.76
<i>Correlation with Nir 2011</i>						0.99	0.88	0.86
<i>Correlation with Eveland & Hively 2009</i>							0.98	0.82
<i>Correlation with Therriault et al. (with mean imputation)</i>								0.74

Nir 2005, *Ambivalence*: $[(\text{Party A} + \text{Party B})/2] - |B4 - C4|$

Nir 2011, *Mixed Networks*: Binary variable coded "1" if two parties are represented

Eveland & Hively 2009, *Diversity*: $1 - [(\text{Party A}/\text{Network Size})^2 + (\text{Party B}/\text{Network Size})^2]$

Therriault et al. 2011, *Cross-Pressures*: $1 - [|\text{Party A} - \text{Party B}| / (\text{Party A} + \text{Party B})]$

Huckfeldt et al. 2004: $\text{Party A} * \text{Party B}$

Beyond these measurement issues, this literature also suffers from a dearth of cross-national theory and evidence. As discussed in this section, a handful of studies from the UK, Spain, and Japan shed some light on the consequences of divergent network preferences for

democratic competence. Nonetheless, this literature has its theoretical origins in American politics, and it remains unclear how theory should travel cross-nationally. Moreover, substantial further evidence is needed on the potentially varying impacts of diversity and conflict around the world.

2.4 HOW DO NETWORKS AND THEIR EFFECTS ON DEMOCRATIC COMPETENCE VARY CROSS-NATIONALLY?

A final major question this dissertation explores relates to how social networks and their effects on democratic competence vary around the world. This question as I have conceptualized it is a truly *comparative* one; I aim to understand both cross-national patterns and country-level factors that may produce those patterns. In particular, I develop and test a theory related to one such country-level factor, the nature of the party and electoral system. Unfortunately, though, the existing literature provides little leverage for answering comparative questions about social networks. As indicated above, scholarship on political discussion and citizen-level networks owes much of its original theoretical development to a number of important contributions within American politics, but this theory has been applied in studies of political behavior around the world. Nonetheless, the theory motivating such studies has continued to operate for the most part at the individual level, with scholars using network factors to explain variation in political behavior among citizens within countries, rather than seeking cross-national factors explaining variation in networks or conditioning networks' effects on behavior.

As a result, this section of the literature review will be more exploratory and patchwork; I am unable to review an established and more-or-less coherent line of scholarship or theory in the

same way as in the previous two sections. First, I provide a very brief overview of the scope of English-language political science scholarship on citizen-level social networks outside the US. Second, I turn to a slightly more detailed review of the literature on social networks and social influence in Brazil, within both political science and other social sciences.²² Third, I address the ways in which social networks and their effects have been shown to vary around the world. Fourth, within the same section I consider more systematically a number of factors that might produce such cross national variation.

2.4.1 Networks and Political Behavior outside the US

Scholars of political behavior around the world have been interested in patterns of political discussion and discussion networks within their countries of study. Moreover, they have produced a substantial body of scholarship showing the importance of such factors for explaining how citizens engage with their political systems. Here, I provide a whirlwind global tour of the English-language component of this literature: from the Anglo democracies, to East Asia, to Europe, Latin America, and Africa.

In the US' closest neighbor to the north, an important body of scholarship on citizen-level political networks has emerged. Canadian network researchers have shown, among other things, networks' relationship to gender norms (Erickson 2006), tolerance (Côté & Erickson 2009), leftist voting (Gidengil et al. 2007), and engagement in environmental activism (Tindall 2002). Across the pond, scholarship on British networks has been prolific. Relevant works show networks' association with vote choice (Bello & Rolfe 2011; Pattie & Johnston 1999, 2000),

²² Here, of course, I rely on literature in both English and Portuguese; the restriction to English-language scholarship in the first section is driven primarily by my own linguistic limitations.

party identification (Zuckerman et al. 2005), tolerance (Pattie & Johnston 2009), and political knowledge (Bennett et al. 2000). In addition, a series of articles (Bennett et al. 2000; Conover et al. 2002; Mutz & Mondak 2006) assesses patterns of discussion within the UK and the US, showing that Americans have somewhat higher levels of discussion in many locations, though Brits are more prone to discussing politics in bars!

In East Asia, an intriguing and substantial body of research on networks has developed; scholars argue that cultural features lead to different network structures and make networks more important determinants of political behavior in this region than in Western democracies. Scholars of Japanese politics argue that social networks are associated with elite mobilization (Cox et al. 1998), political participation (Ikeda 2010; Ikeda & Boase Forthcoming; Ikeda & Kobayashi 2009; Ikeda & Richey 2005; Inamasu & Ikeda 2008), vote choice (Flanagan 1991; Richardson 1991), political knowledge (Richey 2009), and tolerance (Ikeda & Richey 2009). Scholars emphasize the importance of hierarchy (Richey 2009) and of connections to politicians and to candidate support networks (Flanagan 1991; Inamasu & Ikeda 2008; Richardson 1991) in this country. Moreover, Ikeda and Huckfeldt (2001) and Huckfeldt et al. (2005) show very low levels of exposure to disagreement within Japanese networks, and argue that this reinforces a one-party dominant system. Similarly, Chinese scholarship argues for the importance of *guanxi*, or useful connections to the powerful and influential, in that country (Lin 2001). Finally, a study of seven East Asian nations assesses the relationship between networks in recreational groups and political participation (Ikeda et al. Forthcoming).

Social network scholarship has also been prominent in Europe. Representative works on Germany assess the patterns of political discussion (Faas & Schmitt-Beck 2010; Huckfeldt et al. 2005) and show their effects on public opinion (Brosius & Weimann 1996; Zuckerman et al.

2005) and on participation in the 1989 East German protests (Opp & Gern 1993). Duchesne and Haegel (2007, 2010) have made important theoretical and empirical contributions in their rich qualitative studies of the avoidance of conflict in political discussion in France. Other recent works show the association between political discussion and vote choice in Switzerland (Marquis 2010), and between networks and knowledge and participation in Hungary and Spain (Lup 2010; Morales 2010; Toka 2010).

Outside these regions, research on networks is much more scant. While some data on social networks in Uruguay and Chile have been collected as part of the second wave of the Comparative National Elections Project (CNEP-II), I am unaware of any publications (including in Spanish or Portuguese, not just English) using survey based studies of citizens' political networks in those countries, or anywhere else in Latin America except for Brazil. Nonetheless, as discussed in the next section, a social network approach fits well with many of the important themes in Latin American political behavior, including especially clientelism, civil society, and elite mobilization of citizens. Indeed, some Latin Americanists may conceptualize their work in terms of networks even though they do not use the tools and measurements standard in this literature.

Finally, I am also unaware of research on citizens' intimate egocentric networks within the literature on African politics. However, a small but interesting and important group of studies examines the role of networks conceptualized more broadly. Village- and urban neighborhood-based networks have been shown to affect the ways ethnic violence (Scacco 2009) and messages from anti-violence campaigns (Fafchamps 2009) spread in Nigeria. Similarly, networks had an important impact on the diffusion of messages from civic education campaigns surrounding the transitional democratic election of 2002 in Kenya (Finkel & Smith 2011).

As may have become apparent, the great majority of research on political discussion networks has focused on single countries. Nonetheless, there are important exceptions, among them the series of studies cited above comparing political discussion habits in the US and the UK. Moreover, a number of works draw on the CNEP II data. Ikeda & Huckfeldt (2001) and Huckfeldt et al. (2005) use data from the US, Japan, and Germany; Magalhães (2007), Mutz (2006), and Richardson & Beck (2007) analyze broader samples of the data. In addition, Anderson & Paskeviciute (2005) assess patterns of political discussion across fifteen countries, showing that distance from the ideological center as well as, in some countries, support for opposition parties, predicts political discussion.

2.4.2 Networks and Social Influence in Brazil

The most prominent recent scholarship on networks in Brazil examines the social networks of poor people, describing social capital and cycles of poverty (Fontes & Eichner 2004; Marques 2009a, 2009b; Marques & Bichir 2001; Marques et al. 2008a; Marques et al. 2008b). This work parallels a much older literature on friendship networks and the labor market among upper-income professionals (Leeds 1965). While this work has produced fascinating insights regarding the social contexts of low-income and upper-income Brazilians, it has limitations for understanding political behavior. First, it has not adequately compared the networks of low- and higher-income Brazilians, making it difficult to know what aspects of social networks reinforce or ameliorate poverty. Second, this research has focused on socioeconomic rather than political dependent variables.

Turning to political matters, a number of scholars have taken network approaches to understanding Brazilian activists and elites, especially within water conservation and

environmentalist networks (Abers & Keck 2006; Candler 2000; Frank 2001; Keck & Hochstetler 2007; Lemos & de Oliveira 2004; Rodrigues 2003). At the citizen level, however, the only other research of which I am aware that has taken a social network approach to Brazilian political behavior has come out of the Ames-Baker-Rennó study utilized in this dissertation. A few published papers have begun to show how social networks affect political behavior. Baker et al. (2006) found that discussing politics with people with whom one disagrees has a major impact on the probability of switching from one presidential candidate to another over the course of the 2002 presidential campaign. Ames et al. (Forthcoming) similarly show an important effect of network support on switching to or away from President Lula da Silva between 2002 and 2006. And Ames and Smith (2010) find that frequency of political discussion is associated with the ability to think in ideological terms.²³

Despite the relatively small number of published network studies in Brazil, the literature would lead one to suspect that social networks have a relatively strong impact on political behavior in Brazil. Most importantly, a long tradition in political science on Brazil and on Latin America more generally emphasizes the importance of social ties, especially ones between citizens and elites, in mobilizing participation. Historically, *coronelismo* involved deep social ties and relations of mutual dependence between rural elites and impoverished residents, who provided political support to the *coronel* and the candidates the *coronel* supported (Vilaça & Albuquerque 2003). Similar though less deeply inegalitarian relationships may persist in urban areas to this day; as Mainwaring (1999, 188) argues, “many citizens still vote on the basis of what their friends, local community activists, their political *padrinhos*, and local political

²³ In addition, a few published papers examine the relationship between participation in organized civil society and deliberative forums, on the one hand, and political sophistication, on the other (Rennó 2006b; Rennó & Ames 2010). Furthermore, beyond the body of work presented in this dissertation, I have a couple of unpublished papers examining social influences within churches in the Juiz de Fora local elections of 2008 (using the NNBP data) and the national-level presidential elections of 2010 (using the BEPS data) (Smith 2010, 2011).

notables suggest.” A rich ethnographic study of legislative behavior shows how legislators construct networks with key constituencies based on the exchange of political favors and support (Bezerra 1999). Moreover, literature on clientelism throughout Latin America shows that the citizens most likely to be targeted are the ones who are already embedded in civil society organizations and who have connections to party activists (Auyero 2000; Brusco et al. 2004; Faughnan & Zechmeister 2011; Handlin 2009; Kitschelt & Wilkinson 2007; Nichter 2008; Stokes 2005).

Second, cross-cultural psychology also leads one to expect Brazilians to be highly attuned to electoral cues from their social environments. Studies show Brazilians to be collectivists, prioritizing in-group over individual interests; this trait affects many social and ethical behaviors (Beekun, Stedham, and Yamamura 2003; Bontempo, Lobel, and Triandis 1990; Hofstede 2001; Hofstede et al. 2010; Pearson & Stephan 1998). It also leads Brazilians to be especially aware of and responsive to persuasive and factual information regarding politics from in-group members.

2.4.3 Cross-National Variation in Networks and their Effects on Democratic Competence

Do people in some countries discuss politics more than in others? Are networks more disagreeable in some countries than in others? And do networks have larger effects on democratic competence in some countries than in others? The existing literature provides the beginnings of some answers, though primarily with respect to the patterns of discussion, rather than its effects. It seems clear that the levels of everyday political discussion are high in the US, relative to many other countries (Conover et al. 2002; Magalhães 2007; Morales 2010; Mutz 2006). In one of the intriguing and vexing debates coming from this literature, Ikeda and

Huckfeldt (2001) and Huckfeldt et al. (2005) conclude that Americans are exposed to higher than average levels of *disagreement* within their networks, while Mutz (2006), using the same CNEP II data, concludes that they are exposed to higher than average levels of *agreement*. The resolution to this puzzle, as I will show in Chapter 7, seems to be that Americans are unusually likely to know whom their network members support, meaning that they perceive more of *both* agreement and disagreement.

Beyond the US, levels of political discussion and exposure to disagreement within intimate egocentric networks appear to be particularly low in Japan (Huckfeldt et al. 2005; Ikeda & Huckfeldt 2001). Richey (2009) also documents the prominence of hierarchical relationships between social superiors and inferiors in Japan, and shows that such hierarchical relationships affect social inferiors' vote choices. However, he finds that in contrast to nonhierarchical political discussion networks, hierarchical ones do not promote democratic competence (namely, political learning). Scholars of Chinese and Japanese political behavior also argue that connections to politicians, activists, and other power brokers are unusually strong and plentiful in these countries, and that they may have an important impact on vote choice (Flanagan 1991; Lin 2001; Richardson 1991). Finally, studies of political discussion networks in two European Third Wave democracies, Hungary (Lup 2010) and Spain (Morales 2010), argue that political discussion levels are fairly low in these countries due to the nature of the transition and lingering effects of authoritarianism.²⁴

I turn now to explore system-level factors that might lead to variation in networks and their impacts. While the body of literature addressing this topic directly is fairly small, many studies provide hints. First is a group of country-level political variables, including electoral and

²⁴ The argument with respect to Spain echoes McDonough et al.'s (1998) argument that exceptionally low levels of social capital in this country result from revulsion against the excesses of the Spanish Civil War, as well as from the protracted legacies of the Franco regime and of the democratic transition.

party systems and age of democracy. Second are social structural factors such as the prominence of hierarchy and levels and distribution of formal education and other resources. Third is a group of factors that might generally be labeled political culture. Individual level patterns of interpersonal trust, political interest, conflict avoidance, and collectivism, when aggregated at the local or national level, should affect possibilities for political conversation as well as, perhaps, conversation's impact on behavior.

2.4.3.1 Country-Level Political Factors: Electoral and Party Systems and Age of Democracy

A few important studies suggest ways the electoral and party systems might be related to patterns of discussion and social network composition. This is the body of literature most directly related to the contextual theory I develop in this dissertation. Most important is a study by Huckfeldt et al. (2005), which parallels and inspires one portion of the theory and analysis I develop in Chapters 3 and 7. Using the cases of Germany, Japan, and the US, these authors show that the probability of having at least one network member who does not share one's candidate choice is strongly related to a party's level of electoral support. That is, supporters of a candidate who receives 60% of the vote are much more likely to have network members that homogeneously agree with them than are supporters of a candidate who receives 5% of the vote. However, they show that the ways non-agreement is expressed vary across countries, with the Japanese more likely to report that they do not know non-agreeing discussants' preferences.

Several other authors also argue that the partisan environment affects network composition and conditions network effects. Some US-based research on the demobilizing effects of being in the political minority within a particular area might suggest more pronounced demobilization in multiparty systems where most people are in the political minority (Bélanger

& Eagles 2007; Gimpel et al. 2004; Gimpel & Lay 2005; McClurg 2006b; Scheufele et al. 2004, 2006). Alternatively, one might conjecture that such demobilization only occurs when a minority faces a unified majority supporting one candidate or party. In addition, Clough (2007) shows using an agent-based model that in a single-member plurality system, voters with heterogeneous networks are more likely to vote strategically, meaning that they are more likely to coordinate on two parties.

Another system-level factor that might affect levels of political discussion is age of democracy. As Lup (2010) and Morales (2010) suggest in the cases of Hungary and Spain, legacies of authoritarianism and pacted democratic transitions might demobilize citizens. This could be one factor explaining higher levels of political discussion documented in the US. However, it is unclear how age of democracy would condition network effects.

2.4.3.2 Social Structure: Hierarchy, Education, and Access to Other Resources

Macro-level social structural variables might also affect network composition and condition networks' impacts on democratic competence. As indicated above in the discussion of the distinctiveness of Japanese networks, networks may vary around the world in the extent to which they incorporate people of different social statuses and with varying access to material resources and political power. In the American literature, the primary inequality typically theorized in social networks is in political knowledge or engagement. However, Richey (2009) argues that, in the Japanese case, discussants' relative positions in the social hierarchy have a major impact on how they learn from each other. Moreover, a few experimental studies show that groups are highly susceptible to the leader's opinions when one member of the group is designated as such (Richey and Brosnan 2011; Wantchekon 2003), though in the absence of

hierarchy group discussions attenuates leader effects administered as an initial treatment (Druckman and Nelson 2003).

A second social structural factor that might shape political discussion and its effects relates to access to other sources of political information, including formal education and the media. To the extent that political discussion substitutes for other forms of information-gathering (Downs 1957; Fleischer 2008), one might find heavier reliance on discussion in societies with lower levels of education and media access. In addition, the “two-step flow” theory would suggest that the degree of inequality in access to information between an opinion leader and other discussants would affect the value of the former to the latter, as well as the extent of influence (Katz & Lazarsfeld 2005).

2.4.3.3 Political Culture

Finally, cross-national variations in a group of factors that might loosely be considered under the rubric of political culture could affect the extent of discussion as well as, perhaps, discussion’s impacts. One such factor is interpersonal trust. There are strong reasons to suspect that this variable may affect the size of a person’s reported social network. Quite simply, those who trust their fellow citizens more may be more willing to list them as personal discussants; moreover, to the extent that both interpersonal trust and social networks are components of social capital, theory would predict that these things go together. Interpersonal trust could also be associated with the experience of conflict and heterogeneity within social networks, though it is unclear whether the former would have a positive or negative effect on the latter. On the one hand, people who trust each other more might be more willing to discuss their differences, perhaps approaching a Habermasian “ideal speech situation” characterized by mutual respect and openness to dialogue (1989). On the other, to the extent that strong ingroup attachment or

“bonding social capital” (Putnam 2000) foster interpersonal trust, this variable may be associated with low levels of exposure to conflict and heterogeneity. Given that cross-national surveys reveal major differences across societies in levels of confidence in one’s fellow citizens (Inglehart & Welzel 2005; Norris 2002), this variable might explain important variation in patterns of political discussion. Finally, interpersonal trust might condition the relationship between democratic competence and conflict; perhaps more trusting people are less demobilized by conflict, and more willing to learn from it.

Two other political cultural variables that might affect opportunities for discussion are political interest (Morales 2010) and conflict avoidance (Duchesne & Haegel 2007; Eliasoph 1999; Hibbing & Theiss-Morse 2002; Mutz 2002a). At the individual-level, both traits are determinants of the amount of discussion in which a person engages and the size of political discussion networks. Aggregated at the country-level, though, these variables might have a further impact by affecting the availability of political discussants. That is, regardless of one’s own levels of political interest, the political interest of others in one’s social environment should have a major impact on the extent to which on a daily basis one bumps into others who are willing or even eager to talk about politics.

Last, cross-cultural psychology has identified the dimension of individualism-collectivism, or “allocentrism,” meaning the extent of concern for the preferences of others within the in-group, as a major factor distinguishing citizens across countries and driving many cross-national differences in social behaviors (Hofstede 2001; Kâğitçibaşı 1997; Triandis 1995). Surveys of political culture have not tended to emphasize this dimension, making it difficult to test the impact of collectivism on discussion networks given existing data. Nonetheless, it seems

likely that political discussion networks would be both larger and more influential in collectivist societies.

2.5 CONCLUSION: THE STATE OF THE LITERATURE ON SOCIAL INFLUENCE AND DEMOCRATIC COMPETENCE

This chapter began with a brief overview of what other scholars have meant by the term “democratic competence,” which I am using as a framework to organize the dependent variables examined in this dissertation. I then proceeded to consider, in turn, the literature with bearing on each of the three major research questions examined in this dissertation. As we have seen, the literature on the causal effects of network-based political discussion on democratic competence has made great strides, but lacks evidence from real world, externally valid studies outside the US. Scholarship on how divergent preferences within social networks affect democratic competence has also been quite active, but it also has a few gaps. Not only has it produced a confusingly contradictory set of conclusions, but it suffers from inconsistencies in measurement and conceptualization of the key independent variables, and it has not adequately considered how concepts travel cross-nationally. Last, the literature on cross-national variation in social networks is perhaps least developed. A great deal of scholarship around the world has taken a social network approach, though there is a surprising dearth of scholarship within studies of Latin American political behavior, especially given the obvious fit between the concerns of Latin Americanists and the tools offered by social network approaches. Nonetheless, despite the proliferation of studies on social networks around the world, there is little research that provides much basis for understanding how the patterns and effects of discussion should vary cross-

nationally. In this chapter, I have sought to connect some previously unconnected dots in order to begin to flesh out a picture of the cross-national possibilities. In the next chapter, I draw on this review to develop my own theory in greater detail.

3.0 SOCIAL INFLUENCES ON DEMOCRATIC COMPETENCE: THEORY

The previous chapter described the state of the existing literature on social influence, focusing on research addressing the three major research questions motivating the dissertation. This chapter discusses the theory and expectations that will inform the empirical analyses. In the first section I outline what I mean by democratic competence, which I use as a conceptual framework for organizing the dependent variables. The three components of democratic competence that I consider throughout the dissertation are political knowledge, participation, and (anti-)clientelistic dispositions. I explain how these democratic traits affect citizens' abilities to perform their democratic roles, while focusing especially on their importance in the Brazilian context. I then argue that explanations of democratic competence are incomplete unless one accounts for the role of social influence. In the second section, I then briefly consider some issues related to the conceptualization of social networks.

The rest of the chapter considers each of the three major research questions driving this dissertation. The third section is about whether and how political discussions within the immediate social network—typically the friends and family with whom one talks most often—affect participation and political knowledge in Brazil. The fourth section considers how exposure to divergent preferences within social networks affects the democratic competence of members. In particular, it deals with the literature on disagreement within social networks and discusses the role of *social network diversity*, which has largely been ignored in this literature

until now. When I take diversity as well as conflict into account, important expectations from this literature change. Further, I argue that the effects of diversity and conflict vary across party systems.

The fifth section continues to examine the way that Brazil's electoral and party systems shape social networks in that country, in particular connections to politicians. I argue that at the local level, open list proportional representation combined with extreme multipartism leads to a situation in which many Brazilians personally know politicians, candidates, and the people who are campaigning for them. Further, I argue that these connections have an ambiguous effect on democratic competence, one that is some ways beneficial and in other ways pernicious. While they promote knowledge about and engagement in local politics, at the same time they promote clientelism and may contribute to the prevalence of personalistic politics.

Finally, two further notes of explanation are in order. The first issue relates to the dependent variables considered in this study. In the sections addressing the first two research questions, I focus exclusively on knowledge and participation, and do not consider networks' impacts on clientelism. This is because in the first two sections I am interested in relatively horizontal, close-knit relationships within what I will term the "intimate egocentric network," or the handful of people with whom one talks most often. Only in the final research section, the one examining connections to politicians and activists, do I take up clientelism as a dependent variable; these vertical, weak tie relationships are precisely the kind that should be associated with clientelistic interactions. The second issue relates to the discussion of the analytic methods. Throughout the dissertation, the fact that citizens self-select into networks leads to serious causal inference problems, problems that I discuss in this chapter. The methods that I choose to address

these problems vary from section to section, however, based on the availability of longitudinal data, suitable instruments, and the extent to which selection factors are measurable.

3.1 DEMOCRATIC COMPETENCE

This dissertation seeks to understand how citizens across the world, and in particular in Brazil, acquire *democratic competence*. I use this term to refer to the abilities, attitudes, and behaviors citizens needed to perform their democratic roles. Unpacking this seemingly simple definition leads to difficult and normatively charged questions. What are citizens' democratic roles? Why are these roles important? What are the abilities, attitudes, and behaviors needed to perform these roles? And how can we tell whether citizens possess such traits?

In answering these questions, I attempt to heed Kuklinski and Quirk's (2001) admonition that scholars of democratic competence think through and make explicit the logic of the mental and behavioral traits they expect of citizens. Kuklinski and Quirk argue that empirical assessments of competence should be founded on four principal conceptual elements (287): identification of the democratic *task* expected of citizens; statement of a *criterion* for evaluation; selection of an empirical *indicator* or indicators; and identification of *standards*, whether absolute or relative, by which to judge performance once data are available measuring the indicator. In this theory chapter I address the first two elements of Kuklinski and Quirk's framework: the *task* (that is, what roles citizens are expected to play and why) and the *criteria* (that is, the abilities, attitudes and behaviors needed to perform these roles). In later empirical chapters, I discuss measurement issues, which vary from data set to data set and from chapter to chapter. Measurement issues deal with both *indicators* and *standards*.

Returning to the questions posed above: what are citizens' democratic roles? What traits are necessary for democratic functioning? These are questions with contentious answers. A school of political scientists with elite-based visions of democracy has downplayed the need for citizens in democratic polities to do much at all besides go to the polls on occasion. Schumpeter (1976), for instance, draws an analogy between politicians as capitalist entrepreneurs and citizens as consumers; citizens' role is not to help design the products, but simply to choose the one they like best in the political marketplace. Scholars subscribing to an elite-based vision of democracy would argue that an emphasis on citizens' democratic competence or participation is misplaced (see, e.g., Schudson 1997; Weissberg 2001). At the most basic level, assuming reasonably competent elites, an obedient military, and political institutions that are able to continue functioning without much citizen input or tinkering, democratic stability may require relatively little. Weissberg (2001) suggests that citizens need only to be predisposed to solve disputes at the ballot box, rather than through violence, and at least some of them should actually turn out at the polls. While scholars of the "third wave" of democracy may not have intended to promote exclusively elite-based visions of democracy, many "transitologists" downplayed the role of citizens by focusing on transitions to and from democracy as almost exclusively elite-driven processes (Huntington 1991; Linz & Stepan 1978, 1996; O'Donnell & Schmitter 1986; Przeworski 1992).

The elite-based vision of democracy was challenged by revisionist theorists (see, e.g., Kariel 1970; Pateman 1970) who argued both for the central role citizens play in democracy, and for citizens' capability to perform these roles. While I do not assume citizens' capability, I follow this general line of scholars in perceiving citizens as key players, ones whose competence is equally as important as that of elites. Both democratic *stability* and *quality* require active,

knowledgeable citizens. This is arguably the case even in upper-income, long-standing first and second wave democracies, but it is particularly so in the relatively new and lower- and middle-income democracies of the third wave.

First, allowing democracy to rest solely on elite-driven processes may endanger democratic stability. Taking the Brazilian example, the public mindedness of Brazilian elites and Brazilian institutions' ability to go on mechanically without further tinkering are debatable. Granted, after two and a half decades of democracy many Brazilian political institutions, from electoral tribunals to legislatures, appear stable, and a highly experienced class of political elites has developed. At the same time, though, the Brazilian news is deluged with stories of politicians' malfeasance, from vote buying to cronyism and nepotism. And political commentators continue to call for reform of political institutions, especially the judicial and legislative branches. While neither of these problems at present seriously threaten democratic stability, they certainly do not promote it; if taken to an extreme they might endanger it. As Putnam (1993) argued, an actively engaged civil society is a big part of what "makes democracy work." Citizen groups can demand change and hold elites accountable for achieving progress, bolstering the political system and preventing the kind of dysfunction that could ultimately lead to breakdown (Foley & Edwards 1996; Gill 2000; Markoff 1996).

Second, I am interested in more than just the *stability* of the democratic regime. I am also interested in those citizen traits that promote a *higher quality* Brazilian democracy. In a memorable phrase, Weyland (2005, 90) describes the "growing sustainability of Brazil's low quality democracy," indicating the same tension I am pointing out. At the same time that Brazilian democracy now appears relatively stable and consolidated, in the sense of being unlikely to break down, it still lacks many features for which proponents of democracy might

hope.²⁵ What do I mean by higher quality? This takes us into yet murkier and more normatively complex terrain. A high quality Brazilian democracy would differ from the status quo in several ways: it would provide all citizens, regardless of social class or geographic region, equal opportunity for political voice; it would eliminate clientelistic influences on voting, freeing citizens to make electoral choices based on other factors; and it would have stronger, more programmatic links between citizens and elites. Achieving these goals would require much more than increased citizen competence; it would require changes in political institutions, public policy, and elite political culture. I focus here on the citizen side.

3.1.1 The Components of Democratic Competence: *Tasks and Criteria*

Now we can finally fully answer the first question above: what are (or should be) citizens' roles? This relates to Kuklinski and Quirk's (2001) notion of the *tasks* involved in democratic competence. I focus on three core roles. First, democracy requires that citizens take part in politics, on both election and non-election days. Referring to the American case, Verba, Schlozman, and Brady (1995) and Lijphart (1997) argue eloquently that it is not sufficient that *some* citizens participate. The principles of equality at the core of most notions of democracy necessitate approximately equivalent levels of participation among citizens in different sociodemographic and ideological groups, as well as ones affected in different ways by public policies. As Verba, Schlozman, and Brady (1995) argue, "since public officials are likely to be differentially responsive to citizens who exercise their voice...the fact that disparities in political

²⁵ For a discussion of the contested meanings of consolidation, and an argument that the term is best used to describe the stability of the democratic regime (that is, the extent to which democracies fail to transition to authoritarian regimes), see Munck (2001).

involvement are so substantial and that so many citizens are not active at all potentially compromises democracy” (11).

Second, citizens should understand how their political system works, as well as the major political players and issues. Again based largely on the American case, a number of scholars have argued that citizens’ lack of full information has pernicious consequences for voting and public opinion (Althaus 1998; Bartels 1996; Delli Carpini & Keeter 1996; Kuklinski et al. 2000; in Brazil see Castro 1994). General knowledge of the political system provides a basis for expressing one’s preferences through non-electoral participation as well as for making programmatic electoral choices.

Third, citizens should choose candidates based on programmatic considerations, including both long-term material and policy interests. This is necessary for the results of electoral processes to reflect anything like the common will. Moreover, if some types of citizens are more likely to make electoral choices based on programmatic considerations or long-term self-interest, the electoral process may end up systematically favoring those groups in ways that would, again, be pernicious for democracy. Most importantly in the Brazilian case, making programmatic electoral choices entails *not* engaging in clientelistic trades of votes for immediate material benefits. As Kitschelt (2000) argues, there are trade-offs between clientelistic and programmatic citizen-elite linkages; citizens who sell their votes are less likely to get what they want from politicians in policy terms after election day.

Turning to *criteria*, what skills, attitudes, and behaviors are needed to fulfill these roles? In this dissertation I focus on three core traits: *general political knowledge*, *political participation* (both *electoral* and *non-electoral*), and *anti-clientelistic dispositions*. Critics may object that these traits are necessary but not sufficient to achieve the goals for citizen behavior;

arguably we could add a much longer list of requirements. One such set of traits is belief in the legitimacy of the democratic political system, the country's current political institutions, or the authorities in power (Easton 1959; Linz & Stepan 1996; Lipset 1959; Weber 1958). A few studies parse out and test this claim, showing that such attitudes affect citizens' participation in ways that bear on democratic stability and participation, from protest to civil society participation to turnout (Booth & Seligson 2005, 2009; Seligson 2002; Smith 2009). Another set of traits is tolerance and commitment to civil liberties; an important body of literature suggests that these traits affect the extent of freedoms citizens experience in the course of their daily lives (Gibson 2008; Gibson & Gows 2003; Hurwitz & Mondak 2002; Shamir 2001; Sniderman et al. 2004; Sullivan 1982; Sullivan & Transue 1999; Zakaria 2003). Last, one might argue that what is important is not knowledge or participation *per se*, but rather citizens' abilities to select the candidates who most appropriately represent their interests, as measured through some form of "correct voting" (Bartels 1996; Lau & Redlawsk 2006; Richey 2008). Nonetheless, the three traits identified here are clearly critical for citizen competence; for the sake of brevity and focus I concentrate on them.

Brazilian political culture since democratization has put great emphasis on the importance of a *voto consciente*, or a conscientious vote.²⁶ The term is used by both masses and elites as a catch-all for a great range of democratic behaviors, attitudes, and dispositions related to the electoral process. Conscientious voting has three components. To begin with, of course, a *voto consciente* requires (a) electoral participation, which involves both showing up to the polls and understanding the procedures for voting once in the voting booth.²⁷ But it also entails

²⁶ *Voto consciente* literally translates as conscious vote. However, the connotation in Portuguese is closer to that of conscientious vote in English. See <http://forum.wordreference.com/showthread.php?p=8797702>.

²⁷ The Brazilian voting system is entirely electronic, using touch-screen computers. Because of the large number of candidates in most races, especially the ones allocated by proportional representation, voting is conducted

making a vote choice that is (b) informed and (c) based on consideration of the common good, rather than clientelism or narrow personal interest. During the local election campaign of 2008, both the *Justiça Eleitoral*, or federal agency for Electoral Justice, and the Supreme Electoral Tribunal issued nationwide television ads advocating a *voto consciente*.²⁸ These ads featured pregnant women discussing the need to make vote choices that protect future generations; they described voting procedures and advocated making an informed vote choice. The women further told viewers that “I never sell my vote.” The concept of a *voto consciente* has clear overlap with the concept of democratic competence I use in this analysis. This indicates that the criteria for citizen competence I have laid out are relevant in the Brazilian political context, and that they point in the direction that Brazilian political observers themselves believe mass political culture needs to move.

Thus, one of the four dependent variables I consider in the dissertation is electoral participation. Still, one might wonder whether Brazil’s compulsory voting system obviates the need to study turnout. While compulsory voting almost certainly boosts turnout in Brazil, fines are relatively minor and compulsory voting rules are far from completely effective (Castro 2007; Katz 2008; Power 2009).²⁹ The International Institute for Democracy and Electoral Assistance classifies Brazil’s level of enforcement as weak and reports that turnout has hovered around 80 percent of eligible voters over the past twenty years (International IDEA 2008). Studies show that abstention is related to factors similar to those affecting turnout in countries with voluntary

using candidate numbers, rather than names. In many races, these numbers have five digits. Thus, voters need to be able to navigate through the touch-screen computer menu and to remember and type in a fairly long number to be able to express their electoral preferences accurately—requirements that, in a country where literacy is still far from universal, may be difficult to meet. This leads the media, public agencies, and other agents of political socialization such as churches to devote considerable attention to orienting Brazilians towards voting procedures.

²⁸ For examples of this ad campaign and of similar ads developed by other public and private agencies, see <http://www.youtube.com/watch?v=jkSNhwhXcAo&feature=related> and http://www.youtube.com/results?search_query=voto+consciente&aq=f.

²⁹ For comparative evidence on compulsory voting and turnout, see Blais and Dobrzynska (1998), Franklin (2001), and Norris (2004).

voting, factors such as political interest and education (Castro 2007; Katz 2008; Maldonado 2011; Power 2009). Thus, we can meaningfully examine the extent to which social influences pull people who otherwise might not vote into electoral participation, or push them out of the process.³⁰

3.1.2 Social Networks and Democratic Competence

The components of democratic competence that I have argued for here are not revolutionary; these are core concerns in the studies of democracy and of political behavior. This dissertation contributes to the voluminous scholarship on these topics by focusing on a particular set of factors that promote democratic competence: social networks. Most previous scholarship has concentrated on one of three general classes of explanations for democratic competence: what I term individual, societal, and civic organizational. Individual-level factors relate both to sociodemographic characteristics such as gender and age, as well as to personal “resources” such as education, income, civic skills or even cognitive ability (e.g., Brady et al. 1995). Societal factors include country-level variables such as the recency of transitions from authoritarianism (e.g., Mishler & Rose 2007) and levels of economic development and inequality (e.g., Solt 2004, 2008). Civic organizational explanations focus on the role of participation in civic groups and religious organizations as a means of developing the skills and dispositions

³⁰ There is a second concern related to compulsory voting: not that it actually results in universal turnout, but that it could trigger overreporting. Overreporting of voting is a concern in all countries (Belli et al. 1999; Clausen 1968; Traugott & Katosh 1981). It may be particularly a concern in a compulsory voting country such as Brazil, since overreporting is higher when respondents feel greater pressure to vote, and in countries where turnout rates are higher (Bernstein et al. 2001; Traugott & Katosh 1979). Unfortunately, there are no studies of vote overreporting in Brazil, and it may be impossible to obtain data for verification purposes from the federal government. Nonetheless, comparisons of self-reported and official levels of turnout in Brazil produce perhaps surprisingly similar estimates, ones that are often closer than in countries with voluntary voting, such as the US and Chile (Rennó et al. Forthcoming).

inherent in democratic competence (e.g., Brady et al. 1995; Djupe & Gilbert 2006). A subset of this literature concentrates on one particular kind of civic organizational involvement, participation in groups involved in civic education (Finkel 2002, 2003).

I do not dispute the central role each of these three broad sets of factors plays in democratic competence. Moreover, I recognize that civic organizations form one type social network, and that social networks may, in a sense, be subsumed in factors related to the larger national context. Nonetheless, the story of democratic competence is incomplete without taking social networks into account more explicitly. The people whom we bump into in our everyday lives have a major impact on how we understand the political world, ourselves, and the relationship between the two. Network members form, in a sense, an individualized, contextually specific representation of the broader political environment. Through actions and words, they tell us what people like ourselves know, care about, and do. This influence needs to be taken into account in any explanation of democratic competence.

This section has described and justified the dependent variables on which I focus in this dissertation, outlining the nature of democratic competence as well as four more specific criteria: general political knowledge, electoral participation, non-electoral participation, and possession of anti-clientelistic norms. The next section briefly discusses overarching concerns related to the conceptualization and measurement of networks.

3.2 CONCEPTUALIZATION AND MEASUREMENT OF NETWORKS

Citizens can talk about politics in many different places and with many different types of contacts: spouses, close family members and friends, bosses, soccer buddies, local grocers,

neighborhood leaders, and local politicians. These different types and contexts of conversation may well have different effects on democratic competence. Unfortunately, the standard tools and measures used in much of the social network literature related to citizens' political behavior are poorly designed to deal with this diversity. In research following in the line of Huckfeldt and Sprague (1995), social networks have been conceived as small, close-knit and intimate groups, typically measured in survey batteries asking respondents for the names of at most three to five people with whom they talk frequently (what I will call the "intimate egocentric network"). Studies in the American context show that the networks measured with this name generator tend to be comprised of people known well, such as family and close friends (Bailey & Marsden 1999; Bearman & Parigi 2004; Klobstad et al. 2009). Even batteries requesting the names of *political* discussants largely elicit networks of "core" discussants (Klobstad et al. 2009). Their names come most quickly to the top of the head; moreover, the respondent is most likely to have their contact information, which is sometimes solicited as part of the battery. Nonetheless, an egocentric network could theoretically consist of an ego and hundreds of alters.

There are several problems with limiting measurement to the "intimate" egocentric network. First, the battery dramatically truncates the number of social connections measured, constraining respondents to know only the members of their own small networks and no one else. In a typical urban environment, both in Brazil and elsewhere, many people have some fleeting contact with literally hundreds of other people on a daily basis: in public transit, on the street, at the supermarket, at school or work. While many of these contacts have little political relevance, it is likely that many more than the three to five people measured in the intimate egocentric network have at least some political influence. In other areas of political science, including legislative studies and international relations, networks are typically conceptualized as

large social systems in which members may have many different types of social contacts, with varying resources and importance (Scott 2000). Following the intimate network approach, however, each respondent by definition knows all members of his or her own small network, and is constrained not to know anyone else. The approach thus yields a picture not of every man as an island, but of every four-person network as an island.

Second, the approach ignores the broader social and political structure in which networks are embedded. While some network members hold little social or political capital, others contribute important political resources. The typical network measures developed in wealthier countries, however, assume that each alter is associated with the ego in a relatively horizontal and equal relationship.

Third, attempts to measure the amount of political discussion in which a respondent engages by counting the number of social network members will miss important variance in the type of discussion. Conversations with any given weak tie may well be less frequent, informative, and influential than will ones with strong ties; cumulatively, however, many weak ties may provide large amounts of information. To the extent that respondents list weak ties as political discussants, these discussions may be qualitatively different. At the same time, respondents who are reluctant to list their many weak ties will fail to report what may even be the majority of their political discussion.

Throughout this dissertation, I focus on what I term “egocentric networks,” but these are conceptualized more broadly than in the standard approach.³¹ By egocentric network, I mean to refer to *all* of the people with whom a reference individual, or ego, comes into contact, not just

³¹ I use this term to distinguish the “egonet” from the sociometric network. Scholars of sociometric networks trace patterns of relations within contained social systems, and measure the extent to which each member in the data set knows each other member of the data set. In the very large social systems such as cities or countries with which scholars of political behavior are concerned, it is simply impractical to focus on sociometric networks.

the people whose names are elicited in the standard network generator battery. Different types of contacts have different determinants and effects. In the next section and the one following it, I concentrate primarily on the “intimate egocentric network.” In the final section of this chapter, I deal with one particular type of weak tie, connections to politicians and activists.

I have now discussed the dependent variables, and briefly considered some concerns related to the conceptualization of the key independent variables. The remaining sections in this theory chapter focus on the three major research questions motivating the dissertation.

3.3 POLITICAL DISCUSSION NETWORKS AND DEMOCRATIC COMPETENCE

The first research question I address is the most general: how do networks of political discussion affect their members’ democratic competence? While the existing literature related to this topic is voluminous, I argued in the previous chapter that it presents a number of gaps or shortcomings: first, the relative dearth of evidence from outside the US; second, the small number of studies that adequately address important problems of causal inference; third, inadequate evidence on how discussants’ characteristics condition discussion’s impacts; and fourth, the limited amount of research on discussion with people outside of core group I call the “intimate” egocentric network. Here, I aim to develop a theory that addresses these concerns.

There are a number of reasons to expect social networks to be effective in transmitting political information among Brazilians. The first is their convenience and low cost (Huckfeldt & Sprague 1995; McClurg 2003, 2006a). Downs (1957) argued that social networks provide a cheap and efficient way for a rational voter to acquire the minimum information needed to make a satisfactory vote choice. The information held by social network members effectively expands

the individual's own resources; small amounts of information stored in many separate heads go a long way when shared. Social networks can also be cognitively less costly. This advantage may be particularly important in a highly unequal country with high levels of poverty such as Brazil. This is because social networks are pervasive, and they are arguably distributed in a more egalitarian manner than any other source of political communication. Nearly everyone regardless of socioeconomic status has a social network, though of course the quality of the connections may vary. One does not need to own a television set, to know how to read, or to join a formal organization to obtain information from one's social network. Even in 2010, 21 percent of registered Brazilian voters report no formal schooling, while another 33 percent have less than an eighth grade education. Educational levels are rising fairly rapidly. In 2002, when the ABR study began, 27 percent of registered voters reported no formal schooling, and another 36 percent less than an eighth grades education, meaning that the share of the electorate with less than an eighth grade education dropped by nine percent in eight years.³² Still, even in 2010 over half of Brazilian voters will find it difficult to read a basic newspaper article about political campaigns; to the extent that they learn about politics, it will be through other means.

Second, social networks can be effective vehicles for socialization because social and emotional bonds, including social pressure, may lead individuals to pay more attention to the information their family, friends, and neighbors provide. This could lead to higher rates of memory and learning. Also, shared collective identities can lead individuals to be less skeptical of new information that contradicts old (Druckman & Nelson 2003; Walsh 2004).

A third reason has to do with the psychological effect of expressing ideas and engaging in dialogue, rather than just passively receiving messages. By talking about politics, individuals

³² The Tribunal Superior Eleitoral publishes a profile of the Brazilian electorate in each election year. For data, see, <http://www.tse.jus.br/internet/eleicoes/>.

rehearse political information, practicing pieces of the responses that will later be elicited in the survey interview, which is itself a highly formalized political conversation. This practice leads to better recall of information than passive media exposure alone. Moreover, as Pingree (2007) argues, when people feel accountable to respond to their discussants, they are more likely to pay close attention to the information those discussants provide. Again, paying closer attention to information should lead to better memory of it.

And not only should everyday conversations about politics lead to growth in political knowledge, but they should also stimulate individuals to take part in the political sphere. There are a few mechanisms by which informal discussions of politics could lead to higher levels of voting. First, such communication might expose people to politically relevant information, an intangible resource that reduces the costs of participation (Nie et al. 1996; Verba et al. 1978). Thus, *ceteris paribus*, individuals with larger social networks effectively have a larger pool of resources on which to draw when they contemplate getting involved in politics (McClurg 2003). For instance, knowledge of voting procedures, of political institutions, of electoral rules, and of candidates serve as resources that lower the cost of getting involved in politics. Second, exposure to like-minded social network members could reinforce and strengthen prior attitudes, indirectly stimulating participation. Third, discussing politics with people who are more participatory and politically interested could create social pressures that push respondents towards participation and engagement. Some influences—for instance, direct mobilization efforts—might be overt, while others might be subtle, involving friends seeking social approval. A discussant may persuade others within the social network to support a particular candidate, and in the process stimulate general political participation. Or in some cases direct mobilization may involve an informal “getting out the vote,” moral suasion to go out to the polls in order to perform one’s

duty as a citizen. Fourth, political discussion may stimulate general interest in politics, and this general interest would in turn lead to increased rates of participation.

But how can we be sure that social network discussions are causally prior to learning and participation? Social networks and political conversation are far from randomly distributed across the population. Rather, respondents self-select into networks and discussions, even though social structure does play a role in determining opportunities for interaction (Huckfeldt & Sprague 1987). As a result, we must be cautious about any conclusions regarding causality. As I suggested in the previous chapter, associations between knowledge or participation and political discussion might result from some third factor such as political interest. Alternatively, they could result from a causal arrow running in the reverse direction, from knowledge and participation to discussion.

One of the most promising ways to examine causality while preserving external validity is to use longitudinal data, providing repeated measures of both social networks and political information and participation over a several-year period. Such data would enable us to control for stable personal factors that might cause covariation between independent and dependent variables. The analysis could then assess whether the *change* in social network discussion leads to a change in knowledge and participation. Another technique that may enable further grasp on causal questions is two-stage least squares. Such models would enable the creation of proxies for the independent variables that are thought to be endogenous, namely political discussion and social network size.

In considering how network discussions promote democratic competence, I also consider what types of citizens benefit most from discussion, as well as what types of citizens provide the greatest democratic benefits to others. An obvious implication of the arguments presented in this

section is that citizens should learn more from more knowledgeable discussants. If learning through social network discussions is intentional, rather than an accidental byproduct of conversation, we should find that Brazilians seek out and give higher priority to more knowledgeable political discussants. Similarly, more participatory discussants should stimulate greater participation than would less participatory discussants (Lake & Huckfeldt 1998; McClurg 2006).

The intensity of social and emotional bonds should also affect discussants' impact. Not only should respondents prefer their spouses as discussants, but they should learn more from them.³³ Likewise, they should be more affected by the participatory tendencies of spouses than of other network members. Thus, knowledgeable and participatory discussants will have stronger impacts when they are married or domestic partners. Moreover, given inequalities that often exist in political engagement and resources between men and women, and in particular between husbands and wives, spousal influence may be stronger for women than for men.

In addition to investigating what types of discussants are most influential, we can ask what types of citizens benefit the most from political conversation. I will test two competing hypotheses. On the one hand, political conversation might have a "leveling effect," helping the least informed and least participatory make up for gaps in prior knowledge and participatory inclinations (Campbell 2008; Finkel & Smith 2011; Valentino & Sears 1998). Valentino and Sears (1998), for instance, found that new information conveyed during political campaigns narrowed the distance between adolescents and adults in political knowledge and the

³³ This partially contradicts the "weak ties" argument. Nonetheless, the argument is not that non-spouses have no impact, but rather that spouses are in a privileged position when it comes to social influence. Furthermore, while any individual non-spouse discussant may have less impact than a spouse, discussing politics with a large number of weak ties may have a large cumulative impact. In addition, some particular weak ties (for instance, local politicians and activists) may have particularly strong impacts on democratic competence because of their political resources and positions in the social hierarchy.

development of political attitudes. If so, political conversation would *democratize* democratic competence, so to speak.

On the other hand, perhaps political conversation has an “accrual effect,” such that “them that has, gets.” That is, perhaps those who start off with the highest levels of information and who are already most participatory benefit most from political conversation. The most well-informed may be able to take greatest advantage of their discussants’ knowledge, fitting new information into already well-developed schemata that enable better memory of new data. This is similar to the notion of scaffolding in education: information mastered previously helps one understand and assimilate new lessons. Moreover, the more informed may more actively seek out particular pieces of new information to fill knowledge gaps. And those who are most participatory may be most likely to respond to the mobilization cues they receive from discussants. Work in both comparative (Finkel 2002) and U.S. contexts (Klofstad 2009; Kwak et al. 2004; McClurg 2003) finds that the highly educated and more socially-integrated participate more as a result of political discussion, both informal and in the context of civic education programs. If this pattern applies, conversation would exacerbate pre-existing inequalities in political understanding and engagement.

Moreover, women may be more strongly affected than men by their closest personal discussants, and in particular by their spouses. First, due to higher levels of both political interest and employment, men may get political information from a greater variety of sources than women. This follows a finding by Fuchs (1956) that working class Jewish men in the United States had more diverse information networks. Thus, women may give greater weight to the opinions and information conveyed by each of their (more limited number of) political discussants. Moreover, intra-household power dynamics may lead women to pay greater

attention to information coming from their spouses (Iverson & Rosenbluth 2006). Last, women may be more attuned to cues coming from those significant others due to their higher levels of collectivism and emotional connectedness (Dion & Dion 1993; Kashima et al. 1995; Watkins et al. 1998).

