

Social Context and Campaign Volatility in New Democracies: Networks and Neighborhoods in Brazil's 2002 Elections

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In new democracies party systems are often young, so partisan cues and roots in the electorate tend to be weak. The results, in many instances, include volatile campaigns with comparatively high degrees of short-term preference change among voters. We explore the mechanisms of voter volatility and, more broadly, the ways in which citizens learn about issues and candidates in weak-party systems. We claim that citizens in such settings rely heavily upon persuasive information gathered from their immediate social contexts. Utilizing a unique panel survey implemented during Brazil's historic 2002 presidential election, we demonstrate the importance of political discussion within social networks and neighborhood context for explaining preference change during election campaigns. We also demonstrate the concrete political consequences of social context by showing how candidate momentum runs can be driven by waves of discussion.

That democracy is unthinkable without political parties is now conventional wisdom in political science. One of the necessary functions parties fulfill is to simplify the labyrinthine world of politics by supplying voters with relevant information in digestible form. In stable democracies parties facilitate electoral decision making by providing the informational shortcuts and standing choices that many citizens rely upon at the start of every campaign (Popkin 1991; Sniderman 2000). While this makes reasoned choice easier for “information-mising” voters, it also lends an air of predictability and even inevitability to most elections in stable party systems. Because campaign effects tend to be limited or offsetting, outcomes can often be forecast before campaigning even begins (Campbell and Garand 2000; Gelman and King 1993).

When party systems are young and/or in flux, however, parties commonly have a more limited presence in the electorate (Converse 1969). Partisan attachments

are only weakly formed, so voter preferences are more volatile, campaigns more crucial, and election outcomes less predictable (Lawson and McCann 2005). Though this combination—weak partisan cues, low levels of partisan identification, and volatile voters—characterizes many new democracies, scholars have only begun to study how citizens in such contexts gather political information and make electoral decisions. We address this question with a unique public opinion dataset collected during a particularly volatile campaign, the presidential election of 2002 in Brazil. Our central claim is that politically colored information gathered by citizens through social networks plays a primary role in short-term attitude change and vote choice. We explain how interpersonal influence produces short-term preference volatility among voters and shapes election outcomes. Our analysis also contributes to the heretofore U.S.-dominated social network literature by clarifying some of its conceptual and theoretical ambiguities and by pointing out causal mechanisms that

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are more appropriate for weak-party and multiple-party systems.

Voting Behavior When Parties Are Weak

Weak partisan identities, rapid preference changes, and unpredictable election campaigns are a staple of many “third wave” democracies. In Russia’s 1996 election, incumbent Boris Yeltsin won by a 14% margin after beginning the campaign with only 8% of all vote intentions. South Korean Roh Moo-hyun of the five-year-old MDP won in 2002 after beginning the campaign 20 points behind the leader, a swing made all the more impressive because it occurred during the country’s rapid 22-day campaign period. Susilo Yudhoyono began his successful 2004 campaign in Indonesia with only 5% of vote intentions. Volatility even exists in many new and supposedly more party-oriented parliamentary democracies. In Turkey’s 2002 general elections, the Justice and Development Party became the first in Turkish history to win an outright majority of seats after doubling its expected vote share during the campaign.

Electoral weak parties and campaign volatility are especially prevalent in Latin America. In Brazil, Fernando Collor won the presidency in 1989 with less than 8% of initial vote intentions and with a party he had just created, while Fernando Henrique Cardoso won the 1994 election after starting some 40 points behind his main opponent. In Peru, Alberto Fujimori achieved a landslide second-round victory in 1990 after beginning the campaign with a new party and just 2% of vote intentions. Hugo Chávez built a coalition of small parties in 1998 that annihilated Venezuela’s 40-year-old two-party system. Limited partisanship and campaign swings are also the norm in Bolivia, Ecuador, Nicaragua, Panama, and even Mexico, long a paragon of party system stability (Mainwaring and Scully 1995; Lawson 1999; Dominguez and McCann 1996; Dominguez and Lawson 2003). Panel data tell an even more revealing story: 32% of Brazilians¹ and 29% of Mexicans (Lawson 2000) changed their minds in the final months of recent presidential election campaigns. Electoral volatility (Pederson index)² across consecutive elections also attests to limited party roots in society. In Latin America overall, electoral volatility in legislative elections was 23.2% in the 1990s (Roberts

and Wibbels 1999). In the developed world, by contrast, volatility was only 12.8% in the 1990s, and even that figure was achieved after several decades of alleged dealignment (Dalton and Wattenberg 2000).