The exposition until now has focused on fairly close knit networks, following a long-standing pattern in this literature. Nonetheless, a full appreciation of network impacts requires that I consider the effect of conversations not only with members of intimate social networks—the family and friends with whom citizens talk most often—but also as with what scholars of social networks term “weak ties,” meaning acquaintances whose social networks have little overlap with those of their conversation partners (Granovetter 1973). Especially during election campaigns, political discussion in Brazil is plentiful and much of it occurs with weak ties: people met at the bakery, the supermarket, a neighborhood bar, or the bus stop. Many of these discussants may be known only by a nickname, or perhaps their names may not be known at all, but they are good for banter and informal discussion. In between gossip about soccer, family lives, and the weather, they may provide information about recent news or about events on the *horário eleitoral gratuito*, the federally mandated period of free daily TV time for candidates during campaigns. Thus, researchers need to find a way to take weak ties into account.

3.3.1 Hypotheses: The Effects of Intimate, Egocentric Social Networks

This discussion leads to the following hypotheses:

- H1. Larger social networks and more frequent political conversation (with both weak and strong ties) will lead to higher levels of **political knowledge** and **political participation**.

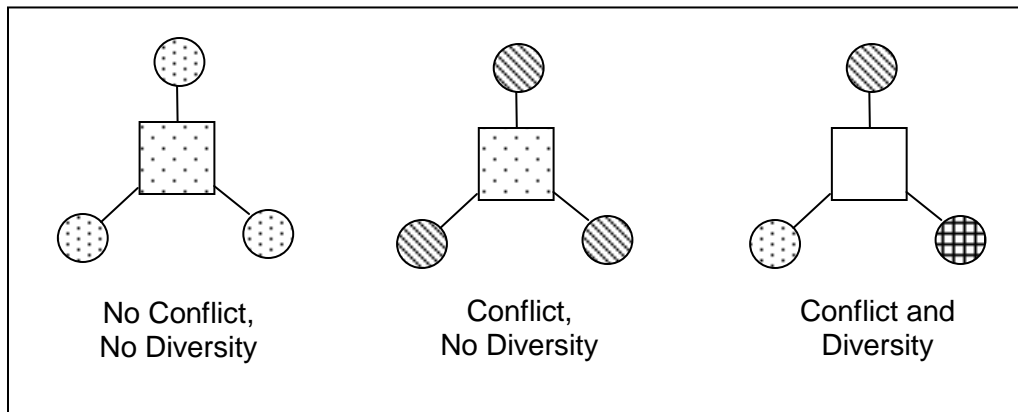
- H2. Citizens will experience greater gains in **political knowledge** and **political participation** from conversation partners who themselves have higher levels of political expertise and who are more participatory.
- H3. Spouses will have a greater impact on **knowledge** and **turnout** than will other discussants, and the impact will be stronger for women than for men.
- H4. Respondents will seek political discussants with higher levels of political expertise.
- H5A. Respondents with higher initial levels of **political knowledge** and **political participation** will learn more from their discussants (the accrual effect); or
- H5B. Respondents with lower initial levels of **political knowledge** and **political participation** will learn more from their discussants (the leveling effect).

3.4 POLITICAL DIVERSITY AND CONFLICT AND DEMOCRATIC COMPETENCE

Can social network discussion lead to both learning and participation? Do these two dependent variables always move in tandem? A compelling recent line of research argues that social network features that promote learning in some cases depress participation (Mutz 2002a, 2002b, 2006). The culprit is political conflict. This literature thus moves away from a focus on the amount of political conversation, the number of discussants, or what they know; instead, it pays attention to their political preferences. It assesses the extent to which citizens talk about politics with people with whom they disagree, as well as the effects of disagreement on citizens' attitudes, abilities, and behaviors. This leads to second question I address in this dissertation:

How does exposure to divergent preferences within political discussion networks affect political learning and engagement?

The first step in answering this question requires recognizing that most studies in this line of research have conflated diversity and conflict. Here, I use the term *conflict* to refer to the number of social network members (often called *alters*) who disagree with the reference person (often called the *ego* or, in survey-based research, the *main respondent*), typically in terms of candidate choice. *Diversity*, meanwhile, refers to the number of points of view represented in the social network. Thus, a four-member social network (one ego and three alters) in which the three alters disagree with the ego would be characterized by *conflict*. However, these three members could all support a single candidate (*conflict* without *diversity*), or they could support three different candidates (*conflict* with *diversity*). Figure 1 illustrates these scenarios.



Note: Squares represent the main respondent, or ego; circles represent other social network members, or alters. Shading in each circle and square represents the individual's choice of candidates.

Figure 1. Example Patterns of Candidate Choice in Four Member Social Networks

Table 3 further explores the configurations of and interactions between *diversity* and *conflict* given egocentric networks comprised of between 0 and 3 alters in two- and in four-party systems. The second and third columns list the number of unique and disagreeing preferences

possible in a network configuration of a given size. The fourth and fifth columns denote whether a particular combination is present in party systems of different sizes. The last column describes how the configuration will be coded in the ensuing analysis.

Table 3. Possible Configurations of Preferences in a Discussion Network with Three Alters

N Alters with Preferences	Number of Unique Preferences	Number of Disagreeing Preferences	Two-Party System	Four-Party System	Preference Configuration
0	0	0	X	X	(A)
1	1	0	X	X	(B)
1	1	1	X	X	(C)
2	1	0	X	X	(B)
2	1	2	X	X	(C)
2	2	1	X	X	(D)
2	2	2		X	(D)
3	1	0	X	X	(B)
3	1	3	X	X	(C)
3	2	1	X	X	(D)
3	2	2	X	X	(D)
3	2	3		X	(D)
3	3	2		X	(D)
3	3	3		X	(D)

Coding of Preference Configurations: (A) No Alters; (B) No Conflict and No Diversity; (C) Conflict but No Diversity; (D) Conflict with Diversity

I argue that diversity and conflict have different and interactive effects on learning and participation, differences that have not previously been fully appreciated until now.³⁴ As discussed in the previous chapter, a number of scholars of American political behavior have argued that exposure to divergent preferences has an educative effect and promotes tolerance. I would suggest that what these scholars have been picking up on is more likely to be the effect of political *diversity* within the network, rather than of disagreement (i.e., *conflict*) between the

³⁴ Note that *diversity* only occurs in networks characterized by at least some *conflict*. That is, *diversity* without *conflict* is logically impossible.

main respondent and his or her discussants *per se*. The more points of view represented in the network, the greater the variety of information to which the respondent is exposed. This discussant-supplied information educates the respondent.

At the same time, *conflict* between the *ego* and his or her alters may nonetheless be demobilizing, particularly in the American context. This could be the case if divergent information induces ambivalence and declines in political interest, or if the citizens avoid participating in ways that put them in conflict with their significant others. Thus, conflict would have a negative impact on electoral participation, but not on political learning.

Note that this argument assumes a control for the *size* of the network, and in particular for the number of network members with known preferences. This is critical because, as established in the previous section, the total amount of discussion in the network has a strong association with many aspects of democratic competence. Whether due to self-selection or to a causal impact from social networks, respondents who talk about politics with more people tend to know more about politics and to be more participatory. Thus, we need to assess the effects of diversity and conflict, net of effects from network size.

3.4.1 How Party Systems Condition the Effects of Diversity and Conflict

The second step in addressing the question of the effects of exposure to divergent preferences on democratic competence requires recognizing that the patterns and effects of diversity and conflict are not constant across the globe. Thus, answering the second major research question of the dissertation simultaneously helps to resolve the third, regarding how country-level factors shape social networks and condition their association with democratic competence. While there are a great many ways in which differences among countries might affect political discussion

networks and network effects, I am interested in particular in the role of party and electoral institutions. In the next major section of this chapter I further explore the consequences of these institutions in Brazil for citizens' social networks. For the moment, though, I argue that they shape the *choice environment*, meaning the number of candidates, their relative prominence, and the amount of information available about each. Operationally, the choice environment will be measured based on the political system's effective number of candidates/parties (ENC), which combines information about the total number of candidates and their relative prominence.³⁵ Of course, the higher the number of parties and candidates, the more complex is the choice environment.

This abstract choice environment does not directly influence citizens through osmosis. Rather, citizens come in contact with it through intermediaries, most importantly the media and their social networks. The information environment may have a particularly strong effect on social communications, since socially supplied information is more likely to convey valenced, directly partisan information. I aim to demonstrate that the choice environment affects the amount of diversity and conflict citizens experience within networks, and that it also conditions the associations between *diversity* and *conflict*, on the one hand, and democratic competence, on the other.

First, as the number of parties rises and the choice environment becomes more complex, citizens are more likely to encounter divergent preferences—both diversity and conflict—in their social networks. The logic is simple. The higher the effective number of candidates or parties, the smaller the percent of the electorate supporting each. The smaller the percent of the electorate supporting any given candidate or party, the lower is the probability of supporters

³⁵ Effective number of candidates (ENC) is calculated following Laakso and Taagepera (1979). With a few exceptions, I will count candidates in presidential systems and parties in parliamentary ones.

appearing in any randomly selected group of people. Of course, networks are not randomly selected; nonetheless, the availability of a party's supporters in the population at large should affect the extent to which they appear in social networks. Thus, networks will be more diverse and contain more conflict in political systems with more complex choice environments.

Second, the relationships between *diversity* and democratic competence and between *conflict* and democratic competence vary across choice environments. In relatively simple environments, having more information about the available alternatives is a positive; thus, political diversity will boost learning and stimulate participation. However, as the choice environment becomes more complex, information-overload may set in. The large body of literature on consumer decision-making cited in the previous chapter shows robustly that the complexity of the choice environment is strongly associated with the difficulty of cognitive processing and with the likelihood of making any decision at all. Similarly, a number of studies of citizens' political choices likewise show that citizens who are asked to consider many choices may become ambivalent, demobilized, and less likely to make a "correct" decision.

Moreover, in multi-party systems, as I have argued, conflict between the ego and alters becomes more common, simply due to lower levels of access to copartisans in the population at large. In such an environment, citizens may be less likely to *expect* agreement, and as a consequence they may better cope with their inevitable encounters with disagreeing significant others. This may be facilitated by the fact that when multiple candidates occupy similar portions of the ideological spectrum, network members may disagree on candidate or party choice while nonetheless clustering fairly closely in ideological terms. Thus, polarization between supporters of different candidates may tend to be lower under such conditions.

3.4.2 Hypotheses: Diversity and Conflict in Social Networks

This discussion leads to the following hypotheses. The first is very general; the following hypotheses flesh out the argument in greater detail:

- H6. Diversity and conflict have distinct effects on democratic competence.
- H7. In the *two*-party context, social networks with greater political *diversity* will be associated with *higher* levels of political knowledge.
- H8. In the *two*-party context, social networks with greater political *conflict* (but not diversity) will be associated with *lower* levels of political participation.
- H9. In the *multi*-party context, the effects of political *diversity* and *conflict* will be attenuated.
- H10. The **number of parties/candidates** in a political system will be positively associated with the levels of diversity and conflict, and the **candidate's share of the electorate** will be negatively associated with the same.

3.5 BRAZIL'S ELECTORAL AND PARTY SYSTEMS, TIES TO LOCAL POLITICIANS, AND DEMOCRATIC COMPETENCE

This section continues to explore the ways the electoral and party systems shape social networks, as well as networks' downstream effects on democratic competence. Here, I focus on these institutions at the local level in Brazil, continuing to emphasize the number of candidates. However, now I argue that the number of candidates is important because it affects the probability that citizens know not supporters of various candidates, but rather candidates and

political activists themselves. The greater the concentration of candidates, the more likely it is that citizens will personally know candidates and the people working for them.

Under the open-list proportional representation system operating in elections for city council, state legislatures (which are unicameral), and the federal Chamber of Deputies in Brazil, each party by law is allowed to run as many candidates as there are open seats, plus a certain quota of *suplicantes*, or substitutes who will replace elected officials who stand down after their terms have begun. Citizens can choose to vote either for candidates or party lists, though in practice the great majority of citizens choose the former. Candidate votes serve simultaneously to rank parties against each other, determining the numbers of seats each party wins, and to rank candidates within parties, determining which candidates get the seats the party has won. These electoral institutions operate in the context of extreme multipartism; at the time of the local elections I study here, there were 29 parties in the federal lower chamber.

This institutional arrangement results in a very large number of people campaigning for public office, particularly at the local level. In the 2008 election campaign for city council in Juiz de Fora, 26 parties ran candidates for public office.³⁶ While most of these parties operated in coalition and thus were not able to run the maximum number of candidates, two of them fielded 32 candidates each. In total, 384 candidates received votes for 19 elected positions. With 257,380 valid votes, 313,366 total votes, and 368,011 adults registered in the entire city, this means that there were 670 voters casting valid votes for every candidate, or 810 total voters and 958 registered citizens per candidate.³⁷

³⁶ The data here are from election results published by the national electoral court, the Tribunal Superior Eleitoral, http://www.tse.jus.br/internet/eleicoes/estatistica2008/est_result/resultadoEleicao.htm, and are based only on candidates receiving votes. It is possible, though unlikely, that there were additional candidates not reflected in these statistics who ran for office but received no votes. After all, each candidate should be guaranteed at least his or her own vote.

³⁷ Voting is mandatory for all literate citizens between the ages of 18 and 69, and optional for illiterates and for citizens who are aged 16-17 or over 70. Turnout typically hovers between 80 and 85 percent of registered voters,

Juiz de Fora is not unusual in the Brazilian political context. In Brazil as a whole in the 2008 local elections for city council, there were 110,085,191 total voters and 128,806,592 registered citizens. These votes were divided across 330,630 candidates for 51,983 city council slots. Thus, there were 333 total voters and 390 registered adults for each city council candidate in the country, and only 2,117 voters (or 2,478 adults) for each candidate elected. The number of voters per candidate is strongly related to the size of the municipality; in smaller cities, there are fewer voters per candidate. Nonetheless, in other cities similar to Juiz de Fora—ones that are not state capitals (the largest municipalities in Brazil are all state capitals) and that have over 200,000 voters—there were just 858 voters and 999 registered adults per candidate. And in state capitals, there were 1,921 voters per candidate. Statistics for state capitals are skewed, moreover, by the cities of São Paulo, where there were 6,422 voters for every candidate, and of Rio de Janeiro, where there were 3,048 voters for every candidate.³⁸

Thus, apart from the very largest municipalities, and especially in smaller cities, one can suspect that most Brazilians personally knew at least one city council candidate. A number of studies attempt to estimate the size of the average person's social network around the world (Dunbar 1992; Killworth et al. 1990; McCarty 2000; McCormick 2008). Even within the US, this has proven quite difficult to pin down; estimates range from 291 to 2,025. Killworth et al. estimated that the average network is smaller in Mexico than in the US, at around 600. It is difficult to know how these results would carry over to Brazil. Nonetheless, based on many of these estimates one might expect many citizens' networks to incorporate at least one politician.

and the great majority of citizens are registered. Thus, the number of voters is a rough approximation for the total number of adults of voting age in Brazil. Citizens who choose to go to the polls to avoid penalties but support no candidate may cast an invalid vote.

³⁸ São Paulo is the largest city in Brazil, and Rio de Janeiro the second largest.

Candidates are not randomly selected from the population, of course: they tend to be people with large social networks, leaders who are well-respected in their communities. They are neighborhood association presidents, pastors or lay church leaders, doctors, local business owners, people in high profile unelected positions in public agencies, radio announcers, and activists, in addition, of course, to those who are already holding or have previously held elected public office. It is easy to imagine that many candidates had personal ties to well over 900 voters. Thus, it is quite feasible that many or even most Juiz de Fora voters knew personally at least one candidate who was running for public office. Of course, candidates are also not randomly distributed across citizens' social networks; some well-connected citizens are located in places in the social structure in which they know many candidates, while others know no one. Nonetheless, the quantity of candidates relative to the population suggests that the incidence of knowing politicians may be quite high.

Not only electoral math but also Brazilian political culture reinforces the expectation of high levels of acquaintanceship with politicians. The Brazilian electorate is characterized by low rates of party identification and of trust in parties, and by high rates of personalism. Voters often report that they vote for the person, not the party. And historically Brazilian politics has been dominated by personalistic relationships between politicians and citizens. All of this suggests that Brazilians will believe that it is important and normatively proper to establish personal connections to politicians. The impact of such connections has not previously been taken into account in social network studies, however.

Moreover, political connections do not stop at candidates themselves. Many Brazilians also know *cabos eleitorais*, literally translated as "electoral commanders," or grassroots campaigners. Sometimes volunteers, sometimes paid workers, *cabos eleitorais* pledge

themselves to drum up votes for particular candidates. In some cases, they actually have quotas, self-imposed or imposed by the candidate, for obtaining a certain number of verbal commitments to vote for their candidates. *Cabos eleitorais* are typically chosen for their people skills and, even more importantly, for their connections. A good *cabo eleitoral* has a large social network and is well-respected in the community. Neighborhood association presidents are highly sought after as *cabos eleitorais*. Importantly, the number of candidates should largely determine the number of *cabos eleitorais*, especially in typically poorly funded local races.

In an influential essay, Carey and Shugart (1995) argue that institutions such as the open-list proportional representation system found in Brazil generate a high incentive to cultivate a personal vote. Furthermore, they hold that this incentive should increase with rising *district magnitude*, meaning the number of seats up for allocation in the district. In the Brazilian case, however, it appears that personalism, at least as measured by the extent to which citizens *know* politicians, may actually decrease as district magnitude rises, since as district magnitude rises, the ratio of politicians to citizens falls in Brazil. The arguments developed here thus suggest a reformulation of Carey and Shugart's (1995) theory. What matters may not be the absolute number of seats up for grabs in the district, but rather the *ratio* of politicians to citizens.

Having established the first link in the chain – the way Brazil's institutions shape networks – I move on to the second – the way these networks affect citizen engagement with the political system. While scholars of “*guanxi*” in Asian politics have shown the importance of social ties to the powerful in China and Japan (Inamasu & Ikeda 2008; Lin 2001; Richardson 1991), little social network research outside that context has recognized the importance of these particular kinds of weak ties. I argue that political networks have an ambiguous effect on democratic competence – promoting some aspects of competence, and harming others. From the

early days of research on social influence in the US, scholars have identified the importance of connections to intermediaries or opinion leaders, who channel information and mobilization (Berelson et al. 1954; Lazarsfeld et al. 1948). However, the effect of personal acquaintanceship with political leaders on general democratic dispositions has not previously been shown. At the most basic level, I surmise that citizens with such political connections will know more about politics and will be more likely to participate. The reasons should be fairly clear: politicians and activists are likely to seek votes from those in their immediate social networks first. Such vote-seeking will typically involve information transfer, and it should certainly result in electoral mobilization.

Information and mobilization may not be the only aspects of democratic competence affected by local political connections. The same social network relationships should also make respondents more likely to have access to clientelistic transfers of material resources, and to accept clientelism on a normative level. Brazil has long been recognized as a country in which voters are wooed in large part through targeted, particularistic material benefits, including clientelism, pork, and social transfers, rather than broad programmatic linkages between politicians and citizens. At the municipal level, however, party fragmentation and the at-large nature of electoral districts may make it difficult for city council members credibly to claim credit for pork and bestowal of social transfers. To the extent that politicians are inclined to seek votes through particularistic benefits, rather than symbolic or programmatic appeals, they should tend to do so through direct exchanges of resources for votes, rather than through pork.

Personal connections between patrons and clients help to reduce many costs of the clientelistic transaction, in particular monitoring costs; clients who know their patron personally may also be predisposed to keep their words. Moreover, especially given the social stigma

associated with vote-buying, the trust forged through personal ties may facilitate deal-making. Politicians and candidates themselves may be especially likely to establish clientelistic relationships with the members of their social networks. However, neighborhood association presidents and *cabos eleitorais* should also engage in material resource transfers in their roles as electoral campaigners. In fact, in the more egregious and obvious cases of vote buying, *cabos eleitorais* may be *more* likely to engage in clientelism, doing the dirty work in order to keep their candidates' hands clean.

Clientelistic transfers from politicians encompass a great range of goods and services: from donations of *cestas básicas* (charity food baskets), to invitations to *churrascos* (barbecues), to direct monetary payments, to jobs, to a politician's use of political muscle to get a client a bed at a public hospital. A recent study found that eight in ten Brazilians believe city council people should pay for hospital bills and funeral expenses of people in need, while six in ten agreed more generally that politicians should provide money to people in need ("Voto, Eleições e Corrupção Eleitoral" 2008). At the same time, 30 percent of people report that they are aware of cases of vote buying. These statistics suggest both the great extent of material resource transfers between local politicians and citizens; and that there may be many cases of material transfers that citizens do not perceive as vote buying.

3.5.1 Causality in Estimating the Effects of Local Political Connections

However, we must be cautious about causality in estimating the effect of political connections on democratic competence. As with intimate egocentric networks, connections to local politicians and *cabos eleitorais* are far from evenly distributed across the Brazilian population. Rather, respondents self-select into such relationships. The factors affecting such

self-selection create threats to causal inference. Variables such as social status and political interest may be strongly related to knowing politicians. This is problematic since these variables are also related to political knowledge and participation. Any association between political connections and democratic competence may turn out to be the result not of the political connections themselves, but rather of these covariates. Matching techniques will enable greater leverage over causality, creating pseudo-experimental conditions in which the sample receiving the treatment (that is, the group assigned to have political connections) is identical in all relevant and measurable ways to the sample in the control group.

3.5.2 Hypotheses: Local Connections

The preceding discussion leads to the following hypotheses:

- H11. Social ties to local politicians and political activists will be prevalent in Brazil, more so in rural than in urban areas, and will vary by the number of candidates per registered voter.
- H12. Social ties to local politicians and political activists will lead to higher levels of political knowledge and political participation.
- H13. Those who know activists and local politicians will be more likely to have clientelistic dispositions.

3.6 CONCLUSION

This chapter has laid out a theory of social influence on democratic competence in Brazil. I begin by describing what I mean by democratic competence, which I use as a broad category to organize and justify my dependent variables. The three variables I am interested in are political knowledge, participation, and clientelistic dispositions.

The rest of the chapter examines three major research questions related to how discussions of politics within social networks affect these dependent variables. First and most generally, how do political discussions affect the political knowledge and participation of the people who engage in them? I argue that Brazilians learn about politics and are mobilized to take part through discussions with the immediate family members and friends with whom they talk most often. Frequency of contact and bonds of social trust make these most intimate contacts particularly powerful. While this topic has attracted a great deal of scholarly interest, it has proven difficult to address effectively because of difficult problems of selection. I argue that panel data on actually existing networks can help resolve questions of causality while preserving external data. Further, I argue that some Brazilians are more persuasive and persuasible than others; citizens are particularly affected by their spouses and their most knowledgeable and engaged discussants. I also suggest the need to explore the role of gender in these relationships; there are reasons to suspect that networks may be more important for the political socialization of women than of men.

Second, how does exposure to divergent preferences within social networks affect democratic competence? I introduce the concept of social network *diversity*, a dimension of divergent preferences that has been underappreciated until now, and that may be particularly important in multiparty contexts. This dimension exists alongside the levels of *conflict* between

the reference individual, or *ego*, and the *alters* to which he or she is connected. Diversity and conflict should have different effects, and these effects should be contingent on institutions. In two-party systems, diversity should boost both knowledge and participation, while conflict should depress participation. In systems with higher numbers of parties, however, diversity may at some point become demobilizing. Moreover, the negative relationship between conflict and participation should be attenuated in systems with high numbers of parties. Last, I also show that institutions should not only condition network effects, but they play an important role in determining the extent to which citizens experience divergent preferences in their networks.

Third, I continue to explore the ways in which party and electoral systems affect networks, turning my attention to Brazil's local institutions and to connections to politicians. Brazil's peculiar combination of open-list proportional representation and extreme multipartism lead to a situation in which citizens are likely to have high levels of personal acquaintanceship with office-holders and people running for local office. These connections should have important impacts on the ways citizens understand and engage with their democratic systems. At the same time, however, I argue that citizens with personal ties to politicians may hold more clientelistic dispositions.

Throughout, I discuss problems with conceptualizations of social networks as small, close-knit groups of up to three to five people with whom the respondent is in frequent contact. A deeper conceptualization of social networks would pay greater attention to the great many weak ties with whom citizens come into contact. This would involve different strategies for measuring what social network researchers call egocentric social networks

The next chapter describes the four data sets I will use to examine these hypotheses. In the remainder of the dissertation, I then test the hypotheses laid out in this chapter.

4.0 FOUR STUDIES

The analysis developed in the next four chapters draws on survey interviews conducted with 10,728 Brazilians interviewed between April 2002 and November 2010 in three different projects over ten survey waves; and with 14,364 citizens from eleven countries interviewed over the course of the 1990s as part of the second wave of the Comparative National Elections Project (CNEP II). I describe these four projects in this chapter.

4.1 STUDY 1: THE AMES-BAKER-RENNÓ (ABR) TWO CITY PANEL

The next two chapters draw on what I am calling the Ames-Baker-Rennó Two City Panel Study (ABR). The study took place over two presidential elections and six waves. The first wave was conducted in April 2002, prior to the start of the presidential election campaign of that year; the second in August 2002, in the midst of the campaign and at the beginning of the period of federally mandated free television time for candidates; and the third in October of that year, between the first and second rounds of the presidential election. The fourth wave of the study occurred in May of 2004, before the beginning of the midterm local election campaigns of that year. The fifth and sixth waves then took place during August and October of 2006, at the beginning and end of the presidential election campaign of that year. In addition, in the third and

fourth waves, a snowball sample of people whom main respondents had previously named as political discussants was interviewed.

As discussed in the introduction, the study was conducted in two cities, Juiz de Fora in the state of Minas Gerais and Caxias do Sul in the southern state of Rio Grande do Sul. The two cities were chosen to hold many social and demographic factors relatively constant – both are medium-sized cities with populations around half a million, and both are relatively prosperous and developed industrial poles – while examining important political differences. Juiz de Fora is fairly typical of many cities in Brazil in terms of the weakness of its party organization and the personalism of its politics. Caxias do Sul, by contrast, has typically had stronger parties which are more programmatically oriented.

4.1.1 Questionnaire and Measures in Each Wave

Across the six waves of the study, the contents of the questionnaire varied; the ramifications for model specification will be discussed in the next two chapters. In Table 4, I list the waves of measurement for a number of important variables; these variables will be described in greater detail in the chapters in which they are used. Note that the composition of social networks was measured only in Waves 2 and 5, that is, in August of 2002 and 2006. Perceived preferences of the members named in those two waves were measured in those waves and in the two subsequent ones.

Table 4. Timeline of ABR Panel Study Questions and Survey Components

	Wv 1 (4/02)	Wv 2 (8/02)	Wv 3 (10/02)	Wv 4 (5/04)	Wv 5 (8/06)	Wv 6 (10/06)
<i>Social Networks and Political Discussion</i>						
Social Network Members/Relationships		X			X	
Social Network Members' Preferences		X	X		X	X
Political Conversation Practices	X	X	X	X	X	X
<i>Potential Dependent Variables</i>						
Political Knowledge Battery	X		X	X	X	X
Interviewer-Rated Political Knowledge	X	X	X	X	X	X
First-Round Presidential Vote Choice	X	X	X	X	X	X
Second-Round Presidential Vote Choice		X	X	X	X	X
Campaign Participation Battery	X					
<i>Other Independent Variables</i>						
Civil Society Participation Battery	X			X	X	
Party Identification	X		X	X	X	X
TV News Attention	X	X	X	X	X	X
Newspaper Use	X	X	X	X	X	X
Campaign Attention	X	X				
Frequency of Social Gathering			X	X	X	
Party Contact			X	X	X	X
Education	X	X		X	X	X
Sex	X	X	X	X	X	X
Age	X		X	X	X	X
<i>Discussant Interviews</i>			X	X		

Note: In the fourth wave, respondents were asked which 2002 presidential candidate they would choose *if the election were held today*, though the election had occurred almost two years previously. Campaign participation is not actually used in the analysis as a dependent variable, but rather as a control, because its measurement was limited to the first wave. As will be discussed further in Chapter 5, the study did not explicitly measure turnout.

Furthermore, at least in some cases the questions within batteries varied from wave to wave. Here, due to its importance in the analyses in the following chapters, I consider what I term the civics quiz: responses to questions on a great range of political issues, from naming a country that is a member of the Mercosul Regional Trade Agreement to identifying the vice-president and the parties of prominent politicians. In the first wave respondents received six questions, in the third they received three, in the fourth they received five, and in the fifth and sixth waves they received four questions. In the second wave, no civics quiz questions were asked at all. Moreover, the questions varied across waves, with only two consistent across five of the six waves. Table 5 details these questions and the waves in which they were asked.

Table 5. Civics Quiz Knowledge Questions, ABR Data

Question	Wave Question Was Asked				
	1	3	4	5	6
What is position of Ana Corso? (City Council) *	X				
What is position of Paulo Delgado? (Deputy) +	X				
Who is Vice President of Brazil?	X	X	X	X	X
What is Fernando Henrique Cardoso's party?	X	X	X		
Which country is a member of Mercosul?	X	X	X	X	X
Which person is a senator from (your state)?	X		X	X	X
Who is President of the Chamber of Deputies?	X		X	X	X

Note: No civics quiz questions were asked in Wave 2. * Asked only in Caxias do Sul. + Asked only in Juiz de Fora.

4.1.2 Sample and Attrition

The sample was clustered by neighborhood, with 22 neighborhoods randomly selected in each city.³⁹ This enables multi-level modeling and also allowed for interviews with local leaders

³⁹ This selection was based on neighborhoods as defined by the Instituto Brasileiro de Geografia e Estatística (IBGE), the federal agency responsible for the census and many other data collection projects. However,

and neighborhood association presidents. Households within neighborhoods were randomly sampled based on a selection of streets and, in some cases, apartment buildings. Another innovative feature of the sample design is that a snowball sample of discussants mentioned by the main respondents was interviewed in the third and fourth waves.

4.1.2.1 Main Respondent Interviews

Over the course of the six waves of this survey, the project interviewed 6,970 main respondents, split evenly between the two cities. However, because of sample attrition and replacement only a fifth of these people were interviewed in all six waves (see Table 6 for the response pattern). The sample used here includes only the 1,401 individuals interviewed in every wave.

in Caxias do Sul on-the-ground field work by Andy Baker quickly revealed that neighborhoods as defined by the IBGE did not correspond to popular usage or to the boundaries of neighborhood associations. As a result, the selected census tracts in Caxias do Sul were subsequently grouped into 28 redefined neighborhoods based on information from local stakeholders. My own fieldwork suggests that a similar though less severe problem may also exist for the 22 IBGE-defined neighborhoods in Juiz de Fora.

Table 6. Response Pattern in the ABR Study

<i>Number of Respondents</i>	<i>Wave 1</i>	<i>Wave 2</i>	<i>Wave 3</i>	<i>Wave 4</i>	<i>Wave 5</i>	<i>Wave 6</i>
1,401						
876						
293						
557						
948						
300						
273						
679						
1						
2						
43						
73						
654						
1						
1						
1						
19						
9						
49						
221						
113						
1						
110						
1						
1						
1						
2						
2						
1						
1						
47						
1						
55						
222						
6,970	4,882	4,507	5,112	2,744	2,042	1,970

Were those who stayed in the study for all six waves different from those who did not? In Table 7 I examine the differences between these groups. There are a number of demographic differences: those who respond in all six waves are substantially and significantly more likely to be female; they also have lower educational and income levels and are older. Since Caxias do Sul and Juiz de Fora are relatively well-off by Brazilian standards, however, these differences may actually make the subsample of the larger survey slightly closer to the national average. Moreover, differences on political variables are much less pronounced. I uncover no differences in ideology, in likelihood of voting for Lula, or in political knowledge. Those who respond in all six waves do have slightly higher political participation, and I uncover weak evidence that they might have somewhat higher levels of party identification and political conversation, at least in some waves. The two most important differences, however, relate to trust in the interview process, as coded by the interviewer at the end of the interview, and social networks. Those who attrit appear to have smaller social networks than those who are present in all six waves. This may be because the survey interview is, in a sense, a political conversation; those who are more social may be more likely to continue with the survey project. However, as I will show in the next chapter, it is also very likely due to the fact that they have significantly higher levels of trust in the interview process in every wave.

Table 7. Differences between Six-Wave and Non-Six-Wave Respondents in Demographics and Trust

	X ₀ : Non-Six-Wave Respondents	X ₁ : Six-Wave Respondents	Prob X ₀ = X ₁
Female	0.517	0.592	.000
Education	8.581	7.908	.000
Age	40.874	44.656	.000
Income (in Reais, R\$)	1420.453	1326.645	.072
Juiz de Fora	0.497	0.494	.842
Trust in Interview: Wave 1	1.644	1.702	.000
Wave 2	1.828	1.873	.001
Wave 3	1.834	1.903	.000
Wave 4	1.840	1.865	.104
Wave 5	1.770	1.838	.001
Wave 6	1.851	1.896	.009
Ideology (Left-Right): Wave 1	2.995	3.018	.722
Wave 2	2.922	2.947	.694
Wave 3	2.778	2.875	.121
Wave 4	3.072	3.093	.795
Wave 5	2.886	2.941	.598
Wave 6	3.064	2.971	.394
First-Round Vote (Intention) for Lula:			
Wave 1	0.229	0.211	.184
Wave 2	0.369	0.382	.387
Wave 3	0.493	0.495	.882
Wave 4	0.366	0.366	.991
Wave 5	0.332	0.309	.303
Wave 6	0.373	0.364	.717
Turnout: Wave 1	0.786	0.807	.115
Wave 2	0.814	0.847	.007
Wave 3	0.859	0.902	.000
Wave 4	0.748	0.781	.043
Wave 5	0.727	0.728	.960
Wave 6	0.928	0.921	.567
Political Knowledge: Wave 1	0.630	0.626	.810
Wave 3	0.623	0.648	.054
Wave 4	0.639	0.637	.883
Wave 5	0.644	0.646	.923
Wave 6	0.699	0.686	.502
Campaign Participation: Wave 1	0.113	0.122	.089
Identifies with a Party: Wave 1	0.491	0.529	.015
Wave 3	0.499	0.524	.115
Wave 4	0.408	0.421	.514
Wave 5	0.359	0.377	.418
Wave 6	0.371	0.399	.255

Table 7 (continued).

	X ₀ : Non-Six-Wave Respondents	X ₁ : Six-Wave Respondents	Prob X ₀ = X ₁
Political Conversation: Wave 1	0.394	0.419	.004
Wave 2	0.485	0.496	.211
Wave 3	0.583	0.608	.003
Wave 4	0.490	0.504	.207
Wave 5	0.492	0.515	.099
Wave 6	0.521	0.519	.858
Network Size: Wave 2	1.703	2.169	.000
Wave 5	2.032	2.157	.029

Note: Political knowledge and party identification questions were not asked in the second wave. Campaign participation questions were only asked in Wave 1.

4.1.2.2 Discussant Interviews

In addition, as mentioned above, the project interviewed a “snowball sample” of discussants whom main respondents had named to the interviewer in Wave 2. Of the six-wave main respondents, 867 main respondents had 1,191 discussants interviewed in Wave 3 (thus, 324 main respondents had two discussants interviewed). In Wave 4, 448 six-wave main respondents had a single discussant re-interviewed, and 70 had two discussants re-interviewed. Table 8 shows that while many of those interviewed were the first listed discussant, a number of discussants were lower ranked.

Table 8. Order of Main Respondent (MR) Preference for Discussants Interviewed in Wave 3

	First discussant interviewed		Second discussant interviewed	
	Number	Percent	Number	Percent
Listed 1 st	567	65.4		
Listed 2 nd	193	22.3	160	49.4
Listed 3 rd	77	8.9	127	39.2
Listed 4 th	30	3.5	37	11.4
<i>Total</i>	<i>867</i>		<i>324</i>	

Note: These estimates are limited to main respondents who were present in all six waves.

Were main respondents who had a discussant interviewed different from those who did not? Quite obviously, those who had a discussant interviewed had reported at least one network member to the interviewer. Thus, analysis based only on those with discussant interviews would of course exclude those who mention no discussants, a group that we should expect to be politically quite distinct.

But beyond differences from those mentioning *no* discussants, one might wonder whether those with a discussant interviewed differ from others who mention at least one discussant, but who do not have any discussant interviewed. There are several ways in which personal characteristics might affect whether or not one's named discussants receive interviews. First, people who supply full contact information for their discussants, including a correct phone number and address, are more likely to have a discussant interviewed. We might expect people who are more sociable and who are wealthier to be more likely to have this information, and to have discussants with working phones. Second, people who name *more* discussants are more likely to have at least one person contacted by the interview team; thus we should expect that people whose discussants are interviewed will have larger self-reported intimate egocentric networks. In Table 9 I examine differences in a number of variables in Wave 3 between six-wave respondents with at least one discussant interviewed and six-wave respondents who name at least one discussant but have none interviewed. It turns out that those with an interviewed discussant differ in quite important ways from those who name discussants but have none interviewed—on sex, social status, city of residence, and many measures of political engagement. These are precisely the same kinds of differences one might expect between those who do and do not name discussants, and they suggest that the analysis will need to treat the sample with an interviewed discussant as a self-selected group.

Table 9. Differences between Six-Wave Respondents Who Have Discussants Interviewed and Six-Wave Respondents Who Name Discussants But Have None Interviewed

	X ₀ : No Discussant Interviewed	X ₁ : Discussant Interviewed	Prob X ₀ = X ₁
Female	.530	.622	.005
Education	7.594	8.455	.000
Age	46.115	43.517	.020
Income (in Reais, R\$)	1215.93	1449.71	.053
Juiz de Fora	.534	.462	.029
Trust in Interview, Wave 3	1.892	1.916	.228
Ideology (Left-Right), Wave 3	2.863	2.832	.811
First-Round Vote for Lula, Wave 3	.505	.486	.570
Political Knowledge, Wave 3	.623	.694	.007
Campaign Participation, Wave 1	.403	.370	.326
Identifies with a Party, Wave 3	.537	.559	.490
Turnout, Wave 3	.898	.921	.213
Political Conversation, Wave 3	1.863	1.898	.483
Network Size, Wave 2	2.450	2.632	.000

Note: Campaign participation questions were only asked in Wave 1. These estimates are limited to main respondents who were present in all six waves.

4.2 STUDY 2: NETWORKS AND NEIGHBORHOODS IN LOCAL BRAZILIAN POLITICS (NNLBP)

The data analyzed in Chapter 8 come from a survey of 1,089 Juiz de Fora residents that I led in November, 2008, as part of the research for this dissertation. The study examined the local election campaign of that year, and was in the field just after the end of the second round election. Funding was provided by a Mellon Fellowship from the University of Pittsburgh and by a National Science Foundation Doctoral Dissertation Improvement Grant. Surveys were clustered in the same twenty-two randomly selected Juiz de Fora neighborhoods studied in the ABR data. Approximately fifty interviews were conducted in each neighborhood, and households were chosen at intervals from selected streets or, in some cases, apartment buildings.

Research support was provided by the Center for Social Research (CPS) at the Federal University of Juiz de Fora (UFJF). I developed the questionnaire (see Appendix A) in consultation with local stakeholders, and personally pretested it in neighborhoods around the city. Undergraduate students affiliated with the CPS conducted the interviews. Data are weighted based on the 2000 Census from Juiz de Fora to ensure that the sample more closely resembles the city's adult population at large, particularly with respect to sex and age.

A second component of the study involved interviews with activists and local leaders. In each neighborhood, I interviewed the neighborhood association president or, in the three neighborhoods where there was no association, local leaders of churches or other institutions. In addition, I attended campaign rallies and get out the vote activities and interviewed campaign volunteers, workers, and city council candidates.

4.3 STUDY 3: THE BRAZIL ELECTORAL PANEL STUDY (BEPS)

In Chapter 8 I also include a small amount of evidence from the Brazilian Electoral Panel Study (BEPS), a three-wave panel study of Brazil's 2010 presidential elections.⁴⁰ Wave 1 of BEPS was conducted in April of that year as part of the Latin American Public Opinion Project (LAPOP)'s 2010 AmericasBarometer (AB). The latter cross-national project was coordinated by LAPOP at Vanderbilt University, with major funding coming from the US Agency for International Development (USAID) and Brazil's Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq). The Brazilian component of the AB was directed by Lúcio Rennó at the Universidade de Brasília. Waves 2 and 3 were designed and coordinated by a

⁴⁰ For more information on BEPS, please see Ames et al. (2011).

group of researchers from the University of Brasília, the University of Minnesota, the University of Pittsburgh, Princeton University, and the Inter-American Development Bank. Funding for those rounds came from many sources, including, most importantly for my purposes, the NSF Doctoral Dissertation Improvement Grant received for this dissertation.

In total, BEPS conducted 4,611 interviews with 2,669 Brazilians throughout 2010. Interviews were conducted across the country, including all five regions, 16 states, and 60 municipalities. The first wave featured 2,482 interviews. Of the 1600 Wave 1 respondents the project attempted to re-contact in the second wave, reinterviews were conducted with 908, yielding a response rate of 57%. In Wave 3, the project reinterviewed 751 respondents who had been surveyed in both previous waves, plus 283 people who had been interviewed in Wave 1 but not Wave 2, and a batch of 187 completely fresh respondents. The Wave 3 response rate was 71% across the various components of the sample. Thus, overall, 751 respondents participated in all three waves. As with the>NNLBP study, data are weighted to resemble the population at large (in this case, the entire country's population) in terms of age, sex, and region.

A number of survey experiments were embedded in the third wave. In order to simplify survey administration in the context of a face-to-face, paper (i.e., non-computer assisted) questionnaire, all experiments were limited to two cells (i.e., treatment and control). Thus, the project developed only two versions of the questionnaire: Type A included all "control group" questions, and Type B included all "treatment group" questions. Respondents were randomly assigned to Type A or Type B *within* each census tract. In total, 596 completed Wave 3 interviews were of Type A, and 625 of Type B. In Table 10 I examine balance across the treatment and control groups on a number of measures of demographics and political engagement. It is clear that balance was not perfect; for some reason treatment group members

had somewhat higher levels of education, political knowledge, and political interest. Thus, it will be important to control for these factors in the analysis.

Table 10. Balance across Treatment and Control in BEPS Experiments

	Mean in Type A	Mean in Type B	Pr (Mean Type A = Mean Type B)
Media Attention	0.843	0.854	0.331
Political Interest	0.330	0.355	0.029
Knowledge	0.432	0.459	0.026
Female	0.545	0.541	0.852
Education	7.837	8.206	0.012
Income	2.743	2.800	0.364
Size of Area of Residence	2.335	2.304	0.481
North Region	0.147	0.147	0.988
Northeast Region	0.230	0.240	0.480
Center-West Region	0.153	0.144	0.525
Southeast Region	0.267	0.248	0.229
South Region	0.204	0.220	0.272

4.4 STUDY 4: THE SECOND WAVE OF THE COMPARATIVE NATIONAL ELECTIONS PROJECT (CNEP II)

Finally, Chapter 7 is based primarily on data from the second round of the Comparative National Elections Project, with some supplementary evidence from the ABR data. The CNEP II offers an unrivaled opportunity to examine intimate egocentric social networks on four continents. Investigators of the CNEP II asked citizens across the study standardized questions on exposure to a number of intermediaries of political information: discussion networks, television, newspapers, and, in many countries, secondary associations and party contacts. This

is the only cross-national project of which I am aware to examine social networks using a network generator battery for more than one discussant and across so many countries. As Table 11 demonstrates, this round comprises interviews with respondents from eleven countries and national-level elections in the 1990s.⁴¹ To the best of my knowledge, to date this constitutes some of the most in-depth treatment of this project’s social network data to incorporate these eleven countries.⁴²

Table 11. Description of CNEP II Sample and Elections

Country	Number of respondents	Election Studied
Bulgaria	1,216	1996
Chile	900	1994
Germany	449	1990
Greece	966	1996
Hong Kong	988	1998
Hungary	1,500	1998
Japan	1,333	1993
Spain	1,448	1993
United Kingdom	3,534	1990
United States	1,318	1992
Uruguay	712	1994

Note: Respondents from East Germany are excluded from the German sample because partisanship questions were not asked in the just-reunified East. In addition, those who did not respond to the second wave in the panel surveys in Spain, Chile, Uruguay, Greece, and Germany are excluded.

⁴¹ In addition, CNEP II included Italy; unfortunately, I am unable to include that country in the analysis due to major problems in the coding of the publicly available data. In Spain, Chile, Uruguay, and Germany two-wave panel studies were conducted; since questions on social networks and vote choice were only asked in the second, post-election wave, I exclude those who attrited from the analysis.

⁴² While the CNEP II is an unparalleled source of data on social networks across the globe and spawned much research, the great majority of that research, surprisingly, has focused on only one or a few countries from the data set. To the best of my knowledge, the research presented here represents the first attempt to develop multilevel models based on the data. Having used the data sets, I speculate that this is in part due to the formidable start-up costs of using the cross-national data, given inconsistent question coding and variable labeling across the project.

Because the numbers of observations vary dramatically across the countries of the study, and in order to avoid, for instance, the UK having seven times the weight of Germany, in the analysis that follows I weight the data so that each country counts as having 1000 respondents.

4.5 CONCLUSION

This chapter has briefly described the four data sets that will be used in the next four chapters of analysis. The empirical analysis leverages a large amount of data from three presidential and one local election campaign in the 2000's in Brazil. In addition, I utilize data from a large cross-national product conducted in eleven countries the 1990s. Together, these studies will provide a substantial amount of insight into the dynamics and consequences of networks in Brazil and cross-nationally.

5.0 PERSONAL TOUCH: INTIMATE EGOCENTRIC NETWORKS AND DEMOCRATIC COMPETENCE IN BRAZIL

This chapter takes up the first and most general of the three major research questions examined in this study: Does political discussion have a causal impact on democratic competence, and for whom and under what conditions does it have the greatest impact? In Chapter 3, I argued that Brazilians get much of their political information from discussants: not only close family and friends, but also casual acquaintances and weak ties. Social networks are important, first of all, because they enable efficiencies in information collection, allowing respondents to share small amounts of knowledge stored in many separate heads. Social networks are cognitively less demanding than text-based sources of information, and cheaper and less time-consuming than sources such as television. One can glean bits of political information from network members over the course of one's daily activities, through informal socialization. Second, information provided by network members may be remembered more clearly and accepted more readily because of social and emotional bonds with the information sources; this may especially hold for information provided by close family and friends. Third, the process of discussion itself, rather than passive receipt of information from the media, helps cement information in memory. The link between political conversation and knowledge as measured in the survey interview may be even stronger because the survey interview is itself a form of political conversation. Information

heard orally and practiced verbally may be more easily reported in the verbal, discursive context of the survey interview.

Discussants, furthermore, help to mobilize their fellow citizens to participate in the political arena. This influence occurs in a number of ways. First, information provided by social network members becomes a personal resource to draw upon when participating in politics. Second, mobilization may take a more persuasive route, as citizens convince family members, friends, and acquaintances to support their own candidates and to participate in the electoral process. Third, political discussion may stimulate more general interest in politics, and this interest might lead to increased participation.

But not all discussants are created equal: some are more knowledgeable than others, and some more trustworthy. Brazilians will value more and give higher priority to their conversations with highly knowledgeable discussants and with spouses. And these discussants—the best informed ones and the ones known most closely—will also have the greatest impact on both political knowledge and participation.

Finally, I speculated about what kinds of respondents will benefit most from political conversation. One type of respondent characteristics relates to prior levels of democratic competence. There are two alternative hypotheses. On the one hand, perhaps those who start out with the lowest levels of information and participation will benefit most. If so, political conversation will have a democratizing effect, spreading democratic competence more evenly throughout the Brazilian electorate. On the other hand, perhaps those who start out best informed and most participatory will benefit the most from conversation, so that democratic competence accrues to those who are best endowed initially. This might happen if a certain amount of background knowledge is needed to make sense of incoming data, and if the

previously well-informed more actively seek particular elements of new information. I call the former possibility the leveling effect and the latter the accrual effect. I find strong evidence in favor of the leveling effect: people who need it the most are most likely to benefit from political discussion. This parallels previous work on the effects of political discussion in Kenya following the democratic transition (Finkel & Smith 2011).

A second characteristic that may affect the extent to which citizens benefit from discussion is gender. Theory argues and analysis shows that women are more strongly influenced than men by their closest discussants, though the effects of political conversation more generally hold for both sexes. Women are also much more likely than men to name their spouses as their most important discussant; low knowledge women are especially likely to do so.

While the role of social influence in explaining political behavior may seem relatively uncontroversial, attempts to demonstrate this effect empirically have been hamstrung by problems of selection and simultaneity. That is, citizens get to choose whether and with whom to talk about politics, not to mention the topics of conversation. It seems very likely that those who are already most politically engaged or democratically competent are precisely the ones who choose to talk about politics the most, and who have the largest political discussion networks. Thus, an important critique from skeptics of the social influence literature argues that measured effects are entirely endogenous. Moreover, even if one admits that political discussion may have some causal effect on democratic competence, estimation of this effect is made quite difficult by the problem of simultaneity—that is, that the causal arrow certainly goes in both directions. Treating the influence as unidirectional is quite likely to overestimate the impact of discussion on democratic competence.

Thus, I test the following hypotheses laid out in Chapter 3:

- H1. Larger social networks and more frequent political conversation (with both weak and strong ties) will lead to higher levels of **political participation** and **political knowledge**.
- H2. Respondents will experience greater gains in **political knowledge** and **political participation** from respondents who themselves have higher levels of political expertise and who are more participatory.
- H3. Spouses will have a greater impact on **knowledge** and **turnout** than will other discussants, and the impact will be stronger for women than for men.
- H4. Respondents will seek political discussants with higher levels of political expertise.
- H5A. Respondents with higher initial levels of **political knowledge** and **political participation** will learn more from their discussants (the accrual effect); or
- H5B. Respondents with lower initial levels of **political knowledge** and **political participation** will learn more from their discussants (the leveling effect).

In this chapter I do not deal with the third aspect of democratic competence, clientelistic dispositions. This is because my theory has argued that clientelism is most likely to be fostered in hierarchical and vertical relationships with people in positions of power and influence. These types of relationships are unlikely to be reported in response to the standard egocentric network battery. In Chapter 8, I turn to this dependent variable.

I am preoccupied by two major sets of methodological concerns in this chapter. The first relates to assessing the causal effect of conversation and network size on democratic competence. Second, I leverage the panel nature of the data to examine the reliability and validity of self-reported networks and discussion. The results indicate that the size of egocentric

networks is unreliable and is often likely to be underreported, jeopardizing the usefulness of network size as a measure of overall political discussion.

In the next section, I discuss variable measurement as well as analytical methods, paying particular attention to the measurement of political discussion and social networks. I then proceed to assess the impact of immediate egocentric networks and political discussion on knowledge. The third section deals with effects on electoral decision-making.

5.1 DATA AND METHODS

5.1.1 Ames Baker Rennó (ABR) Two-City Brazilian Elections Panel

All analysis in this chapter is based on the ABR data set described in Chapter 4. Respondents described their social networks and identified their members to interviewers in the second and fifth waves of the study. Moreover, a snowball sample of these discussants was interviewed in November 2002 and again in June 2004. In this section, I describe the variables used in the analysis, as well as the analytical methods.

5.1.1.1 Dependent Variables: Political Knowledge and Voting Decisions

The first analytical section of this chapter assesses the effects of social networks and political discussion on general knowledge of the political system, one of the three components of democratic competence described in Chapter 3. *Political knowledge* is measured here in two ways. As discussed in the previous chapter, there was substantial variation in political knowledge questions across the various waves of the ABR study, and the battery was not

administered at all in Wave 2. This variation presents special challenges for the assessment of political knowledge. However, in each wave interviewers also rated respondents' political knowledge on a five-point scale. These ratings are symmetrically distributed about the midpoint of the scale and are highly correlated with civics quiz scores in each wave in which quiz scores are measured (see Appendix A). Moreover, they are highly stable, with average correlations across subsequent waves of .60. Inter-rater reliability is fairly high; correlations between scores in one wave and the subsequent one are .50 when interviewers change, and .73 when the interviewer remains the same. The alpha reliability coefficient for interviewer ratings for all six waves is .88. These descriptive statistics suggest that interviewer-rated knowledge is likely to be a valid and reliable indicator of respondents' actual levels of political knowledge.⁴³

Most of the analysis relies on interviewer ratings of knowledge, rather than civics quiz scores (see Bartels 1996). This is so for models utilizing longitudinal analysis of multiple waves of data and for ones that include the second wave, in which civics quiz questions were not asked. Since social network size was measured in Wave 2, that wave is critical to many of the models developed below. However, I use civics quiz scores instead of interviewer ratings in a few cases: namely, in models that combine measures of both main respondent and discussant knowledge. I do so because the civics quiz provides a more objective standard for comparison. Traits that may affect interviewer ratings of knowledge—for instance, extraversion, cooperativeness, verbal

⁴³ Could interviewers have rated more highly the knowledge of interviewees whom they *liked* more? In addition to knowledge, interviewers also rated interviewees' cooperativeness; this rating can serve as a proxy for interpersonal compatibility between the interviewer and interviewee. As shown in Appendix A, interviewer-rated cooperativeness does have a substantial effect on interviewer-rated knowledge, even after controlling for civics quiz scores. However, the same table in that Appendix shows that respondents who are actually more knowledgeable tend to be perceived as more cooperative, suggesting that part of the effect of interviewer-rated cooperativeness comes from real knowledge. There are a number of possible explanations for this finding. Perhaps more knowledgeable respondents tend to be of higher social status, which leads interviewers to like them better; or perhaps more knowledgeable respondents are more interested in politics and respond more readily to the questionnaire. In any case, it is clear that interviewer-rated political knowledge is to a great extent an accurate indicator of respondents' levels of understanding of politics.

dexterity, and social status—are largely held constant when we compare individuals against their own scores over time, but they are not when we compare main respondents with their discussants. Moreover, since discussants were interviewed only in the third and fourth waves, the models utilizing measures of discussant knowledge avoid the second wave, the one in which civics quiz questions were not administered.

Political participation, the reader may recall, is the second dimension of democratic competence identified in the third chapter. Again, however, the ABR data present both limitations and opportunities. Participation in campaigns beyond the voting booth—for instance, working for candidates or parties and displaying candidate signs or stickers—was measured only in the first wave. Thus, I do not address non-electoral participation, since it is impossible to model longitudinally, or even in a single-wave model in the proper temporal order.

Electoral participation was examined only indirectly in the ABR surveys. In each wave, respondents were asked which candidate they would vote for in the first election *if the elections were held today*. Nonresponse options included “No one,” which was not read aloud, as well as the usual “Doesn’t know” and “No response.” These nonresponse categories are ambiguous in several ways. First, it is very likely that there are many “no ones” lurking among the “doesn’t know” and the “no responses.” Second, there are a few reasons a respondent could reply “no one.” The respondent could plan to go to the voting booth in compliance with Brazil’s compulsory voting laws, but nullify their ballot or cast a blank vote in the privacy of the voting booth. This would be the case of the classic disaffected voter who seeks to avoid the penalties for not voting.⁴⁴ Or the respondent might have a legally recognized excuse for not voting. The

⁴⁴ Voting is compulsory for literate citizens between the ages of 18 and 69. Citizens in the compulsory category who fail to vote in any election have 60 days to appear before a judge in the Regional Electoral Tribunal (TRE) and explain the circumstances that caused them to miss the election. If the judge rejects the claim, the citizen pays a very small fine. Citizens who fail to vote or to appear before a judge in three consecutive elections may have

respondent might be over 70 years of age (the limit for mandatory voting) or be more than a legally defined distance away from his or her home voting precinct. And finally, the respondent might not have a legally acceptable excuse but plan to stay home anyway. Since the penalties for non-voting are fairly mild, the percentage of registered voters in this group is often fairly large, between 15 and 20 percent. As a result of these ambiguities, nonresponse is not a measure of participation (or more precisely, non-participation) *per se*. Some people who reply “no one” or who choose not to respond may end up making an appearance at the voting booth on election day, even if they do not vote for any candidate once inside. Nonresponse is, however, a sign that the respondent has not chosen actively to support any of the available candidates.

The second section of the analysis thus models an indicator variable for whether a respondent names a candidate as a first round vote choice preference. I label this construct (perhaps a little awkwardly) the *first-round voting decision* (see Appendix A for the distribution across waves). The percentage of the sample that supports a candidate is quite high in each wave, and peaks in Waves 3 and 6, the end of the election campaigns in 2002 and 2006.

5.1.1.2 Network and Discussion Measures Reported by the Main Respondent

Social influences on the two dependent variables are estimated in this chapter using two categories of treatment variables. First, I assess the impact of the overall *amount* of political conversation on democratic competence, using two measures of the amount of conversation: *social network size* (at times referred to as *social network degree*) and *general political conversation*. Second, I measure a variety of discussant characteristics based on a combination of reports by main respondents and by discussants themselves. Main respondents reported their

their voter registration revoked, and become ineligible for public employment or enrollment in a public university. For more information on compulsory voting, see Power (2009) and Power and Roberts (1995).

relationships with their discussants (spouse, parent/child, other family member, or friend). In addition, I use the order in which respondents listed their discussants as a ranking of their preference for or priority given each discussant.

In the second and fifth waves of the ABR study—that is, in August of 2002 and 2006—respondents received the following question: “Can you indicate the names of the three people with whom you most often talk about politics?”⁴⁵ After naming a discussant, the respondent was asked for the person’s telephone number and address, as well as for their relationship (spouse/partner, relative, parent/child, or friend) and for the discussant’s presumed vote choice in the upcoming elections. In the waves immediately following the ones in which the social network battery was administered—that is, in the third wave (October 2002) and the fifth wave (October 2006)—respondents were again asked about the presumed vote preferences of the discussants named in the immediately prior waves. Table 12 demonstrates the distribution of *social network size*, both for six-wave respondents and for all respondents.

A few features of the distribution of social network size merit discussion. First, in both the second and fifth waves half the sample lists three discussants. This strongly suggests that the distribution is truncated on the right; many respondents in the top category might have listed more than three discussants if they had been given the opportunity. In fact, a small subsample of respondents was asked for the name of a fourth social network member. Those who listed three family members received a request for the name of a fourth network member. In the second wave, 215 of the 828 six-wave respondents who named three network members received a request for a fourth member, and in the fifth wave 194 out of 833 received such a request. Compliance was very high; 71.6 percent of those asked named a fourth network member in

⁴⁵ Respondents who named three family members were then asked for the name of a fourth person who was not a family member. Because only a small percentage of respondents received this question, though, I omit responses to this question in all analysis.

Wave 2, and a strikingly high 91.7 percent did so in Wave 5.⁴⁶ If those who received a request for a fourth discussant were similar to those who named three discussants but did not receive a request for a fourth, this provides strong evidence that network size is right-truncated.

Table 12. Size of Reported Social Network, ABR Data

	Wave 2		Wave 5	
	Six-Wave Respondents	All Respondents	Six-Wave Respondents	All Respondents
No members	16.4%	33.0%	17.4%	18.8%
1 member	10.3%	9.7%	9.5%	9.4%
2 members	14.1%	10.6%	13.6%	13.1%
3 members	59.1%	46.6%	59.5%	58.7%
<i>Total</i>	<i>1,401</i>	<i>4,507</i>	<i>1,401</i>	<i>2,042</i>

Note: No social network questions were asked in Waves 1 and 4. Wave 3 and Wave 6 descriptive statistics on the social network are the same as those for Waves 2 and 5, respectively.

Second, many people list no discussants. There are several reasons a respondent might fall into the latter group. Some—for instance, those who are shut in or who for some other reason spend their days at home—might have contact with few other people. Others could have quite a bit of human contact, but dislike talking about politics. And still others might simply be reluctant to provide names of their social network members in the survey interview context. Apart from those who are shut in or who have little social contact, however, it is hard to imagine that in the midst of a busy election campaign those in the no discussants group truly receive no political stimuli from anyone in their social environments. Unfortunately, it is impossible to know which of these factors leads any given respondent to report no discussants. Third, about a third of the sample lists only one or two network members. As with those who report no

⁴⁶ Examining all respondents, not just those present in all six-waves, 522 received a request for a fourth network member in the second wave, and 59.4% complied. In the fifth wave, 275 received such a request, and 87.3% complied.

discussants, lack of trust in the interview process might depress the number of reported contacts even in this group. For all these reasons, social network size is likely to be a noisy measure of the size of the politically relevant social network.

But even if social network size is systematically underreported, does it proxy the overall amount of political discussion in which a respondent engages? In addition to the social network battery, the ABR survey measured political discussion habits in each wave, asking respondents how frequently on a four-point scale they talk about politics with a series of groups. Among these, questions about the neighborhood, family, friends, and work or school were asked in every wave and have an alpha reliability coefficient of .78 across all six waves. I used these four questions to create an index of *political conversation* running from 0 to 3. The bottom row of Table 13 shows the correlation between the measures of social network size and political discussion. The association is sizable, but it is clear that network size is not a complete proxy for the amount of political discussion in which a respondent engages.⁴⁷

Table 13. Descriptive Statistics on Political Conversation, ABR Data

	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6
Political Conversation (0-3 scale)						
Mean	1.25	1.47	1.79	1.46	1.48	1.50
Standard Deviation	0.80	0.82	0.80	0.86	0.85	0.83
Correlation, Conversation & Network Size	NA	0.40	--	NA	0.38	--

⁴⁷ Another way of assessing the extent to which the number of network members reported in the standard egocentric network battery proxies for the total amount of political conversation is to examine who is reported (see Table 49 in Appendix A). It turns out that only 37 percent of married respondents and 38 percent of those who report an unmarried partner list their spouse or partner as a discussant; 64 percent of respondents list at least one family member in Wave 2, and 62 percent do so in Wave 5. Meanwhile, over half of respondents list at least one friend as a political discussant. However, since “friend” serves as a catch-all category for all non-family members, the nature of these relationship is hard to determine further from the ABR data.

Family members and spouses might be prominent in self-reported social networks in another way: respondents might value political information and opinions received from their spouses and family members more than they do that received from friends. One measure of the priority given to a contact may be the order in which the contact is listed in the social network battery. Regressing the order in which a discussant is named on the discussant’s relationship to the main respondent, I find that, to the extent spouses are named, they are highly likely to be first; other family members are also likely to be named before friends (see Table 50 in Appendix A).

In Table 14 I regress self-reported network size in the fifth wave on interviewee trust, as well as a measure of overall political conversation and the lagged (Wave 2) dependent variable. Trust is a measure based on a three-point question the *interviewer* completed at the end of the survey: “How distrustful was the interviewee before and during the interview?” Response categories were “not at all distrustful,” “a little distrustful,” and “very distrustful.” Answers have been reverse coded so that higher values represent greater trust. While the lagged dependent variable and the index of political conversation are important, it turns out that interviewee trust has a major impact on the size of the reported network, an impact similar in magnitude over the range of the independent variable to that of the lagged dependent variable.

Table 14. Ordered logit model: Interviewee Trust as a Predictor of Social Network Size

	Coefficient	Standard Error
Interviewee Trust	0.365**	0.133
Social Network Size (Wave 2)	0.217***	0.047
Political Conversation	0.898***	0.073
<i>Cutpoint 1</i>	<i>0.673</i>	<i>0.268</i>
<i>Cutpoint 2</i>	<i>1.315</i>	<i>0.270</i>
<i>Cutpoint 3</i>	<i>2.036</i>	<i>0.273</i>
<i>Number of observations</i>	<i>1385</i>	
<i>Pseudo R-squared</i>	<i>0.081</i>	
<i>Log likelihood</i>	<i>-1413.727</i>	

Note: Coefficients are significant at + p<.10, * p<.05, ** p<.01, *** p<.001.

To what extent is the size of the network stable for individuals over time? In Chapter 2, I pointed out that understanding the stability of social networks can help establish expectations for causal analysis. On the one hand, if networks are highly stable, one might expect some methods of panel data analysis such as fixed effects or first difference models to be less useful in examining networks’ impact. On the other hand, if networks are highly unstable, this may be an

indication of measurement error, which would contaminate both cross-sectional and longitudinal analysis of networks' impacts on democratic competence.

Since the social network generator battery was administered twice, four years apart, we can examine consistency in responses over time. Table 15 shows that fewer than half of respondents report networks of the same size in both 2002 and 2006. This proportion receives a major boost, furthermore, from the large number of respondents in the top category, which I have already suggested is very likely to be right truncated. This truncation means that the latent responses might well be quite a bit less stable than the truncated ones. Among respondents listing fewer than three social network members in the second wave, only 19 percent report the same number of social network members four years later. Social network sizes between the two waves are correlated only at .22, and at .16 for respondents listing fewer than three network members in 2002. By contrast, the correlation between the measures of political conversation in the second and fifth waves is .56.

Table 15. Stability and Change in Social Network Size, ABR Data

	Wave 5 Social Network				<i>Total</i>
	0 members	1 member	2 members	3 members	
Wave 2 Social Network					
0 members	72	31	29	98	230
1 member	36	16	24	69	145
2 members	34	19	31	114	198
3 members	102	67	107	552	828
<i>Total</i>	<i>244</i>	<i>133</i>	<i>191</i>	<i>833</i>	<i>1,401</i>

This instability is striking. Many of the features commonly thought to determine the degree to which citizens engage in political discussions are fairly stable: for example, personal circumstances such as family size; social structural conditions such as labor market position; and

personality traits such as extroversion and openness to experience (Mondak et al. 2010; Mutz & Mondak 2006; Pattie & Johnston 1999, 2000; Valentino & Sears 1998). The instability found here, however, suggests that such long term factors are only part of the story behind those self-reports. Instability may be due to time-varying personal and social circumstances, to factors that such as trust in the interviewer, or simply to measurement error.

To what extent are the same people mentioned over time? Examining the names and relationships of social network members, I coded each discussant mentioned in the second wave based on whether the main respondent named the same person again in the fifth wave.⁴⁸ Overall, only 28 percent of discussants listed in 2002 reappeared in the rosters four years later. Not surprisingly, the rate of repeats varies dramatically by the relationship with the main respondent. Table 16 reveals that close to half of spouses mentioned in the second wave are repeated in the fifth, while only less than one in five friends are.

Table 16. Percent of All Discussants Listed in Wave 2 Who Are Repeated in Wave 5, ABR Data

	Same	Total	Percent
Spouse/Companion	165	357	46.2%
Parent/Child	127	348	36.5%
Other Relative	306	945	32.4%
Friend	244	1365	17.9%
<i>Total</i>	<i>842</i>	<i>3015</i>	<i>27.9%</i>

Note: These proportions exclude 15 respondents for whom the relationship was not specified.

Still, even among spouses the rate of repeat mentions is surprisingly low. While I found at least one respondent who listed a different spouse in 2006 from the one he had listed in 2002, we can assume that most of the respondents remained married to the same person over the four

⁴⁸ This involved some discretion. Is a João identified as a friend in Wave 2 the same as a João identified as a friend in Wave 5? Unless I had strong grounds to suspect that a discussant had changed, I generally classified ambiguous cases as stable. The estimates presented here may thus slightly *underestimate* instability.

year period. Did the half who mentioned their spouse in 2002 and failed to do so again in 2006 actually talk about politics with their spouse in one election campaign but not the other? This is certainly possible, but it seems just as likely that the discrepancy should be chalked up to measurement error, or more specifically to low reliability of the measurement instrument. Similarly, as one sifts through the data one finds many respondents who name one child as a discussant in 2002 and a different child in 2006. Perhaps these respondents really did change their political discussion habits, favoring one child in one election year and a different one four years later. However, again we might guess that the process of deciding whom to name as a discussant is characterized by a fair amount of measurement error.

5.1.1.3 Discussant Characteristics from Snowball Interviews

Further information on discussants comes from a snowball sample of discussants—that is, people named by the main respondent who were themselves interviewed in Waves 3 and 4 (see the previous chapter for a discussion of this sample). Discussant interviews provide information on discussants' levels of political knowledge and on whether they have made voting decisions; these variables become predictors of main respondents' own characteristics. Data from discussant interviews not only exclude main respondent who listed no discussants, but also those who listed discussants but had none interviewed. As the analysis in the previous chapter shows, those who listed discussants but had none interviewed were different in important ways from those whose named discussants were interviewed. As a result, analysis based on data from discussant interviews uses a selection model in which the first stage estimates whether or not a respondent's named discussants were interviewed.

5.1.1.4 Other Independent Variables: Political Engagement and Demographics

Models of knowledge and voting decisions incorporate a number of variables measuring other factors commonly understood to affect political knowledge and the decision to vote. *TV news frequency* is a variable running from 0 to 6 measuring the number of days a week that the respondent reports viewing television news. *Newspaper frequency* is likewise the number of days per week (from 0 to 7) that the respondent reads news in newspapers (see Appendix A for descriptive statistics). In addition, I control for education, measured on a 0 to 15 scale (number of years completed), and for age in number of years. The effect of life course on political engagement has been well-documented in cross-national studies, which typically find that engagement increases over the life course (Converse 1969; Kaase & Marsh 1979; Miller et al. 1999; Mishler & Rose 2007; Plutzer 2002; Stoker & Jennings 2008). In the Brazilian context, however, I expect the relationship between age and political engagement to be non-linear, because voting is not compulsory for older Brazilians. Thus, I include an indicator variable for senior citizens, measured as respondents 70 years of age and older, since there may be a marked drop at the age at which voting becomes non-compulsory (Power 2009).

5.1.2 Analytical Methods

In the analysis below, I seek to develop valid causal estimates of the effects of political discussion on political knowledge and electoral participation. I face a few challenges in doing so. The first is selection. As I have argued, Brazilians are at least to some extent able to choose the amount of political discussion to which they are exposed. This might not pose a barrier to causal inference if the factors leading them to select into situations involving more or less political discussion had no relationship to the dependent variables in which I am interested. This

is, of course, highly unlikely. The forces leading some Brazilians to participate in more political discussion and others in less are likely to include variables such as political interest and education—variables which should also be associated with the dependent variables. Some but not all of these variables are measured in the data and can be included as covariates; those that are not are relegated to the error term. In addition, the dependent variables themselves might affect levels of political discussion. For instance, more knowledgeable people might be more driven to talk about politics, in order to share their knowledge with others. And participation may lead Brazilians into situations in which they are more likely to talk about politics, though this is less likely to occur for voting decisions, which are fairly solitary and non-social. In either case, models regressing democratic competence on political discussion will yield error terms that are correlated with the measures of political discussion, creating endogeneity and violating standard regression assumptions (see Finkel & Smith 2011 for a discussion of similar issues). In order to deal with the problem of selection, I use a number of estimation strategies, including both longitudinal analysis and two-stage least squares models. I discuss these strategies in further detail in the following sections. The goal is to improve the plausibility of the assumption that the assignment of the treatments is *ignorable*—that is, that treatment assignment is orthogonal to the potential outcomes, at least once other observables as well as unobservables are taken into account.

The second major challenge I face in estimation relates to measurement error. The exploration of self-reported social network characteristics in the previous section indicated that these measures are likely to be contaminated by low reliability. Error in the measurement of network size will bias its measured impact towards 0, increasing the possibility of Type I errors. The impact of this error on the measured effects of other variables, meanwhile, will depend on

the nature of the association between the “true” network size and those other variables; in some cases the bias may inflate their measured effects, and in other cases the bias will depress them. Thus, I also attempt a correction for measurement error.

Finally, the fact that those who had discussants interviewed were different in major ways from those who did not poses a third challenge to estimation. This systematic variation creates a missing data problem: we are missing information on the network members of certain non-randomly selected respondents. This is particularly a problem because the same factors that affect *whether* respondents’ discussants get interviewed—social status, sociability, and political engagement, for instance—are likely to affect their levels of democratic competence. While some of these factors are measured in the ABR data, others are not. Thus, the error terms of models of selection and outcomes will be correlated. The result is selection bias: models predicting democratic competence using non-random samples estimate coefficients incorrectly (Heckman 1979; Little & Rubin 2002).

5.1.2.1 Fixed and Random Effects Models

What are typically known as fixed effects models seek to eliminate unobserved heterogeneity in the distribution of the treatment by controlling for the stable, respondent-level distributions of the treatment and other independent variables. These models assume that the variance of all variables as well as the error term can be partitioned into two components: a stable, time-invariant, respondent-level tendency as well as time-varying, within-respondent variations from this tendency. Some Brazilians tend to have larger social networks and engage in more discussion at all points in time, while others have tend to smaller networks and engage in less discussion in all time points. But after taking into account these tendencies, Brazilians at all levels will experience over-time fluctuation in the sizes of their networks and the amount of

discussion in which they engage. Similarly, one can partition the error from standard regression models into two components: stable, unit-level error and time-varying error. Critically, these models enable one to eliminate the stable sources of error by incorporating fixed effects that control for all time-invariant sources of heterogeneity, whether observed or unobserved. Assuming the treatment was correlated with the time-invariant but not with the time-varying error, these models improve the plausibility of the ignorability assumption. Thus, I estimate models of political knowledge using fixed effects.

Unfortunately, fixed effects specifications pose special problems for estimation of models with binary dependent variables, such as the indicator for whether respondents have made a vote choice. Fixed effects logit models exclude all respondents who are completely stable on the dependent variable: that is, who are either a “0” or a “1” in every wave. This is particularly a problem in models estimated on a small number of waves; that is, respondents are more likely to be measured as perfectly stable when one has only two time points than when one has six. As a result, I assess the determinants of having a voting decision primarily using random effects models, though I also include one fixed effects model as a check of the results. The random effects specification, however, requires the assumption that the stable unit effects are uncorrelated with any of the independent variables.

5.1.2.2 Two-Stage Model Using Instruments for Networks and Conversation

To the extent that violations of the ignorability assumption derive from time-invariant rather than time-varying unobservables, fixed effects models and random effects models including the means of time-varying predictors will much improve causal inferences. In this study, though, it is quite possible that time-varying elements of the error term also lead to correlations between the treatments (political discussion) and at least one of the dependent

variables, namely political knowledge. In fact, prior values of knowledge itself may affect the initial distribution of political conversation. The well-informed might choose to talk more about politics in order to share their information, or the poorly informed might avoid discussing politics out of embarrassment. If this is the case, neither random nor fixed effects models will entirely eliminate threats to causal inference. While they may show that within-unit changes in democratic competence are associated with within-unit changes in discussion and network size, the direction of causality will remain ambiguous.

Instrumental variables may allow further grasp on causality even in the presence of simultaneity, or mutual influence between the treatment and outcome variables. Instruments that are correlated with the treatment but assumed to be exogenous to the outcome variable can become proxies for the treatment, standing in for it in regression models. The critical assumption is that all correlation between the instrument and the outcome is due to the instrument's effect on the treatment. That is, if Z represents the instrument, X the treatment, and Y the outcome, the implicit causal model is $Z \rightarrow X \rightarrow Y$, with no possibility of a causal path running $Z \rightarrow Y$ (Gelman & Hill 2007).

Two-stage least squares (2SLS) models incorporate instruments into multivariate models.⁴⁹ In the first stage, the treatment is regressed on the instrument(s) as well as other exogenous predictors that will be incorporated into the second stage model. Based on this model, predicted values of the treatment can be calculated, yielding estimates of the treatment that are effectively purged of the influence of endogenous variables. In the second stage, the outcome variable is regressed on the predicted values from the first stage as well as other exogenous predictors. The standard errors of the coefficient for the exogenized treatment

⁴⁹ The analysis uses a fixed-effect instrumental variable model based on the Stata user-written command `xtivreg2` (Schaffer 2010).

variable must then be adjusted. Identification of the two-stage model requires that each endogenous variable predicted in the first stage be matched with at least one exogenous instrument—that is, at least one regressor not included in the second stage. If the model is under-identified, it will be impossible to estimate all the parameter values in the second stage.

In models of political knowledge, then, I attempt to use fixed effect 2SLS to estimate the effect of political discussion and social networks. A number of variables serve as instruments, including family size, ethnic identification, and employment status. These characteristics are assumed to increase the likelihood that respondents will have opportunities to talk with others; at the same time, there is no reason to expect that any of them would, by themselves, affect democratic competence. With only these identifying variables, 2SLS tests showed that the instrument was weak. As a result, and because (spoiler alert!) longitudinal analysis also shows that social network size is uncorrelated with democratic competence, I use both lagged values of political conversation and contemporaneous values for social network size as additional instruments identifying political conversation. The first stage models also include other exogenous predictors from the second-stage analysis: age, education, and media consumption. Tests show that the instrument is strongly associated with the potentially endogenous regressor, but not with the dependent variable. Moreover, tests also reveal that political conversation is indeed actually endogenous to political knowledge. Nonetheless, concerns remain. For one thing, it is not clear that, at the theoretical level, network size is actually unassociated with the dependent variable; for another, lagged values of political conversation are a surprisingly weak instrument. Thus, results from the 2SLS analysis should be interpreted only as preliminary and suggestive.

5.1.2.3 Corrections for Measurement Error

As we have seen, there is strong reason to suspect that the measurement of the size of the intimate egocentric network is plagued by high levels of measurement error, which would reduce the estimated impact of the network. We are in luck, though—one of the most important uses of panel data is to correct for measurement error (Finkel 1995). By using multiple measurements of a latent variable taken over time, one can assess the nature of that latent variable, as well as (at least in some specifications) the true levels of stability and change in that variable. The simplest corrections for measurement error using panel data rely on two waves of data, with a single indicator in each wave. This is precisely the kind of information available on social network size within the ABR data: a single measurement of the size of the intimate egocentric network taken in Waves 2 and 5. With these data, however, it will be impossible to estimate the true stability of network size; both measures are needed to identify minimally the latent underlying construct. Thus, I factor analyze social network size, developing a single factor score size that predicts and hierarchically structures both measurements.

Note that this turns the latent construct of network size into a time invariant variable. As a result, I also develop factor scores for all other time-varying variables (both independent and dependent) in the knowledge model, and run a time-invariant model. Thus, the perspective here is in some ways the inverse of the one taken in the fixed effects model; rather than being interested in within-individual *variation* in network size, I am now interested in the latent trait that unites and explains multiple within-individual measures. I compare the results of this model to a pooled model without error correction, assessing the extent to which the development of a latent construct for network size improves the measurement of its effect. To do so, I standardize all dependent and independent variables in the pooled model to parallel the factor scores.

5.1.2.4 Selection Model

Heckman (1979) showed that estimation using non-randomly selected samples could be interpreted as problem of specification error, or omitted variable bias, where some of the omitted variables are unobserved and affect both the selection process and the outcome of interest. Models predicting democratic competence based only on the non-randomly selected cases for which discussants were interviewed will misestimate coefficients when the error terms of the outcome and selection models are correlated. Following Heckman, I develop a two-stage model; the first stage assesses whether a respondent's named discussants get interviewed, while the second stage assesses determinants of democratic competence among those whose discussants are interviewed. More specifically, the model contains both selection and outcome equations. The selection equation develops a probit model assessing whether at least one of the respondent's named discussants was interviewed in Wave 3, while the outcome equation models the observed levels of democratic competence. In order to achieve identification, at least one regressor in the selection equation must be unique (Greene 1997). However, all the regressors from the outcome equation do not have to be included in the selection equation. The observed values for the outcome variable can be estimated by adjusting for the correlation of the error terms in the outcome and selections equations, multiplied by the inverse mills ratio, λ .

5.2 PREDICTING POLITICAL KNOWLEDGE

In this section I take up the question of how political discussions affect what Brazilians know about politics. The first sub-section deals with the impacts of the overall amount of political knowledge and of social network size. The second and third sub-sections address how

discussants' own stores of political information and their relationships with main respondents affect what the main respondents learn. The fourth sub-section takes up the question of what kinds of Brazilians learn most from political discussion.

5.2.1 How General Political Conversation and Social Network Size Affect What Respondents Learn

Table 17 presents results from fixed effects models regressing political knowledge, as rated by the interviewer, on measures of political discussion and social networks. The first model, based on Waves 2 and 5, estimates the contemporaneous effects of networks and conversation on knowledge. It turns out that variations in social network size is unassociated with fluctuations levels of political knowledge. However, results for political conversation reveal that in waves in which respondents talk about politics more (or less) than average, they also know more (or less) about politics. But perhaps it takes some time for social networks discussions to lead to political learning. The second column of Table 17 re-estimates the models from the first column for Waves 3 and 6, which occurred in October of 2002 and 2006. Social network size is thus a lagged variable measured in Waves 2 and 5, or two months prior to the dependent variable. The pattern of results in the second column, however, essentially confirms that found in the first, confirming the insignificance of the size of the intimate egocentric network. In the third column, I assess the effects of political conversation across all six waves, finding similar though slightly smaller effects. Finally, the last model develops the 2SLS analysis described above, suggesting again that conversation may affect political knowledge (see Appendix A for the first stage equation).

Table 17. Fixed Effects Models: Determinants of Political Knowledge

	Waves 2 and 5	Waves 3 and 6	All waves	2SLS
Intimate Egocentric Network Size	0.017 (0.021)	0.008 (0.019)		-0.005 (0.020)
Political Conversation	0.086* (0.040)	0.075* (0.037)	0.064*** (0.015)	
Political Conversation (instrument)				0.369*** (0.173)
TV News Frequency	0.026+ (0.014)	0.030** (0.012)	0.025*** (0.006)	0.011 (0.008)
Newspaper Frequency	0.029* (0.012)	0.01 (0.011)	0.015** (0.005)	0.011 (0.008)
Education	0.042* (0.019)	0.036* (0.018)	0.030*** (0.009)	0.048*** (0.012)
Senior Citizen	-0.031 (0.128)	-0.163 (0.113)	-0.130+ (0.067)	-0.074 (0.091)
Change in Interviewer	-0.032 (0.032)	-0.021 (0.030)	0.038* (0.018)	0.038 (0.023)
Constant	1.312*** (0.173)	1.396*** (0.167)	1.492*** (0.078)	0.954*** (0.202)
<i>Number of observations</i>	2729	2742	8165	5331
<i>Davidson-MacKinnon F Test of Exogeneity (p)</i>				2.654 (0.103)
<i>Cragg-Donald Wald F statistic</i>				7.130
<i>Sargan Statistic (test of overidentification) (p)</i>				9.272 (0.234)
<i>R-squared within</i>	0.02	0.02	0.01	
<i>R-squared overall</i>	0.33	0.32	0.30	0.29

Note: Standard errors are clustered on 1,401 respondents. Coefficients are significant at + p<.10, * p<.05, ** p<.01, *** p<.001. Variable for change in interviewer is based on Wave 2-5 change in the first column, Wave 3-6 change in the second, and consecutive wave change in the third and fourth. Instrument for political conversation is discussed in text and first-stage model is presented in Appendix A.

Beyond the effects of political networks and discussion, the models in Table 17 reveal that changes in education are strongly associated with increases in political knowledge. Meanwhile, the media are also fairly strong determinants of political knowledge, and television may be somewhat more important than newspapers. Perhaps more interestingly, the fixed effects models suggest that becoming a senior citizen may decrease one's levels of political knowledge, but *only* at the height of the election campaign.⁵⁰ Thus provides suggestive evidence that the compulsory voting age cutoff may lead people who "age out" to turn off from politics. Last, because of evidence that interviewer-rated knowledge is slightly less stable when interviewers change, I have controlled for changes in the interviewer. In both all-wave models, there is some evidence that respondents who get new interviewers receive higher ratings than those who are being interviewed the second or third time by the same person. Why this would be is unclear; perhaps familiarity really does breed contempt.

The null effects found for the size of the intimate egocentric network may in part result from measurement error, however. In Table 18, I develop models in which I use a factor score to correct for error in the measurement of network size. Unfortunately, with only two waves of measurements of the size of the network it is impossible simultaneously to correct for measurement error and to maintain a within-respondent model specification. Thus, in the measurement error correction model, I lose the fixed effects specification and am unable to account for the stable unit fixed effects.

⁵⁰ This comes close to a regression continuity design, since the model assess the effects of *becoming* a senior citizen between 2002 and 2006. The model does not control for age because in a fixed effects specification focusing on within-respondent change, the variable will be virtually identical for every respondent over the course of the panel.

Table 18. Ordinary Least Squares Models: Determinants of Political Knowledge

	Measurement Error Correction	No Correction
Intimate Egocentric Network Size	0.094* (0.040)	0.048** (0.015)
Political Conversation	0.185*** (0.023)	0.192*** (0.016)
TV News Frequency	0.067** (0.021)	0.087*** (0.014)
Newspaper Frequency	0.159*** (0.021)	0.141*** (0.015)
Education	0.338*** (0.021)	0.409*** (0.018)
Age	0.107*** (0.024)	0.111*** (0.020)
Senior Citizen	-0.020 (0.020)	-0.020 (0.018)
<i>Constant</i>	-0.005 (0.016)	-0.032* (0.015)
<i>Number of observations</i>	1280	5442
<i>R-Squared</i>	0.469	0.348

Note: Standard errors in second model are clustered on 1,401 respondents. Coefficients are significant at + $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$. Measurement error correction model is based on factor scores calculated for all variables except age and senior citizen status. Non-corrected model uses standardized dependent and independent variables for comparability with the factor scores.

Nonetheless, the models in Table 18 are instructive in a few ways. First, the coefficient for network size *doubles* relative to a model without error corrections. Second, note that this is in contrast to what happens to the other variables in the model, which change very little after correction for measurement error. Third, note that even after the correction for measurement error, the standardized effect of the intimate egocentric network is still only half the size of the standardized effect for general political discussion. Thus, I conclude that measurement error substantially attenuates the measured effect of network size, but that even with corrections for error, overall political discussion remains a more important determinant of democratic competence. Moreover, these models tell us nothing about whether *within-respondent* changes in networks affect within-respondent changes in democratic competence.

5.2.2 How Discussants' Knowledge Affects What Respondents Learn

The stores of political knowledge discussants hold should have a major effect on what their conversation partners learn. Interviews with discussants using a snowball sample in Waves 3 and 4 make it possible to examine the relationship between discussant and main respondent knowledge. A Heckman selection model (see Appendix A) reveals that discussants' knowledge has a strong effect on what respondents learn, even after controlling for main respondents' lagged knowledge. But do respondents intentionally seek political information within their discussion networks, or do they only occasionally stumble across it by accident? If the former, we would expect them to seek more knowledgeable discussants.⁵¹ Figure 2 reports civics quiz

⁵¹ Of course, if discussion networks are reciprocal (as indeed they must be at least to some extent), then unless both members of a discussion dyad are exactly equal in knowledge, one member of the dyad will have a more knowledgeable discussant and the other member will have a less knowledgeable discussant. The key here is that discussion networks are to some extent subjective. While the question of whether political conversation occurs

scores of main respondents with interviewed discussants and the first and second discussants who were interviewed in the third and fourth waves (see Appendix A for full results). It is clear that political discussants interviewed through snowball sampling tend to be substantially more knowledgeable about politics than do main respondents. This pattern holds especially for the first discussant interviewed.

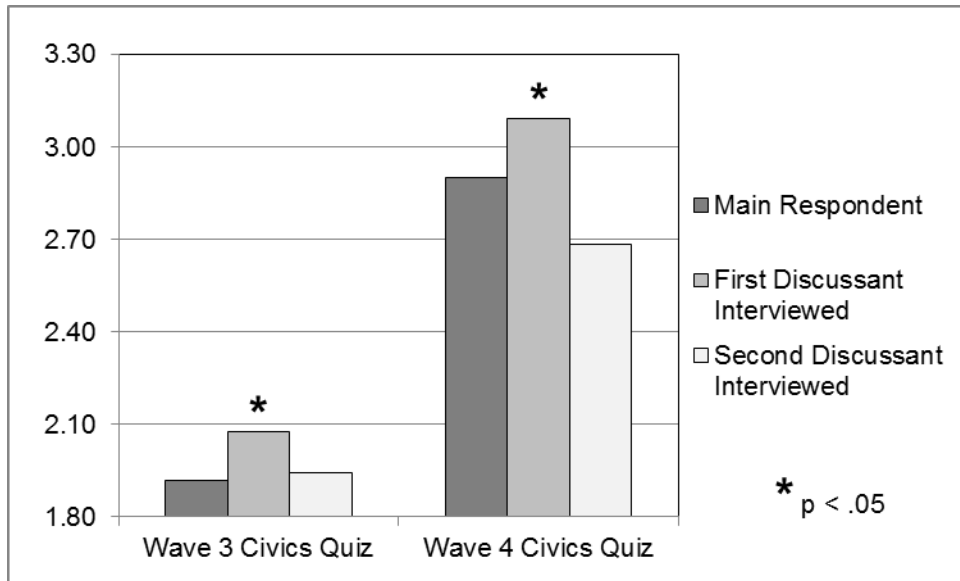


Figure 2. Political Knowledge of Main Respondents and Interviewed Discussants

The varying results for first and second discussants suggest the possibility that respondents tend to report their most knowledgeable discussants first. Indeed, if Brazilians do value expertise when they seek political discussion partners, we would expect to find such a pattern. Table 19 examines whether respondents name more knowledgeable discussants before less knowledgeable discussants, while controlling for the intimacy of the relationship. The nature of the relationship is the primary determinant of its prominence in the main respondent’s

within a particular dyad should have an objective answer, the issue of whether to report that dyad in the survey context is subjective. The less knowledgeable halves of dyads may tend to report such relationships more often.

report. However, the discussant’s level of political knowledge is also quite influential. In fact, across the range of this independent variable, which runs from 0 to 3, the effect is almost as sizable as that for spouses. Taken together, Figure 2 and Table 19 indicate that Brazilians seek discussants who are political experts.

Table 19. Ordered Logit Model: Predictors of the Order in Which Discussant Was Named

	Coefficient	Standard Error
Discussant political knowledge	-0.468**	0.157
Relationship to Main Respondent:		
Spouse/Partner	-1.929***	0.216
Child or Parent	-0.945***	0.167
Other Relative	-0.869***	0.125
<i>Cutpoint 1</i>	<i>-1.007</i>	<i>0.142</i>
<i>Cutpoint 2</i>	<i>0.413</i>	<i>0.142</i>
<i>Cutpoint 3</i>	<i>2.075</i>	<i>0.176</i>
<i>Number of observations</i>	<i>1191</i>	
<i>Pseudo R-squared</i>	<i>0.045</i>	
<i>Log likelihood</i>	<i>-1339.614</i>	

Notes: Dependent variable is scaled such that lower values represent greater preference. Analysis is based on the 1,191 discussants interviewed in Wave 3. Standard errors are clustered on 867 main respondents; 324 main respondents had two discussants interviewed. Coefficients are significant at + $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$.

5.2.3 How the Relationship with Discussants Affects Learning

Brazilians obviously recognize and value political expertise within their discussion networks. However, they are far from purely cerebral actors who systematically and rationally seek the most knowledgeable members of their social networks for political conversation; personal relationships should affect opportunities for discussion and mediate the effects of discussion. In Table 20 I develop a second Heckman selection model, this time testing whether

the impact of discussant knowledge varies between spouses and non-spouses.⁵² The model is restricted to the third wave and to the first discussant interviewed because the number of interviews is much larger for the first discussant and for the third wave. A lagged dependent variable makes this a model of change in knowledge, i.e. learning, rather than of absolute level of knowledge. Note that this analysis is limited to respondents who reported at least one discussant; thus the question is not whether discussion in general leads to learning, but whether discussion with more knowledgeable discussants leads to higher levels of learning than discussion with less knowledgeable discussants.⁵³ The selection equation predicts whether a respondent who names a discussant to the interviewer has at least one discussant interviewed; the correlation between the outcome and selection equations indicates that a selection model was needed.

Quite unexpectedly, the interaction term between discussant knowledge and spousal relationships is large and negative. That is, talking about politics with a knowledgeable discussant can boost one's political knowledge if that discussant is someone other than a spouse. But within couples, the higher one spouse's political expertise, the lower the other spouse's is predicted to be. Figure 3 shows predicted values for this model. Again, the counterintuitive negative relationship between discussants' and main respondents' knowledge within spousal pairs is quite clear.

⁵² I count unmarried partners as spouses.

⁵³ When the selection equation is estimated based on *all* six-wave respondents, the correlation between the selection and outcome equations is not statistically significant ($p = .1416$). The effect of discussant knowledge remains statistically significant in this specification.

Table 20. Heckman Selection Model: The Effect of Discussant Knowledge on Main Respondent Knowledge, Contingent on Relationship, Wave 3

	Coefficient	Standard Error	p-value
<i>Outcome Equation</i>			
Discussant Knowledge, Wave 3	0.085	0.028	0.002
Discussant Knowledge * Spouse	-0.196	0.064	0.002
Discussant is Spouse	0.146	0.048	0.003
Main Respondent Knowledge, Wave 1	0.562	0.032	0.000
Political Conversation	0.058	0.014	0.000
TV News Frequency	0.011	0.005	0.025
Newspaper Frequency	0.004	0.004	0.291
Education	0.022	0.003	0.000
Age	0.000	0.001	0.761
Senior Citizen	0.016	0.039	0.689
Constant	-0.170	0.057	0.003
<i>Selection Equation</i>			
Education	0.032	0.013	0.016
Age	-0.003	0.003	0.233
TV News Frequency	0.023	0.022	0.295
Newspaper Frequency	-0.001	0.018	0.961
Female	0.312	0.082	0.000
Political Conversation	-0.042	0.061	0.494
Trust in Interview	0.066	0.125	0.598
Juiz de Fora	-0.137	0.082	0.096
Social Network Size	0.212	0.055	0.000
Constant	-0.289	0.341	0.396
<i>Rho (correlation between equations)</i>	<i>0.509</i>	<i>0.153</i>	<i>0.036</i>
<i>Number of Observations (Selection)</i>	<i>1137</i>		
<i>Number of Observations (Outcome)</i>	<i>834</i>		
<i>Log likelihood</i>	<i>-669.983</i>		

Note: Model is based only on Wave 3. Selection equation predicts the probability that a main respondent who names at least one discussant will have a discussant interviewed.

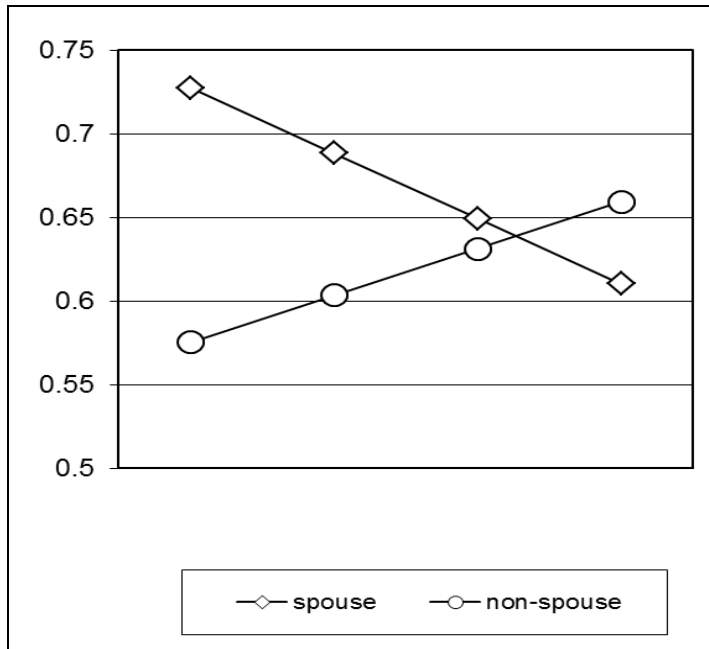


Figure 3. The Effect of Discussant Knowledge on Main Respondent Knowledge, by Relationship⁵⁴

Could this unexpected finding for spouses be driven in some way by differences between genders? Reestimating the relationship separately for male and female respondents, I find that the inverse relationship between spouse and main respondent expertise occurs only for women.⁵⁵ Perhaps less knowledgeable women tend to rely on their spouses' expertise, while more knowledgeable women look beyond their spouses for information. In Figure 4, I assess how one's own knowledge affects the probability of naming one's spouse as the first discussant (see full results in Appendix A). For women, moving from minimum to maximum political knowledge leads to an 11% drop in the probability of naming one's spouse as one's first political discussant; for men, political knowledge leads to only a 7% drop in this probability.

⁵⁴ All other variables are held at their mean values.

⁵⁵ Models available upon request

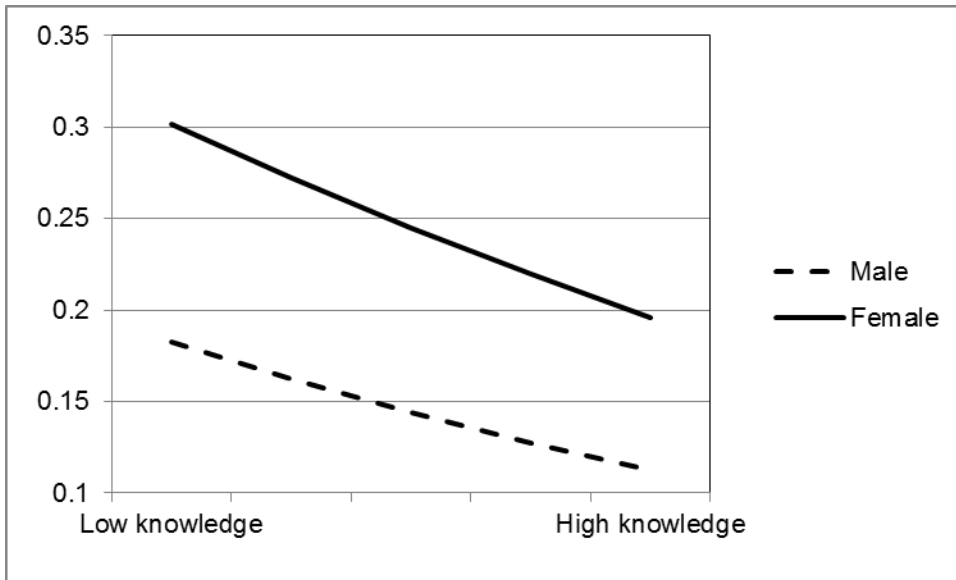


Figure 4. Probability that the First Named Discussant is a Spouse, by Sex and Knowledge

The same models reveal that discussant knowledge has absolutely no impact on main respondent knowledge among men.⁵⁶ While the number of men in the estimation sample is low, further exploratory models, including ones pooling discussants and introducing two- and three-way interactions by gender robustly confirm the lack of effects among male respondents. This finding is also interesting. It is in line with findings by other scholars that many social network impacts founded in American literature occur much more strongly among women than among men (Djupe et al. 2010; Fuchs 1956).

5.2.4 How Initial Levels of Knowledge Affect What Respondents Learn

How does the initial distribution of knowledge affect the extent to which respondents learn about politics from their discussion partners? One hypothesis is that more knowledgeable respondents are most equipped to tap into and learn from the expertise of their discussants (the

⁵⁶ I have checked for whether gender conditions the main effect of political conversation or network size; there is no significant gender interaction for the effects found in Table 18.

accrual effect); an alternative hypothesis is that the least knowledgeable benefit the most (the leveling effect). Table 21 builds fixed effects models similar to those in the third column of Table 17, except that the amount of political conversation is interacted with Wave 1 values of political knowledge. I also control for regression to the mean by interacting Wave 1 levels of knowledge with dummy variables for each subsequent wave.

The results provide strong support for the leveling hypothesis: conversation has a significant negative interaction with prior knowledge. To aid in interpretation of these effects, Figure 5 presents predicted values for political information by frequency of political conversation, and at maximum and minimum levels of prior political knowledge. The results are clear: political conversation has a much more important impact among those who begin with the lowest levels of political knowledge. In fact, among those at the highest levels of prior knowledge, conversation's effect is insignificant but negative.

Table 21. Fixed Effects Models: Conversation's Effect on Political Knowledge, Conditional on Wave

1 Knowledge

	Coefficient	Standard Error	p-value
Conversation	0.249	0.032	0.000
Conversation X Wave 1 Knowledge	-0.077	0.014	0.000
TV News Frequency	0.022	0.006	0.000
Newspaper Frequency	0.018	0.005	0.000
Education	0.040	0.009	0.000
Senior Citizen	-0.075	0.065	0.252
Change in Interviewer	0.216	0.021	0.000
<i>Controls for Regression to the Mean</i>			
Wave 2 X Wave 1 Knowledge	-0.121	0.011	0.000
Wave 3 X Wave 1 Knowledge	-0.175	0.012	0.000
Wave 4 X Wave 1 Knowledge	-0.200	0.012	0.000
Wave 5 X Wave 1 Knowledge	-0.207	0.013	0.000
Wave 6 X Wave 1 Knowledge	-0.210	0.012	0.000
Constant	1.611	0.078	0.000
<i>Number of observations</i>	7902		
<i>R-squared within</i>	0.07		

Note: Standard errors are clustered on 1,401 respondents. Model is based on all six waves.

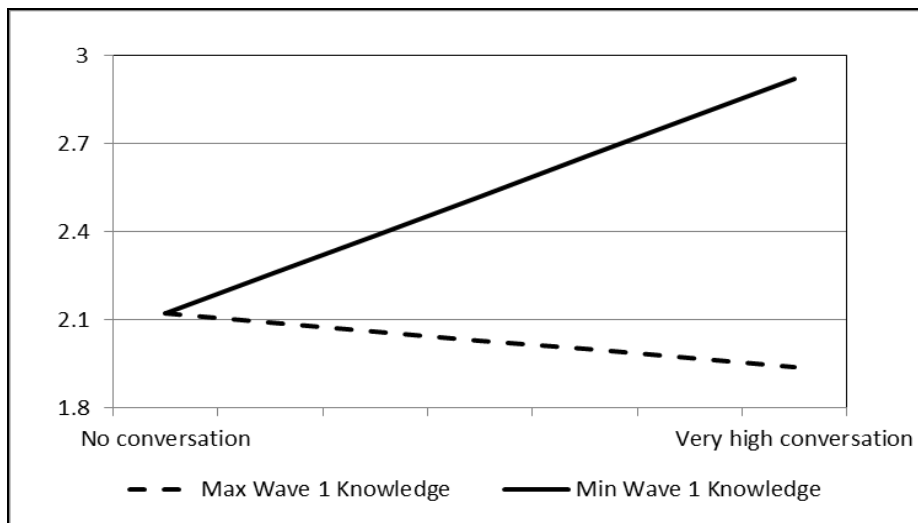


Figure 5. Conversation's Effect on Political Knowledge, Conditional on Wave 1 Knowledge⁵⁷

⁵⁷ All substantive variables are held at their mean values (senior citizen is set to 0). Fixed effects and regression to the mean effects are not calculated.

5.3 PREDICTING THE DECISION TO VOTE

Do political discussions affect Brazilians' ability to make candidate choices? I first address the effects of general political discussion on whether the respondent has decided whom to vote for, examining measures of general political conversation as well as social network size. I then examine data from the first interviewed discussant, testing what discussant characteristics most affect main respondents' abilities to make a decision.

5.3.1 How General Conversation and Social Network Size Affect the Decision to Vote

In Table 22, I assess the effects of social network size and general conversation on the likelihood of deciding which candidate to support. The first three columns develop random effects logit models (Agresti et al. 2000). As in Table 17, the first column regresses voting decisions in Waves 2 and 5 on measures of social networks and general political conversation measured in the same waves. The second column uses measures of voting decisions in Waves 3 and 6 but maintains the treatment variables measured in the previous waves. Thus, the model estimates the lagged effects of network size and discussion. Finally, the model in the third column includes data from all waves and estimates the effects only of general political conversation. Lagged dependent variables help to control for temporal dependence. The fourth column, meanwhile, maintains the six-wave specification, but uses fixed effects. Note that I lose 2,300 cases where the dependent variable was always "0" or always "1" when I move from the random effects to the fixed effects specification.

Table 22. The Effect of Social Networks and Political Conversation on Whether the Main Respondent Supports a Candidate

	Random Effects Logit			Fixed Effects Logit
	Waves 2 and 5	Waves 3 and 6	All Waves	
Lagged Decision	1.085*** (0.124)	1.356*** (0.193)	0.497*** (0.110)	
Intimate Egocentric Network Size	0.099* (0.050)	0.001 (0.077)		
Political Conversation	0.196* (0.078)	0.473*** (0.124)	0.337*** (0.051)	0.329*** (0.062)
TV News Frequency	0.104*** (0.029)	0.115** (0.044)	0.075*** (0.019)	0.051* (0.022)
Newspaper Frequency	0.022 (0.025)	0.034 (0.042)	0.041* (0.017)	0.035+ (0.021)
Education	-0.059** (0.018)	0.060+ (0.030)	-0.033* (0.013)	0.014 (0.034)
Age	-0.015** (0.005)	0.020* (0.008)	-0.009* (0.003)	
Senior Citizen	0.148 (0.225)	-1.100** (0.355)	-0.144 (0.159)	-0.041 (0.279)
Constant	0.906** (0.331)	-0.276 (0.528)	1.242*** (0.246)	
<i>Number of observations</i>	2767	2775	6913	4641
<i>Pseudo R-squared</i>				0.01
<i>Log likelihood</i>	-1343.69	-745.38	-2909.77	-1695.83

Note: Coefficients are significant at + p<.10, * p<.05, ** p<.01, *** p<.001.

The size of the intimate egocentric network, almost for the first time, achieves statistical significance in the contemporaneous effects model in the first column of Table 22, though it remains statistically insignificant in the lagged effects model in the second column. Meanwhile, as with knowledge, political conversation has a robustly positive effect on the ability to make a vote choice. This holds in every temporal specification, and in both fixed and random effects models. As in the knowledge models, media consumption again is found to boost democratic competence. Moreover, there is strong evidence that becoming a senior citizen between 2002 and 2006 reduces one's propensity to choose any candidate, but that the effect occurs only in the campaign waves.

5.3.2 How Discussants Affect Respondents' Decisions

While the effects of self-reported social network size are ambiguous, the actual members may nonetheless be highly influential. Discussants who have made a decision themselves may convey this decision to the main respondent, directly mobilizing the main respondent; or respondents may learn about politics from more knowledgeable discussants, and this knowledge may stimulate voting decisions. Preliminary exploration based on the discussant interviews indicates that whether the discussant has a voting decision is strongly associated with the main respondent's ability to make a decision (results available on request). Furthermore, one might expect spouses to have greater impact on each others' abilities to choose a candidate, due both to the amount of time spent together and to the intensity of bonds between spouses.

In Table 23, I assess the effect of discussants' vote decisions on main respondents, breaking out the effect by type of relationship. It turns out that among non-spouses discussants' decisions have no impact on main respondents, while among spouses the effects are quite

strong.⁵⁸ Figure 6 illustrates these relationships by showing how the predicted probability of having a voting decision varies by discussants' decisions and by their relationships with their main respondent. If one's spouse has *not* chosen a candidate to support, one's probability of having a candidate is 68 percent; but if one's spouse has chosen a candidate, the probability rises to 99 percent! Note, of course, that these results only hold for main respondents who list their spouse as a political discussant. Among non-spouses, however, discussants' decisions raise the probability of the main respondent having a decision only from 91 percent to 93 percent, a rise which is far from statistically significant.

Table 23. The Effect of Discussants' Voting Decisions on Main Respondent Decisions, Contingent on Relationship, Wave 3

	Coefficient	Standard Error	p-value
Main Respondent Decision (Wave 2)	0.807	0.330	0.015
Discussant Decision (Wave 3)	0.375	0.424	0.376
Discussant Decision X Spouse	3.798	1.243	0.002
Discussant is Spouse (0-1)	-1.492	0.718	0.038
Political Conversation	0.574	0.200	0.004
TV News Frequency	0.170	0.066	0.010
Newspaper Frequency	0.027	0.061	0.660
Education	0.034	0.048	0.475
Age	0.031	0.011	0.006
Senior Citizen	-2.383	0.536	0.000
Constant	-1.676	0.847	0.048
Number of observations	864		
<i>Pseudo R-Squared</i>	0.16		
<i>Log Pseudo-Likelihood</i>	-200.48		

Note: Analysis is limited to Wave 3. Dependent variable is an indicator for whether the respondent has a voting decision.

⁵⁸ All variables are measured in the third wave, except for the lagged dependent variable, which is from the second wave.

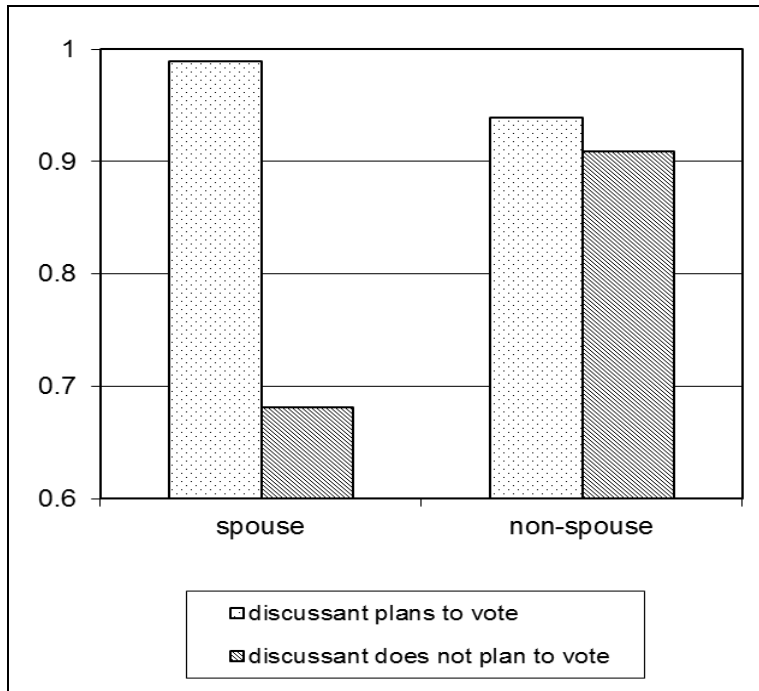


Figure 6. The Effect of Discussants' Voting Decisions on Main Respondent Probability of Having a Decision, Contingent on Relationship⁵⁹

Do these effects apply to both men and women? In models not shown here, I re-estimated the model presented in Table 23 separately for male and female respondents. As I found for knowledge, the effects hold very strongly for women. However, it appears that discussants' voting decisions have no impact at all on main respondents' decisions when the main respondents are male. Again, though, the low number of male respondents who had a discussant interviewed ($N = 270$) leads me to be uncertain about the robustness of this result.

5.3.3 How Previous Voting Decisions Condition the Effect of Conversation

What kinds of respondents benefit most from political conversation? Does it stabilize the vote intentions of those who previously knew whom they planned to vote for? Or does political

⁵⁹ All other variables are held at their mean values.

conversation mostly help those who previously told the interviewer that they were undecided or planned not to vote make up their minds? In Chapter 3, I argued that conversation may have either a leveling or an accrual effect. I test these alternative hypotheses, estimating a transition model that interacts political conversation and each of the other independent variables by the value of the lagged dependent variable (see Appendix A).⁶⁰ Here, the results are consistent with *both* the accrual and the leveling hypotheses (or alternatively, with neither). Among those who did not previously support any candidate, political conversation promotes taking a decision to support a candidate. And among those who previously did support a candidate, political conversation helps to stabilize the choice. However, there is a hint that political conversation may have a stronger effect among those who are previously undecided, though the difference between the two coefficients is not statistically significant. This would be consistent with the leveling hypothesis, as in the models of political knowledge.

5.4 CONCLUSION

This chapter has addressed the first and most general of the research questions posed in the introduction: how does the extent to which Brazilians discuss politics within their intimate egocentric networks affect their levels of democratic competence? Competence is operationalized here in two ways: as political knowledge and as the decision to support a presidential candidate. The treatment is in turn operationalized in three ways: as the size of the

⁶⁰ Transition models assess how a vector of covariates affects the probability of transition between or stability in dichotomous states. In the appendix table, note that each column presents coefficients at that value of the lagged dependent variable. For a further discussion of transition models and their application to political science, see Ames et al. (Forthcoming; also, Diggle et al. 2002; Hillygus & Jackman 2003; Morgan et al. 1983).

immediate egocentric social network, as the characteristics of the first discussant interviewed from that network, and as a more general index of political conversation.

The results presented here show robustly, and after adjustments for obstacles to causal inference, that political discussion among ordinary Brazilians can promote political learning and help participants take decisions regarding candidate support. It appears that the overall *frequency* of political conversation matters more than does the *number of members* of the immediate egocentric social network, especially for political knowledge.

At the same time, I uncover important problems related to the measurement of the size of the intimate egocentric network. Careful descriptive analysis suggests that this variable has low reliability and may well underestimate the actual number of people with whom most individuals exchange some kind of political information. Corrections for measurement error indicate that the measurement error leads to a substantial underestimation of the effect of this variable on political knowledge.

While measures of social network size are not strongly associated with democratic competence, the named discussants by and large represent highly influential network members, ones typically known quite well. It turns out that discussants' levels of political knowledge have a major impact on political learning. Moreover, Brazilians recognize and value political expertise and they actively seek out more knowledgeable political discussants. In addition, main respondents whose discussants have made voting decisions are much more likely themselves to have chosen presidential candidates. The latter effect relationship is found much more strongly among spouses, while knowledge effects appear to be concentrated among non-spouses, contrary to my hypothesis. Note that all of these effects are discovered using only the first discussant

interviewed; if we had comprehensive data from a larger number of members of the intimate egocentric network, social network effects might be yet more pronounced.

I also uncover preliminary evidence that network effects may vary by the sex of the main respondent. While the effects of general political discussion occur equally for both sexes, women benefit more from the political expertise of their closest discussants. However, within spousal relationships, the political knowledge of women who list their spouse as a political discussant is actually inversely related to their husbands' levels of political knowledge. Moreover, women are much more likely than men to list their spouses as discussants.

Finally, this chapter provides evidence that everyday political discussions do not profit all Brazilians equally. Political conversation's effects on knowledge are concentrated in the segments of the population that "need" it the most—those who start the study with the lowest levels of knowledge. Thus, discussion levels the political playing field, enabling those with fewer political resources to live beyond their means, so to speak. The effects of conversation on the ability to make candidate choices are more widespread, accruing both to the previously undecided and to the previously decided. Again, however, the minor and statistically insignificant differences in effects favor the previously undecided. This again suggests that political conversation may have a democratizing, or leveling, effect on political participation.

The next chapter explores the nature of the egocentric social network further. Instead of the democratic competence of members or their relationships to the main respondent, it deals with members' candidate preferences, taking up the question of how disagreement within the network affects democratic competence.

6.0 DIVERSITY AND CONFLICT IN INTIMATE EGOCENTRIC NETWORKS: TESTS IN BRAZIL AND CROSS-NATIONALLY

The previous chapter established that Brazilians with larger social networks and who talk about politics more often learn more about politics and are more engaged in the electoral system. It also showed that more knowledgeable and participatory discussants have greater impact, but that the effect is mediated by the relationship between the main respondent and the discussant. That chapter focused on *whom* citizens know, and on how much they discuss politics. In this and the following chapter, however, I turn my attention to the content of communication, and in particular to the extent of agreement and disagreement within intimate egocentric networks.

At the outset of the dissertation, I described a second major research question: does discussing politics with people with whom one disagrees positively or negatively affect democratic competence, conceptualized here as political knowledge and participation? This is a critical question in the study of social networks, since democracy entails the ability at a minimum to coexist peacefully within the same political system with others with whom one disagrees, and much of the democratic promise of political discussion requires exposure to divergent viewpoints. On the one hand, research at the nexus of decision science and political science suggests that increasing numbers of options in the choice environment may confuse and demobilize voters (Barker and Hansen 2005; Lau and Redlawsk 2006). Moreover, an important line of research in American politics has shown that, in general, discussing politics with people

with whom one disagrees can lead to lower levels of political engagement (Huckfeldt, Mendez and Osborn 2004; Mutz 2002b). On the other hand, other researchers have shown that this relationship does not hold under all circumstances, even within the American context (Jang 2009; Nir 2005, 2011). Furthermore, some scholars have shown that contact with contrasting views can boost awareness of political arguments and perhaps even more general political information (Mutz 2002a; Price, Cappella, and Nir 2002).

So does disagreement within networks hurt or harm democratic competence? I have argued that there are two steps to addressing this puzzle. First, disagreement should be disaggregated into two separate constructs, *conflict* and *diversity*. The former refers to the number of members of a social network who disagree with the main respondent. The latter refers to the number of different points of view represented in the network. Let us imagine a context in which there are four political parties, A, B, C, and D. Let us also imagine that a main respondent named Fulano is a supporter of Party A and has three discussants: Beltrano, Sicrano, and John Doe (who is a gringo immigrant). If Beltrano, Sicrano, and John Doe all support Party A, of course, conflict takes the value of 0 and diversity take the value of 1. But when the three discussants disagree with Fulano, the possibilities become more complicated. Let us say that Beltrano, Sicrano, and John Doe all support Party B. In that case, conflict—the number of people disagreeing with Fulano—is 3, but diversity—the number of alternative points of view in the network—remains 1. Alternatively, let us say that Beltrano supports Party B, Sicrano Party C, and John Doe Party D. In that case, conflict and diversity will both be 3. When we reconceptualize disagreement as two distinct constructs, its consequences can also be rethought. The second step to solving the puzzle, I have argued, involves recognizing that the effects of these two distinct manifestations of divergent preferences vary across different party systems.

In the next chapter, I will evaluate how contextual factors condition the impacts of conflict and diversity on democratic competence, both in Brazil and cross-nationally. In the present chapter, the goal is more limited. First, I describe the extent of diversity and conflict in the ABR data, assessing the stability of these two distinct constructs and their relationships to each other and to other social network measures. In the second section, I begin to explore the association between these two measures and democratic competence. The hypothesis I test is the most general one outlined in the section on diversity and competence in Chapter 3:

H6. Diversity and conflict have distinct effects on democratic competence.

I test the relationship first in the Brazilian case, and I then briefly examine the relationship in the cross-national context of the CNEP data set. This sets up the analysis for fuller, contextually dependent tests in the following chapter.

6.1 DATA AND METHODS

6.1.1 The Ames-Baker-Rennó (ABR) Two City Panel Study

Most of the analysis in this chapter relies on the ABR data set. Measures of both diversity and conflict in the ABR data are based on discussants' votes for president, as reported by the main respondent in waves 2, 3, 5, and 6. There are two reasons I use main respondents' reports of discussants preferences, rather than those preferences as reported in the discussant interview. First and most importantly, main respondents provided a great deal more information on the preferences of their social network members than was obtained through interviews with those members. At most two discussants were interviewed from any social network, and discussant

interviews occurred only in Waves 3 and 4. Using main respondent reports, however, we have information on up to three discussant preferences for four waves, and for a much larger number of respondents. The larger sample is particularly important, given that we have seen that the group of main respondents who had a discussant interviewed was different in many respects. Second, one could argue that main respondents' perceptions of discussants' preferences are most important, since one cannot be influenced by an opinion one does not recognize.

6.1.1.1 Number of Known Preferences

In the analysis presented below and in the next chapter, I control for the *number of known discussant preferences*, as a proxy for the number of network members with whom the respondent discusses politics.⁶¹ Table 24 describes the total number of discussant preferences main respondents reported in each wave. Across the four waves of the study, the mean *number of known preferences* was fairly stable, and was higher in both election waves than in the non-election waves. How does the *number of known preferences* relate to the size of the social network? By definition, the *network size* serves as an upper bound on the *number of known preferences*. Dividing *number of known preferences* by *network size* yields an indicator of the extent of political discussion in the network, which I will call *politicization*. Table 24 also reveals that the extent of *politicization* ranges from 67% in Wave 5 to 82% in Wave 3. Again, *politicization* is higher in the election waves than in the non-election waves.

⁶¹ Because I am interested in all political communication, I also code respondents who are known to support “no one” as having known preferences. When I instead code only discussants who are known to support a candidate as having known preferences, the mean number of known preferences drops to range from 1.38 in Wave 5 to 1.69 in Wave 6; and politicization ranges from 63% in Wave 5 to 79% in Wave 6. The lack of change in Wave 6 measures is due to the fact that “no one” was not recorded as a discussant preference in that wave.

The second coding scheme for *number of known preferences* results in a measure that is, when entered in a model jointly with *conflict*, a perfectly collinear determinant of the dichotomous variable for having a vote decision. This may contaminate four-wave models that include Wave 6; thus, as a robustness check, I reestimate the models presented here without Wave 6.

Table 24. Number of Discussants' Preferences Known by Main Respondent

	Wave 2	Wave 3	Wave 5	Wave 6
0	26.3%	22.8%	35.0%	26.6%
1	15.2%	15.8%	15.2%	15.0%
2	19.2%	21.9%	17.8%	21.4%
3	39.3%	39.4%	32.0%	37.0%
<i>Total</i>	<i>1,401</i>	<i>1,401</i>	<i>1,401</i>	<i>1,401</i>
<i>Mean</i>	<i>1.71</i>	<i>1.78</i>	<i>1.47</i>	<i>1.69</i>
<i>Percent of reported discussants with known preferences (Politicization)</i>	<i>76.4%</i>	<i>82.3%</i>	<i>66.9%</i>	<i>78.6%</i>

How stable is the *number of known preferences*? Perhaps not surprisingly, given that the size of social networks is constant within election years, the *number of known preferences* is fairly stable from one wave to the next within election years. The correlation between Wave 2 and Wave 3 measures is .69, and the correlation between Wave 5 and Wave 6 measures is .62. Correlations across years, however, are much lower; for instance, the correlation between Wave 3 and Wave 5 is only .29.

I control for the number of known discussant preferences because political conversation in itself affects each of the dependent variables, as shown in Chapter 5. Since the variables for diversity and conflict are by construction correlated with the size of the network, it is important to control for network size. Otherwise any effects found for diversity and conflict might be due to the effects of discussion, rather than to disagreement *per se*. I use the number of discussants with known preferences, rather than the total number of discussants, because this chapter is more generally concerned with preferences. Incidentally, this provides a more stringent test of the effects of diversity and conflict, since they are more strongly correlated with the number of discussants with known preferences than they are with the total number of discussants.

6.1.1.2 Number of Unique Preferences and Social Network Diversity

Table 25 presents the number of unique preferences reported among a respondent's discussants over the six waves of the ABR study, again using presidential candidate choices as the measure of preferences.⁶² The number of *known* preferences determines the upper bound of the number of *unique* preferences. As we can see, the number of unique preferences is fairly low; most respondents have networks with no more than one unique preference represented. How stable is the number of unique preferences? This network characteristic turns out to exhibit greater flux than the number of known preferences. Between the second and third waves, the correlation is .54, while between the fifth and sixth waves, the correlation is only .44. Meanwhile, between the third and sixth waves, the correlation is .26.

Table 25. Number of Unique Preferences Represented in Egocentric Network

	Wave 2	Wave 3	Wave 5	Wave 6
0	28.3%	25.8%	39.1%	28.3%
1	41.7%	47.0%	41.8%	42.9%
2	14.7%	15.8%	10.1%	14.5%
3	15.3%	11.3%	9.0%	14.3%
<i>Total</i>	<i>1,401</i>	<i>1,401</i>	<i>1,401</i>	<i>1,401</i>
<i>Mean</i>	<i>1.17</i>	<i>1.13</i>	<i>0.89</i>	<i>1.15</i>

Social network diversity is coded simply as an indicator for networks with more than one unique preference reported. Note that when more than one unique preference is present, by definition at least one discussant is in conflict with the main respondent; thus, a network with diversity but no conflict is logically impossible. Table 25 indicates that while political conversation may be prevalent, the extent of exposure to diversity is much lower.

⁶² Here, I code based only on discussants known to support a candidate; discussants known to support “no one” are not counted as having a unique preference.

6.1.1.3 Social Network Conflict

Table 26 presents the number of discussants who disagree with the main respondent in each wave of the ABR study.⁶³ Again, the *number of known preferences* determines the upper bound of the level of disagreement. The number of disagreeing preferences turns out to be fairly unstable. Between the second and third waves, the correlation is .38, while between the fifth and sixth waves, the correlation is .35. Across waves, stability is correspondingly lower, at only .14 between the third and sixth waves.

Table 26. Number of Discussants Disagreeing with Main Respondent

	Wave 2	Wave 3	Wave 5	Wave 6
0	65.2%	67.1%	73.1%	68.3%
1	21.6%	21.0%	15.4%	19.3%
2	9.7%	9.1%	7.2%	7.4%
3	3.4%	2.9%	4.3%	5.1%
<i>Total</i>	<i>1,401</i>	<i>1,401</i>	<i>1,401</i>	<i>1,401</i>
<i>Mean</i>	<i>0.70</i>	<i>0.59</i>	<i>0.62</i>	<i>0.69</i>

Conflict is coded simply as an indicator variable coded “1” for those who have at least one disagreeing preference in their networks. Using this measure, we see even lower levels of exposure to divergent preferences within the electorate. Across the four waves of the study, the majority of respondents did not have even a single discussant known to support an opposing candidate. Nonetheless, between 27% and 32% of citizens in each wave reported talking about politics with at least one person with whom they disagreed.

⁶³ To avoid creating a measure of *conflict* that is by design a perfect predictor of the dummy variable for voting decisions, I code situations in which the discussant is known to support a candidate, but the main respondent supports “no one,” “doesn’t know,” or does not respond, as instances of dyadic conflict. However, *discussants* who support “no one” or who have unreported preferences are automatically coded as not being in conflict with the main respondent.

6.1.1.4 Model Specification and Analysis

The impacts of conflict and diversity are estimated using four waves of longitudinal data, since discussants' preferences were measured in two waves each in the elections of 2002 and 2006. In contrast to the models presented in the previous chapter, this analysis uses random effects. This is done in large part to maximize comparability with the multilevel models based on the CNEP II. Dependent and control variables largely follow the specifications described in the last chapter. However, the models include a number of other controls, again largely to correspond with the models based on the CNEP II data: party identification, party contact, campaign participation, and an indicator for whether the respondent has a spouse or partner.

6.1.2 Second Round of the Comparative National Elections Project (CNEP II)

In the final section of this chapter, I conduct preliminary tests of the relationship between diversity and conflict, on the one hand, and democratic competence, on the other, using data from the second round of the Comparative National Elections Project (CNEP II). Given the multilevel structure of the data, in order to estimate coefficients and standard errors properly I develop mixed models, using a random intercept at the country level (Gelman & Hill 2007; Steenbergen & Jones 2002). In addition, because the sample size varies dramatically across the countries of the study, in the analysis that follows I weight the data so that each country counts as having 1000 respondents.

The CNEP II offers an unrivaled opportunity to examine intimate egocentric social networks on four continents. Investigators of the CNEP II asked citizens across the study standardized questions on exposure to a number of intermediaries of political information: discussion networks, television, newspapers, and, in many countries, secondary associations and

party contacts. Assessing the features and consequences of political discussion networks based on these data required the creation of a single, unified data base. This demanded very careful attention to detail to ensure that variables received the same operationalization across the eleven countries of the study. This is, to my knowledge, one of the first times the social network data from these eleven countries have been used together in analysis (but see Magalhães 2007; Richardson & Beck 2007), as well as the first time that multilevel models have been developed based on these data.

6.1.2.1 Social Network Measures

Social network measures are constructed to be identical to those based on the ABR data. In every country of the CNEP survey, respondents were asked for the first names of people with whom they talked about “important matters,” and they then responded to a series of questions about each named discussant. In most countries, respondents first received questions explicitly asking political discussions with their spouses or partners, followed by questions about two other discussants. In the US, UK, Germany, and Japan, respondents were not asked explicitly about their spouses, but they received questions about five discussants. The first measure of the social network that I code is the number of members reported in response to the egocentric social network battery. I code this variable on a scale from 0 to 3 in all countries, with the first discussant representing the spouse. In those countries where respondents were not explicitly asked about their spouses, I code the first discussant based on whether the respondent named a spouse as any one of the top five discussants. The first two non-spouse discussants go in second and third place, regardless of where they fall in the order provided by the respondent.

Next, I code a variable running from 0 to 3 in all countries, measuring the frequency of political discussion within the network. For each discussant (both spouse and non-spouse), a

variable is coded from 0 to 1 measuring the frequency of reported discussion of politics with that person. These variables are then summed to produce a measure that combines the number of discussants with the frequency of political discussion with each one.

I then code a number of variables based on network members' vote preferences. These preferences generally reference candidates in presidential systems, and parties in parliamentary ones.⁶⁴ I create variables for the extent to which social network members' candidate or party preferences are known, and for network *diversity* and *conflict*. *Diversity* is coded as the total number of unique, non-blank, non-missing preferences in the network, regardless of whether they agree or disagree with the main respondent. This variable is unavailable in Greece, because in that country responses were coded simply based on whether the discussant disagreed with the main respondent. *Conflict* refers to the number of network members who are known to support some candidate or party, and whose choice is different from that of the main respondent. In Appendix B I present the rules for coding preferences, as well as the parties and candidates coded for each country.

6.1.2.2 Dependent Variables

In the analysis of the CNEP II data, I assess the effects of social network characteristics on two aspects of democratic competence, political knowledge and turnout. Turnout in each country is measured simply with a dichotomous variable measuring responses to a question regarding whether the interviewee voted in the most recent presidential or parliamentary election, depending on whether the country's electoral system is presidential or parliamentary. Political knowledge is much more complicated to assess in a cross-national context, since standard questions typically ask about issues related to domestic affairs. In 8 of the 11 countries,

⁶⁴ However, in Uruguay and Hong Kong, responses were based on a combination of parties and candidates.

locally determined questions gauged respondents' knowledge of major political issues; in Germany, Japan, and the US, knowledge questions were not available.⁶⁵ Based on these locally determined questions, I measure knowledge as the respondent-level mean of dichotomous variables for right answers to each individual knowledge item, and I standardize responses within each country (i.e., within each country, mean = 0, standard deviation = 1). In Table 27, I describe the distribution and number of variables measured in indices of political knowledge in each country.

Table 27. Distribution and Composition of Knowledge Indices in the Countries of the CNEP II

Country	Mean of Index	Standard Deviation of Index	Number of Questions
Bulgaria	0.468	0.367	5
Chile	0.423	0.359	5
Greece	0.589	0.363	3
Hong Kong	0.673	0.350	3
Hungary	0.398	0.369	3
Spain	0.395	0.358	4
United Kingdom	0.533	0.234	10
Uruguay	0.206	0.281	3

6.1.2.3 Other Independent Variables

I also code a number of other variables that were available across all countries of the survey. *Educational level* was coded as years of schooling, and was rescaled to run from 0 to 1 in each country. *Female* is an indicator coded 0 for men and 1 for women. *Age* is coded in four groups: 18-29, 30-44, 45-64, and 65 and over. *Newspaper* and *TV* measure attention to political news from newspapers and television, respectively. Both are on a 0 to 1 scale running from “never or almost never” to “every day or almost every day.” *Political interest* is the mean of responses to

⁶⁵ Unfortunately, interviewer ratings of respondents' political knowledge were available only in Bulgaria, Chile, Greece, Hungary, Spain, and Uruguay.

two questions, both recoded on a 0 to 1 scale, regarding interest in politics and interest in the election campaign. *Married* is a dichotomous variable coded 1 for those who are married or living with a partner, and 0 for all others; this is an important control, since by construction the size of the network depends in part on whether the respondent has a spouse or partner.⁶⁶ Finally, *Has party identification* is an indicator variable coded 1 for respondents who reported sympathizing with a political party.

6.2 THE ASSOCIATION BETWEEN DIVERSITY AND CONFLICT AND DEMOCRATIC COMPETENCE IN BRAZIL

How does discussing politics with network members with diverse and conflicting preferences affect democratic competence? While scholars of deliberation suggest that exposure to different viewpoints leads to better informed preferences and improves democratic legitimacy (Ackerman & Fishkin 2004; Barabas 2004; Druckman & Nelson 2003; Fishkin & Luskin 2005; Gastil et al. 2002; Gutmann & Thompson 1996; Price et al. 2002; Ryfe 2005; Wantchekon 2009), a number of scholars in the American context have shown that the experience of conflict can be demobilizing. I seek to build on such findings, suggesting that *diversity* and *conflict* have distinct effects on democratic competence. In this section, I begin to examine the extent to which the argument might hold in Brazil.⁶⁷ Figures 7 and 8 present the relationships between

⁶⁶ The correlation between *married* and network size, however, is only .19, and the correlation with number of known preferences is only .16.

⁶⁷ As I have explained in previous chapters, the ABR study did not distinguish between voting null or blank and non-voting. As a result, I am not able to model turnout *per se*. Rather, I model whether the respondent reports supporting a specific candidate, which I term “having a vote decision.” In the cross-national data, however, I model turnout as such. Also, I do not use clientelism as an indicator of democratic competence in this context, since I do not expect horizontal relationships within intimate egocentric networks to be associated with clientelism.

diversity and *conflict*, respectively, and political knowledge.⁶⁸ Those with no unique or conflicting preferences (meaning people with no discussants) have quite low levels of political knowledge. Knowledge scores range from 2.07 for those with one unique preference in their networks to 2.27 for those whose network includes three unique preferences. Moreover, while those who no conflict in their networks have substantially lower levels of knowledge, there is very little difference in knowledge between those with one and with three conflicting discussants. Knowledge scores ranging from 2.15 for those with one conflicting network member, to 2.22 for those with three conflicting network members.

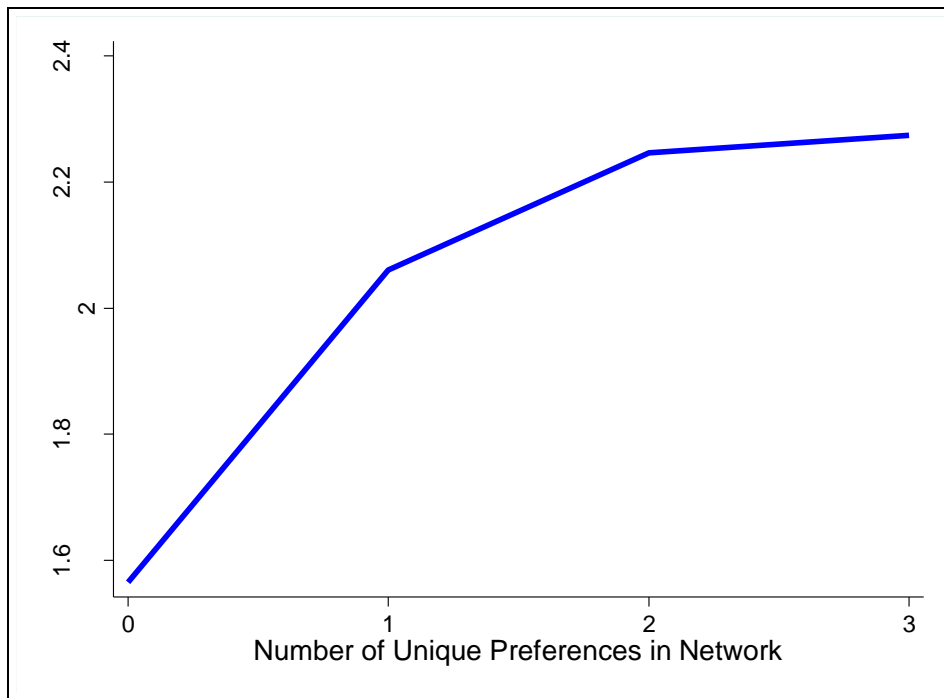


Figure 7. Number of Unique Preferences and Political Knowledge

⁶⁸ As discussed in detail in Chapter 5, knowledge is measured using interviewer ratings due to the lack of consistent political information measures across the many waves of the study. See that chapter for an in-depth exploration of the validity of this measure as an indicator of political knowledge.

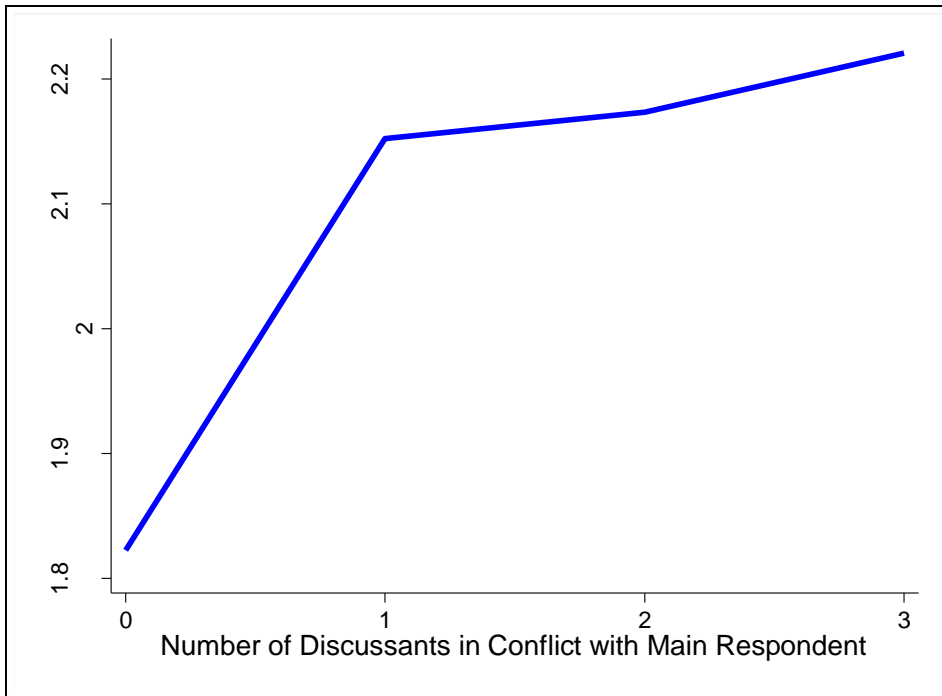


Figure 8. Network Disagreement and Political Knowledge

Next, Figures 9 and 10 assess the relationship between *diversity* and *conflict*, on the one hand, and the probability of having a voting decision, on the other. Since these figures present bivariate associations, the dependent variable is simply the proportion of respondents that has a vote decision. Figure 9 presents a relationship that looks similar to the two previous figures: an overall positive association between diversity and voting decisions, though there is very little difference between those with one and two unique preferences in their networks in the probability of having a voting decision. Again, while the probability of having a voting decision is (relatively speaking) quite low in the data for those with no unique preferences in their networks, the probability of having a voting decision ranges only from .89 for those with one unique preference in their networks to .92 for those with three unique preferences.

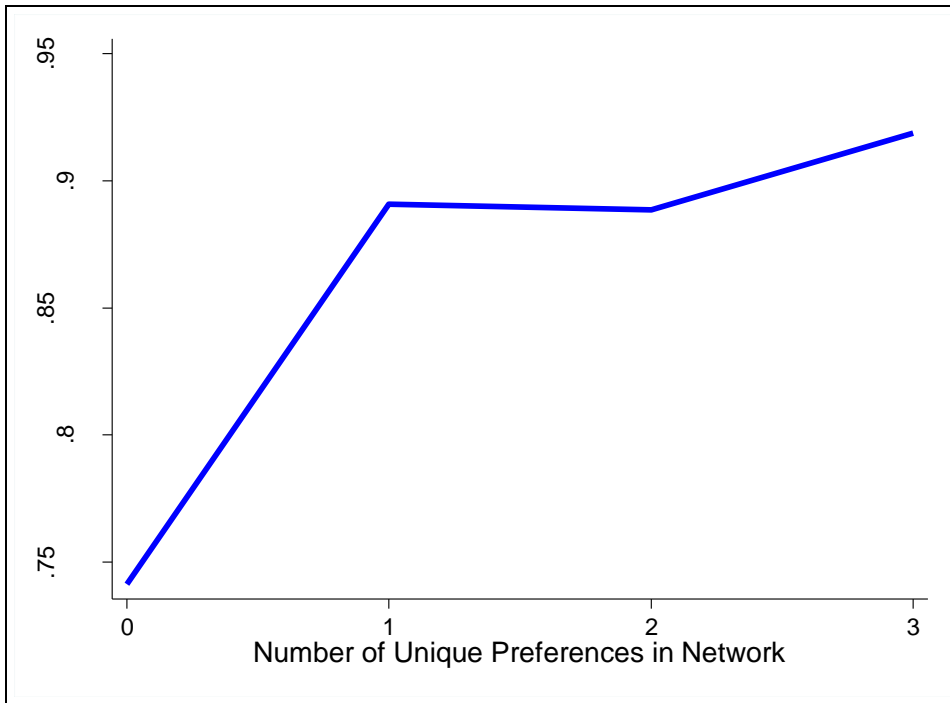


Figure 9. Number of Unique Preferences and Probability of Having a Voting Decision

Finally, the association between *conflict* and voting decisions presented in Figure 10 looks quite different from the relationships found in the previous three figures. Here, the relationship is strongly negative, though the probability of having a voting decision actually rises slightly between those with zero and one discussants in conflict with the main respondent. The probability of having a voting decision drops steeply from .89 for those with one disagreeing discussant, to .79 for those with two disagreeing discussants, to .60 for those with three.

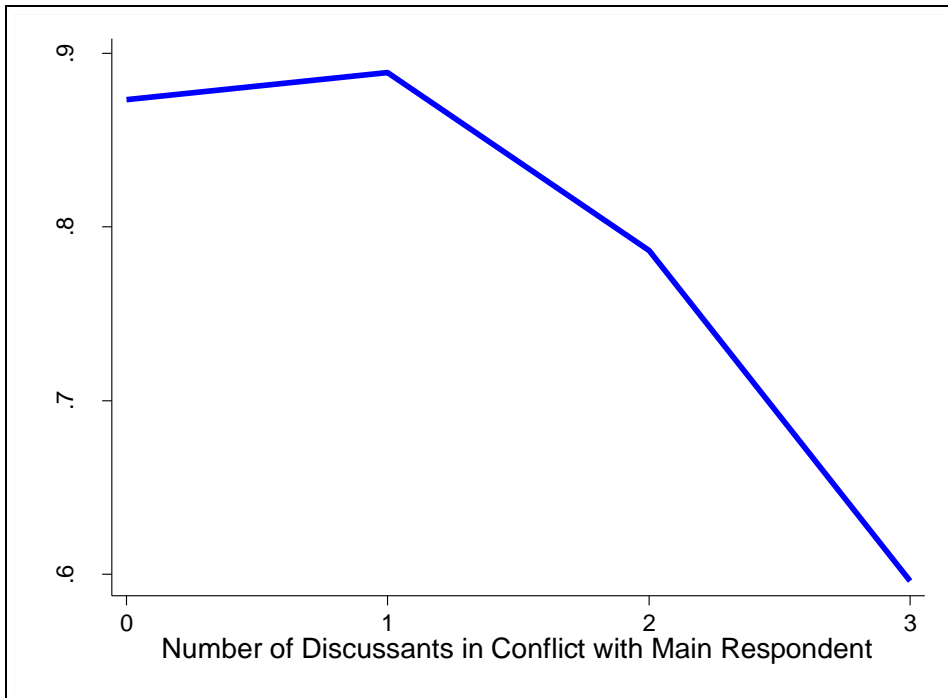


Figure 10. Conflict as a Determinant of Having a Voting Decision

The associations discovered here are very preliminary. First, they have ignored the possibility of interactions between diversity and conflict. Second, the analysis lacks important controls. In the models presented in the next section, I consider interactions, and I also control for a host of network-related, political engagement, and demographic measures, in the context of a longitudinal random effects model using a lagged dependent variable. The most important control is for the number of known preferences. It is critical to take into account overall awareness of network members' political preferences since, as indicated above, the number of known preferences serves as the upper bound of counts of unique and disagreeing preferences; and since the number of known preferences is strongly associated with both dependent variables.

Figures 11 and 12 demonstrate this claim, presenting the relationship between the number of known preferences and the two dependent variables, knowledge and the probability of making a voting decision. As we can see, in both cases the relationship between number of known

preferences and the measures of democratic competence is quite strong, monotonically positive, and closer to linear, though the effect of moving from zero to one known preference is stronger than the effect of moving from one to two or two to three.

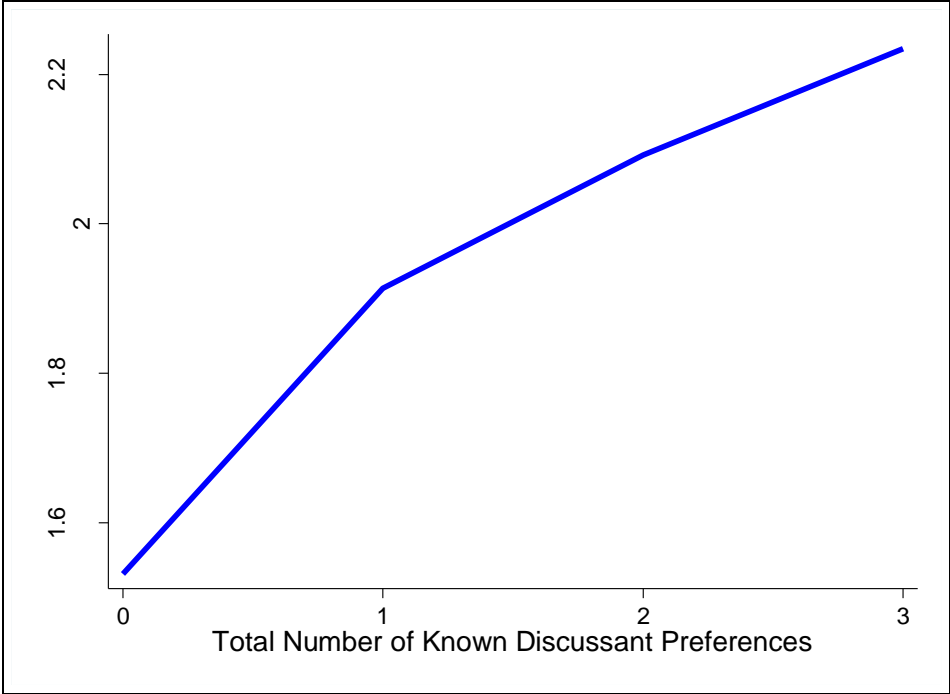


Figure 11. Number of Known Preferences and Political Knowledge

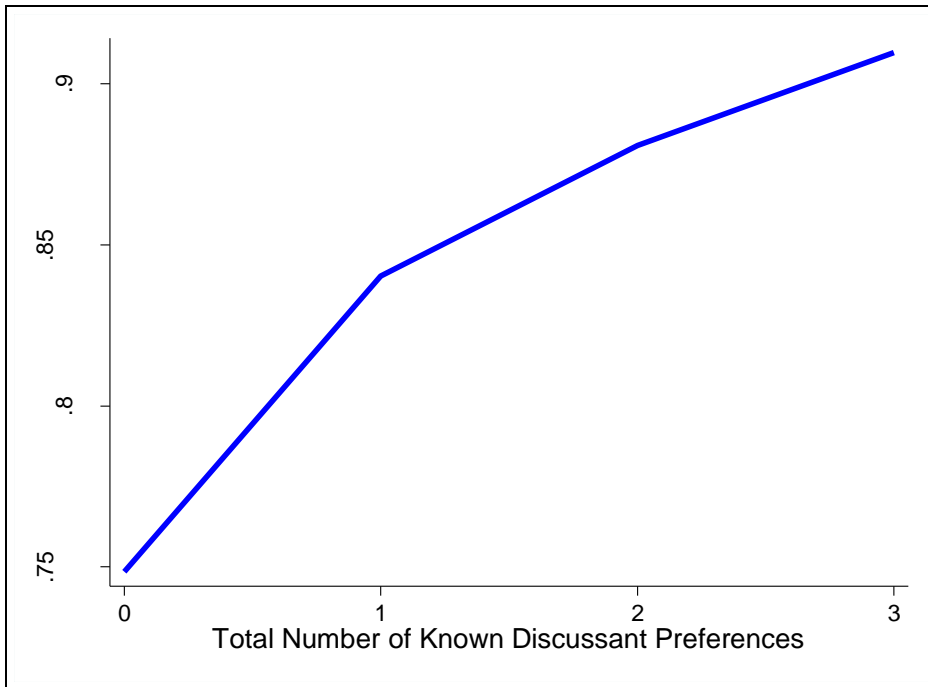


Figure 12. Number of Known Preferences and the Probability of Having a Voting Decision

6.3 DISCUSSION, DIVERSITY, CONFLICT, AND DEMOCRATIC COMPETENCE: EVIDENCE FROM THE CNEP II AND THE ABR DATA

How do the experiences of *conflict* and *diversity* within social networks affect democratic competence? Table 28 assesses the effects of diversity and conflict within the immediate egocentric network on democratic competence in Brazil. The model includes indicators for networks with no conflict, with conflict but no diversity, and with conflict and diversity; the omitted category is networks with no alters. Results indicate that the *number of known preferences* is strongly associated with both variables. Moreover, the experience of *conflict* has a strong negative effect on the probability of having a voting decision, as well as a positive effect on knowledge. However, this effect is attenuated when conflict is combined with diversity.

Table 28. The Effect of the Network Composition on Voting Decisions and Knowledge, ABR Data

	Political Knowledge	Voting Decision
Number of Known Preferences	0.059*** (0.014)	0.746*** (0.067)
No Conflict (At Least One Preference Known)	0.065 (0.046)	0.127 (0.144)
Conflict without Diversity	0.113* (0.054)	-2.307*** (0.185)
Conflict with Diversity	0.101+ (0.055)	-1.129*** (0.223)
Education	0.116*** (0.005)	-0.028 (0.017)
Female	-0.339*** (0.032)	-0.133 (0.113)
Age	0.007*** (0.001)	-0.006 (0.004)
Senior Citizen	-0.108* (0.055)	-0.162 (0.197)
TV News Frequency	0.041*** (0.006)	0.031 (0.022)
Newspaper Frequency	0.040*** (0.007)	0.112*** (0.024)
Party Contact (mean)	0.223*** (0.061)	-0.089 (0.227)
Campaign Participation (wave 1)	0.097** (0.037)	0.359** (0.127)
Has Party Identification (mean)	0.263*** (0.044)	0.248 (0.169)
Has Spouse/Partner	0.000 (0.032)	0.177 (0.109)
Constant	0.291*** (0.086)	1.453*** (0.298)
R-squared (overall)	0.37	
Log likelihood		-1932.57
Number of observations	5116	5208

Note: Model of political knowledge is estimated using random effects GLS regression, with robust and clustered standard errors. Model of voting decisions is estimated using random effects logit, with robust standard errors. Coefficients are significant at + p<.10, * p<.05, ** p<.01, *** p<.001.

Control variables generally have the expected effects, though they are somewhat spotty. Media attention, party identification, and prior campaign participation promote both aspects of democratic competence, while women have lower levels of knowledge and lower rates of making a voting decision. Interestingly, education and age are both positively associated with knowledge, but education's effect on voting decisions is negative, and age becomes statistically indistinguishable from zero. Respondents over the age of 70, by contrast, have lower democratic competence.

One might wonder whether diversity and conflict have similar effects on all citizens. Effects might vary by city of residence, sex, education, age, or partisanship. I run a series of follow-up models to examine whether some citizens receive extra benefit or harm from exposure to divergent preferences. In each model, I interact one of the demographic or political variables listed here with both diversity and conflict. In Table 29, I present the interacted coefficients as well as the statistical significance of the interaction term for the results of each of these ten interaction models. There are few statistically significant interactions, even at very generous levels of significance, and even where results vary, the differences are small and rather uninteresting. The effects of discussion on knowledge appear to be stronger in Juiz de Fora than in Caxias do Sul. In addition, conflict's effects on the probability of having a voting decision are stronger for those at high educational levels.

Table 29. Coefficients for Diversity and Conflict, by Respondents' Demographic and Political Characteristics

	Knowledge			Voting Decision		
	No Conflict	Conflict no Diversity	Conflict and Diversity	No Conflict	Conflict no Diversity	Conflict and Diversity
Juiz de Fora	.120*	.243***	.147*	0.154	-2.325***	-1.248***
Caxias do Sul	-0.001	-0.033	0.045	0.125	-2.287***	-1.014***
Interaction significant?	p = .130	p = .004	no	no	no	no
Male	0.025	0.105	.148*	-.013	-2.591***	-1.053***
Female	0.086	.115^	0.061	0.208	-2.146**	-1.189***
Interaction significant?	no	no	no	no	p = .12	no
Education: minimum	0.04	0.11	0.083	0.373	-1.755***	-0.549
Education: maximum	0.093	0.123	0.124	-0.209	-2.889***	-1.678***
Interaction significant?	no	no	no	no	p = .04	p = .06
Age: minimum (16)	0.117	0.142	0.084	0.407	2.231***	-0.955**
Age: maximum (94)	0.005	0.083	0.158	-0.24	-2.344***	-1.324**
Interaction significant?	no	no	no	no	no	no
No Party Identification	.159*	0.123	.207*	0.199	-1.796***	-0.593^
Party Identifier	0.079	0.135	.192^	0.029	-2.184***	-0.696^
Interaction significant?	no	no	no	no	no	no

Note: Coefficients are statistically significant at ^p < .10, *p < .05, **p < .01, ***p < .001.

I now turn to the CNEP II. In Table 30, I assess the relationship between diversity and conflict, on the one hand, and turnout and political knowledge, on the other, while controlling for the total number of known preferences and a range of variables related to political engagement, and using country-level random intercepts to account for heterogeneity at that level. This analysis not only allows a preliminary test of the impacts of diversity and conflict cross-nationally. Stepping back a little, it also allows us to contextualize the findings from the previous chapter, examining the effects of political discussion more generally on democratic competence. In these models, the experience of conflict decreases turnout, while homogeneously agreeing networks boost it. However, diversity and conflict are unrelated to political knowledge. Meanwhile, the number of known preferences is very strongly associated with both measures of democratic competence, though it may be impossible to tease out the direction of influence based on these cross-sectional, observational data.

Table 30. The Effect of the Network Composition on Turnout and Knowledge, CNEP II

	Knowledge	Turnout
No Conflict (At Least One Preference Known)	0.022 (0.033)	1.162*** (0.116)
Conflict without Diversity	0.011 (0.038)	-0.852*** (0.112)
Conflict with Diversity	0.052 (0.050)	-0.114 (0.161)
Number of Known Preferences	0.052** (0.017)	0.220*** (0.059)
Education	0.979*** (0.040)	0.311** (0.119)
Female	-0.378*** (0.020)	0.128* (0.060)
Aged 30-44	0.260*** (0.030)	0.523*** (0.083)
Aged 45-65	0.355*** (0.032)	0.838*** (0.095)
Aged 65 +	0.296*** (0.032)	0.694*** (0.090)
News from newspaper	0.132*** (0.024)	0.410*** (0.076)
TV news	0.089** (0.030)	0.385*** (0.091)
Political interest	0.201*** (0.011)	0.391*** (0.033)
Has party identification	0.049* (0.023)	0.695*** (0.070)
Married	0.029 (0.023)	0.07 (0.067)
<i>Constant</i>	-0.724*** (0.047)	0.4 (0.368)
<i>Number of Observations</i>	10674	13479
<i>Number of Countries</i>	8	11
<i>Log likelihood</i>	-9871.86	-3682.17

Note: All models are estimated using hierarchical (mixed) linear regression models, with random effects at the country level. Coefficients in standard errors are significant at + $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$.

The control variables yield not unexpected findings. Democratic competence is strongly related to a variety of measures of political engagement and attention, as well as to social status and age, though the latter variable's effects are clearly non-linear. In an interesting contrast with the Brazilian findings, in the cross-national sample women have higher levels of turnout, and education promotes both aspects of democratic competence. For age, we again see evidence of a drop-off in democratic competence for citizens in the oldest age cohort, though by far the strongest results are for the difference in democratic competence between citizens under 30 and everyone else.

6.4 CONCLUSION

The second research question this dissertation seeks to resolve is the following: does exposure to divergent preferences within the network hurt or help democratic competence? There are reasons to suspect that it might at times hurt and at others help. Research in American politics has shown that disagreement within social networks tends to depress participation, at the same time that it boosts tolerance and understanding of others' points of view. Still, other scholars have shown that the depressive effects of disagreement do not necessarily hold for those with mixed networks, and for those who have very low levels of engagement. Moreover, research on political decision-making suggests that being exposed to a high number of points of view may at times lead to *disengagement*.

I have argued that a key to answering this question is to recognize an important distinction, that between what I have termed *diversity* and *conflict*. The former refers to the number of different points of view represented in the intimate social network, and the latter

refers to the number of network members who disagree with the main respondent, or ego. Each network feature may have distinct effects on democratic competence.

This chapter begins to test these arguments. The ABR data clearly support parsing divergent preferences into two distinct, though closely related, constructs. I begin by examining measures of these two network features, discovering moderate levels of diversity and fairly low levels of conflict. Both measures exhibit moderate levels of stability within election years, and fairly low levels of stability across election years. I then assess these measures' associations with democratic competence, finding that, at least in bivariate analysis, both diversity and conflict are positively associated with political knowledge, but that their relationships with having a voting decision diverge. While diversity is associated with higher probabilities of having a voting decision, conflict is associated with lower probabilities.

In multivariate specifications, the results are mixed. In Brazil there is some evidence that diversity may be positively associated with knowledge, but no network configuration has any effect on knowledge in the cross-national data set. Turning to voting decisions/turnout, we find more effects. In the Brazilian case, conflict decreases the likelihood having a voting decision, though the impact is much stronger in homogeneous and conflicting networks. In the CNEP II, conflict's impact on turnout is negative, but only in non-diverse (homogeneously conflicting) networks.

I have argued, however, that both the distribution and the effects of diversity and conflict should vary around the world. The nature of the party system, and in particular the effective number of candidates/parties, should strongly determine the extent to which citizens are exposed to conflict and diversity. Moreover, both variables' relationship to democratic competence should be conditioned by the same party systems variable.

7.0 PUTTING NETWORKS IN CONTEXT: CROSS-NATIONAL VARIATION IN INTIMATE EGOCENTRIC NETWORKS AND THEIR EFFECTS

I have several goals in this chapter. I seek first to put the Brazilian case in comparative perspective by examining the degree to which egocentric networks in Brazil are similar to or different from networks in other countries. Even more importantly, I aim to pull together more completely my answers to the second and third research questions motivating the dissertation: how does discussing politics with people with divergent preferences affect democratic competence? And how do country-level factors affect the composition of networks and condition their impact on democratic competence?

In addressing the former question, I have argued that the notion of divergent preferences needs to be reconceptualized as two distinct network characteristics, *diversity* and *conflict*, which have distinct and interactive effects on democratic competence. In the previous chapter I examined these two network features in the Brazilian case, and provided preliminary evidence that they have different associations with political engagement. In this chapter I take the arguments and evidence laid out in the previous chapter further, showing how party systems affect the extent and consequences of exposure to *diversity* and *conflict*.

In addressing the latter question, I focus on the role of party systems, and in particular the number of candidates. This variable affects social network composition in two ways. First, the number of parties or candidates in an election affects the extent to which citizens are exposed to

countervailing information from discussants and conditions the effect of countervailing information on democratic behavior. Thus, the resolution of the third research question will also help to resolve the second one. Second, as I will show in Chapter 8, Brazil's multipartism and system of open list proportional representation lead to high numbers of social ties to local politicians.

In the previous empirical chapters, I have examined the composition of Brazilians' social networks, discovering that this composition affects democratic competence. I have focused on two major dimensions of the intimate egocentric network: their size and the general frequency of political discussion within them; and the degree to which they provide exposure to divergent political preferences. In this chapter, I consider cross-national data related to these dimensions. The empirical analysis to be presented here begins with a descriptive examination of the patterns of discussion across countries. I consider a couple of questions: To what extent do the sizes of social networks vary across countries? Further, to what degree does discussion within those networks have political content? I use a measure of the extent to which discussants' political preferences are known as an indicator of what I term network *politicization*, or the extent of political discussion in that network. Last, to what extent do intimate egocentric networks around the world provide citizens access to different points of view? While the aim of this preliminary exercise is baldly descriptive, it is important for beginning to contextualize the Brazilian findings and for beginning to think about how patterns of discussion vary around the world.

The empirical analysis then proceeds to test a series of hypotheses. First, I examine the impact of the party system on the extent to which citizens around the world experience divergent preferences within their networks. Second, using both the CNEP II and the ABR data, I test

whether the effects of diversity and conflict, which were examined in a preliminary way in the previous chapter, vary across systems with different numbers of candidates.

Why would party systems affect social networks? I focus here on mechanisms related to information transfer. Personal discussion networks filter information from the broader environment, in particular partisan information. When discussants disagree with each other or with the main respondent, they contribute new information to the mix. This has two implications. First, the higher the number of parties in a political system, the lower each party's share of the electorate is likely to be; and the smaller one's party's share of the electorate, the more difficult it will be to surround oneself with like-minded network members. Thus, the more likely one is to have networks dominated by divergent preferences.

Second, the fact that social networks filter partisan information implies that the effects of social networks on citizen engagement in politics will vary across party systems. In particular, party systems condition the effects of exposure to divergent preferences. Previous scholarship has generally considered only one aspect of divergent preferences within networks, namely the extent to which network members agree or disagree with the main respondent. When we recognize that divergent preferences take different forms, however, we can also investigate their distinct effects. In diverse networks—that is, ones where more than one preference is represented—citizens receive information about various political tendencies. Furthermore, by definition citizens are exposed to at least some discussants who disagree with them. In general, and especially when the total number of candidates in the system is low, more information is educative; in systems with more complex candidate choice environments, however, the information environment can become oversaturated. At the same time, conflict between the main respondent and his or her discussants has generally been seen as demobilizing in the US

context. However, one must consider whether the network is homogeneously disagreeing, or provides access to mixed preferences. Moreover, in systems with high numbers of candidates, I argue, conflict becomes the norm, and its negative effect on political mobilization should be attenuated.

Thus, in this chapter, I test the following hypotheses, explained in Chapter 3:

- H7. In the *two*-party context, social networks with greater political *diversity* will be associated with *higher* levels of political knowledge.
- H8. In the *two*-party context, social networks with greater political *conflict* (but not diversity) will be associated with *lower* levels of political participation.
- H9. In the *multi*-party context, the effects of political *diversity* and *conflict* will be attenuated.
- H10. The **number of parties/candidates** in a political system will be positively associated with the levels of diversity and conflict, and the **candidate's share of the electorate** will be negatively associated with the same.

7.1 DATA AND MEASUREMENT

This chapter primarily uses data from the second round of the Comparative National Elections Project (CNEP II). This data set was described in general in Chapter 4, and variable coding was described in Chapter 6. As in the previous chapter, I develop mixed models, using a random

intercept at the country level, and I weight the analysis so that the countries count as having equal numbers of respondents. In addition, a contextual variable is added to the analysis.⁶⁹

7.1.1.1 Party System Measure

In each country, I code party system measures based on CNEP respondents' candidate/party preferences, as described above in Section 8.1.1 and below in Appendix B. The effective number of candidates/parties in each country is based on the Laakso-Taagepera index (Laakso & Taagepera 1979); it is coded using the formula

$$ENC_k = 1/\sum_{i=1}^j(p_{ik}^2),$$

where k represents the country, and p_{ik} is the proportion of survey respondents supporting party i in country k , and where parties in country k range from 1 to j . In addition, in some models I include the candidate/party's percent of the electorate, coded simply as the proportion of all voters within the sample supporting the candidate or party of the respondent's vote choice.

7.2 PATTERNS OF DISCUSSION ACROSS COUNTRIES

7.2.1 Network Characteristics

To what extent are social network characteristics constant across countries? I begin the empirical analysis by describing intimate egocentric networks throughout the NCEP II. In Figure 13, I assess both the average number of network members reported in each country and the average number of network members whose candidate or party preferences are known.

⁶⁹ In the long-term, my goal is to examine the effects of each of the many possible country-level factors I identified in the literature review in Chapter 2.

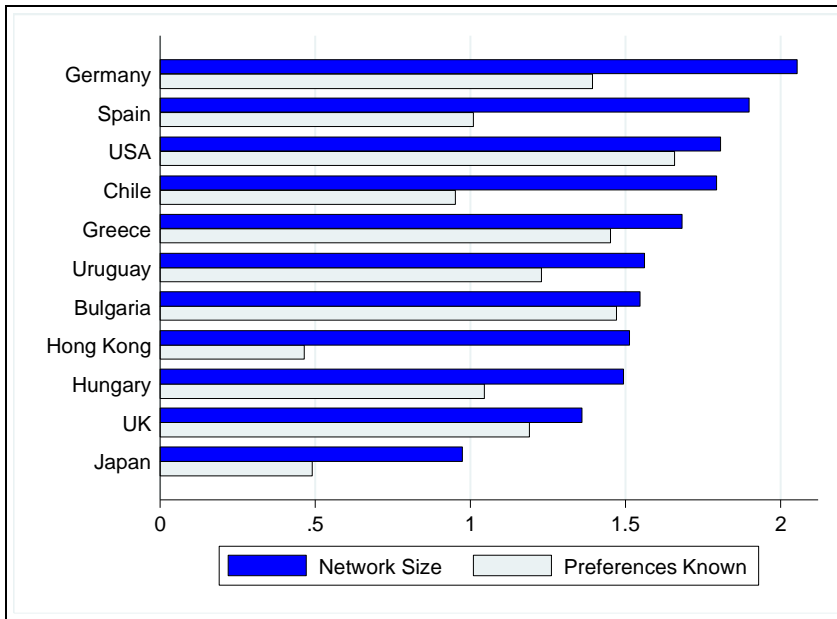


Figure 13. Network Size and Number of Known Preferences in the Countries of the CNEP II

The figure reveals that average number of network members varies substantially across countries, from a high of a little over 2 (on this variable running from 0 to 3) in Germany to a low of a little under 1 in Japan. Recall that the network generator battery in each country asks about discussants of “important matters,” not of “politics”; thus, these statistics cannot be taken as an indicator of the amount of political discussion. Nonetheless, they give us a sense of how patterns of sociability vary across countries.

To what extent do such patterns correspond to political discussion? In Figure 13, I also examine the average number of network members whose political preferences are known, as an indicator for whether political discussion has occurred with each member.⁷⁰ Again, we find substantial variation across countries; 11.6% of the variance in the number of preferences known is accounted for simply by country dummies. The impact of country-level factors on awareness

⁷⁰ As described in Appendix B, if a respondent knows that his or her discussant did not vote or voted blank, I code this as knowing the discussant’s preference, since some political discussion must have occurred.

of network member preferences is very strong even after accounting for network size. Obviously, since the size of the network defines the upper bound for the possible range of number of network members with known preferences, average network size correlates with average number of known preferences. Nonetheless, what is perhaps most striking about the results is the extent to which the two diverge. On this more politically oriented measure, the US appears as the country with most politically engaged networks, followed by Bulgaria and Greece, and with Germany only in fourth place. On the other end of the spectrum, Hong Kong and Japan are the countries where there appears to be the least awareness of network members' preferences.

Based on these two network measures, I estimate what I call the average level of *politicization* of networks in each country of the NCEP II. This construct refers to the probability that any given discussant's preferences are known, and it is calculated as the number of known preferences divided by the number of total network members. Thus, the measure effectively controls for the number of network members listed, which may largely be determined by non-political factors. In Figure 14, which presents the average politicization in each country of the NCEP II, we find that Hong Kong and Japan are the countries with the least politicized networks, while Bulgaria, the US, the UK, and Greece are the countries with the most politicized networks. The same figure also presents the average reported frequency of political discussion with each network member, on a four-point scale rescaled to run from 0 to 1. The two country-level measures are correlated at $r = .85$, which boosts confidence that both tap into an underlying construct related to the intensity of political discussion within the country.

While it is impossible to draw definite conclusions on this matter with such a limited number of cases, Figure 14 seems to indicate that patterns of political discussion within networks may vary by world region. Confucian and, to a lesser extent, Iberian heritage might be

associated with lower levels of political discussion with each network member, while Anglo and Eastern Europe heritage might be associated with higher levels of such discussion.

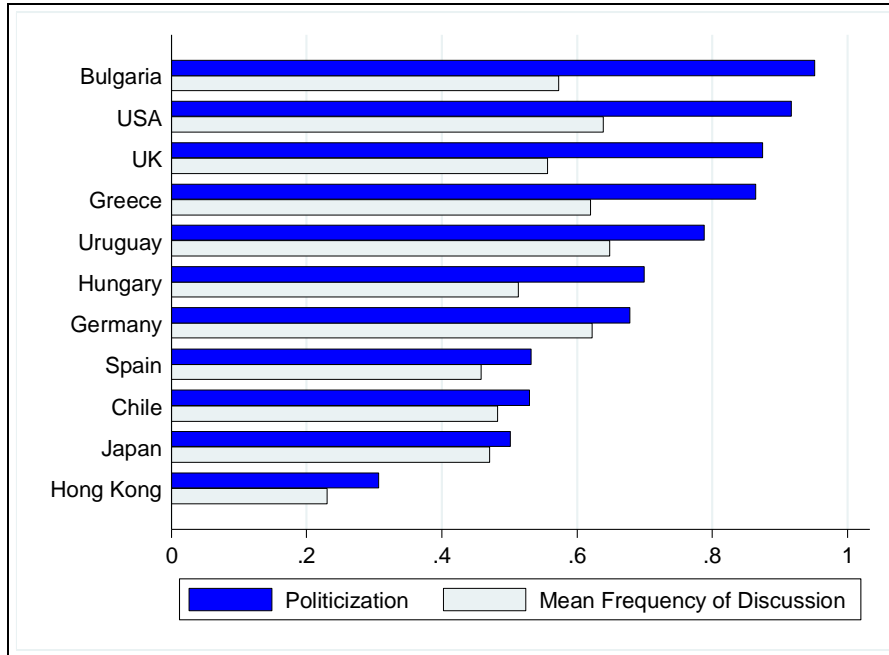


Figure 14. Average Network Politicization and Frequency of Discussion in the Countries of the CNEP II

Where does Brazil stand in cross-national perspective? Note that the Brazilian surveys asked about discussants of politics, rather than of “important matters.” This difference makes the Brazilian data not completely comparable, though research in the US context does indicate that the two different “network generators” produce very similar results (Huckfeldt & Sprague 1995; Klobstad et al. 2009). In addition, the Brazilian surveys did not ask about *frequency* of discussion. Nonetheless, they do provide a great deal of comparable information. In the six-wave sample from the ABR data, the mean egocentric network size is 2.2 in Waves 2 and 3, and 2.1 in Waves 5 and 6, while in the all-respondent sample the measures are 1.9 and 2.1, and counting only non-six-wave respondents the respective numbers are 1.7 and 2.0. Thus, even in

the most conservative analysis, Brazil appears to be one the most sociable country studied. Moreover, in cross-national perspective it becomes clear that Brazilians are also fairly likely to know their discussants' preferences. As described in the last chapter, the mean number of known preferences in the ABR data is 1.7 in Wave 2, rising to 1.8 at the height of the election 2002 campaign, in Wave 3; and 1.5 in Wave 5, rising to 1.7 in Wave 5, at the height of the 2006 campaign. Thus, at the height of Wave 3, Brazilian networks had a level of politicization of .82, while in Wave 6 politicization was .79. This puts Brazil at around the positions of Uruguay or Greece in terms of the politicization of networks.

How do the levels of *diversity* and *conflict* found within social networks vary around the world? Figure 15 examines the average number of unique preferences and the average number of discussants in conflict with the main respondent around the world. Recall that these two measures run from 0 to 3, and are dichotomized to create the indicators for diversity and conflict. Since the number of known preferences is an upper bound for both measures, it is not surprising that patterns found above are repeated here. Only in the US and (just barely) in Bulgaria does the average number of unique preferences within a network exceed 1.0, while in Japan and Hong Kong the average number of unique preferences is far below 0.5. Meanwhile, exposure to explicit conflict is lower; in no country does the average network contain even a single member in conflict with the main respondent. How does Brazil compare based on these measures? The analysis presented in the previous chapter indicates that the levels of exposure to diversity and conflict in Brazil are quite high. Diversity was measured at 1.13 and 1.15 in the two election waves, while conflict was measured at .59 and .69. This suggests that Brazil and US have approximately equal levels of exposure to divergent preferences, and that the two lead the pack on these measures.

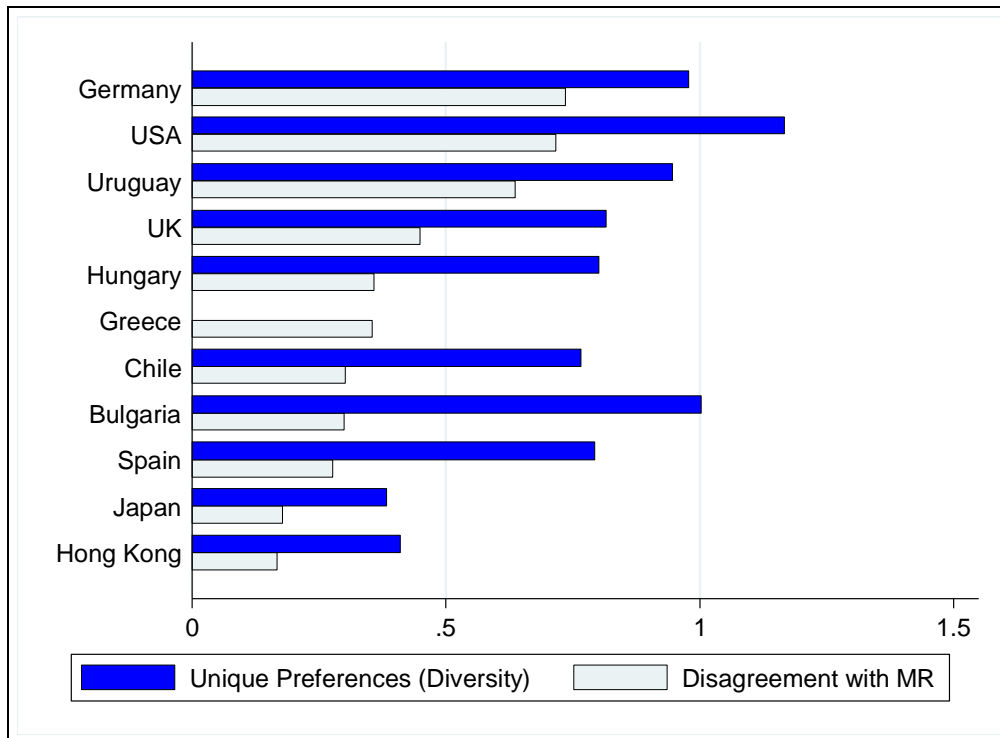


Figure 15. Average Number of Unique Preferences and Network Disagreement in the Countries of the CNEP II

7.2.2 The Impact of Party Systems on Exposure to Diversity and Conflict

I now turn to the relationship between party systems and network diversity and conflict, using two measures of the party system: the effective number of candidates/parties, and candidates' percentage of the vote. In Figure 16, I present descriptive statistics on the effective number of candidates in each country.⁷¹ On the one end, Uruguay's (at the time) factionalized party system led it to have the highest effective number of candidates, with close to 5.⁷² Other systems with three or more candidates included Greece, Hungary, Hong Kong, the UK, Spain, and Germany. The 1992 election examined here was unusual for the US, since it included a prominent third

⁷¹ The analysis in this section is based primarily on the CNEP II. See Chapter 1 for an assessment of the effective number of candidates in each wave of the ABR study.

⁷² At the time, parties were allowed to run more than one candidate on a general election ballot.

party candidate, Ross Perot. Thus, the US has well over two effective candidates in the CNEP II. The countries with the lowest effective numbers of candidates are Chile, where Eduardo Frei and the *Concertación* enjoyed a landslide win in this newly democratized country; and Japan, where the LDP, in keeping with its status as the country's dominant party, had 65% of the parliamentary election vote in the survey.⁷³ The effective number of candidates should logically be tightly related to the second measure of the party system, the percentage of the electorate supporting a candidate; the more candidates there are, the fewer voters will be available for each. Indeed, the correlation between the effective number of candidates and candidates' percentages of the vote is $-.39$.

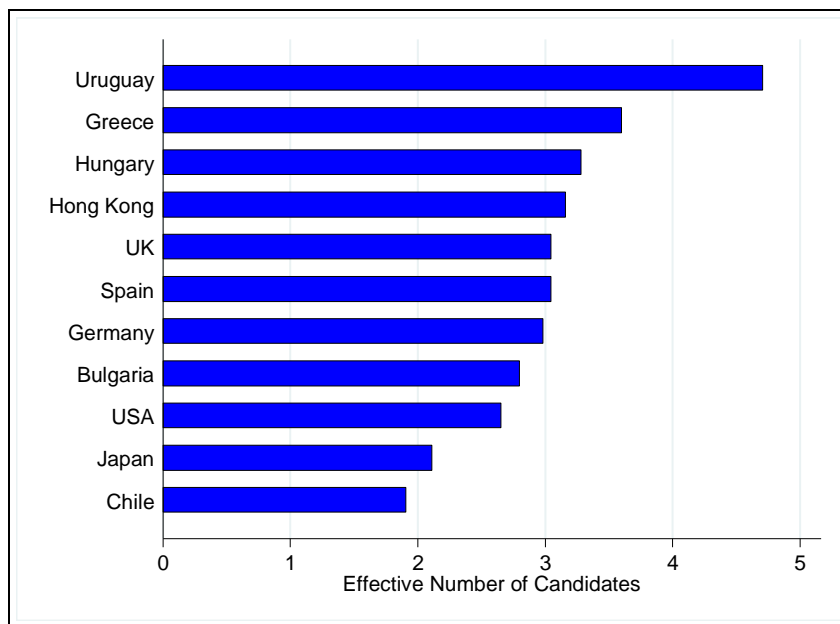


Figure 16. Effective Number of Candidates in the Countries of the CNEP II

Is multipartism at the country level associated with multipartism within individuals' social networks? I have argued above that personal networks filter information and influences from the broader party system. This implies that the nature of the party system affects network

⁷³ A full 70% of Chileans who expressed a vote choice did so for Frei.

composition, and that the party system's impacts on political behavior may be mediated by intermediaries such as social networks or the media. In Figure 17, I begin to examine the evidence, testing the bivariate relationship in the CNEP II between the effective number of candidates and two different measures of what might be called network-level multipartism: country mean levels of the number of disagreeing preferences within networks; and country mean levels of the number of unique preferences within networks. I find suggestive evidence that the effective number of candidates is associated with greater *diversity* and *conflict*, though with only 11 aggregate level cases the correlation coefficients of .32 and .25 are not statistically significant.⁷⁴

⁷⁴ In the ABR data it is somewhere between very risky and impossible to test the effect of a system level variable such as the effective number of candidates; nonetheless, taking the four waves as four cases and analyzing just those four cases, the correlation between the effective number of candidates and the wave mean number of disagreeing preferences is .90, while the correlation between the effective number of candidates and wave mean number of unique preferences is .04. Including the four ABR waves as four additional cases in the CNEP II analysis presented in Figure 18, the correlation between effective number of candidates and conflict drops to .27, while the correlation between effective number of candidates and diversity drops to .19.

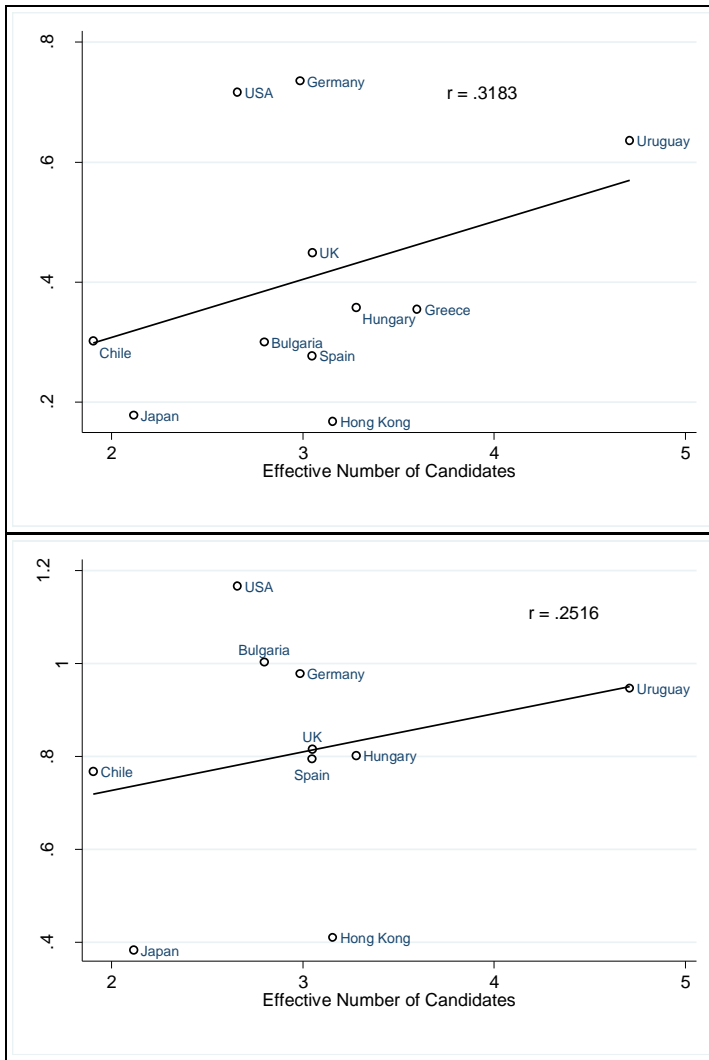


Figure 17. Association between Effective Number of Candidates and the Average Number of Unique and Conflicting Preferences in Networks (CNEP II)

The effective number of candidates affects network composition, I have argued, because, quite simply, when there are more candidates, each candidate will tend to represent a smaller proportion of the electorate, and his or her supporters will be less able to isolate themselves from exposure to divergent preferences. This suggests that the candidate's percent of the electorate may be a party system variable that has a more proximate effect on network composition. Indeed, Huckfeldt et al. (2005) show in a study of the US, Germany, and Japan that the

probability of having a completely agreeing network is strongly linearly related to the percentage support for one's candidate in the population. In Figure 18 I test this notion, finding strong support in the case of the average number of disagreeing preferences, but not the average number of unique preferences.⁷⁵

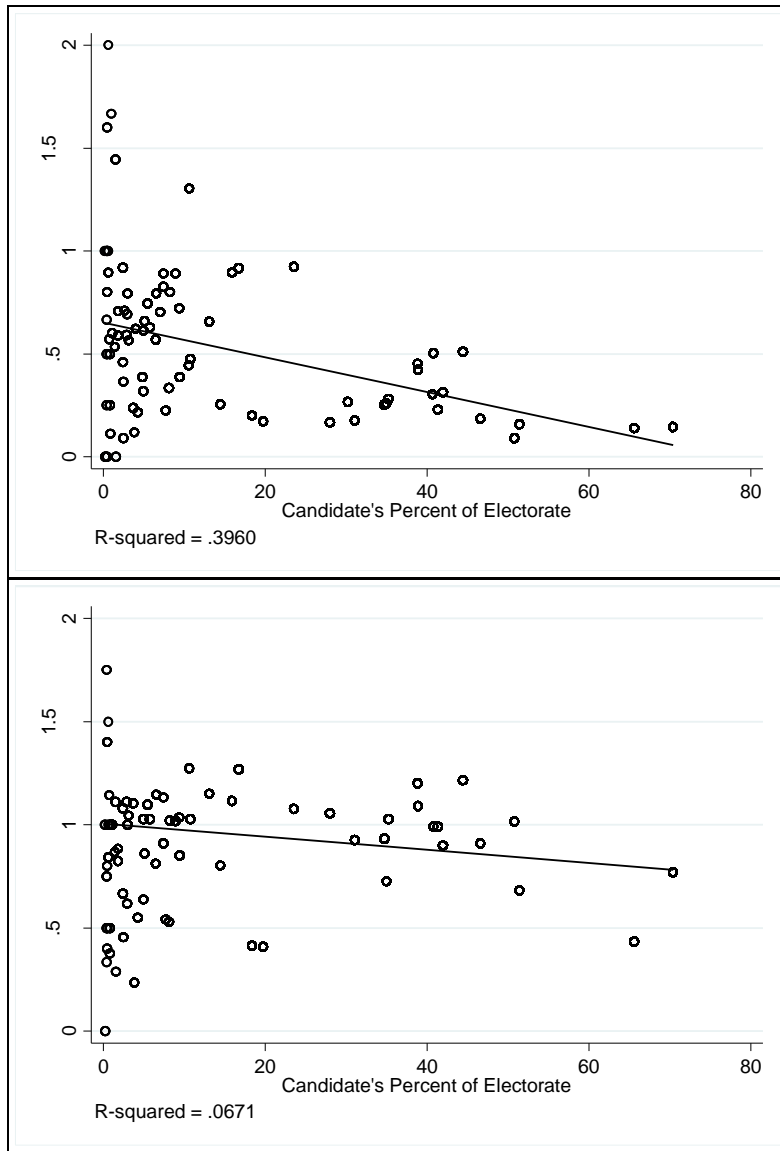


Figure 18. Linear Association between Candidate's Share and Conflict and Diversity in the CNEP II

⁷⁵ In the ABR data, the correlation between the average number of unique preferences and the candidate's percent of the electorate is $-.06$, while the correlation between the average number of disagreeing preferences and the candidate's percent of the electorate is $-.28$ (calculating the candidate's share of the vote in each wave separately).

The scatterplots in Figure 18 suggest, however, that the relationships may not actually be linear; especially the bottom plot seems to indicate that the true relationship may actually be curvilinear, or more precisely quadratic. While this runs counter to expectations, it would be consistent with a story in which some supporters of fringe candidates isolate themselves from political discussion and potential disagreement. Figure 19 shows that a quadratic term substantially improves the fit of the line, especially in the bottom scatterplot.

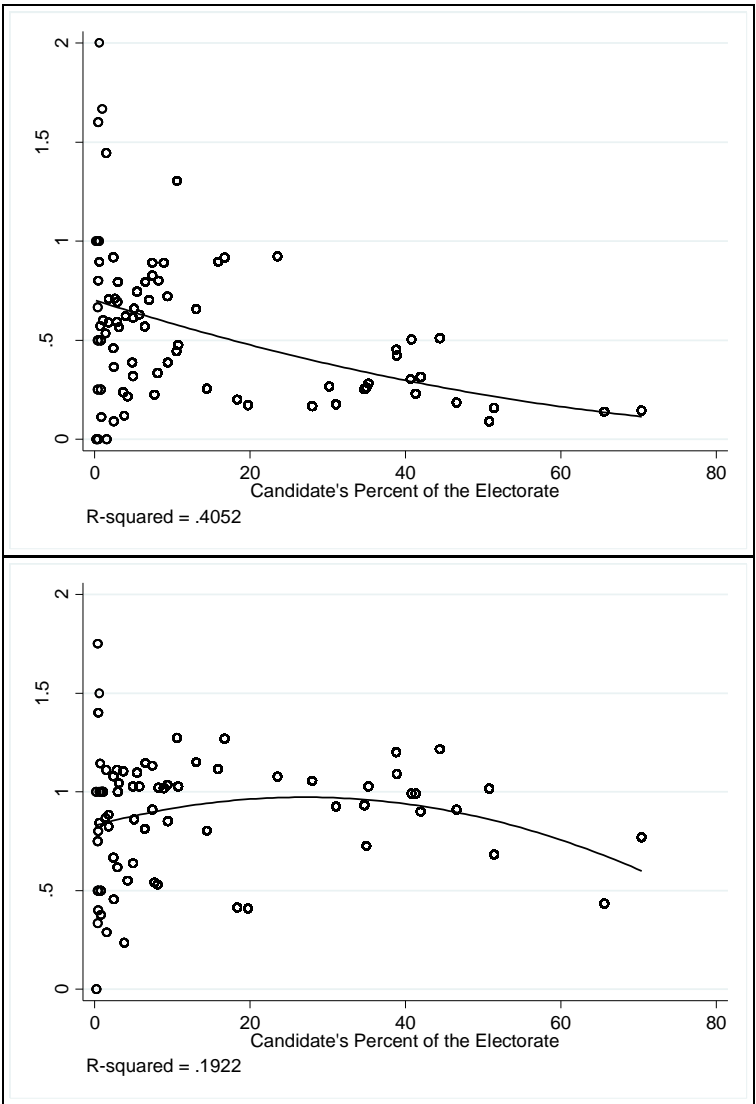


Figure 19. Curvilinear Association between Candidate's Share and Conflict and Diversity (CNEP II)

In Table 31, I assess the relationships depicted in Figures 18 and 19 using multivariate models based on the CNEP II. I test the extent to which the number of disagreeing and unique preferences in a network is related to the percentage (and percentage squared) of the vote a respondent's chosen candidate receives, as well as to the effective number of candidates at the country level. At the same time, the models take into account country-level heterogeneity using a mixed model with random intercepts at the country level. The models also control for the number of known preferences, since this variable defines the upper bound of both dependent variables; other network-related measures such as frequency of reported political discussion and whether the respondent is married; and a number of other controls for political engagement and socio-demographics.

Table 31 reveals that across the countries of the CNEP II, supporters of more popular candidates have less opportunity for exposure to deliberation fostered within networks characterized by high levels of conflict and diversity. Both the main and quadratic terms are highly statistically significant, confirming the bivariate association found in Figure 19.⁷⁶ The effective number of candidates does *not* have a statistically significant association with either measure, though the effect is in the expected direction and suggestive. Moreover, if, as I argued and the data support, the effective number of candidates affects candidates' vote shares, the number of candidates may have an indirect effect on the experiences of diversity and conflict.

⁷⁶ If I remove the quadratic term from the models using percentage candidate support, the linear term remains highly statistically significant.

Table 31. The Effect of the Electoral Environment on Discussion Network Composition

	Number of Disagreeing Preferences		Number of Unique Preferences	
Effective Number of Candidates	0.061 (0.061)		0.020 (0.014)	
Candidate's Percent of Electorate		-2.686*** (0.148)		-0.433*** (0.114)
Candidate's Percent Squared		2.914*** (0.224)		0.407* (0.166)
Number of Known Preferences	0.387*** (0.008)	0.321*** (0.009)	0.627*** (0.006)	0.592*** (0.007)
Frequency of Political Discussion in Network	-0.007 (0.011)	-0.004 (0.012)	-0.050*** (0.008)	-0.049*** (0.010)
Education	0.087*** (0.022)	0.118*** (0.024)	0.045** (0.016)	0.047* (0.019)
Female	-0.009 (0.012)	-0.008 (0.013)	0.006 (0.008)	0.015 (0.010)
Aged 30-44	-0.039* (0.017)	0.002 (0.019)	0.001 (0.012)	0.005 (0.015)
Aged 45-65	-0.091*** (0.018)	-0.038+ (0.020)	-0.042*** (0.013)	-0.038* (0.016)
Aged 65 +	-0.092*** (0.018)	-0.037+ (0.020)	-0.034** (0.013)	-0.025 (0.016)
News from newspaper	-0.042** (0.015)	-0.009 (0.017)	-0.002 (0.011)	-0.013 (0.013)
TV news	-0.037+ (0.019)	0.012 (0.022)	0.006 (0.013)	0.006 (0.017)
Political interest	-0.029*** (0.007)	-0.015* (0.007)	0.001 (0.005)	0.000 (0.006)
Has party identification	-0.106*** (0.013)	-0.062*** (0.015)	-0.017+ (0.009)	-0.020+ (0.012)
Married	-0.023+ (0.014)	-0.016 (0.015)	0.001 (0.009)	-0.011 (0.012)
<i>Constant</i>	-0.036 (0.197)	0.482*** (0.056)	0.115* (0.047)	0.319*** (0.029)
<i>Number of Observations</i>	13644	10462	12683	9550
<i>Log likelihood</i>	-9491.60	-6680.85	-4713.75	-3826.83

Note: All models are estimated using hierarchical (mixed) linear regression models, with random effects at the country level. Coefficients in standard errors are significant at + $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$.

The models yield a number of other conclusions. The number of known preferences has a strong positive effect on the number of disagreeing and unique preferences in a network but, after controlling for this variable, marriage has little relationship with the dependent variables. A number of measures related to political engagement, including frequency of political discussion in the network, political interest, and party identification, decrease experiences of conflict and diversity, again controlling for the number of known preferences. Interestingly, however, education boosts exposure to conflict and diversity, while respondents in older cohorts tend to have more homogeneous and agreeing networks than do those under the age of 45.

7.3 PARTY SYSTEMS CONDITION THE EFFECTS OF DIVERSITY AND CONFLICT

Do the effects of diversity and conflict vary across political systems with different numbers of candidates? I have argued that in systems with low numbers of candidates, conflict may be demobilizing, while exposure to more points of view may boost knowledge. Such a pattern would be consistent with what has been found in the literature, which has been largely based on the US until now. I have also argued, though, that as the number of candidates rises and conflict becomes the norm, both conflict's demobilizing effect and diversity's educative effect may disappear. If this is the case, the results presented in the previous chapter will misestimate the true effects of *diversity* and *conflict* on democratic competence.

In Table 32, I examine the interactive relationships between the effective number of candidates and various configurations of conflict and diversity. Dummy variables represent networks with no conflicting members, with at least one conflicting member but only one unique

preference, and with at least one conflicting member and more than one preference represented among the discussants; as before, the omitted category is respondents with no discussants. I find substantial evidence that the relationship between each network configuration and democratic competence is contingent on the nature of the party system. In the knowledge model, the impact of diversity is attenuated in systems with more effective candidates. In the turnout model, again, both the negative effects of conflict and the positive effects of its absence are attenuated in systems with more candidates. Meanwhile, the main effect for effective number of candidates is insignificant in both models; that is, among citizens who are not exposed to divergent preferences, the party system has no effect on political behavior.

To facilitate interpretation of the interaction terms presented in Table 32, in Figures 20, 21, and 22 I estimate how variation in the effective number of candidates conditions the association between network configurations and turnout.⁷⁷ The solid line in each figure represents the estimated coefficient, while the dotted lines represent the 95% confidence intervals. In the first figure, we find that the effect of lack of conflict on turnout is positive and statistically significant across most of the range of the effective number of candidates, but that it becomes statistically significant when this number is slightly over 4.0. Similarly, the effect of having a network characterized by conflict but no diversity (that is, where every alter disagrees with the main respondent, and supports the same candidate) on turnout is negative across the range of the party system variable, but it becomes statistically insignificant when the number of candidates rises above approximately 3.5. Finally, the last figure indicates that the effect on turnout of having a network characterized by *both* conflict *and* diversity (versus having no discussants) is statistically insignificant across the board.

⁷⁷ Because coefficients for the effects of diversity on knowledge are so robustly insignificant, I do not graphically interpret that coefficient here.

Table 32. The Interactive Effects of Electoral Environment and Network Composition on Turnout and Knowledge, CNEP II

	Knowledge	Turnout
No Conflict (At Least One Preference Known)	0.118 (0.108)	3.288*** (0.669)
No Conflict * Effective Number of Candidates	-0.033 (0.033)	-0.688** (0.216)
Conflict without Diversity	0.275* (0.133)	-2.797*** (0.459)
Conflict without Diversity * Effective Number of Candidates	-0.083* (0.040)	0.679*** (0.157)
Conflict with Diversity	0.399** (0.145)	-0.864 (0.714)
Conflict with Diversity * Effective Number of Candidates	-0.110* (0.043)	0.272 (0.241)
Effective Number of Candidates	-0.007 (0.029)	0.595 (0.407)
Number of Known Preferences	0.053** (0.017)	0.203*** (0.060)
Education	0.973*** (0.040)	0.312** (0.119)
Female	-0.378*** (0.020)	0.134* (0.060)
Aged 30-44	0.263*** (0.030)	0.506*** (0.084)
Aged 45-65	0.358*** (0.032)	0.825*** (0.095)
Aged 65 +	0.296*** (0.032)	0.678*** (0.091)
News from newspaper	0.138*** (0.024)	0.402*** (0.076)
TV news	0.085** (0.028)	0.400*** (0.091)
Political interest	0.200*** (0.011)	0.392*** (0.033)
Has party identification	0.052* (0.023)	0.688*** (0.070)
Married	0.032 (0.023)	0.066 (0.067)
Constant	-0.696*** (0.096)	-1.462 (1.292)

Table 32 continued.

	Knowledge	Turnout
<i>Number of Observations</i>	10674	13479
<i>Number of Countries</i>	8	11
<i>Log likelihood</i>	-9865.26	-3660.76

Note: All models are estimated using hierarchical (mixed) linear regression models, with random effects at the country level. Coefficients in standard errors are significant at + $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$.

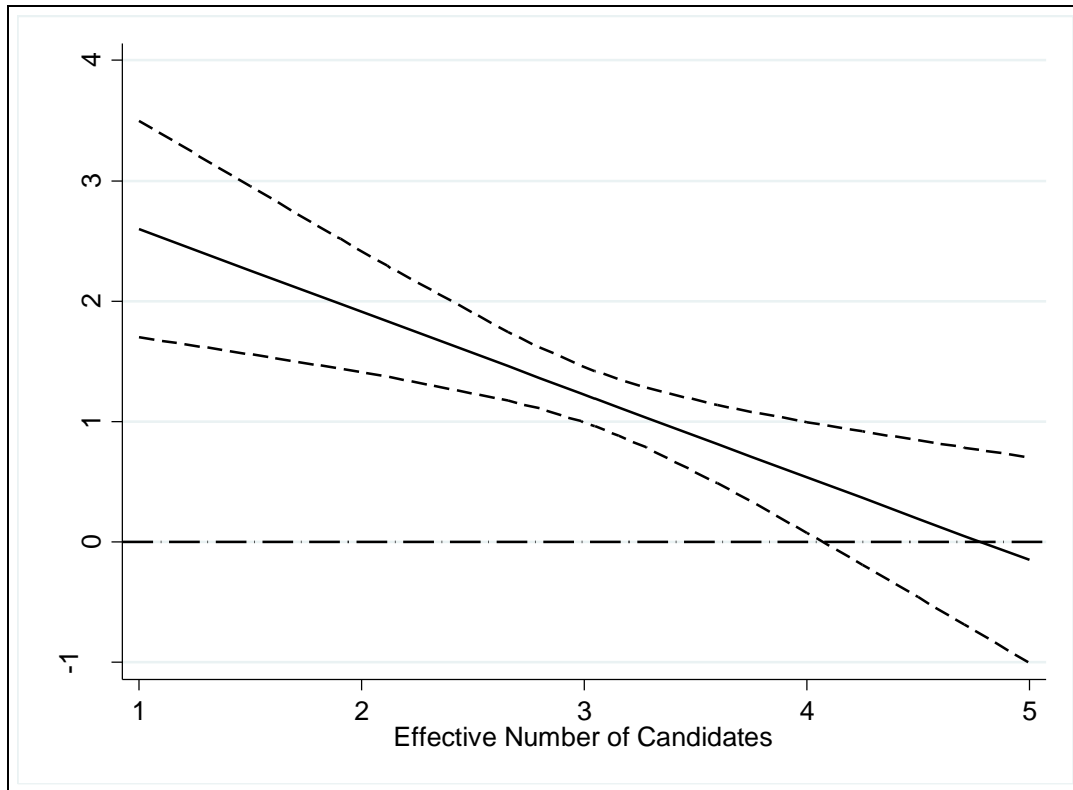


Figure 20. Interaction between Effective Number of Candidates and Diversity in Predicting Turnout (with 95% Confidence Interval)

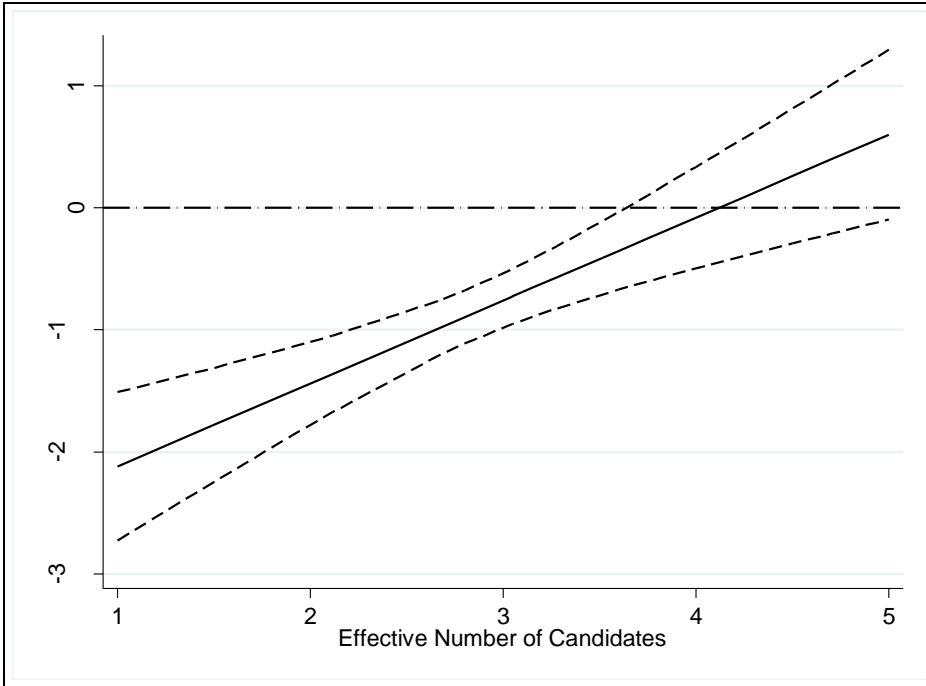


Figure 21. Interaction between Effective Number of Candidates and Conflict in Predicting Turnout (with 95% Confidence Interval)

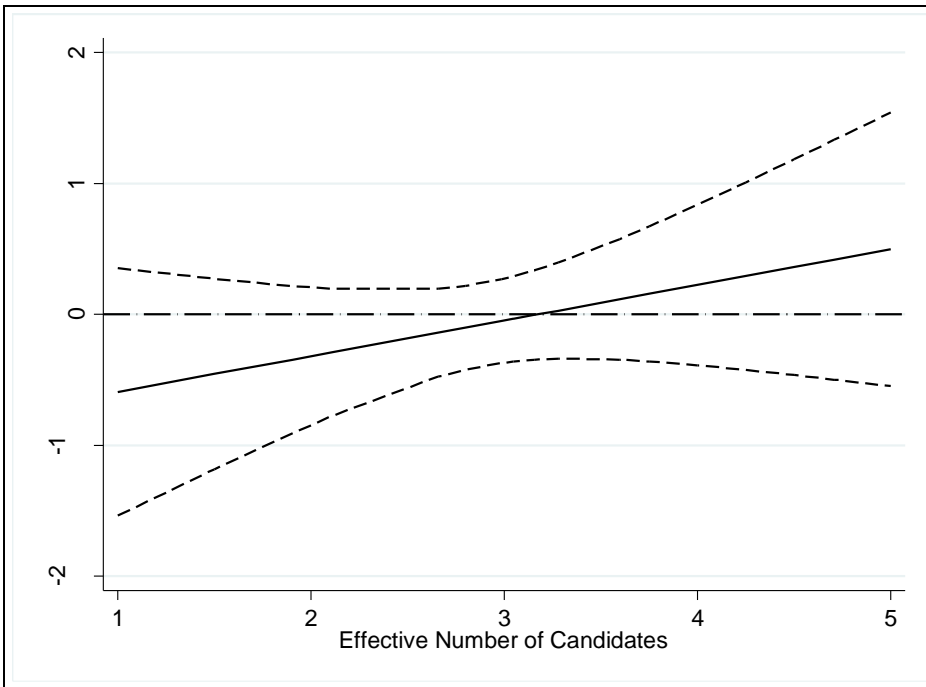


Figure 22. Interaction between Effective Number of Candidates and Conflict in Predicting Turnout (with 95% Confidence Interval)

Next, Figures 23, 24, and 25 interpret the coefficients from the model of political knowledge. The first figure shows that having a network with no conflict (as opposed to having no network members with known preferences) is unassociated with political knowledge. The second figure demonstrates that at the more lax standard of statistical significance of $p < .10$, conflict without diversity has a small positive impact on knowledge when the effective number of candidates is 2, but the effect quickly disappears in more complex party systems. Finally, in the last figure we see that diverse networks have boost political knowledge in smaller party systems, but the effect becomes statistically insignificant in political systems with a little over 2.5 effective candidates. Taken together, these results provide substantial evidence that the effects of exposure to divergent preferences on knowledge and turnout vary both across the type of diverging preferences that are measured and the number of candidates/parties.

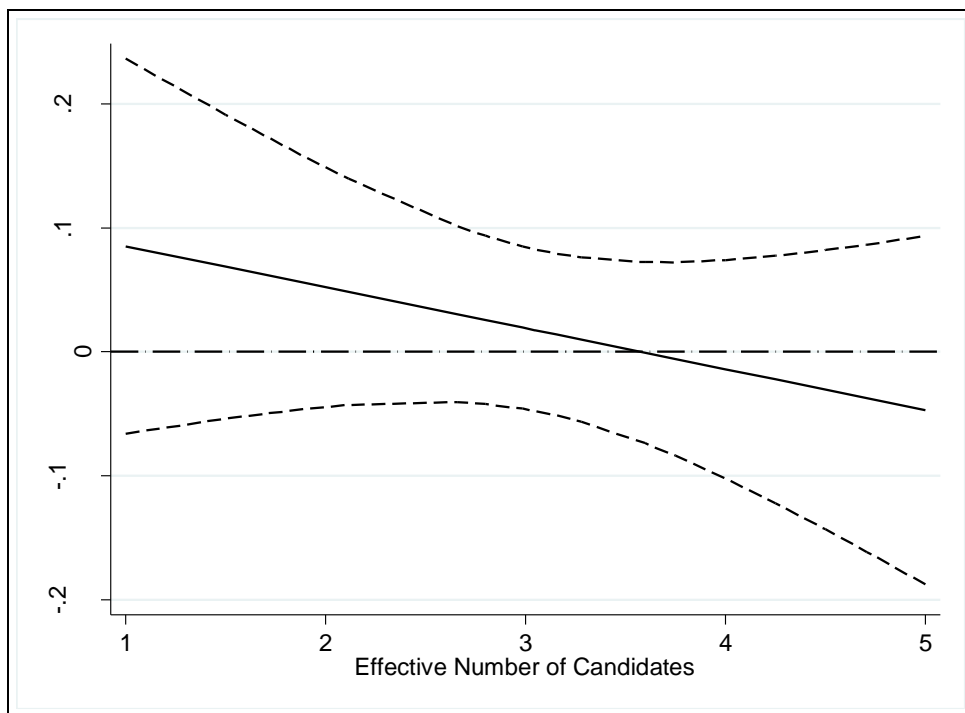


Figure 23. Interaction between Effective Number of Candidates and No Network Conflict in Predicting Knowledge (with 95% Confidence Interval)

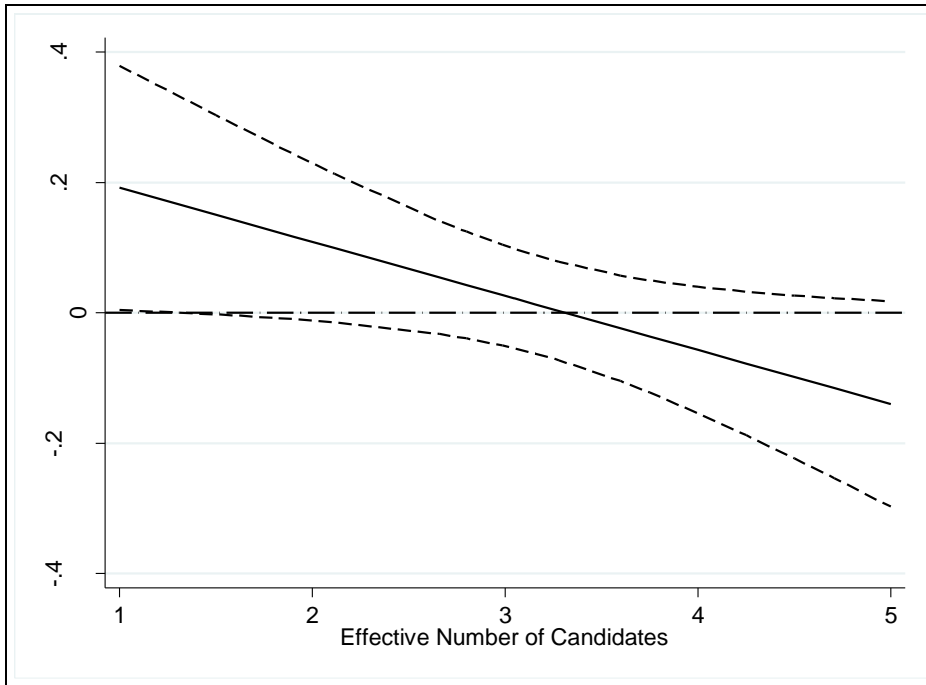


Figure 24. Interaction between Effective Number of Candidates and Conflict *without* Diversity in Predicting Knowledge (with 95% Confidence Interval)

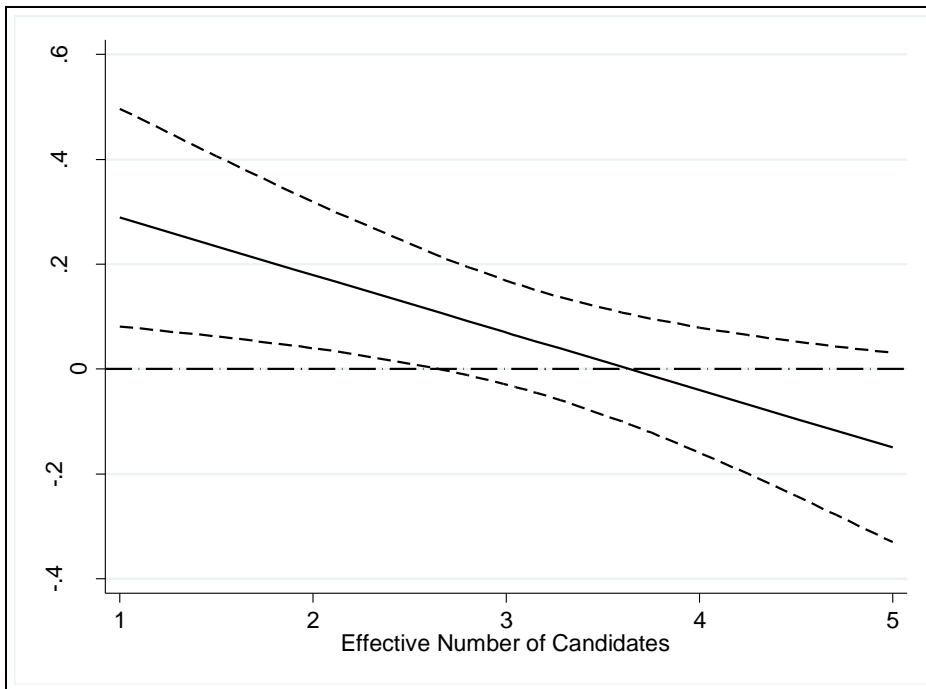


Figure 25. Interaction between Effective Number of Candidates and Conflict *with* Diversity in Predicting Political Knowledge (with 95% Confidence Interval)

7.4 CONCLUSION

In this chapter, I have first sought to put Brazilian networks in cross-national context. It turns out that the size of social networks, the extent to which networks are politicized, and the amount of exposure to conflicting and diverse preferences vary substantially around the world. In cross-national context, Brazilians appear to be highly sociable, and to have fairly high levels of political discussion with their network members. Brazilians are tied with citizens of the US as having the highest levels of exposure to *diversity* and *conflict* among the countries studied here. At the same time, in no country examined here does the average citizen have even a single disagreeing member within the intimate egocentric network.

More importantly, I have sought to address the second and third research questions laid out in the introduction. These questions are related to the cross-national factors affecting social network composition and effects, and to the effects of exposure to divergent preferences on democratic competence. As I had begun to show in the previous chapter in the Brazilian case, conflict and diversity are two distinct features of social networks, and they have distinct and interactive effects on democratic competence. Moreover, both the levels of conflict and diversity and their effects on turnout (but not knowledge) vary across systems with different numbers of candidates.

These results leave many questions. Most importantly, what other system-level factors affect social network composition and effects? To what extent are there regional cultures related to social networks and to political discussion, as some of the results here suggest? In the final chapter, I consider more systematically these and other questions.

8.0 LOCAL CONNECTIONS: ELECTORAL AND PARTY SYSTEMS, SOCIAL TIES TO POLITICIANS, AND DEMOCRATIC COMPETENCE IN BRAZIL

This chapter continues to deal with the third set of questions motivating this dissertation: how do the electoral and party systems shape egocentric networks? And what are the downstream consequences for democratic competence? In this chapter, I return to focus on Brazil, and in particular on the case study of the 2008 local elections in the city of Juiz de Fora. Findings from this case are striking: I estimate that three-quarters of local adults knew personally someone who was running for local office, and over half knew personally a *cabô eleitoral*, meaning someone who was campaigning for a candidate. Moreover, over 60% knew personally the city council candidate whom for whom they voted. What causes such high levels of social ties to politicians? And what are their consequences? My answer relies on the nature of Brazil's electoral and party systems.⁷⁸

In the previous chapter I argued that the party system shapes the amount of conflict citizens experience within their personal discussion networks and conditions the impact of networks on democratic competence. The theorized mechanism related to the number of candidates the system produces. I argued in part that in elections with higher numbers of candidates, citizens are more likely to encounter disagreeing network members but at the same time this conflict is less likely to be demobilizing.

⁷⁸ I do not have cross-national data on connections to politicians; in post-dissertation work, I hope to pursue cross-national research related to this social network feature further.

In this chapter I revisit the way the number of candidates in an election affects the composition of social networks. Here, however, I am not interested in social ties to candidates' supporters, but rather to candidates themselves. As I showed at length in Chapter 3, Brazil's combination of extreme multipartism and open-list proportional representation leads to a situation in which a very large number of people run for public office at the local level. In Brazil as a whole in the 2008 local elections, there was one city council candidate for every 389 eligible voters in the country. The ratio of voters to candidates is strongly associated with the size of the city, with smaller areas having lower voter-to-candidate ratios. In medium-sized cities such as Juiz de Fora, there were approximately 1000 eligible voters per city council candidate. As a result, it is quite possible that in most cities in the country, during local elections the majority of citizens personally know someone who is running for office, or a person such as a *cabo eleitoral* who is campaigning for a candidate.

Who knows politicians and *cabos eleitorais*? First, I expect the well-connected to be more politically and civically engaged. Second, social status may have a complex relationship with political connectedness. At the individual level, status should have a positive effect on connections. But at the neighborhood level, low status areas should have more personalistic politics and should be home to more activism. Third, those who are more sociable in general, as measured by the characteristics of their personal discussion networks, may have more ties to politicians. Also, the size of the intimate egocentric network might affect political connections. At the same time, what is perhaps most striking about the patterns of social ties to politicians is the extent to which selection does not tell the whole story. While factors such as political interest, non-religious civil society engagement, and social status were certainly associated with holding political ties, even those who were completely uninterested in politics, who reported no

participation in civic groups, and with low social status had high levels of ties to politicians and *cabos eleitorais*.

These social ties have important effects on democratic competence, ones that have not previously been recognized. This is not to say, however, that political connections are uniformly beneficial. While citizens who know personally politicians and campaigners learn from and are mobilized by these network members, they may also be exposed to appeals to vote trading. The first part of the theory is simple: politicians seek to mobilize their own network members first. In the process of mobilization, they also provide useful campaign-related information. In a sense, candidates and *cabos eleitorais* can be seen as “opinion leaders” within a classic “two-step” model of information transfer, though the analogy has obvious limitations: their information tends to come not just from the media but also from personal experience, and they have more at stake in the information transfer than the typical “opinion leader” in Lazarsfeld and coauthors’ famous studies (Berelson et al. 1954; Lazarsfeld et al. 1948). At the same time, politicians and *cabos* are also most likely to target the weak ties within their own networks for offers of clientelistic trades. Knowing personally the people to whom one offers material resources in exchange for votes helps to reduce many costs of the clientelistic transaction, in particular monitoring costs, and it may predispose clients as well to follow up on their ends of the bargain. Using matching to restrict the sample to members of the treatment and control groups who are similar on all measured pre-treatment variables, I show that political connections mobilized citizens and helped them learn about the campaign, but that they also boosted clientelistic dispositions.

This chapter’s findings have implications for both the conceptualization and the measurement of social networks. The previous three chapters have focused on the members of

what I have termed the intimate egocentric network, referring to a handful of people—typically three to five—with whom respondents report conversation. I have shown that these people can have important impacts on respondents’ democratic competence. Results from the previous chapter reveal that several aspects of such networks affect political behavior: to some extent the size of the network, but more importantly the democratic competence of the members themselves, their relationships with the main respondent, and their mix of political preferences.

In this chapter, however, I turn away from the intimate egocentric network. The conceptualization of social networks that is most common within the political behavior tradition – one that views networks as small, close-knit groups of people with whom the *ego* at the center is typically in frequent contact – has led to an underappreciation of social networks’ full impacts. I seek to show that reconceptualizing networks can yield important insights into the forces driving political behavior, and that these insights are particularly important for understanding citizen-level politics in new and middle- and lower-income democracies.

For one thing, an exclusive focus on the intimate egocentric network misses the great majority of most individuals’ social ties. This is particularly true in urban areas, where many people have some fleeting contact with literally hundreds of their fellow citizens on a daily basis – on public transit, walking on the street, at the supermarket, at school or work, at restaurants. While most of this contact has little political relevance, it seems likely that in the midst of an election campaign there must be many opportunities for political influence outside the immediate egocentric network. This is especially the case because, as research in the American context shows and as my own exploration in Chapter 5 confirms for the Brazilian case, self-reported egocentric networks tend to comprise core discussants, meaning close family and friends (Bailey & Marsden 1999; Huckfeldt & Sprague 1995; Klobstad et al. 2009). Thus, even politically

relevant weak ties are unlikely to be reported. For another thing, the intimate egocentric network battery tends to elicit the names of people of relatively similar social status and political resources. As a result, scholars within the political behavior tradition have paid little attention to the effects of imbalances in resources – including information, material goods (and money), and political power – within discussion networks.

In this chapter, I test the following hypotheses, which I first laid out in Chapter 3:

- H11. Social ties to local politicians and political activists will be prevalent in Brazil, more so in rural than in urban areas, and will vary by the number of candidates per registered voter.
- H12. Social ties to local politicians and political activists will lead to higher levels of political knowledge and political participation.
- H13. Those who know activists and local politicians will be more likely to have clientelistic dispositions.

I test these hypotheses using two data sets, the>NNLBP Study and the BEPS Project. The next section describes the measurement of social ties, democratic competence, and other variables in the analysis. Second, I assess the distribution of local political connections, at the same time assessing what factors affect such distributions. Third, I assess the impact of such discussions on democratic competence, while accounting for selection into the treatment.

8.1 MEASURES

8.1.1 Data from the Networks and Neighborhoods in Local Brazilian Politics (NNLBP)

Study

Most data in this chapter come from the NNLBP Study, which was described in Chapter 4. This section discusses the measures of social networks, of democratic competence, and of other variables used throughout the analysis. Though social network measures are reviewed in the following section, in this section I describe distributions on other variables.

8.1.1.1 Local Political Connections

To measure political connections I use dummy variables for whether the respondent reports knowing city council candidates and *cabos eleitorais*, respectively. This was measured using the following two questions, both coded Yes/No (see the Appendix A for the questionnaire in Portuguese):

5. Do you know someone who was a candidate for city council in the last election, or even who is a current member of city council?

6. In the last election, did you know someone who was a cabo eleitoral or who worked for a politician?

I also sought to understand the extent to which such acquaintanceship translated into and was associated with more specific political discussion with the candidates, utilizing the following four questions.

1. The first questions are about the people with whom you talked during the municipal election campaign, that is, since July. When I call someone a politician, I mean that they

are a mayor, city council person, representative, or governor, or that they are a candidate for one of those positions. Did you personally talk with a politician who asked for your vote?

Those who had done so received the following question: *2. More or less how many politicians asked for your vote?*

3. And has a cabo eleitoral or someone who works for a politician asked for your vote?

Those who responded in the affirmative received the following question: *4. More or less how many cabos eleitorais asked for your vote?*

To reduce the right skew of these variables, counts of the number of conversations with *cabos eleitorais* and politicians are both truncated at 6. Most of the analysis, however, uses only the two indicator variables for political ties.

8.1.1.2 Dependent Variables: Measures of Democratic Competence

The analysis incorporates a series of measures of democratic competence, which I use as dependent variables. First, political knowledge is the mean of dummy variables for correct answers to five factual questions about the local election campaign, including the parties of the top two mayoral candidates (Margarida and Custódio), the name of the current mayor, the name of the city council candidate who received the highest number of votes in the first round election, and the number of seats on the city council; plus an indicator for whether the respondent was able to name all six mayoral candidates in the first-round election. Thus, this is a highly localized, contextually specific measure of political knowledge.

Second, I examine two dimensions of political participation: electoral and campaign participation. Turnout is an ordinal variable measuring whether the respondent reports voting in the first and second round local elections, on October 5 and 26, respectively. Campaign

participation is also an ordinal variable formed by summing indicators for whether the respondent worked on a campaign, used campaign stickers, put up posters, attended a rally, or watched a televised debate during the most recent election campaign. Descriptive statistics for the knowledge and participation measures are found in Table 33.

Table 33. Descriptive Statistics for Knowledge and Participation

	Mean	Standard Deviation	Minimum	Maximum
Political Knowledge	0.47	0.31	0	1
Turnout	1.81	0.53	0	2
Campaign Participation	1.87	1.32	0	5

Note: Percentages are weighted by neighborhood population, sex, and age.

Third, two questions sought to uncover the extent of clientelism. Because of the social stigma attached to vote buying, as well as the recent promulgation of laws against vote buying and selling, I chose not to ask about respondents' own clientelistic practices. Instead, I first asked whether the respondent knew others who had traded their own votes for something such as a job, a favor, a present, or money. Respondents who reported that they did were asked if they knew one or two people, three to five people, five to ten people or more than ten people who sold their votes. While this quite indirect measure may not tell us whether people who know politicians are themselves more likely to trade their votes, they do indicate whether the kinds of networks that include politicians are the same kinds of networks where vote trading is common. Second, I attempted to tap norms related to clientelism by asking respondents whether they believed it is very good, good, bad, or very bad to receive presents from politicians. Responses are coded so that higher values represent the belief that presents are bad. Table 34 presents descriptive statistics. While most respondents claim to know no one who traded their votes and

report strongly anti-clientelistic attitudes, about a fifth know someone who has traded their vote, and approximately the same percentage says that receiving presents from politicians is good. Interestingly, however, these two measures are correlated only at $r = -.02$, a correlation coefficient that is highly insignificant. Based in part on the models to be presented below, I suspect that responses to the latter question are affected by social desirability bias to a much greater degree than are responses to the former.

Table 34. Descriptive Statistics: Clientelistic Networks and Norms

	Percentage
Number of acquaintances who traded votes	
No one	80.9
1-person	5.5
3-5 people	5.6
5-10 people	3.2
More than 10 people	4.9
Receiving favors or presents from a politician is:	
Very good	4.8
Good	13.3
Bad	31.6
Very bad	50.3

Note: Percentages are weighted by neighborhood population, sex, and age.

8.1.1.3 Other Factors Affecting Democratic Competence

The multivariate analysis includes a number of additional variables. Since both political networks and democratic competence are associated with general political engagement, I control for political interest and for the size of the intimate egocentric discussion network. I also control for the respondent's general level of political discussion using an index measuring the amount of political conversation reported, on a four-point scale, with friends, family, in the neighborhood, at bars and restaurants, and at work or school.

I further control for personal and neighborhood education, since higher status individuals and ones living in social environments with greater amounts of political information will know more about and more likely to participate in politics, and will hold more anti-clientelistic norms (Almeida 2007; Delli Carpini & Keeter 1996). Age may also affect knowledge if older people have acquired more information about the political system over time (Converse 1969), or alternatively if older people are less able to remember new information (Lau & Redlawsk 2006). There is a well-documented, strong association between education and voting in other contexts (for a recent and compelling example, see Sondheimer & Green 2010), and some evidence of such a link even in Brazil (Castro 2007; Kerbauy 2004). However, we must also take into account the fact that voting is compulsory in Brazil, though fines are relatively minor and around fifteen percent of the eligible electorate fails to vote in most elections (Castro 2007; Katz 2008; Power 2009).

Control variables were coded as follows. Interest in local politics is coded on a four-point scale. Media attention is an index ranging from 0 to 1, based on the mean of the number of days per week that the respondent reports accessing news on television, on the radio, on the Internet, and in newspapers. Education is coded on a 15-point scale ranging from no formal education to graduate school completed. Neighborhood education is the mean of education for all respondents in each of the 22 neighborhoods sampled.⁷⁹ Education is the only measure of social status in part because of nonresponse regarding household income. Social network size is a count, from 0 to 4, of the number of discussants the respondent reports when asked for the names of social network members. Finally, age is coded in number of years.

⁷⁹ I estimated a second version of this variable removing each respondent's own education from the value assigned to him or her. These two variables are correlated at .996, and the results are nearly identical. I prefer the measure that does not remove the respondent's own education in part because it facilitates multi-level modeling.

8.1.2 Data from the BEPS Panel Study

The analysis from the NNLBP study is supplemented with analysis of the BEPS Panel Study, which was also described in Chapter 4. In this section, I briefly describe the measures to be used in this analysis.

8.1.2.1 Social Network Measure: Political Connections

In this national level election, I included a measure of connections to candidates and people campaigning for them. Item KP, which was administered in both the second and third waves of BEPS, read as follows: “Do you know personally someone who is a politician, candidate, or someone who campaigns for a candidate?” Responses were coded as dichotomous. Due to space constraints, I was unable to distinguish between *cabos eleitorais* and politicians themselves in the survey. Nonetheless, this variable will provide a preliminary understanding of how political connections are distributed in the context of a national- and state-level election.

8.1.2.2 Democratic Competence Measure: Clientelism

As discussed in Chapter 4, the BEPS study included a number of experiments. Most importantly, in the third wave the study sought to measure vote trading using a list experiment.⁸⁰ The text of the introduction to the question LISTEXP read as follows: “Now, I’m going to show you a card that mentions various things that the candidates for all the positions up for election and their *cabos eleitorais* sometimes do during political campaigns. I would like for you to tell me simply **HOW MANY** of them, not which of them, happened during this year’s political campaigns.” The control group received the following four items: “They offered you flyers,

⁸⁰ See Gonzalez-Ocantos et al. (2010) for an example of a similar survey experiment in Nicaragua.

stickers, or buttons”; “They visited your home”; “They offered you money to campaign for them”; and “They threatened you or someone in your family.” These items were chosen to range from highly common campaign activities to highly uncommon ones, in order to prevent both floor and ceiling effects. The treatment group received the same four items, plus a fifth one: “They offered you money, favors, or presents in exchange for your vote.” The variable for “clientelism list experiment” is thus a count that ranges from 0 to 4 in the control group, and from 0 to 5 in the treatment. Following standard practice in the literature on list experiments, the difference in the count between the control and treatment group can be treated as a measure of the proportion of the sample that was offered a clientelistic exchange (Piazza and Sniderman 1998; Sniderman 2011).

8.1.2.3 Determinants of Political Connections

Using the BEPS data I also assess the determinants of knowing a politician or a person campaigning for a politician. Most importantly, I examine how the *size of the area of residence* is associated with political connections. This is a variable coded by the survey research team using five categories: rural area, small city, medium-sized city, large city, and state/federal capital (metropolitan area).⁸¹ In addition, I examine the effect of region, using dummy variables for the major political/geographical regions of the country, with the Northeast as the omitted category.

In addition, I examine the effects of a number of other variables, chosen to match those from the analysis based on the NNLBP as closely as possible. I use an indicator for *female* gender and a variable for *education* coded in numbers of years, from 0 to 18; plus a four-point variable for *political interest*, a three-point index for membership in non-political *civil society*

⁸¹ As in much of Latin America, the largest urban areas in Brazil are capital cities.

organizations, and an indicator for having *worked for a party or candidate* in the 2006 presidential election. I also control for the wave to deal with any fluctuation in the levels of political engagement of one's social contacts over the course of the campaign.

8.2 WHO KNOWS WHOM? SOCIAL TIES TO POLITICIANS AND THEIR INDIVIDUAL AND COUNTRY-LEVEL DETERMINANTS

I begin the analysis by examining politicized social networks during the 2008 local election campaign in Juiz de Fora and during the 2010 Brazilian state and federal elections. After examining the distribution of social ties, I proceed to examine the factors affecting this distribution.

Why do some Brazilians have more politically relevant social ties than others? I have argued that the size of the locality should have an important impact on the social ties to politicians, with residents in smaller localities having more such ties. Moreover, the extent of political connections may vary by other features of local political culture and patterns of sociability. In the analysis based on the BEPS Study, I control for region, while in the analysis based on the NNLBP study I control for the level of education in the neighborhood. Neighborhoods of lower socioeconomic status in Brazil tend to be more closely knit than higher-status ones, which are often dominated by high-rise apartment buildings.

I suspect that such connections are far from randomly distributed, and depend on individual-level characteristics such as political engagement, social status, and general levels of sociability. Thus, in models of politicized social networks I control for political interest, political

conversation, education, the size of the egocentric political network, and involvement in civil society.

8.2.1 Analytical Methods: Accounting for Neighborhood Level Variation in Networks

These expectations for neighborhood-level effects violate one of the key assumptions of standard regression models, namely the independence of observations. To address this lack of independence and to estimate more accurately coefficients at the neighborhood level, I develop hierarchical or mixed models. These models take into account variation at the neighborhood level in two ways. First, they incorporate random intercepts for each neighborhood, estimating the differences in neighborhood level mean levels of each form of social tie. Moreover, they incorporate a substantive neighborhood-level variable, neighborhood-level education.

8.2.2 Local Political Connections: Analysis based on the>NNLBP Study

Table 35 reveals that the rates of knowing politicians and campaigners are quite high.⁸² Three-quarters of the sample report knowing personally someone who is a candidate for city council, and more than three-fifths of those who went to the polls for the first round know the city council candidate for whom they voted.⁸³ Moreover, over half know a *cabo eleitoral* who is working for a candidate. Overall, 82.2% have one or both types of connections. Smaller proportions of the population, though, reported that a politician or a *cabo eleitoral* had asked for their vote. This

⁸² In part because of oversamples within smaller neighborhoods, results are weighted by neighborhood population, sex, and age.

⁸³ This understates the percentage, since some of those who went to the polls voted for mayor but “rolled off” for the city council election, leaving this section of the electronic ballot blank. Of those who reported the name of the city council candidate for whom they voted, 79.6% knew the person personally.

suggests that for many respondents acquaintanceship with politicians and activists is incidental to other life activities, and it does not necessarily always come bundled with vote requests. Still, politicians may not feel the need directly to request the votes of those who are members of their close social circle.

Table 35. Contact with Politicians and *Cabos Eleitorais*

	Percentage
Knows someone who is a candidate for city council	75.6
Knows personally the candidate supported	61.6
Knows someone who is a <i>cabo eleitoral</i>	55.5
Talked with a politician who asked for vote	41.4
<i>1-politicians</i>	16.5
<i>3-4 politicians</i>	11.3
<i>5 or more politicians</i>	13.7
Talked with a <i>cabo eleitoral</i> who asked for vote	39.3
<i>1-cabos</i>	15.1
<i>3-4 cabos</i>	9.0
<i>5 or more cabos</i>	15.2

Note: Percentages are weighted by neighborhood population, sex, and age.

One might suspect that these types of social ties are self-selected. Perhaps the politically and civically engaged or low-income voters hoping for material benefits seek out political connections. In Figures 26 to 29 I examine the distribution of political connections across a series of factors that might affect selection: political interest, civil society participation, income, and education. What is most striking about these figures is the extent to which political ties are widespread throughout the population. Over 60% of those who say that they are *completely uninterested* in politics report that they know a candidate; likewise, over 70% of those who are members of no civics associations or who have less than a secondary education do so. And contrary to the suspicion of clientelistic selection, low-income people report knowing *fewer*

politicians than higher-income people do. It appears that politicians are woven into the local social fabric; respondents go to the same church with candidates, they see them at the bus stop or grocery store, their parents and siblings know each other, and they went to high school together.

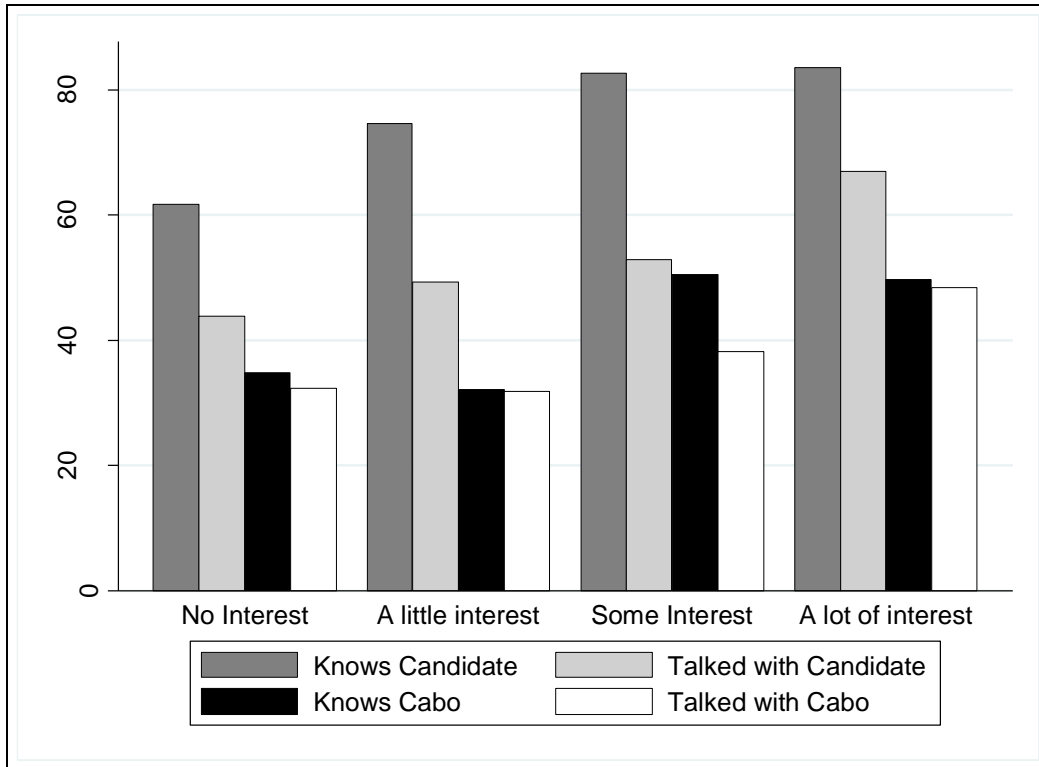


Figure 26. Political Connections by Political Interest

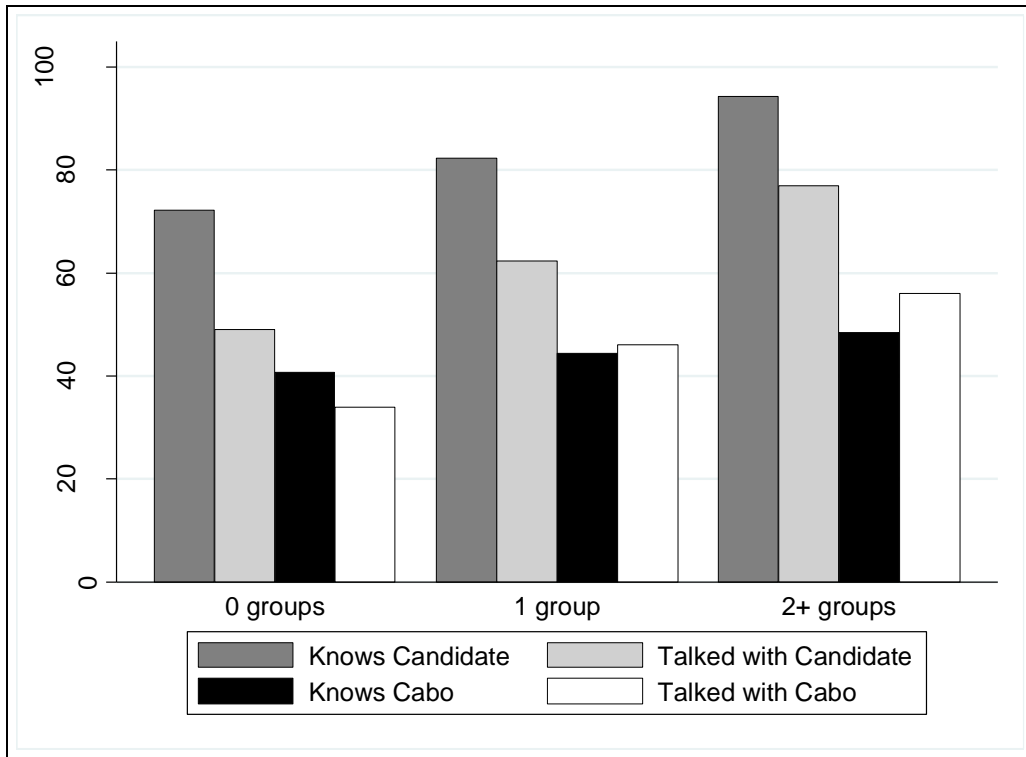


Figure 27. Political Connections by Group Memberships

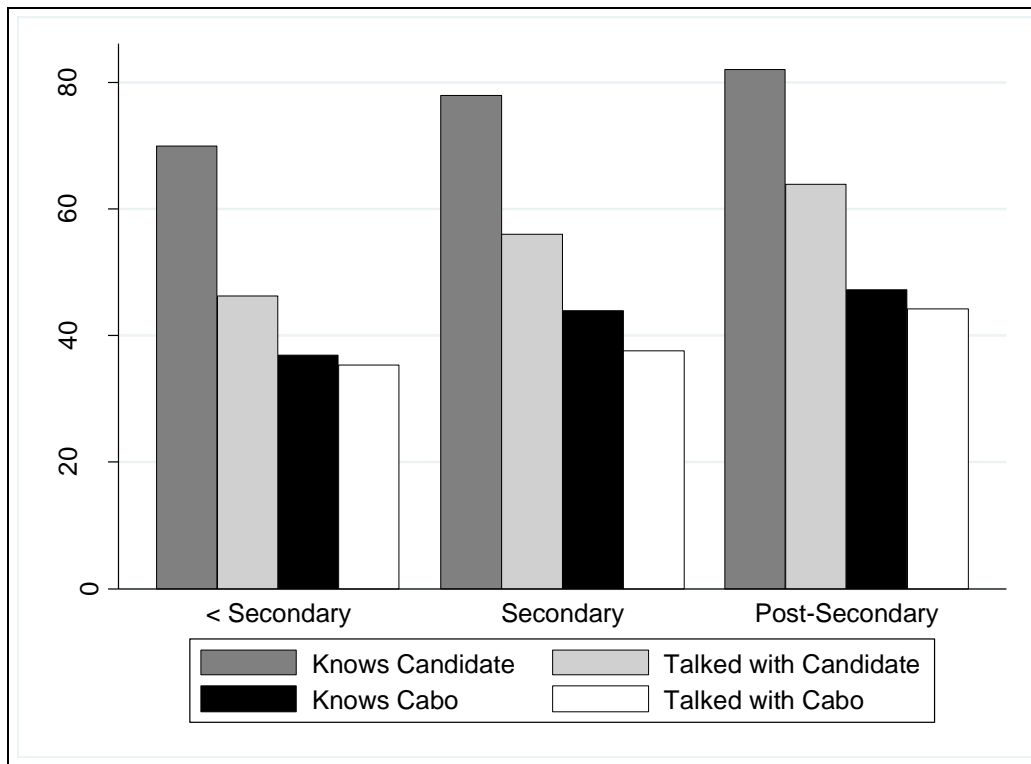


Figure 28. Political Connections by Educational Level

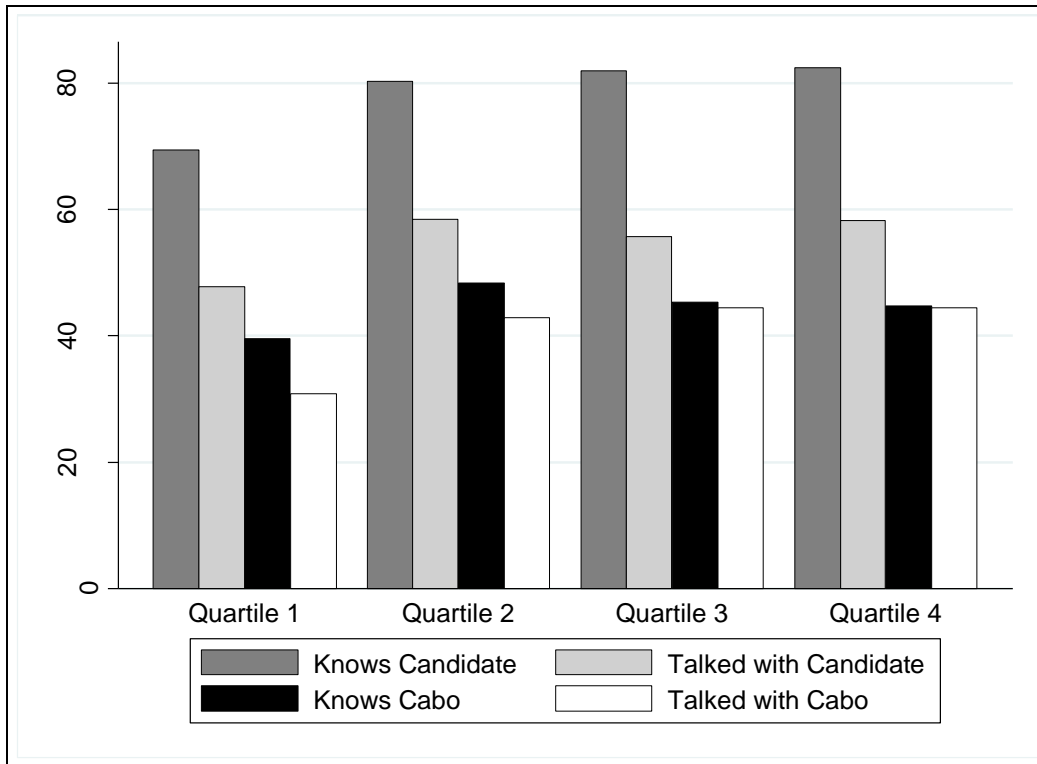


Figure 29. Political Connections by Income Quartile

At the same time, it is clear that political connections are not completely randomly distributed. Hierarchical logistic regression models (see Table 36) show that determinants of contacts with politicians and *cabos eleitorais* are fairly similar to each other. Traditional measures of civic and political engagement—both interest in local politics and conversation about politics—matter, as does the respondent’s own educational level. People with larger political discussion networks are also more likely to report these kinds of connections while women are much less likely to do so. Finally, there are two important findings at the neighborhood level. First, respondents living in neighborhoods with lower educational levels are more likely to hold both types of social ties. Second, it bears noting that the random effects are significant, as indicated by statistically significant rho coefficients. This indicates that a significant portion of the variance is explained by differences among neighborhoods.

Table 36. Logistic regression models: Predictors of Local Political Connections

	Knows a City Council Candidate	Knows a <i>Cabo</i> <i>Eleitoral</i>
Political interest	0.305** (0.075)	0.270** (0.066)
Education	0.049* (0.022)	0.064** (0.020)
Female	-0.281^ (0.162)	-0.445** (0.142)
Group memberships	0.472** (0.156)	0.372** (0.118)
Intimate egocentric network size	0.145^ (0.083)	0.151* (0.073)
General political conversation	0.158^ (0.083)	0.235** (0.076)
<i>Neighborhood-level variables</i>		
Neighborhood education	-0.165** (0.060)	-0.144^ (0.077)
Constant	1.124* (0.539)	-0.404 (0.669)
<i>Number of observations</i>	1063	1063
<i>Rho (proportion of variance due to u)</i>	0.02	0.08
<i>Probability rho = 0</i>	0.043	0.000
<i>Log likelihood</i>	-542.29	-663.11

Notes: Models include a neighborhood-level random effect. Standard errors in parentheses. Coefficients are significant at: ^ $p < 0.10$; * $p < 0.05$; ** $p < 0.01$.

8.2.3 Connections in State- and National Elections: Analysis of BEPS

The theory and evidence until this point has focused on local elections. However, one might wonder whether the patterns found for local elections hold in the context of state and national-level elections. Moreover, examining this very different context provides an opportunity to begin to test part of the first hypothesis examined in this chapter: that social ties to politicians will vary by the number of candidates per registered voter. Examining responses to the question KP in the BEPS data, I find that 57.6% of respondents report knowing personally a politician or *cabo eleitoral* in the second wave, while in the third wave 55.7% do so (weighted percentages). Since the 2010 campaign involved contests for both state and federal legislatures and executives, the question of what offices these personal connections were campaigning for remains open.

While the percentage with social ties to politicians in the BEPS data is certainly lower than the 82% found in the NNLBP study, this is to be expected given that there were many fewer candidates per voter in the 2010 elections. In stark contrast to the 390 registered voters per city council candidate in Brazil in the 2008 local elections, two years later there were 6,246 registered voters per candidate in all state and federal races combined in the country.⁸⁴ This included 9,385 registered voters per state deputy candidate, and 22,577 per federal deputy candidate. Thus, the extent to which social ties to campaigners and politicians is found in the 2010 elections is actually perhaps surprising, and very likely results from a much higher rate of hiring *cabos eleitorais* in the 2010 elections.

⁸⁴ Data are from the Tribunal Superior Eleitoral (TSE): http://www.tse.jus.br/internet/eleicoes/estatistica2010/est_resultados.html

The national scope of the 2010 BEPS data provides an opportunity to develop a preliminary test of another part of the first hypothesis, that personal connections to politicians will be more plentiful in smaller localities. At the same time, however, to the extent that such a relationship appears, it will not be due to the electoral math discussed in this and in the third chapter. The number of candidates for all offices is constant within states at the level of state and national elections in Brazil, where states serve as single electoral districts with very large district magnitudes. If I find such a relationship, it will suggest that other institutional or political cultural factors besides the ratio of candidates to citizens also in part lead to an association between the size of the locality and the intensity of political connections. At the same time, the BEPS data also provide an opportunity to test the robustness of the individual-level results provided in Table 36 in a different context and data set. Table 37 presents the results of such a model.

Table 37. Determinants of Knowing a Politician or *Cabo Eleitoral* in 2010 Election, BEPS Data

	Coefficient	Standard Error	p-value
Size of Area of Residence	-0.306	0.052	0.000
North Region	-0.476	0.195	0.015
Center-West Region	-0.324	0.190	0.089
Southeast Region	-0.305	0.152	0.045
South Region	-0.178	0.172	0.299
Education	0.045	0.015	0.003
Political Interest	1.260	0.213	0.000
Female	-0.383	0.119	0.001
Worked for a Politician in 2006 Election	1.338	0.283	0.000
Non-Political Civil Society	1.173	0.237	0.000
Wave 3	-0.106	0.102	0.301
Constant	0.243	0.204	0.234
<i>Number of Observations</i>	<i>1908</i>		
<i>Pseudo R-Squared</i>	<i>0.0975</i>		
<i>Log-likelihood</i>	<i>-1173.629</i>		

Note: Logit model with standard errors clustered on 1,183 respondents. Analysis is weighted by population, sex and age at the regional level.

Most importantly, this analysis shows that the size of the locality of residence is strongly associated with knowing politicians and campaigners. It may well be that candidates hire more *cabos eleitorais* per unit of population in rural areas and small cities. This could be due to rural areas having both lower cost of labor and lower population densities, which make it necessary to have proportionately more people on the ground in order to cover a given territory. At the same time, regions have an independent effect on the extent of political connections, after controlling for the size of the locality. Finally, all the individual-level variables function as expected, and the model confirms the results found in the previous section. In Figure 30 I estimate the predicted probability of knowing a politician or *cabo eleitoral* in different areas of the country, holding all other variables at their means except for gender (set to male) and wave (set to

second). The figure reveals that in each region residents in capital cities have a 20% lower probability of having some sort of political connection than residents of rural areas.

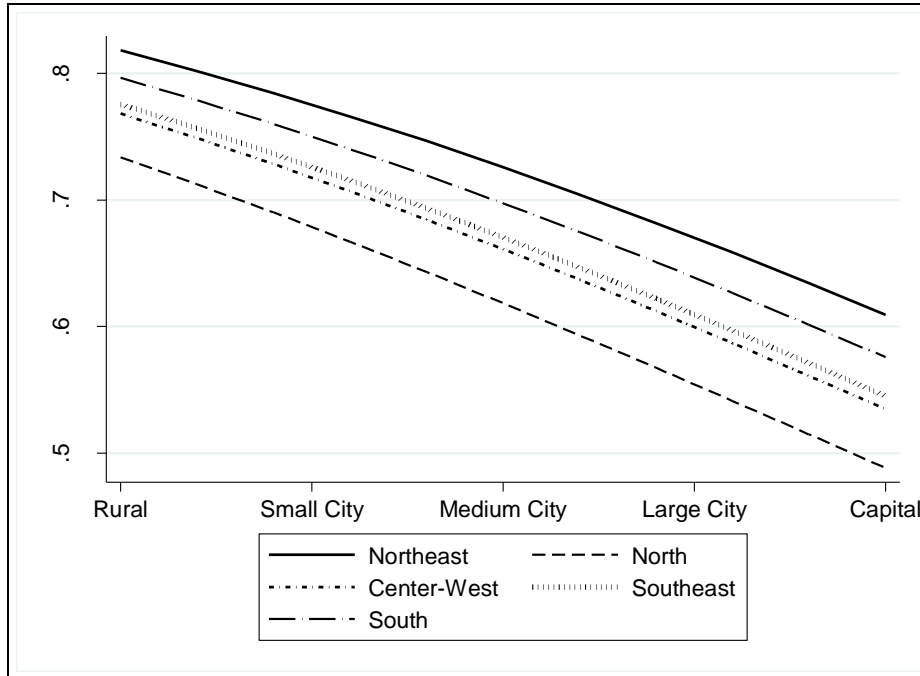


Figure 30. Probability of Political Connections, by Locality, in BEPS

8.2.4 Political Connections versus Intimate Egocentric Networks

Do respondents name these kinds of contacts as members of their intimate egocentric networks? If they do, there might be no need to assess their influence separately from that of the immediate egocentric social network. To examine this, I assess the percentage of respondents who provide the names of no intimate network members in response to the standard intimate network battery in the NNLBP, but who say they know *cabos eleitorais*. I focus here on *cabos* because they are the kinds of ordinary citizens likely to be reported within the intimate network.⁸⁵ The first row of Table 38 reveals that a quite high percentage of those reporting no political discussants in the

⁸⁵ In addition, the relationship between the reported egocentric network and other network connections is even lower than that for connections to *cabos eleitorais*.

intimate network later say that they have talked about the elections with a *cabo eleitoral*. The percentage is only slightly lower, in fact, than among those reporting at least one intimate network member. Could respondents have chosen not to report these contacts as network members because they did not personally know the *cabos eleitorais* with whom they spoke? The second line of Table 38 shows that about half the sample *knew* someone working as a *cabo eleitoral*, and that the proportion was only slightly lower among those reporting no intimate network members. Taken together, these findings provide strong reason to believe that Brazilians for the most part ignored *cabos eleitorais*—and, one might guess, other weak ties—when they responded to the standard social network battery.

Table 38. Percentages Reporting Contact with *Cabos Eleitorais*, by Response to the Egocentric Network Battery,>NNLBP Study

	No Egocentric Network Members	At Least One Egocentric Network Member	Total
Conversation with <i>Cabos Eleitorais</i>	32.9%	39.5%	36.0%
Knows a <i>Cabo Eleitoral</i>	48.7%	53.1%	50.7%

But omitting these kinds of weak ties might not matter very much if the standard network battery effectively proxied for unreported social contacts. Are respondents who report the largest intimate egocentric networks the same ones who have other unmeasured political contacts? In Table 39, I examine correlations between the size of the egocentric network measured using the standard battery and report of other social network contacts. The low correlations between the size of the egocentric network and acquaintanceship with politicians and *cabos eleitorais* make it clear that the two measures are related but do not represent the same construct.

Table 39. Correlations between Size of Intimate Egocentric Network and Other Network Measures,

NNLBP Data

Network Measure	Correlation Coefficient
Knows a City Council Candidate	0.080**
Knows a <i>Cabo Eleitoral</i>	0.122**
Talked with City Council Candidates Who Asked for Vote	0.063*
Talked with <i>Cabos Eleitorais</i> Who Asked for Vote	0.141***

Note: Coefficients are significant at * $p < .05$, ** $p < .01$, *** $p < .001$.

8.3 HOW WHO YOU KNOW MATTERS

A popular saying in Brazil holds that “*O que mais importa no Brasil é o QI: Quem indica.*”⁸⁶ Is this accurate? How do local political connections affect Brazilians’ ability to navigate their democratic system at election time? In this section I turn from describing social ties and assessing their determinants to examining their consequences for the democratic system.

8.3.1 Analytical Methods

8.3.1.1 Accounting for Selection in Social Networks: NNLBP Data

I seek to understand the causal impact of the treatment variables—social ties to local politicians and activists—on democratic competence. The experimental ideal might involve randomly assigning Brazilians to different conditions. Some would be assigned to the control group in which they knew no one, a second group would be assigned to know politicians, and a third

⁸⁶ The first part of the sentence reads “What matters most in Brazil is...”; what follows is a play on words. “QI” is a common abbreviation for “quociente de inteligência,” or IQ in English. However, here “QI” is instead defined to stand for “quem indica,” meaning “who recommends you.” In other words, what matters is not intelligence, but connections to the powerful.

group *cabos eleitorais*. Since the assignment to the treatments and control would be by design orthogonal to the distribution of the outcome, I would be able simply to assess the difference in means between the treatment and control groups on each of the dependent variables.

In real world, as the previous section clearly showed, social connections are determined by family, neighborhood, and personal background, as well as political and civic engagement and social status. This would not necessarily pose a problem for causal inference, except that some of these factors should also determine the distribution of the dependent variables. Thus, any association discovered between the treatment and outcome might result not from the causal effect of the treatment, but from the impact of the other variables associated with it.

In order to deal with these threats to causal inference, I employ coarsened exact matching (CEM) (Blackwell et al. 2009; Iacus et al. 2009, 2010). Matching techniques allow researchers to develop treatment and control groups that are *balanced*, or similar in all relevant respects except for their assignment to the treatment. Such techniques seek to eliminate differences between the treatment and control in the distributions on the other independent variables affecting the treatment (Angrist & Pischke 2009; Gelman & Hill 2007). Once these pre-existing differences are eliminated, researchers can be more confident that any remaining differences between the treatment and control groups on the dependent variables are due to the treatment.

Many methods of matching have been developed, including propensity score matching, Mahalanobis distance matching, genetic matching, and exact matching. CEM is a matching estimator that seeks exact matches between treatment and control on each independent variable. More technically, CEM attempts to eliminate threats to causal inference that may derive from observed covariates \mathbf{X} that affect both the outcome Y and assignment to a dichotomous treatment $T \in \{T_c, T_t\}$, where T_c and T_t refer to the value of the treatment in conditions that we will call

the treatment and the control (Iacus et al. 2009, 2010). CEM is a simple but powerful method of matching that assigns each observation to a point in k -dimensional space, where each axis in this space maps a covariate $X_i, i \in 1, \dots, k$. Exact matching algorithms retain only those observations located at points occupied by at least one observation for which $T = T_c$ and at least one observation for which $T = T_t$. In other words, all observations in either the treatment or control that do not have an exact match on all values of the covariates are discarded.

Traditional exact matching algorithms may lead to loss of the great majority of the data, especially when \mathbf{X} includes continuous variables for which it may be nearly impossible to find observations with exact matches. CEM's innovation is to coarsen the X_i , grouping similar values on each variable together in theoretically and empirically meaningful ways. A variable for income, for instance, might be recoded into quintiles of the income distribution or, in the Brazilian case, numbers of minimum wages received per month. A variable for educational attainment by year completed might be recoded into school levels (i.e., elementary school, middle school, high school, university). Each coarsened variable thus has fewer values, increasing the probability that matches can be found in both the treatment and control without loss of theoretically relevant precision. Each k -dimensional point in the new, coarsened space is called a stratum or, using the language of histograms, a bin.

Beyond its intuitive simplicity, CEM has a number of advantages as a method of matching. It is a member of the Monotonic Imbalance Bounding (MIB) family of matching algorithms, meaning that the analyst defines the maximum amount of imbalance through the matching design, rather than discovering the degree of imbalance only after performing the matching algorithm. Second, it meets the *congruence principle*, meaning that the matching algorithm retains the dimensionality of the data, rather than reducing the matching criteria to a

unidimensional score such as occurs in propensity score and Mahalanobis distance matching. This avoids the possibility of two very different configurations of the data being mapped onto the same point on a unidimensional scale. Third, it is approximately invariant to measurement error and bounds estimation error in the ultimate causal quantity of interest.

In the primary analysis presented here, I develop a matched sample based on the treatment of knowing *either* a candidate *or* a *cabo eleitoral*. I do so in large part because the matching algorithm requires a single treatment. Moreover, as the analysis developed in the last section show, these two types of connections are driven by very similar determinants, though they have different baseline levels in the sample. Nonetheless, Table 40 indicates that the intercorrelation between these two dummy variables is not as high as one would normally expect for variables combined in a single indicator (Cronbach's alpha is .47). As a result, and in order to understand whether and how the effects of the two types of connections differ, I develop further analysis in which I preprocess the data by running a separate matching algorithm for each treatment variable, while at the same time controlling for the other type of tie. That is, matching estimates of the effects of knowing politicians also control for knowing *cabos*; matching estimates of the effects of knowing *cabos* also control for knowing politicians. I match each "treatment group" member on education, interest, social network size, political conversation, group memberships, and neighborhood education. The coefficients are presented graphically, and the full results in Appendix C.

Table 40. Correlations among Treatment Variables

	City council candidate	<i>Cabo eleitoral</i>	Combined indicator
Knows city council candidate	1.000		
Knows <i>cabo eleitoral</i>	0.311	1.000	
Combined indicator for political connections	0.838	0.481	1.000

Two caveats apply to the analysis using matching. First, not only are different respondents in the treatment group for each of the treatment variables, but these two groups are imbalanced in somewhat different ways for each. As a result, the region of common support is different for each treatment variable, and the matching procedure produces different matched treatment and control groups for each. This means that the models are estimated on slightly different samples for each treatment variable. Moreover, inferences can be drawn safely only within the region of common support—that is, at levels of each independent variable for which there are cases in both the treatment and control groups. Second, matching methods assume that all confounding factors that threaten the ability to draw causal inferences are observed, and that once these factors have been matched upon, the process of assignment to treatment is orthogonal to the distribution of the outcome. If this assumption is violated, matching will not adequately deal with all barriers to inference.

Table 41 describes the features of the matching solution for each of the three treatment variables. The L statistic is a measure of the difference in the proportion of the sample in each stratum and runs from 0 to 1, where 1 represents complete imbalance (i.e., no overlapping strata) and 0 represents complete balance. We can see that each matching solution yielded complete balance on the independent variables included in the model, but that each also resulted in a pruning of the number of observations in both the treatment and control groups. This pruning naturally restricts the conclusions we can draw to the region of common support.

Table 41. Results from Coarsened Exact Matching on Treatment Variables

	Knows Either	Knows a Candidate	Knows a <i>Cabo Eleitoral</i>
L1 (Imbalance) pre-matching	0.638	0.594	0.543
L1 (Imbalance) post-matching	0.000	0.223	0.272
Number of strata	463	463	463
Number of strata matched	90	100	140
Number of treatment observations	879	820	545
Number of treatment observations matched	352	349	313
Number of control observations	199	258	533
Number of control observations matched	153	190	348

Note: Matching performed using cem routine for Stata, developed by Blackwell et al. (2009).

Finally, in Appendix C I also present the results without matching for the three different treatment variables. This enables me to test the impact of including fixed effects for neighborhood in the models. I am unable to do so in the models using matching because with the drop in sample size in some neighborhoods there simply are not enough degrees of freedom to include the fixed effects.⁸⁷

8.3.1.2 Accounting for Social Desirability Bias: BEPS Study

I aim to examine the hypothesis that political connections increase the likelihood of engaging in clientelistic transfers of votes for material benefits. I face formidable difficulties in testing this hypothesis, however – namely the problem of social desirability bias. Recent laws in Brazil make vote buying explicitly illegal, and TV and radio publicity campaigns trumpet the importance of not selling one’s vote. In qualitative interviews with activists, moreover, it is common to hear railing against clientelism and denunciations of vote buying. Thus, it is quite likely that by the late 2000’s most Brazilians are at least aware that of norms against trading

⁸⁷ A number of models using matching and fixed effects fail to converge, because the dependent variable is completely determined in a few neighborhoods.

one's votes for goods. Thus, in the NNLBP study I chose not to endanger the relationship between the interviewer and interviewee by including a question asking directly about clientelistic activity.

The BEPS study sought to deal with this problem by embedding questions regarding vote buying within a list experiment, as described in the previous section. Apart from respondents who reply that all five activities have occurred, there should be no way for the interviewer to know based on the respondent's answer whether the respondent has engaged in the clientelistic activity. Thus, this list experiment should mitigate concerns about respondents giving socially desirable answers or hesitating to reveal their true actions to the interviewer.

8.3.2 The Impact of Local Political Connections: NNLBP Analysis

I now assess how local political connections affect political knowledge, participation, and clientelistic dispositions. I have hypothesized that these kinds of social ties have mixed implications for democratic competence; at the same time that they promote engagement with electoral politics, they promote clientelism. Table 42 assesses the effects of social network connections to local political leaders on knowledge of local politics, participation, and clientelism, using a dichotomous variable for *either* type of connection. The fact that these models employ matching boosts confidence that the findings are due to the impact of social networks themselves, rather than being the spurious result of some associated variables. The models show that exposure to local politicians and leaders has a statistically significant effect on three of the five dependent variables. Political connections are associated with higher levels of political knowledge, though in this combined model the coefficient is not statistically significant. However, Brazilians with political connections are *much* more likely both to vote and to get

involved in campaigns in other ways. In addition, local political connections are a strong predictor of the extent to which respondents know others who have traded their votes. Finally, the treatment is unrelated to attitudes towards receiving presents from politicians. In fact, the only robust effects from the clientelistic attitudes models are for education and age. This suggests that responses to the question about the desirability of trading one's vote were strongly conditioned by social desirability bias, and that those least sensitive to this bias have lower educational levels and are younger.

Table 42. Local Political Connections as a Determinant of Democratic Competence (Using CEM)

	Campaign Knowledge	Turnout Both Rounds	Campaign Participation	Vote Trading Network	Presents are Bad
Local Political Connections	0.242 (0.243)	1.201*** (0.232)	0.500* (0.206)	1.448** (0.469)	-0.092 (0.292)
Intimate Egocentric Network Size	0.166^ (0.098)	-0.044 (0.172)	0.286** (0.107)	-0.112 (0.176)	0.060 (0.143)
General Political Discussion	0.442** (0.155)	0.337 (0.221)	0.604*** (0.166)	0.275 (0.191)	0.193 (0.178)
Female	-0.262 (0.200)	-0.003 (0.215)	0.216^ (0.126)	-0.227 (0.241)	0.302 (0.200)
Education	0.153*** (0.034)	-0.004 (0.039)	-0.042 (0.035)	-0.018 (0.057)	0.120*** (0.030)
Age	0.009 (0.007)	-0.030* (0.012)	-0.006 (0.005)	-0.032** (0.010)	0.018** (0.006)
Interest	0.164^ (0.084)	0.151 (0.164)	0.273* (0.127)	-0.028 (0.117)	0.064 (0.091)
Media attention	0.395 (0.546)	-0.729 (0.897)	0.742 (0.762)	0.298 (1.032)	0.509 (0.568)
Cutpoint 1	1.534^ (0.795)	-2.060* (0.934)	0.493 (0.731)	2.128* (1.078)	-0.402 (0.732)
Cutpoint 2	2.662** (0.822)	-1.398 (0.909)	2.601*** (0.747)	2.508* (1.110)	1.180^ (0.673)
Cutpoint 3	3.386*** (0.819)		3.866*** (0.828)	2.919* (1.145)	2.979*** (0.708)
Cutpoint 4	4.185*** (0.795)		5.060*** (0.855)	3.463** (1.127)	
Cutpoint 5	4.986*** (0.804)		5.755*** (0.910)		
Cutpoint 6	6.316*** (0.909)				
<i>Number of observations</i>	500	500	500	500	477
<i>Pseudo R-squared</i>	0.048	0.089	0.053	0.059	0.027

Notes: Models are weighted by neighborhood population, sex, and age. Standard errors in parentheses are robust and clustered by neighborhood. Coefficients are significant at: ^ p < 0.10; * p < 0.05; ** p < 0.01.

This analysis has developed a single treatment variable for respondents who know *either* city council candidates or *cabos eleitorais*. But which types of connections are more important? Do results hold when each is assessed individually? In Figure 31 I present the coefficients from separate models in which matching is performed on each of the key independent variables individually. Since the two key treatment variables are moderately correlated at .31, and the number of observations in the matching model is reduced, the inclusion of both treatment variables simultaneously may reduce the ability to find either significant. Thus, I present results from one model in which the treatment variable in question is entered without its pair (for instance, “Knows Candidate” is entered without controlling for “Knows Cabo”) and another in which the pair is controlled (for instance, “Knows Candidate” is entered while controlling for “Knows Cabo”). In addition, I present results from models based on the full sample, without matching. In these models, I also include neighborhood fixed effects, since both independent and dependent variables show substantial variation across neighborhoods.

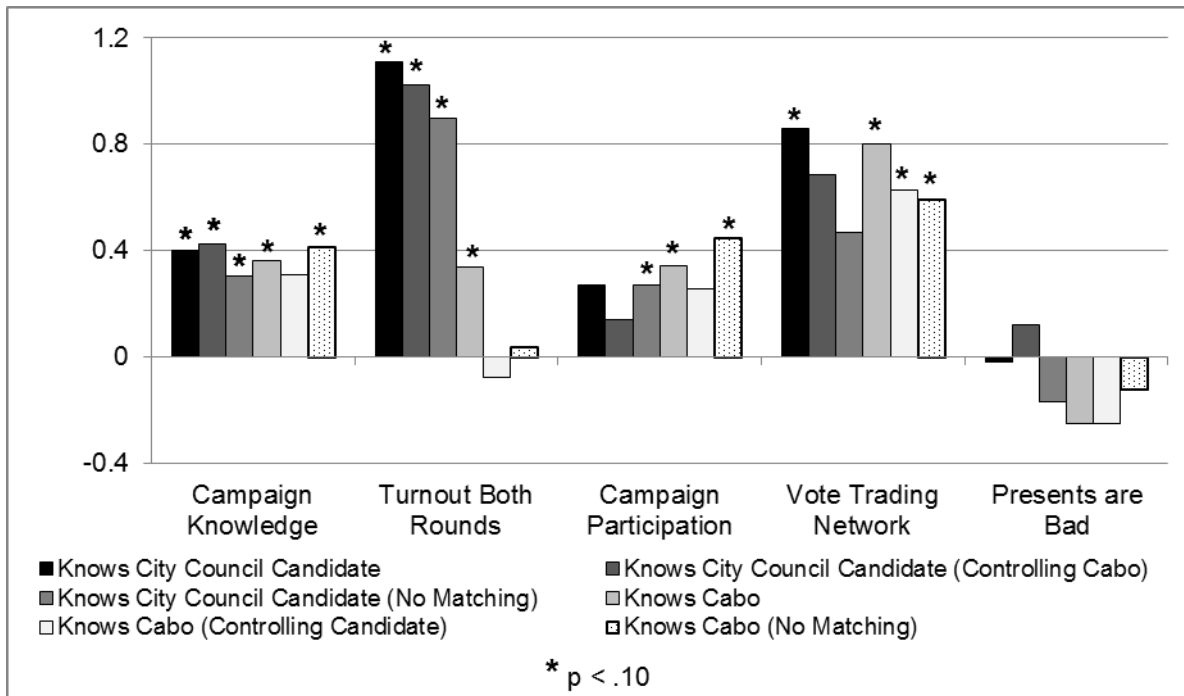


Figure 31. Marginal Effects of Social Ties to Candidates and *Cabos Eleitorais* as Separate Determinants of Democratic Competence

The most important difference from the results presented in Table 42 is that while the combined treatment did not appear to have any effect on campaign-related knowledge, disaggregating the two shows that each has an independent, though not overwhelmingly large, effect. These results hold in both the models controlling for both treatment variables and introducing each variable separately; only in the model using the full sample and neighborhood fixed effects does the coefficient for knowing a *cabo eleitoral* become just barely insignificant. It also turns out that the impact of political connections on turnout comes almost entirely from knowing candidates, not those who campaign for them. However, *cabos eleitorais* may be slightly more successful in stimulating other forms of campaign participation. Finally, both types of social ties appear to insert respondents into vote trading networks, though the effects are somewhat more robust in the case of ties to *cabos eleitorais*. Neither type of social tie is

significantly related to clientelistic norms, though connections to *cabos* has a consistently negative albeit statistically insignificant relationship to this dependent variable.

8.3.3 The Impact of National-Level Political Connections: BEPS Analysis⁸⁸

While I had argued that connections to politicians would be associated with clientelism, assessing this argument empirically has been difficult, in large part due to problems with measurement of the dependent variable. For one thing, in the NNLBP study I was reluctant to ask respondents directly whether they had traded their votes for some material benefit. For another, it appears that self-reported adherence to clientelistic (or anti-clientelistic) norms is affected by social desirability bias. The previously discussed list experiment related to clientelism in the BEPS project, combined with that project's network measures, provides an excellent opportunity to assess the extent to which political networks affect clientelism. Since the treatment condition is assigned randomly, the difference in the number of items reported in the treatment and control groups can be taken as a measure of the incidence of clientelistic offers in the population at large.

Running a non-interactive analysis indicates that levels of vote buying were low in Brazil in the 2010 presidential election, at only an estimated 5.4%, which is not significantly different from 0 ($p = .24$, one-tailed). At the same time, though, closer examination reveals a role for political connections; among those who report a tie to a politician or a *cabo*, the estimate of clientelistic interactions rises to 12.2% ($p = .10$, one-tailed).

Table 43 presents a regression-based analysis of the list experiment, looking at differences in responses between the treatment and control among both the politically

⁸⁸ The analysis presented in this section was developed in discussion and collaboration with Cesar Zucco.

unconnected and the politically connected.⁸⁹ The omitted category in this analysis is members of the control group without political connections. Among those without connections, the effect of the treatment is *negative*, though highly statistically insignificant. However, the difference between the treatment group with exposure to politicians and the control group without exposure to politicians is highly statistically significant. Moreover, in analysis not shown here, I find that among respondents who know politicians, exposure to the treatment is statically significant at $p = .10$, one-tailed.

Table 43. Ordinary Least Squares Model: Predictors of Number of Items Reported in List Experiment

	Coefficient	Standard Error	p-value
Control, Knows Politician	0.136	0.105	0.194
Treatment, Knows No Politician	-0.044	0.113	0.695
Treatment, Knows Politician	0.259	0.106	0.015
Constant	1.215	0.077	0.000
<i>Number of Observations</i>	<i>1184</i>		
<i>Adjusted R-Squared</i>	<i>0.006</i>		

To facilitate interpretation of the model, Figure 32 examines the reported number of items listed in the treatment and control, by whether the respondent reports political connections. Political connections have a much stronger effect on responses in the treatment group than in the control. Moreover, respondents who are in the treatment and have political connections have predicted responses that are .25 items higher than those who are in the control and who do not have political connections.

⁸⁹ The model is estimated using ordinary least squares to facilitate the calculation of predicted values. Results using negative binomial regression are virtually identical, including the results from the combination of knowing politicians and the treatment. Results are also nearly identical after controlling for education, political interest, and knowledge.

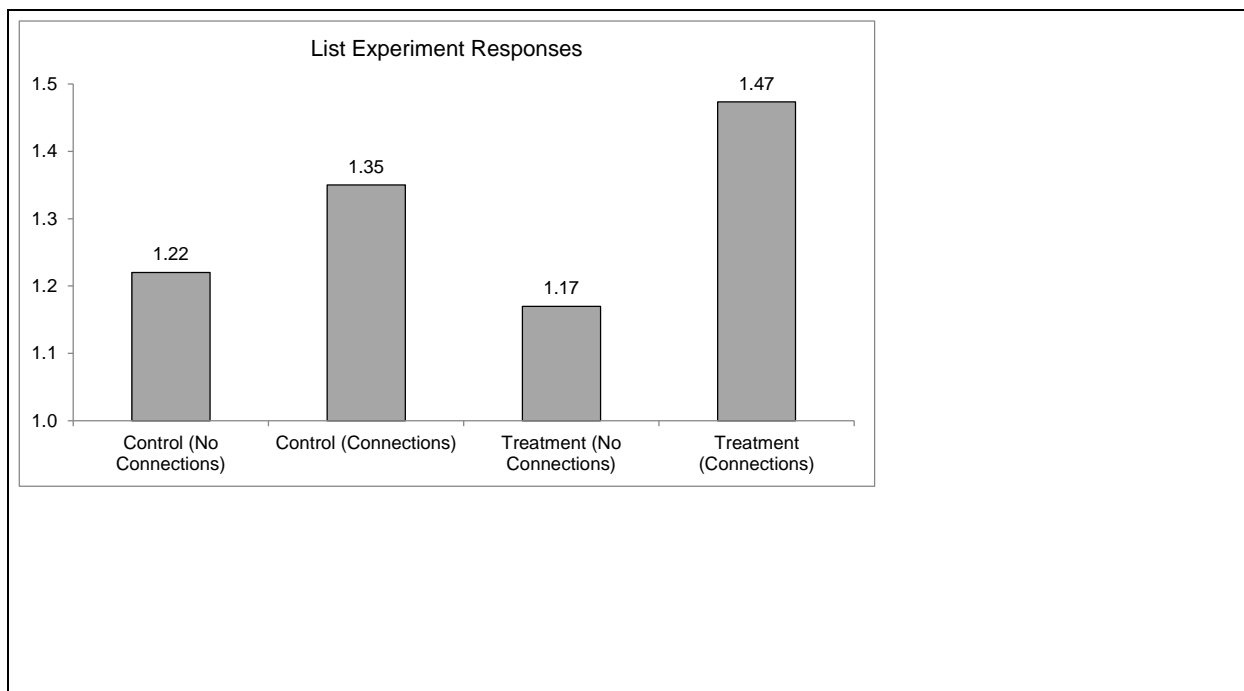


Figure 32. The Impact of Political Connections on List Experiment Responses, by Treatment Condition and Network Connections to Politicians

8.4 CONCLUSION

This chapter has addressed the third research question of the dissertation, regarding how the electoral and party systems shape networks and indirectly affect democratic competence. I have argued that at the local level, Brazil's open-list proportional representation system, combined with extreme multipartism, leads to a situation in which many citizens know personally people who run for local office as well as people who campaign for them.

This chapter provides strong evidence that social connections to politicians and local leaders are quite prevalent in Brazil, and that they have a powerful impact on citizens' democratic dispositions. A very high proportion of voters knows someone who is running for

city council, and many also know someone who is campaigning for a candidate. In fact, in this survey 82 percent of respondents have some kind of political connection. The effects of these social ties on political behavior are pronounced. Brazilians learn about politics from and are mobilized by the politicians in their social networks. *Cabos eleitorais*, or grassroots campaigners, are also important agents of political socialization, though both rates of acquaintanceship and impacts are not quite as high as for city council candidates. In particular, *cabos eleitorais* seem surprisingly ineffective at stimulating turnout, though they do effectively mobilize their network members into other forms of political participation. Moreover, the results provide suggestive but not conclusive evidence that both city council candidates and *cabos* are likely to target the members of their own social networks for clientelistic exchanges.

Last, it bears noting that social ties do a very poor job of explaining normative attitudes towards clientelism, even though they do a much better job of explaining the rates of knowing people who have sold their votes. This finding, combined with the lack of any empirical association between these two measures of clientelism, suggests that self-reported evaluations of the desirability of receiving presents are contaminated by social desirability bias.

At the same time that network ties to politicians and activists are prevalent, however, they are not particularly democratically distributed. As is the case with many other political resources, those of higher status and who are more politically and civically engaged have greater access to both city council candidates and *cabos eleitorais*. Likewise, political interest (but not education or civil society engagement) affects the likelihood of awareness of church-based political discussions. At the same time, however, hierarchical models reveal that residents of *lower* status neighborhoods are also more likely to know both candidates and campaigners. Not only do the uneven distributions of social network connections threaten our ability to develop

causal inferences, but they have a substantive implication. While politicians' and activists' social networks can serve as an important source of political socialization, their influence is necessarily limited by the extent of their reach.

In addition to demonstrating an important mechanism of political socialization, this analysis sheds new light on the consequences of Brazil's peculiar electoral and party system. A voluminous literature argues that this institutional arrangement hurts Brazilian democracy by weakening parties and legislatures and facilitating personalism and clientelism (Ames 2001; Mainwaring 1999; Mainwaring & Pérez-Liñan 1997; Nicolau 2006). One consequence that has largely been ignored, however, is the high number of politicians this system produces, particularly at the local level. These politicians, as well as other local activists, provide the citizens in their social networks with personal connections to the political world. Such connections may strengthen Brazilian democracy at the citizen level, promoting engagement with and understanding of their political system. At the same time, these connections may also contribute to the personalism of Brazilian politics as well as the erosion of its parties, as citizens vote for friends and family members rather than based on party allegiances or, even less, ideology.

9.0 CONCLUSION: POLITICAL DISCUSSION AND DEMOCRATIC COMPETENCE

Political conversations among ordinary citizens in the course of their daily lives are a critical piece of the democratic process. Through talking with others, citizens learn about institutions candidates, and issues; they formulate, challenge, and reformulate political positions; they encourage others to care and to get involved; and they meet other social, non-political objectives in the process. This dissertation shows emphatically that political discussion affects what citizens in twelve democracies around the world know about politics and how they interact with the system. Turning to Brazil, I examine the conditions under which political discussion has the greatest impact. I find that conversation has a democratizing, or “leveling,” effect, helping those who start out the farthest behind in knowledge make up the gaps between them and their fellow citizens. This is consistent with the fact that citizens appear to seek out discussants who know more than they do about politics. I also discover that spouses have a particularly strong effect on each others’ participation, and that women and those lower in knowledge are more likely to privilege their spouses as their most important political discussants.

Using panel data spanning the 2002 and 2006 Brazilian presidential election, moreover, I find that these effects withstand a number of econometric tests. Though preliminary instrumental variables models suggest that conversation is indeed endogenous to political knowledge—that is, that levels of political knowledge affect the extent to which citizens choose

to talk about politics—analysis also indicates that people who talk about politics learn from and are mobilized by their discussion. This is one of the most stringent tests of conversation’s impacts to date: rigorous analytical methods applied to a study of real, actually existing networks over a four-year period, outside of the research laboratory and in a developing democracy.

These findings help to resolve a “paradox of participation” in Brazil (Rennó et al. Forthcoming). While cross-national survey based research shows that Brazilians have comparatively very low levels of participation in many forms of civil society and low levels of interpersonal trust, it also shows Brazilians to be relatively politically engaged. Moreover, qualitative researchers have argued that organized, politicized civil society organizations and processes are quite strong in Brazil. The disjuncture between non-political and political participation runs counter to a line of research following from Putnam (1995, 2000) that argues that the former is necessary for the latter. What I argue instead is that social capital is better conceptualized in terms of social networks in the Brazilian context. While organizations such as parent-teacher associations and neighborhood organizations may certainly mobilize the small proportion of citizens who take part in them, most citizens are stimulated to participate through their informal connections to others, connections forged and maintained in the course of other daily activities.

The dissertation also sheds light on a second long-standing puzzle in the literature on social networks. A great deal of scholarly attention has been focused on assessing how exposure to disagreement within their social networks affects citizens’ abilities to understand and engage with their political systems. This literature has been concentrated on the American case. While some scholars have argued persuasively that disagreement is demobilizing, many subsequent researchers have called these findings into question, suggesting at a minimum that they may not

hold in all circumstances. I have argued that the key to resolving this puzzle requires two steps. First, we need to recognize that there are two components of disagreement, or divergent preferences: *diversity*, meaning the extent to which network members disagree with each other; and *conflict*, meaning the extent to which they disagree with the *ego* or reference individual at the center of the network. Second, the effects of diversity and conflict vary across systems with different numbers of candidates. In two party systems, diversity promotes turnout and conflict depresses it. As the number of parties/candidates rises and political disagreement becomes normalized, however, the negative effect of conflict is attenuated. Diversity, meanwhile, has no impact on political engagement even in systems with slightly more than two parties/candidates. When the number of parties becomes very high, moreover, it actually depresses turnout, as citizens begin to have difficulty processing their many choices.

Finally, this dissertation illuminates a third puzzle, one regarding how Brazil's electoral and party systems affect citizens' engagement with the political system. While a large body of literature argues that Brazil's institutions contribute to elite-level dysfunction and citizen disengagement, a very different group of scholars focusing on other democracies has argued that proportional representation and multipartism are *good* for democracy, and particularly for citizen engagement. I have pointed out that networks are missing from both of the standard stories. The number of parties or candidates in a political system affects citizens' networks in two ways. First, exposure both to diversity and to conflict within one's social network is more common in countries with higher effective numbers of candidates/parties. Second, when the number of candidates becomes *very* high, citizens' probabilities of having social ties to politicians rise. I show that Brazil's unusual combination of institutions produces high rates of social connections to local politicians. In fact, three quarters of respondents in the local election I study knew

personally someone running for city council, and two-thirds knew personally the candidate for whom they ended up voting. The city of Juiz de Fora is not an anomaly; in many places in Brazil, such as rural areas and smaller cities, these kinds of ties are likely to be even more plentiful. Controlling for selection effects, I also show that these ties have mixed effects on democratic competence. On the one hand, they help citizens learn about and mobilize them to participate in the election campaign. On the other hand, they also make citizens more likely to receive clientelistic offers.

This study also has implications for the analysis of political discussion and discussion networks more generally. First, taking advantage of the panel structure of the data has enabled me to examine stability and change in self-reported intimate egocentric networks in a way that has been possible in few other studies. This exploration reveals high instability, instability that I argue is indicative of measurement error. Correcting for error in the measurement of the size of the intimate egocentric network, I find that the estimated impact of network size on knowledge doubles. This suggests that scholars should take seriously the need to develop better measures of the size of the intimate egocentric network. Second, I have argued that the standard battery used to measure the intimate egocentric network misses the great majority of most citizens' social ties, and that at least some of the ties that are underrepresented have important political consequences. Returning to the local election case study, I show that the size of the intimate egocentric network has only a small association with connections to politicians, and that these weak ties constitute a form of social capital that really should be measured in studies of political behavior.

9.1 NEXT STEPS

I see several items on the agenda for future research. First, I will seek cross-national data on numbers of candidates and on social ties to politicians, in order to provide context for the findings of the eighth chapter. Surprisingly (at least to me) I have been unable to find cross-national data comparable to the data I have collected on connections to politicians in Brazil, except for a few items on some surveys in Japan and East Asia. I am concerned that the great many cultural, historical, and political institutional differences between Brazil and those countries make it difficult to assess the effects of electoral institutions, particularly given small country N's. Thus, I am lobbying to include a single question on social ties to politicians in the 2012 round of the AmericasBarometer by LAPOP, in order to be able to compare Brazil to other more similar countries.

Second, in the final section of the literature review I discussed a wide range of country-level factors that might affect the composition and effects of social networks. Testing all of these potential hypotheses was beyond the scope of this dissertation, but they should be considered more systematically in future research. Indeed, this discussion outlines a research agenda that could keep me busy for a very long time (not only with analyzing, but also with collecting data).

Third, I would like to develop experiments examining how discussion affects subjects' abilities to process campaign information and to make vote choices. Treatment group members would be placed in groups of four to five members and asked to discuss candidates, while control group members would be asked individually to rate candidates. The dependent variables would be measured at the individual-level, with group-level fixed effects. In a first set of experiments, I would vary the number of candidates to assess how discussion's impact varied across the "party

system.” In a second set of experiments, I would put one of the group members in control of “clientelistic” resources, and assess how the availability of these resources affected group members’ processing of information that group member was assigned to present.

9.2 INSTITUTIONAL IMPLICATIONS

The findings in this dissertation have implications for the design of institutions. They indicate that among the other ways institutions affect citizen behavior, scholars need to appreciate effects on social networks. In this regard, multipartism increases citizens’ exposure to others who are politically different from themselves, creating more spaces for everyday forms of democratic deliberation. At the same time, extreme multipartism, particularly at the local level, can promote high levels of social connections to politicians themselves. Such ties have mixed democratic effects, promoting citizen engagement and at the same time contributing to clientelism and personalism.

Moreover, the findings presented here have implications for the design of another type of democratic institution. At the outset of the dissertation, I discussed the movement to create institutional forums for citizens to come together with others, to deliberate, and even to make policy decisions and choices. One such forum in the Brazilian context is the participatory budgeting process. The proponents of such institutions have argued that the experience of meeting other citizens and talking about politics will itself have democratic benefits for the participants. While I certainly cannot make claims about the extent to which any particular deliberative forum benefits its participants, the evidence presented here shows clearly that such democratic discussions can be both educative and mobilizing.

APPENDIX A

ADDITIONAL ANALYSIS FROM CHAPTER 5, PERSONAL TOUCH

Table 44. Descriptive Statistics for Selected Variables, ABR Data

	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6
<i>Interviewer Ratings of Political Knowledge</i>						
Very low	121	135	122	98	115	101
Low	281	272	284	287	326	333
Medium	518	531	551	610	532	602
High	315	320	311	311	317	282
Very high	112	95	97	76	95	78
<i>Total</i>	<i>1,347</i>	<i>1,353</i>	<i>1,365</i>	<i>1,382</i>	<i>1,385</i>	<i>1,396</i>
Corr. with civics quiz	.59	NA	.59	.57	.56	.62
Percent with a First-Round Voting Decision	80.70%	84.70%	90.20%	78.10%	72.80%	92.10%
Mean TV News Freq. (0-6)	4.56	4.37	4.46	4.66	4.60	4.57
Mean Newspaper Freq. (0-7)	1.83	1.76	2.01	2.05	2.08	2.14

Note: No civics quiz questions were asked in Wave 2.

Table 45. The Effect of Civics Quiz Scores on Interviewer Ratings of Knowledge and Cooperativeness

	Interviewer-Rated Knowledge	Interviewer-Rated Cooperativeness
Interviewer-Rated Cooperativeness	0.265*** (0.013)	
Civics Quiz Knowledge	0.218*** (0.011)	0.095*** (0.011)
Civics Quiz Knowledge X Wave 3	0.209*** (0.019)	-0.022 (0.020)
Civics Quiz Knowledge X Wave 4	0.030+ (0.016)	-0.017 (0.016)
Civics Quiz Knowledge X Wave 5	0.107*** (0.018)	-0.005 (0.018)
Civics Quiz Knowledge X Wave 6	0.130*** (0.017)	-0.029 (0.019)
Wave 3	-0.121* (0.051)	0.302*** (0.058)
Wave 4	-0.013 (0.056)	0.189** (0.060)
Wave 5	-0.101+ (0.055)	0.160** (0.062)
Wave 6	-0.226*** (0.054)	0.138* (0.067)
Constant	0.390*** (0.053)	3.145*** (0.048)
<i>Number of observations</i>	6874	6887
<i>R-squared within</i>	0.06	0.01
<i>R-squared overall</i>	0.38	0.04

Note: Standard errors in parentheses are clustered on 1,40respondents. Models based on all waves except Wave 2, since civics quiz knowledge was not measured in that wave. Coefficients are significant at + p<.10, * p<.05, ** p<.01, *** p<.001.

Table 46. Percent of All Respondents Naming Relationships as Social Network Members, ABR Data

	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6
Spouse/Partner	NA	25.41%	--	NA	23.48%	--
Child(ren)/Parent(s)	NA	18.84%	--	NA	17.77%	--
Other Relative(s)	NA	44.61%	--	NA	40.83%	--
Friend(s)	NA	56.17%	--	NA	51.25%	--

Note: No social network questions were asked in Waves 1 and 4. Wave 3 and Wave 6 descriptive statistics on the social network are the same as those for Waves 2 and 5, respectively.

Table 47. Ordered logit model. Predictors of the Order in Which Discussants Are Named

	Coefficient	Standard Error
Spouse	-1.548***	0.090
Parent/Child	-0.246**	0.078
Other Relative	-0.175**	0.056
<i>Cutpoint 1</i>	<i>-0.736</i>	<i>0.039</i>
<i>Cutpoint 2</i>	<i>0.758</i>	<i>0.039</i>
<i>Number of observations</i>	<i>5857</i>	
<i>Pseudo R-squared</i>	<i>0.026</i>	
<i>Log likelihood</i>	<i>-6212.12</i>	

Note: Coefficients are significant at + $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$. Unit of analysis is the main respondent-discussant dyad. Data represent observations from Waves 2 and 5. Note that negative coefficients indicate higher priority.

Table 48. First Stage of 2SLS Estimation: Fixed Effect Model of Political Conversation

	Coefficient	Standard Error	p-value
<i>Included Variables</i>			
TV News Frequency	0.023	0.006	0.000
Newspaper Frequency	0.024	0.005	0.000
Education	0.001	0.009	0.926
Senior Citizen	0.053	0.078	0.503
Change in Interviewer	0.064	0.017	0.000
Social Network Size	0.083	0.011	0.000
<i>Excluded Variables</i>			
Lagged Conversation	-0.014	0.016	0.385
Age	-0.003	0.010	0.773
Age Squared	0.000	0.000	0.159
Has a Job	0.063	0.029	0.030
Attends Church	0.006	0.017	0.709
Evangelical	-0.074	0.060	0.215
White	-0.053	0.035	0.130
Number of Adults in Family	-0.018	0.012	0.135
Constant	1.721	0.233	0.000
<i>Number of Observations</i>	5329		
<i>R-squared within</i>	0.05		
<i>R-squared overall</i>	0.11		

Note: Standard errors in parentheses are clustered on 1,401 respondents. Coefficients are significant at + p<.10, * p<.05, ** p<.01, *** p<.001.

Table 49. Distribution of Main Respondent and Discussant Knowledge Scores

	Main Respondent	First Discussant Interviewed	Second Discussant Interviewed
Wave 3 Quiz Score			
0	15.3%	13.1%	12.7%
1	18.3%	15.2%	21.0%
2	25.4%	22.4%	25.9%
3	41.0%	49.3%	40.4%
<i>Mean</i>	<i>1.92</i>	<i>2.08</i>	<i>1.94</i>
<i>Pr(mean = that of main respondent)</i>	<i>--</i>	<i>0.00</i>	<i>0.82</i>
<i>Number of respondents</i>	<i>858</i>	<i>858</i>	<i>320</i>
Wave 4 Score			
0	9.5%	7.5%	10.0%
1	10.9%	12.2%	12.9%
2	17.4%	12.7%	17.1%
3	21.9%	20.5%	28.6%
4	25.7%	25.1%	21.4%
5	14.5%	22.0%	10.0%
<i>Mean</i>	<i>2.87</i>	<i>3.09</i>	<i>2.69</i>
<i>Pr(mean = that of main respondent)</i>	<i>--</i>	<i>0.00</i>	<i>0.93</i>
<i>Number of respondents</i>	<i>579</i>	<i>518</i>	<i>70</i>

Table 50. Heckman Selection Model: The Effect of Discussant Knowledge on Main Respondent

Knowledge, Wave 3

	Coefficient	Standard Error	p-value
Outcome Equation			
Discussant Knowledge, Wave 3	0.049	0.026	0.056
Main Respondent Knowledge, Wave 1	0.566	0.032	0.000
Political Conversation	0.057	0.014	0.000
TV News Frequency	0.011	0.005	0.033
Newspaper Frequency	0.004	0.004	0.322
Education	0.022	0.003	0.000
Age	0.000	0.001	0.654
Senior Citizen	0.011	0.039	0.780
Constant	-0.142	0.056	0.011
Selection Equation			
Education	0.032	0.013	0.015
Age	-0.003	0.003	0.238
TV News Frequency	0.023	0.022	0.293
Newspaper Frequency	-0.001	0.018	0.956
Female	0.321	0.083	0.000
Political Conversation	-0.039	0.061	0.524
Trust in Interview	0.065	0.125	0.606
Juiz de Fora	-0.144	0.082	0.078
Social Network Size	0.212	0.055	0.000
Constant	-0.298	0.341	0.381
<i>Rho (correlation between equations)</i>	<i>0.493</i>	<i>0.145</i>	<i>0.024</i>
<i>Number of Observations (Selection)</i>	<i>1137</i>		
<i>Number of Observations (Outcome)</i>	<i>834</i>		
<i>Log likelihood</i>	<i>-674.932</i>		

Note: Model is based only on Wave 3. Selection equation predicts the probability that a main respondent who names at least one discussant will have a discussant interviewed.

Table 51. Logit Model: Probability that the First Named Discussant is a Spouse

	Coefficient	Standard Error	p-value
Female	0.657	0.128	0.000
Interviewer Knowledge	-0.143	0.061	0.020
Education	0.001	0.020	0.941
TV News Frequency	-0.004	0.031	0.894
Newspaper Frequency	-0.013	0.024	0.573
Age	0.001	0.004	0.869
Senior Citizen	-0.541	0.272	0.047
<i>Constant</i>	<i>-1.450</i>	<i>0.309</i>	<i>0.000</i>
<i>Number of Observations</i>	<i>2274</i>		
<i>Pseudo R-Squared</i>	<i>0.025</i>		
<i>Log likelihood</i>	<i>-1128.524</i>		

Note: Standard errors are clustered on 1311 main respondents in Waves 2 and 5.

Table 52. Transition Model: Conversation's Effect on Voting Decisions, Conditional on the Previous**Decision**

	Undecided in previous wave	Decided in previous wave
Political Conversation	0.333*** (0.089)	0.295*** (0.056)
TV News Frequency	0.077* (0.033)	0.064** (0.021)
Newspaper Frequency	0.019 (0.033)	0.038* (0.019)
Education	-0.023 (0.021)	-0.033* (0.124)
Age	-0.021*** (0.006)	-0.002 (0.004)
Senior Citizen	0.282 (0.248)	-0.287+ (0.165)
<i>Constant</i>	<i>1.236***</i> (0.370)	<i>1.461***</i> (0.235)
<i>Number of observations</i>	<i>6913</i>	
<i>Pseudo R-squared</i>	<i>0.05</i>	
<i>Log likelihood</i>	<i>-2919.13</i>	

Note: Standard errors are clustered on 1,401 respondents. Coefficients are significant at + p<.10, * p<.05, ** p<.01, *** p<.001.

APPENDIX B

CODING OF DISCUSSANT AND MAIN RESPONDENT PREFERENCES IN CNEP II

The following rules were used for coding parties/candidates in all eleven countries, for both respondents and discussants:

- 1) A vote choice of “other” is treated as a party/candidate. If both a respondent and a discussant are coded as voting for “other,” this is treated as agreement (or, more precisely, it is *not* coded as conflict on the dichotomous variable for conflict).
- 2) Recorded vote choices of “Don’t Know,” “No Response,” “Didn’t Vote,” and “Voted Blank” are coded as missing, for the purpose of determining disagreement.
- 3) Only discussants with known, non-missing, non-blank vote choices may be coded as in conflict with the main respondent. Conversely, discussants with unknown, missing, or blank vote choices are automatically coded as *not* disagreeing with the respondent.
- 4) If the discussant has a known vote, but the main respondent does not, this is coded as conflict.
- 5) If the respondent knows that his or her discussant did not vote or voted blank, this counts as knowing the discussant’s preference for the purpose of determining the number of known preferences.

The following parties and candidates were coded in each country. In many cases, the original vote choice variables had not followed the same coding scheme for respondents and

discussants, and I had to reconcile the two schemes to create compatible vote measures for the purposes of determining disagreement.

Table 53. Parties and Candidates Coded in the CNEP II

<i>Country</i>	<i>Parties and Candidates Coded</i>
Bulgaria	I. Marazov; P. Stoyanov; A. Tomov; G. Ganchev; Other
Chile	Arturo Alessandri; Eduardo Frei; Manfred Max Neef; José Piñera; Eugenio Pizarro; Cristian Reitze
Germany	CDU/CSU; SDP; FDP; Grün/B90; REP; PDS; DSU; Other
Greece	PA.SO.K.; New Democracy; Politiki Anixi; Communist Party (KKE); Left Coalition; Democratic Social Movement; Other
Hong Kong	Democratic Party; Liberal Party; DAB; The Frontier; HKADPL; Citizens Party; 123 Democratic Alliance; New Territories Alliance; independent candidate; Pioneer; Chow Kit Bing Jennifer; Fok Pui Yee; Leung Yiu Chung; Ting Yin Wah; Andrew Wong Wang-Fat; Kan Brian Ping-Chee; Chong Chan Yau
Hungary	Fidesz; FKGP; KDNP; MDF; MDNP; MIIP; MSZDP; MSZP; Munkaspart; Lszdsz; Zj Szvvetsig
Japan	LDP JSP; KOMEI; JCP; DSP; SDF; Other
Spain	PSOE CDS; PP; IU; CIU; ERC; PNV; EA; HB; BNG; PA; PAR; UV; Verdes; UA; PSE-EE; ADE (Ruiz Mateos); LV-Verdes; Partido Andalucista; PCPE; Partido Reg. Cantab; UPCA; Other
United Kingdom	Conservative; Labour; Liberal Democrat; Scottish NP/Plaid Cymru; Other
United States	B. Clinton; R. Perot; G. Bush
Uruguay	Partido Nacional (unspecified); Partido Nacional (Ramírez); Partido Nacional (Volonté); Partido Colorado (unspecified); Partido Colorado (Sanguinetti); Encuentro Progresista/Frente Amplio; Nuevo Espacio; Other

APPENDIX C
QUESTIONNAIRE FROM THE NETWORKS AND NEIGHBORHOODS IN
BRAZILIAN POLITICS STUDY

Please see the following page for the questionnaire used in the Networks and Neighborhoods in Brazilian Politics study.

Entrevista – Juiz de Fora – Questionário

APRESENTAÇÃO

Eu sou aluno(a) da UFJF e estou trabalhando numa pesquisa sobre a política local aqui em Juiz de Fora. Tenho um questionário sobre o que o(a) sr(a) acha sobre a política. Queria saber se o(a) sr(a) ou alguma pessoa na casa teria tempo para falar comigo.

No. de adultos que moram aqui: _____ Nome do adulto com o primeiro aniversário: _____

PEÇA PARA FALAR COM O ADULTO (MAIOR DE 18 ANOS) COM O PRIMEIRO ANIVERSÁRIO NO ANO. SE NÃO ESTIVER DISPONÍVEL, PEÇA FALAR COM A PESSOA COM O SEGUNDO, ETC.

Nome do Entrevistado: _____ Telefone: _____

Endereço: _____ Bairro: _____

Data: _____ Hora: _____ Entrevistador: _____

LER ANTES DE COMEÇAR A ENTREVISTA:

Antes de começar queríamos agradecer o(a) sr(a) pelo tempo. Também queríamos dizer que esta entrevista é completamente voluntária. Suas respostas são sigilosas e o seu nome não será associado a elas. Nós registramos seu nome e endereço somente para que a supervisão da pesquisa possa verificar o meu trabalho. Algumas pessoas entrevistadas serão contactadas posteriormente para que as informações, como nome e endereço do entrevistado, sejam conferidas. Nome, telefone e endereço serão descartados depois dessa verificação.

Durante a entrevista, por favor, diga se houver alguma questão que você não queira responder, e eu passarei para a questão seguinte. O(a) sr(a) pode terminar a entrevista em qualquer momento. Se concordar podemos começar a entrevista agora.

- | | | | |
|----|--|--|----------------------|
| 1. | As primeiras perguntas são sobre as pessoas com quem o(a) sr(a) conversou durante a campanha para as eleições municipais, ou seja desde julho. Quando eu falar que uma pessoa é um político, quero dizer que é prefeito, vereador, deputado ou governador ou que é candidato a tal cargo. O(a) sr(a) já conversou pessoalmente com um político que pediu o seu voto? | 1.Sim 2.Não → 3
8.NS 9.NR → 3 | <input type="text"/> |
| 2. | Mais ou menos quantos políticos pediram seu voto? | No. : _____
88. NS 99.NR | <input type="text"/> |
| 3. | E algum cabo eleitoral ou alguém que trabalhe para um político já pediu seu voto? | 1.Sim 2.Não → 5
8.NS 9.NR → 5 | <input type="text"/> |

-
- | | | | |
|-----|---|--|--|
| 4. | Mais ou menos quantos cabos eleitorais pediram o seu voto? | No. : _____
88. NS 99.NR | <input style="width: 100px; height: 40px;" type="text"/> |
| 5. | O(a) sr(a) conhece alguma pessoa que foi candidato a vereador na última eleição ou mesmo um vereador atual? | 1.Sim 2.Não
8.NS 9.NR | <input style="width: 100px; height: 40px;" type="text"/> |
| 6. | Na última eleição, o(a) sr(a) conheceu alguma pessoa que foi cabo eleitoral ou que trabalhava para um político? | 1.Sim 2.Não
8.NS 9.NR | <input style="width: 100px; height: 40px;" type="text"/> |
| 7. | Tem muitas pessoas que receberam presentes, agrados ou favores de políticos em troca pelo voto nas eleições de outubro. O(a) sr(a) conhece alguma pessoa que trocou o voto? | 1.Sim 2.Não → 9
8.NS 9.NR → 9 | <input style="width: 100px; height: 40px;" type="text"/> |
| 8. | Conhece mais ou menos quantas pessoas que fizeram isso: uma ou duas pessoas, três a cinco pessoas, cinco a dez pessoas ou mais do que dez pessoas? | 1.Uma ou duas
2.Três a cinco
3.Cinco a dez
4.Mais do que dez
8.NS 9.NR | <input style="width: 100px; height: 40px;" type="text"/> |
| 9. | Agora vou fazer perguntas sobre alguns grupos e lideranças no seu bairro. O(a) sr(a) sabe se existe alguma Sociedade Pró-Melhoramento ou Associação de Bairro aqui em (BAIRRO)? | 1.Sim 2.Não → 17
8.NS 9.NR → 17 | <input style="width: 100px; height: 40px;" type="text"/> |
| 10. | O(a) sr(a) vota já votou em alguma eleição da associação? | 1.Sim 2.Não
8.NS 9.NR | <input style="width: 100px; height: 40px;" type="text"/> |
| 11. | O(a) sr(a) sabe o nome do presidente da associação? (Como se chama?) | 1.Sim: _____
2.Não/NS 9.NR | <input style="width: 100px; height: 40px;" type="text"/> |
| 12. | O(a) sr(a) conhece o(a) presidente pessoalmente? | 1.Sim 2.Não → 14
8.NS 9.NR → 14 | <input style="width: 100px; height: 40px;" type="text"/> |
| 13. | Nas eleições de outubro, (ele/ela) pediu seu voto ou sugeriu algum candidato? | 1.Sim 2.Não
8.NS 9.NR | <input style="width: 100px; height: 40px;" type="text"/> |
| 14. | O(a) sr(a) já participou de alguma atividade da associação? | 1.Sim 2.Não
8.NS 9.NR | <input style="width: 100px; height: 40px;" type="text"/> |
-

15. O(a) sr(a) já recebeu algum tipo de ajuda da associação? **1.Sim** **2.Não → 17**
8.NS **9.NR → 17**
16. Que tipo de ajuda? _____
8.NS **9.NR**
17. Vou falar agora da sua igreja. Qual a sua religião? **1. Católico** **2. Evangélico**
3. Umbanda/Candomblé **4. Espírita**
5. Protestante **6. Outra: _____**
8. NS **9. NR**
18. Vai para alguma igreja? **1.Sim (SE O ENTREVISTADO FOR CATÓLICO → 20)**
2.Não → 27 **8.NS** **9.NR → 27**
19. Como se chama sua igreja? _____
8.NS **9.NR**
20. Sua igreja fica neste bairro? **1.Sim** **2.Não**
8.NS **9.NR**
21. O(a) sr(a) assiste celebrações, cultos ou atividades na igreja *uma vez à semana* ou *mais que uma vez à semana* ou *menos que uma vez à semana*? **1. Mais do que uma vez à semana**
2. Uma vez à semana
3. Algumas vezes ao mês
4. Algumas vezes ao ano
5. Nunca **8. NS** **9. NR**
SE FALAR MENOS: Assiste *algumas vezes ao mês*, *algumas vezes no ano* ou *nunca*?
22. Além do dízimo, (a) sr(a) participa de alguma atividade na igreja que ajude pessoas necessitadas, por exemplo por meio de caridade? **1.Sim** **2.Não**
8.NS **9.NR**
23. Nos últimos meses, o(a) sr(a) já ouviu alguma pessoa na igreja falar que deve votar ou que deve ter consciência no voto? **1.Sim** **2.Não**
8.NS **9.NR**
24. Nos últimos meses, o(a) sr(a) já ouviu alguma pessoa na igreja falar sobre os candidatos? **1.Sim** **2.Não**
8.NS **9.NR**
25. O(a) sr(a) sabe qual candidato a **vereador** (o pastor/o padre/o pai ou mãe de santo) apoiou? (Quem?) **1.Sim: _____**
2.Não/NS **9.NR**

- | | | | |
|-----|---|--|----------------------|
| 26. | O(a) sr(a) sabe qual candidato a prefeito (o pastor/o padre/o pai ou mãe de santo) apoiou? (Quem?) | 1.Sim: _____
2.Não/NS 9.NR | <input type="text"/> |
| 27. | O(a) sr(a) conhece pessoalmente o padre ou pastor de alguma (outra) igreja aqui perto (além da sua)? | 1.Sim 2.Não
8.NS 9.NR | <input type="text"/> |
| 28. | O(a) sr(a) participa de algum clube social ou de esporte? | 1.Sim 2.Não → 31
8.NS 9.NR → 31 | <input type="text"/> |
| 29. | Seu clube fica neste bairro? | 1.Sim 2.Não
8.NS 9.NR | <input type="text"/> |
| 30. | Nos últimos meses, o(a) sr(a) já ouviu as pessoas no clube falarem sobre as eleições? | 1.Sim 2.Não
8.NS 9.NR | <input type="text"/> |
| 31. | O(a) sr(a) participa de algum time de futebol ou outra equipe esportiva como jogador? | 1.Sim 2.Não → 34
8.NS 9.NR → 34 | <input type="text"/> |
| 32. | Seu time fica neste bairro? | 1.Sim 2.Não
8.NS 9.NR | <input type="text"/> |
| 33. | Nos últimos meses, o(a) sr(a) já ouviu as pessoas na equipe falarem sobre as eleições? | 1.Sim 2.Não
8.NS 9.NR | <input type="text"/> |
| 34. | O(a) sr(a) é sócio(a) de algum sindicato? | 1.Sim 2.Não → 36
8.NS 9.NR → 36 | <input type="text"/> |
| 35. | Nos últimos meses, o(a) sr(a) já ouviu as pessoas no sindicato falarem sobre a eleição? | 1.Sim 2.Não
8.NS 9.NR | <input type="text"/> |
| 36. | O(a) sr(a) participa de algum outro grupo, por exemplo uma associação de pais e mestres ou o movimento estudantil ou um conselho municipal ou local? (De qual grupo participa?) | 1.Sim: _____
2.Não
8.NS 9.NR | <input type="text"/> |
| 37. | O(a) sr(a) faz outro trabalho voluntário na comunidade? (O que?) | 1.Sim: _____
2.Não
8.NS 9.NR | <input type="text"/> |
| 38. | Em sua adolescência, o(a) sr(a) foi assistido em algum projeto social, por exemplo na AMAC ou num projeto dentro | 1.Sim 2.Não → 41
8.NS 9.NR → 41 | <input type="text"/> |

de uma igreja?				
39. Qual projeto?	_____			
40. Nesse projeto, os educadores falaram sobre a política e assuntos comunitários <i>freqüentemente, de vez em quando, muito pouco ou nunca?</i>	1.Nunca 3.De vez em quando 8.NS	2.Muito pouco 4.Freqüentemente 9.NR		
41. O(a) sr(a) sabe o nome de alguma outra liderança comunitária no bairro? (Como ele/ela atúa no bairro? E tem mais alguém?) (ESCREVA ATÉ 2 NOMES E FUNÇÕES.)	NOME 1. _____ 2. _____ 8.Não/NS	FUNÇÃO 9.NR	Número de lideranças:	
42. Quantas pessoas que fazem parte do seu convívio social moram neste bairro? Diria que é a maioria, bastante, poucas, ou quase ninguém?	1.A maioria 3.Poucos 8.NS	2.Bastante 4.Quase ninguém 9.NR		
43. Quantos familiares do(a) sr(a) moram no seu bairro? Diria que é a maioria, bastante, poucos, ou quase ninguém?	1.A maioria 3.Poucos 8.NS	2.Bastante 4.Quase ninguém 9.NR		
44. Agora eu vou fazer algumas perguntas sobre a política local em Juiz de Fora. Quanto interesse o(a) sr(a) tem na política local: muito interesse, algum interesse, pouco interesse ou nenhum interesse?		1.Muito 3.Pouco 8.NS	2.Algum 4.Nenhum 9.NR	
45. Se o voto não fosse obrigatório, o(a) sr(a) com certeza iria votar, provavelmente iria votar, provavelmente não iria votar ou com certeza não iria votar?		1.Com certeza iria 2.Provavelmente iria 3.Provavelmente não iria 4.Com certeza não iria 8.NS	9.NR	
46. O (a) sr(a) foi votar no dia 5 de outubro, que foi o primeiro turno da eleição municipal?	1.Sim 8.NS	2.Não → 54 9.NR → 54		
47. Em qual candidato a vereador o(a) sr(a) votou? (ESCREVA NOME.)		2.Branco/nulo → 51 8.NS/Não se lembra → 51 9.NR → 51		

48. O(a) sr(a) conhece (ele/ela) pessoalmente? **1.Sim** **2.Não**
8.NS **9.NR**
49. O(a) sr(a) tentou convencer outras pessoas a votar (nele/nela)? **1.Sim** **2.Não → 51**
8.NS **9.NR → 51**
50. Quantas pessoas o(a) sr(a) tentou convencer?

888.NS **999.NR**
51. Agora vou fazer algumas perguntas sobre os candidatos a prefeito. No primeiro turno, em qual candidato a prefeito o(a) sr(a) votou?
1.Margarida Salomão
2.Custódio Mattos
3.Tarcísio Delgado
4.Omar Peres
5.Vitor Pontes
6.Rafael Pimenta
7.Branco/nulo → 54
8.NS **9.NR → 54**
52. O(a) sr(a) tentou convencer outras pessoas a votar (nele/nela)?
1.Sim **2.Não → 54**
8.NS **9.NR → 54**
53. Quantas pessoas o(a) sr(a) tentou convencer?

888.NS **999.NR**
54. E o(a) sr(a) votou no segundo turno no dia 26 de outubro?
1.Sim **2.Não → 56**
8.NS **9.NR → 56**
55. No segundo turno, em qual candidato a prefeito o(a) sr(a) votou?
1.Margarida Salomão
2.Custódio Mattos
3.Tarcísio Delgado
4.Omar Peres
5.Vitor Pontes
6.Rafael Pimenta
7.Branco/nulo
8.NS **9.NR**
56. Você simpatiza com algum partido político? Sim ou não?
1.Sim **2.Não → 58**
8.NS **9.NR → 58**
57. Qual? (ESCREVA O PRIMEIRO MENCIONADO)

58. Quando o(a) sr(a) era criança e adolescente, seus pais simpatizavam com algum partido? **1.Sim** **2.Não**
8.NS/Não se lembra
9.NR
59. Qual? (ESCREVA O PRIMEIRO MENCIONADO) _____
60. Em relação ao seu posicionamento político, você se considera de **1.Esquerda** **2.Centro-esquerda**
esquerda, centro-esquerda, centro, **3.Centro** **4.Centro-direita**
centro-direita, ou de direita? **5.Direita** **6.Nenhum (NÃO LER)**
7.Não entende termos (NÃO LER) → 63
9.NR → 63
61. O que significa ser da direita? (ESCREVA O QUE O ENTREVISTADO DISSER.)

62. O que significa ser da esquerda? (ESCREVA O QUE O ENTREVISTADO DISSER.)

63. O(a) sr(a) trabalhou para algum partido ou algum candidato a vereador ou prefeito este ano? **1.Sim** **2.Não**
8.NS **9.NR**
64. O(a) sr(a) usava adesivo de algum candidato *nunca, raramente, às vezes ou freqüentemente?* **1. Nunca**
2. Raramente
3. Às vezes
4. Freqüentemente
8.NS **9.NR**
65. O(a) sr(a) colocava algum cartaz de candidato na sua casa ou no carro? **1.Sim** **2.Não**
8.NS **9.NR**
66. O(a) sr(a) já foi para algum comício, debate ou reunião política? **1.Sim** **2.Não → 68**
8.NS **9.NR → 68**
67. Foi para mais ou menos quantos comícios, debates ou reuniões? **Número:** _____
68. O(a) sr(a) já assistiu algum debate na rádio ou na TV? **1.Sim** **2.Não → 70**
8.NS **9.NR → 70**
69. Assistiu mais ou menos quantos debates? **Número:** _____

70. Em setembro e outubro, quantos dias na semana costumava assistir o programa eleitoral na TV ou na rádio? **Número: _____**
(ESCREVA DE 0 A 6)
71. E quantos dias na semana costuma assistir jornal de televisão? **Número: _____**
(ESCREVA DE 0 A 6)
72. E quantos dias na semana lê notícias sobre política em algum jornal? **Número: _____**
(ESCREVA DE 0 A 7)
73. E quantos dias na semana lê notícias sobre política na internet? **Número: _____**
(ESCREVA DE 0 A 7)
74. E programas de rádio que falem sobre assuntos políticos: o(a) sr(a) escuta nunca, menos que três hora na semana, entre três e sete horas na semana, ou mais que sete horas na semana? **1.Nunca**
2.Menos que três horas
3.Três a sete horas
4.Mais que sete horas
8.NS 9.NR

NAS PRÓXIMAS PERGUNTAS, NÃO DEIXE OUTRA PESSOA RESPONDER PELO ENTREVISTADO. SE O ENTREVISTADO PRECISAR DE AJUDA PARA RESPONDER, MARQUE COMO INCORRETO.

75. O(a) sr(a) sabe qual é o partido da Margarida Salomão? **1.PT (Correto)**
2.Outro (incorreto) 3.NS/NR
76. O(a) sr(a) sabe qual é o partido do Custódio Mattos? **1.PSDB/Tucano (Correto)**
2.Outro (incorreto) 3.NS/NR
77. Sabe me dizer o nome do prefeito atual? **1.José Eduardo Araújo (Correto)**
2.Outro (incorreto) 3.NS/NR
78. O(a) sr(a) sabe qual candidato a vereador foi mais votado na eleição do 5 de outubro? Foi o Wanderson Castelar, o Bruno de Freitas Siqueira, o Isauro Jose de Calais Filho ou o João Evangelista de Almeida? **1.Wanderson Castelar**
2.Bruno de Freitas Siqueira
3.Isauro Jose de Calais Filho
4.João Evangelista de Almeida
8.NS/NR
79. O(a) sr(a) sabe quantos vereadores tem na Câmara Municipal? É 12, 17, 19 ou 23? _____
88.NS/NR

80. O(a) sr(a) pode me dizer os nomes dos candidatos a prefeito no primeiro turno? (MARQUE TODOS OS CANDIDATOS MENCIONADOS. QUANDO O ENTREVISTADO TERMINAR, PERGUNTE “Tem mais alguém?”)

- 1.Margarida Salomão
- 2.Custódio Mattos
- 3.Tarcísio Delgado
- 4.Omar Peres
- 5.Vitor Pontes
- 6.Rafael Pimenta

Número de candidatos mencionados:

	1.Muito importante	2.Algo importante	3.Pouco importante	4.Nada importante	8.NS	9.NR
81. Quando o(a) sr(a) escolhe um candidato a vereador, quanta importância tem os seguintes critérios: se o(a) sr(a) conhece o candidato pessoalmente. Isso é <i>muito importante, algo importante, pouco importante</i> ou <i>nada importante</i> para sua escolha?						
82. Se o candidato mora no seu bairro. Isso é <i>muito importante, algo importante, pouco importante</i> ou <i>nada importante</i> para sua escolha?						
83. Se o candidato já ajudou pessoas necessitadas na comunidade.						
84. Se o candidato foi indicado por algum familiar ou amigo.						
85. Se o candidato é do seu partido.						
86. Se o candidato é da esquerda ou da direita.						
87. Se o candidato já teve experiência.						
88. Se o candidato é indicado por algum político de confiança.						

	1.Nunca	2.Raramente	3.De vez em quando	4.Freqüentemente	8.NS	9.NR
89. Agora eu vou mudar um pouco de assunto para falar das conversas informais sobre política. Nos últimos meses, com que frequência o(a) sr(a) esteve num bar ou restaurante e presenciou que as pessoas falaram da política: <i>nunca, raramente, às vezes ou freqüentemente</i> ?						
90. E nos últimos meses, com que frequência o(a) sr(a) presenciou as pessoas no seu bairro falando sobre política: <i>nunca, raramente, às vezes ou freqüentemente</i> ?						
91. E com que frequência presenciou as pessoas do seu trabalho ou na escola ou na universidade falando sobre política?						
92. Nos últimos meses, com que frequência diria que o(a) sr(a) costumava conversar sobre política com seus amigos e familiares?						
93. E com que frequência conversava sobre política com pessoas em lugares públicos, por exemplo no supermercado ou na rua?						
94. Quando era criança e adolescente, com que frequência seus pais conversavam sobre política?						

95. O(a) sr(a) pode me indicar o nome da pessoa com quem mais conversa sobre assuntos importantes na sua vida? **1.** _____ **3.NS/NR → 126**

96. Qual a sua relação com essa pessoa? **1. Companheiro** **2. Parente**
3. Pai/Mãe/Filho **4. Amigo/vizinho**
5. Outro: _____
8. NS **9. NR**

97. O(a) sr(a) acha que o nível de conhecimento sobre a política dessa pessoa é *muito alto*, *alto*, *regular*, *baixo* ou *muito baixo*? **1. Muito alto** **2. Alto**
3. Regular **4. Baixo**
5. Muito baixo **9. NR**
8. NS
98. O(a) sr(a) costuma conversar sobre política com essa pessoa *muito*, *de vez em quando*, *pouco* ou *nunca*? **1.Muito** **2.De vez...**
3.Pouco **4.Nunca**
8.NS **9.NR**
99. Essa pessoa mora no seu bairro? **1.Sim** **2.Não**
8.NS **9.NR**
100. Essa pessoa conhece algum candidato a vereador ou prefeito na última eleição ou mesmo um vereador ou prefeito atual? **1.Sim** **2.Não**
8.NS **9.NR**
101. O(a) sr(a) sabe o nome do candidato a vereador que essa pessoa apoiou? **1. _____**
2. NS **3. NR**
102. O(a) sr(a) sabe o nome do candidato a prefeito que essa pessoa apoiou no primeiro turno? **1. _____**
2. NS **3. NR**
103. O(a) sr(a) pode me indicar o nome de outra pessoa com quem conversa sobre assuntos importantes na sua vida? **1. _____**
3.NS/NR → 126
104. Qual a sua relação com essa pessoa? **1. Companheiro** **2. Parente**
3. Pai/Mãe/Filho **4. Amigo/vizinho**
5. Outro: _____
8. NS **9. NR**
105. O(a) sr(a) acha que o nível de conhecimento sobre a política de essa pessoa é *muito alto*, *alto*, *regular*, *baixo* ou *muito baixo*? **1. Muito alto** **2. Alto**
3. Regular **4. Baixo**
5. Muito baixo **9. NR**
8. NS
106. O(a) sr(a) costuma conversar sobre política com essa pessoa *muito*, *de vez em quando*, *pouco* ou *nunca*? **1.Muito** **2.De vez...**
3.Pouco **4.Nunca**
8.NS **9.NR**
107. Essa pessoa conhece algum candidato a vereador ou prefeito na última eleição ou mesmo um vereador ou prefeito atual? **1.Sim** **2.Não**
8.NS **9.NR**

108. O(a) sr(a) sabe o nome do candidato a vereador que essa pessoa apoiou? 1. _____
2. NS 3. NR
109. O(a) sr(a) sabe o nome do candidato a prefeito que essa pessoa apoiou no primeiro turno? 1. _____
2. NS 3. NR
110. O(a) sr(a) me pode indicar o nome de outra pessoa com quem conversa sobre assuntos importantes? 1. _____
3.NS/NR → 126
111. Essa pessoa mora neste bairro? 1.Sim 2.Não
8.NS 9.NR
112. Qual a sua relação com essa pessoa? 1. **Companheiro** 2. **Parente**
3. **Pai/Mãe/Filho** 4. **Amigo/vizinho**
5. **Outro:** _____
8. NS 9. NR
113. O(a) sr(a) acha que o nível de conhecimento sobre a política dessa pessoa é *muito alto, alto, regular, baixo ou muito baixo*? 1. **Muito alto** 2. **Alto**
3. **Regular** 4. **Baixo**
5. **Muito baixo**
8. NS 9. NR
114. O(a) sr(a) costuma conversar sobre política com essa pessoa *muito, de vez em quando, pouco ou nunca*? 1.**Muito** 2.**De vez...**
3.**Pouco** 4.**Nunca**
8.NS 9.NR
115. Essa pessoa conhece algum candidato a vereador ou prefeito na última eleição ou mesmo um vereador ou prefeito atual? 1.**Sim** 2.**Não**
8.NS 9.NR
116. O(a) sr(a) sabe o nome do candidato a vereador que essa pessoa apoiou? 1. _____
2. NS 3. NR
117. O(a) sr(a) sabe o nome do candidato a prefeito que essa pessoa apoiou no primeiro turno? 1. _____
2. NS 3. NR
118. O(a) sr(a) pode me indicar o nome de uma quarta pessoa com quem conversa sobre assuntos importantes? 1. _____
3.NS/NR → 126

119. Qual a sua relação com essa pessoa? **1. Companheiro** **2. Parente**
3. Pai/Mãe/Filho **4. Amigo/vizinho**
5. Outro: _____
8. NS **9. NR**
120. O(a) sr(a) acha que o nível de conhecimento sobre a política dessa pessoa é *muito alto, alto, regular, baixo* ou *muito baixo*? **1. Muito alto** **2. Alto**
3. Regular **4. Baixo**
5. Muito baixo
8. NS **9. NR**
121. O(a) sr(a) costuma conversar sobre política com essa pessoa *muito, de vez em quando, pouco* ou *nunca*? **1.Muito** **2.De vez...**
3.Pouco **4.Nunca**
8.NS **9.NR**
122. Essa pessoa mora neste bairro? **1.Sim** **2.Não**
8.NS **9.NR**
123. Essa pessoa conhece alguma pessoa que foi candidato a vereador ou prefeito ou mesmo um vereador ou prefeito atual? **1.Sim** **2.Não**
8.NS **9.NR**
124. O(a) sr(a) sabe o nome do candidato a vereador que essa pessoa apoiou? **1. _____**
2. NS **3. NR**
125. O(a) sr(a) sabe o nome do candidato a prefeito que essa pessoa apoiou no primeiro turno? **1. _____**
2. NS **3. NR**

126. Agora tenho mais algumas questões sobre o que o(a) sr(a) acha sobre a política. Vou ler uma série de frases e gostaria que o(a) sr(a) me dissesse o quanto concorda com cada uma: **Caso você precise, seria possível para você conseguir a atenção ou o apoio dos políticos.** O(a) sr(a) *concorda muito, concorda um pouco, discorda um pouco* ou *discorda muito* com essa afirmação?

1. Concorda muito	2. Concorda um pouco	3. Discorda um pouco	4. Discorda muito	8. NS	9. NR
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

	1. Concorda muito	2. Concorda um pouco	3. Discorda um pouco	4. Discorda muito	8.NS	9.NR
127. Às vezes, política e governo parecem tão complicados que você não pode realmente entender o que se passa. O(a) sr(a) concorda muito, concorda um pouco, discorda um pouco ou discorda muito com essa afirmação?						
128. Os políticos têm maneiras de saber se um eleitor votou neles.						
129. Um governo militar seria melhor.						
130. É direito de todas as pessoas, independente de classe social e idade, terem lazer gratuitamente.						
131. Uma tarefa do Estado é melhorar a economia e dar emprego para a população.						

132. O(a) sr(a) acha que receber favores ou presentes de algum político é muito bom, bom, ruim ou muito ruim?
1. Muito bom
2. Bom
3. Ruim
4. Muito ruim
8.NS 9.NR
133. O(a) sr(a) sabe se existe uma lei que proíbe os políticos de darem presentes ou favores ou empregos aos eleitores?
1. Sim 2. Não
8.NS 9.NR
134. Durante esta campanha, o(a) sr(a) já ouviu falar sobre alguma lei assim?
1. Sim 2. Não →136
8.NS 9.NR →136
135. Onde ouviu falar da lei: na TV, na rádio, no jornal, na igreja, na escola ou em outro lugar? (MARQUE TODOS OS LUGARES MENCIONADOS. ESCREVA OUTRO LUGAR SE MENCIONAR.)
1. TV 2. Rádio
3. Jornal 4. Igreja
5. Escola
6. Outro: _____
8. NS 9.NR
136. Com qual das seguintes afirmações o(a) sr(a) concorda mais: Os moradores deste bairro podem reivindicar e
1. Os moradores podem...
2. O bairro precisa...

obter melhorias mesmo se o bairro não tivesse um vereador. OU O bairro precisa de uma liderança na câmara municipal para obter melhorias.

8. NS

9.NR

	1.Muita influência	2. Alguma influência	3. Pouca influência	4. Nenhuma influência	8.NS	9.NR
137. Quanta influência o(a) sr(a) acha que pessoas comuns podem ter na comunidade? Diria que podem ter <i>muita influência, alguma influência, pouca influência</i> ou <i>nenhuma influência</i> ?						
138. E quanta influência o(a) sr(a) acha que pessoas comuns podem ter nas decisões do governo municipal? Diria que podem ter <i>muita influência, alguma influência, pouca influência</i> ou <i>nenhuma influência</i> ?						
139. E os abaixo-assinados: quanta influência o(a) sr(a) acha que os abaixo-assinados tem nas decisões dos políticos?						
140. E as manifestações e passeatas: quanta influência elas têm?						
141. E as lideranças de bairro: quanta influência elas têm?						
142. E as grandes empresas: elas têm <i>muita influência, alguma influência, pouca influência</i> ou <i>nenhuma influência</i> ?						
143. E as pequenas e micro-empresas?						

144. NÃO PERGUNTE: Sexo

1. M

2. F

145. NÃO PERGUNTE: Casa ou apartamento

1. Casa

2. Apto

146. Agora faltam poucas perguntas para terminar. O(a) sr(a) trabalha fora de casa?

1.Sim → 148

2.Não

8.NS/NR

147. O(a) sr(a) é aposentado(a) ou é estudante ou é do lar? **1.Aposentado → 149**
2.Estudante → 149
3.Do lar → 149
8.NS/NR → 149
148. Seu trabalho fica neste bairro? **1.Sim 2.Não**
8.NS 9.NR
149. Agora vou falar da sua ocupação. Quando falar “ocupação,” quero dizer o que o(a) sr(a) (faz/fazia) para ganhar dinheiro e não necessariamente a profissão de formação na escola ou na universidade. Qual (era) a sua ocupação? **88. NS 99. NR**
150. O(a) sr(a) (tem/teve) carteira de trabalho assinada? **1.Sim 2.Não**
8.NS 9.NR
151. Até que série você estudou ou estuda?
(NÃO LEIA AS ALTERNATIVAS)
- 0. Sem instrução**
1. 1º ano do primário
2. 2º ano do primário
3. 3º ano do primário
4. 4º ano do primário / primário completo
5. 5ª série / 1º ano ginásio
6. 6ª série / 2º ano ginásio
7. 7ª série / 3º ano ginásio
8. 8ª série / 4º ano ginásio / 1º grau
9. Primeiro ano do 2º grau
10. Segundo ano do 2º grau
11. 3º ano do 2º grau / 2º grau com.
12. Iniciou a faculdade (Superior incompleto)
13. Formou-se da faculdade (Superior com.)
14. Pós-graduação incompleta
15. Pós-graduação completa
88. NS 99. NR
152. Agora vou falar das pessoas que moram no seu domicílio, ou seja, as pessoas que dormem na maioria dos dias da semana. **Incluindo o(a) sr(a),** quantos adultos maiores de 18 anos moram neste domicílio? **88. NS 99. NR**
153. E quantas crianças e adolescentes menores de 18 anos?

- | | | |
|--|---|--|
| 154. Vou falar agora da renda total das pessoas que moram no seu domicílio por mês. Gostaria que o(a) sr(a) somasse todos os rendimentos, incluindo aposentadoria, Bolsa Família, pensão, trabalho temporário e o que recebem de outros familiares. Se não souber um número exato pode me dizer aproximado. Mais ou menos, qual é a renda total? | <hr/> 8. NS 9. NR | <input style="width: 100px; height: 60px;" type="text"/> |
| 155. No último ano, sua família recebeu alguma assistência do programa Bolsa Família? | 1.Sim 2. Não
8.NS 9.NR | <input style="width: 100px; height: 30px;" type="text"/> |
| 156. Há quantos anos o(a) sr(a) mora em Juiz de Fora? | <hr/> 888. NS 999. NR | <input style="width: 100px; height: 30px;" type="text"/> |
| 157. Há quantos anos o(a) sr(a) mora neste bairro? | <hr/> 888. NS 999. NR | <input style="width: 100px; height: 30px;" type="text"/> |
| 158. Em que ano o(a) sr(a) nasceu? | <hr/> 8. NS 9. NR | <input style="width: 100px; height: 30px;" type="text"/> |
| 159. Como o(a) sr(a) se define em termos de cor ou raça? O(a) sr(a) diria que é branco, preto, pardo, amarelo ou indígena? | 1.Branco 2.Preto
3.Pardo 4.Amarelo
5.Indígena
8.NS 9.NR | <input style="width: 100px; height: 60px;" type="text"/> |

Eu terminei com as perguntas. Estou muito agradecido(a) pelo seu tempo e suas respostas vão nos ajudar muito com a pesquisa. Como falei anteriormente, as suas respostas são completamente privadas e vamos manter os questionários sob sigilo. Se tiver qualquer pergunta após a entrevista pode me contactar no Centro de Pesquisas Sociais na Universidade Federal de Juiz de Fora.

APPENDIX D

ADDITIONAL ANALYSIS FROM SECTION 8.3.1, LOCAL CONNECTIONS'

IMPACTS ON DEMOCRATIC COMPETENCE

Tables 58-62 provide further evidence regarding the impact of knowing politicians and *cabos eleitorais* on democratic competence, considering these two treatment variables' separate impacts. These tables complement the results presented in Section 8.3.1. The analysis in the first two columns in each table are based on a sample in which the data have been matched using social ties to politicians as the treatment variable. In the second two columns, matching has been conducted using social ties to *cabos* as the treatment variable. In both these cases I assess the impacts of the treatment variables both by themselves and while controlling for the alternative, non-matched treatment variable. Given the reduced sample sizes and the fact that the two treatments are moderately correlated, it may be that introducing both into models reduces the statistical significance of either. Finally, in the last column of each table, I present the results for the full sample, without using matching, including both key independent variables as well as fixed effects for neighborhoods. The fixed effects enable me to further examine whether patterns occur even within neighborhoods, after controlling for the many factors that make neighborhoods different from each other. In the models using matching, however, the low sample-sizes within some neighborhoods led to problems with model convergence when I included neighborhood fixed effects.

Table 54. Ordered Logit Models: Local Connections' Effects on Political Knowledge

	Matching on Ties to Candidates		Matching on Ties to <i>Cabos</i>		No Matching, Neighborhood Fixed Effects
Knows City Council Candidate	0.425*	0.398*	0.217		0.302^
	(0.198)	(0.199)	(0.255)		(0.166)
Knows <i>Cabo Eleitoral</i>	-0.091		0.308	0.360*	0.415***
	(0.197)		(0.197)	(0.173)	(0.109)
Intimate Egocentric Network Size	0.203*	0.205*	0.021	0.023	0.070
	(0.095)	(0.095)	(0.088)	(0.091)	(0.070)
General Political Discussion	0.324*	0.315*	0.342*	0.354**	0.408***
	(0.153)	(0.146)	(0.134)	(0.135)	(0.079)
Female	-0.299^	-(0.296)	-0.559***	-0.556***	-0.536***
	(0.179)	(0.180)	(0.168)	(0.168)	(0.132)
Education	0.150***	0.150***	0.114***	0.115***	0.112***
	(0.029)	(0.029)	(0.031)	(0.031)	(0.020)
Age	0.008	0.009	0.003	0.003	0.002
	(0.007)	(0.007)	(0.006)	(0.007)	(0.005)
Interest	0.208**	0.206**	0.202*	0.204**	0.152***
	(0.076)	(0.077)	(0.080)	(0.078)	(0.036)
Media attention	0.541	0.547	1.264**	1.297**	1.254***
	(0.551)	(0.545)	(0.441)	(0.407)	(0.336)
Cutpoint 1	1.402^	1.412^	0.811	0.750	1.111*
	(0.747)	(0.743)	(0.629)	(0.598)	(0.523)
Cutpoint 2	2.563***	2.572***	2.042**	1.976**	2.309***
	(0.768)	(0.763)	(0.635)	(0.603)	(0.546)
Cutpoint 3	3.287***	3.297***	2.807***	2.739***	3.156***
	(0.757)	(0.752)	(0.631)	(0.600)	(0.541)
Cutpoint 4	4.100***	4.110***	3.661***	3.592***	4.069***
	(0.754)	(0.752)	(0.643)	(0.612)	(0.550)
Cutpoint 5	4.958***	4.966***	4.638***	4.571***	4.994***
	(0.742)	(0.739)	(0.634)	(0.609)	(0.556)
Cutpoint 6	6.344***	6.351***	5.903***	5.838***	6.334***
	(0.812)	(0.808)	(0.702)	(0.690)	(0.616)
<i>Number of observations</i>	533	533	650	650	1043
<i>Log Pseudolikelihood</i>	-954.17	-954.33	-1165.53	-1166.36	-1835.10
<i>Pseudo R-squared</i>	0.049	0.049	0.056	0.055	0.082

Notes: Models use coarsened exact matching (Blackwell et al. 2009). Robust standard errors in parentheses are clustered by neighborhood. Neighborhood fixed effects in final model are not shown. Coefficients are significant at: ^ p < 0.10; * p < 0.05; ** p < 0.01.

Table 55. Ordered Logit Models: Local Connections' Effects on First and Second-Round Turnout

	Matching on Ties to Candidates		Matching on Ties to <i>Cabos</i>		No Matching, Neighborhood Fixed Effects
Knows City Council Candidate	1.025*** (0.200)	1.112*** (0.202)	1.511*** (0.282)		0.899*** (0.183)
Knows <i>Cabo Eleitoral</i>	0.336^ (0.193)		-0.077 (0.162)	0.339^ (0.191)	0.038 (0.146)
Intimate Egocentric Network Size	-0.054 (0.168)	-0.066 (0.170)	-0.214 (0.159)	-0.176 (0.157)	-0.061 (0.098)
General Political Discussion	0.245 (0.186)	0.282 (0.180)	0.429^ (0.239)	0.515* (0.223)	0.313* (0.127)
Female	(0.006)	-(0.003) (0.192)	(0.005) (0.169)	(0.055) (0.151)	-0.011 (0.180)
Education	-0.014 (0.037)	-0.013 (0.037)	-0.038 (0.033)	-0.027 (0.034)	0.007 (0.031)
Age	-0.026* (0.010)	-0.026* (0.011)	-0.019^ (0.010)	-0.016 (0.012)	-0.018* (0.008)
Interest	0.087 (0.151)	0.090 (0.154)	0.111 (0.116)	0.129 (0.119)	0.072 (0.097)
Media attention	-0.231 (1.040)	-0.224 (1.046)	0.074 (0.982)	0.280 (1.136)	0.180 (0.614)
Cutpoint 1	-2.226** (0.849)	-2.226** (0.838)	-1.628^ (0.897)	-1.725^ (0.972)	-1.508* (0.657)
Cutpoint 2	-1.523^ (0.821)	-1.525^ (0.816)	-0.799 (0.857)	-0.950 (0.940)	-0.729 (0.695)
<i>Number of observations</i>	533	533	650	650	1043
<i>Log Pseudolikelihood</i>	-301.17	-302.05	-328.24	-347.99	-500.96
<i>Pseudo R-squared</i>	0.070	0.068	0.097	0.042	0.090

Notes: Models use coarsened exact matching (Blackwell et al. 2009). Robust standard errors in parentheses are clustered by neighborhood. Neighborhood fixed effects in final model are not shown. Coefficients are significant at: ^ p < 0.10; * p < 0.05; ** p < 0.01.

Table 56. Ordered Logit Models: Local Connections' Effects on Campaign Participation

	Matching on Ties to Candidates		Matching on Ties to <i>Cabos</i>		No Matching, Neighborhood Fixed Effects
Knows City Council Candidate	0.141 (0.203)	0.269 (0.195)	0.310 (0.272)		0.268 [^] (0.143)
Knows <i>Cabo Eleitoral</i>	0.417* (0.195)		0.255 (0.179)	0.343* (0.150)	0.446*** (0.113)
Intimate Egocentric Network Size	0.225* (0.107)	0.218* (0.105)	0.197 [^] (0.116)	0.201 [^] (0.116)	0.282*** (0.077)
General Political Discussion	0.628*** (0.125)	0.663*** (0.134)	0.659*** (0.121)	0.671*** (0.128)	0.561*** (0.083)
Female	0.335** (0.124)	0.327* (0.129)	(0.186) (0.145)	(0.181) (0.145)	-0.03 (0.128)
Education	-0.034 (0.031)	-0.033 (0.031)	-0.083* (0.033)	-0.081* (0.032)	-0.015 (0.019)
Age	-0.008 (0.006)	-0.009 (0.006)	-0.009* (0.004)	-0.009* (0.004)	-0.003 (0.004)
Interest	0.199 [^] (0.119)	0.205 [^] (0.123)	0.310** (0.098)	0.309** (0.102)	0.306*** (0.061)
Media attention	0.788 (0.753)	0.783 (0.761)	0.263 (0.733)	0.295 (0.701)	0.790 (0.560)
Cutpoint 1	0.356 (0.590)	0.344 (0.600)	-0.011 (0.498)	-0.101 (0.474)	1.380** (0.510)
Cutpoint 2	2.405*** (0.583)	2.378*** (0.604)	2.035*** (0.500)	1.936*** (0.473)	3.657*** (0.505)
Cutpoint 3	3.645*** (0.646)	3.604*** (0.670)	3.268*** (0.529)	3.171*** (0.499)	4.976*** (0.539)
Cutpoint 4	4.990*** (0.675)	4.944*** (0.705)	4.514*** (0.512)	4.414*** (0.483)	6.128*** (0.548)
Cutpoint 5	5.669*** (0.728)	5.623*** (0.760)	5.347*** (0.591)	5.244*** (0.564)	7.226*** (0.533)
<i>Number of observations</i>	533	533	650	650	1043
<i>Log Pseudolikelihood</i>	-777.72	-780.75	-965.98	-967.60	-1487.49
<i>Pseudo R-squared</i>	0.054	0.050	0.054	0.052	0.088

Notes: Models use coarsened exact matching (Blackwell et al. 2009). Robust standard errors in parentheses are clustered by neighborhood. Neighborhood fixed effects in final model are not shown. Coefficients are significant at: [^] p < 0.10; * p < 0.05; ** p < 0.01.

Table 57. Ordered Logit Models: Local Connections' Effects on Clientelistic Networks

	Matching on Ties to Candidates		Matching on Ties to <i>Cabos</i>		No Matching, Neighborhood Fixed Effects
Knows City Council Candidate	0.686 (0.488)	0.857 [^] (0.478)	0.866* (0.343)		0.467 (0.308)
Knows <i>Cabo Eleitoral</i>	0.634 (0.392)		0.629 [^] (0.375)	0.801* (0.372)	0.591* (0.236)
Intimate Egocentric Network Size	-0.167 (0.184)	-0.147 (0.183)	0.002 (0.107)	0.021 (0.113)	0.148 [^] (0.088)
General Political Discussion	0.417* (0.198)	0.472* (0.198)	-0.015 (0.193)	0.027 (0.186)	0.242* (0.121)
Female	(0.023)	-(0.013) (0.306)	-(0.064) (0.222)	-(0.063) (0.210)	-0.093 (0.171)
Education	-0.064 (0.059)	-0.062 (0.058)	0.001 (0.036)	0.007 (0.037)	0.000 (0.028)
Age	-0.034*** (0.010)	-0.035*** (0.009)	-0.024** (0.009)	-0.022** (0.008)	-0.023*** (0.006)
Interest	-0.098 (0.123)	-0.077 (0.133)	0.002 (0.138)	0.006 (0.138)	0.023 (0.070)
Media attention	0.490 (1.060)	0.404 (1.004)	0.559 (1.127)	0.555 (1.071)	0.928 (0.626)
Cutpoint 1	1.779 [^] (0.950)	1.684 [^] (0.953)	1.913* (0.792)	1.617* (0.703)	3.076*** (0.729)
Cutpoint 2	2.106* (0.984)	2.007* (0.994)	2.276** (0.766)	1.979** (0.676)	3.506*** (0.764)
Cutpoint 3	2.665** (0.978)	2.558** (0.985)	2.734*** (0.796)	2.434*** (0.705)	4.056*** (0.812)
Cutpoint 4	3.206** (1.004)	3.098** (1.004)	3.201*** (0.857)	2.898*** (0.759)	4.644*** (0.904)
<i>Number of observations</i>	533	533	651	651	1043
<i>Log Pseudolikelihood</i>	-282.43	-285.00	-375.21	-378.79	-631.36
<i>Pseudo R-squared</i>	0.058	0.050	0.043	0.034	0.079

Notes: Models use coarsened exact matching (Blackwell et al. 2009). Robust standard errors in parentheses are clustered by neighborhood. Neighborhood fixed effects in final model are not shown. Coefficients are significant at: [^] p < 0.10; * p < 0.05; ** p < 0.01.

Table 58. Ordered Logit Models: Local Connections' Effects on Belief that It's Bad to Receive

Presents from Politicians

	Matching on Ties to Candidates		Matching on Ties to <i>Cabos</i>		No Matching, Neighborhood Fixed Effects
Knows City Council Candidate	0.118 (0.231)	-0.020 (0.222)	-0.035 (0.226)		-0.170 (0.205)
Knows <i>Cabo Eleitoral</i>	-0.453 [^] (0.267)		-0.252 (0.215)	-0.253 (0.225)	-0.124 (0.151)
Intimate Egocentric Network Size	0.041 (0.165)	0.056 (0.161)	0.161 (0.112)	0.156 (0.115)	0.004 (0.082)
General Political Discussion	0.228 (0.163)	0.182 (0.174)	0.124 (0.169)	0.133 (0.163)	0.236* (0.110)
Female				0.136 (0.160)	0.014 (0.130)
Education	0.132*** (0.033)	0.129*** (0.030)	0.087* (0.035)	0.088* (0.035)	0.061*** (0.017)
Age	0.023*** (0.005)	0.024*** (0.005)	0.015* (0.007)	0.015* (0.007)	0.009* (0.004)
Interest	0.128 (0.091)	0.112 (0.093)	-0.033 (0.071)	-0.036 (0.073)	0.019 (0.059)
Media attention	0.714 (0.485)	0.730 (0.486)	0.451 (0.616)	0.482 (0.614)	-0.155 (0.569)
Cutpoint 1	0.085 (0.641)	0.137 (0.671)	-1.541* (0.743)	-1.404 [^] (0.745)	-2.649*** (0.421)
Cutpoint 2	1.634** (0.604)	1.673** (0.625)	0.253 (0.737)	0.390 (0.722)	-1.030* (0.407)
Cutpoint 3	3.508*** (0.682)	3.529*** (0.691)	2.111** (0.732)	2.250** (0.734)	0.877* (0.430)
<i>Number of observations</i>	510	510	625	625	1007
<i>Log Pseudolikelihood</i>	-564.68	-567.74	-673.74	-673.37	-1038.57
<i>Pseudo R-squared</i>	0.041	0.035	0.021	0.021	0.076

Notes: Models use coarsened exact matching (Blackwell et al. 2009). Robust standard errors in parentheses are clustered by neighborhood. Neighborhood fixed effects in final model are not shown. Coefficients are significant at: [^] p < 0.10; * p < 0.05; ** p < 0.01.

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