What fills the void left by weak standing decisions and missing partisan cues when only a minority of voters identifies with any party? How do citizens learn about candidates, and how does this learning influence their voting decisions? Standard voting models developed in long-established democracies fail to address this question adequately. Rational choice theories assume that voters have fixed and known policy preferences (Downs 1957; Johnston et al. 1993). Psychological models emphasize stable partisan and symbolic attachments, in which voters begin campaigns with a storehouse of assessments that they infer simply upon learning the candidates’ partisan affiliations (Campbell et al. 1960; Rahn 1993; Sears et al. 1980; Sniderman 2000). Partisan attachments tend to provide citizens with a filter for incoming politically colored information, inducing them to reject countervailing messages and “homogenizing” much of what they accept and absorb (Zaller 1992). Strong partisan attachments and cues thus make short-term preference change unlikely, with vote switching rates in single digits in the United States and in the teens in Western Europe (Blais 2004; Lazarsfeld, Berelson, and Gaudet 1948; Zaller 2004).³ Consequently, models from countries with consolidated party systems apply awkwardly to young democracies where partisan cues are weak or non-existent and where many more voters change their minds.

Mass Media, Social Context, and Preference Volatility

When partisan filtering of new and countervailing information is weak, preference change is likely and frequent. From where, though, does politically relevant information come in new democracies with weak parties? To date, scholars of emerging, and especially Latin American, democracies have answered this question by studying mass media. In particular, the conventional wisdom points to biased news coverage of major media outlets and to direct appeals by candidates to voters in television campaign commercials. Many television news programs in transitional democracies maintain political biases dating back to prior authoritarian regimes, and

¹Brazilian results are calculated from the two-city panel data described and used in this article.

²This is half of the sum of the percentage changes in all party vote shares between two elections.

³Far from refuting these differences between new and old democracies, the volatility customary in U.S. presidential primaries is the exception that proves the rule, since these intra-party contests effectively nullify partisan cues (Bartels 1988).

research indicates that these biases often yield the network's desired effect on voters (Lawson 2002; Lawson and McCann 2005; Lima 1988; Skidmore 1993). Likewise, some empirical evidence attests to the importance of candidate image-building and personality-based appeals through campaign propaganda, especially television commercials (Skidmore 1993).

While evidence for these media effects is convincing, we suspect that media exposure is not the sole or even most important source of attitude swings during campaigns. Media research ignores the social context in which voters are embedded. Though it is well documented that citizens in established democracies deliberate and discuss politics in consequential ways (Walsh 2004), scholars have overlooked the role of interpersonal discussion when considering political behavior in new democracies. Nonetheless, we expect social context to be particularly important in explaining the high level of observed voter preference volatility where parties are weak. We propose that, in lieu of a standing partisan choice, citizens in weak-party settings rely heavily on persuasive information gathered during campaigns from their immediate social contexts.

In particular, we consider two aspects of voters' immediate social milieu: ongoing "molecular interaction" or "hot communications" within informal political discussion networks and the slightly broader context of the neighborhood microenvironment (Berelson, Lazarsfeld, and McPhee 1954; MacKuen and Brown 1987). First, we assess the role of informal and incidental discussions within social networks of friends, family, neighbors, and colleagues. Even narrowly defined social networks are often surprisingly heterogeneous, so political discussion has the potential to expose citizens to new information and to beliefs contradicting their own (Conover, Searing, and Crewe 2002; Huckfeldt, Johnson, and Sprague 2004). Second, neighborhoods can hold a similar heterogeneity, as they are rarely unanimous in their political orientations. Exposure to environmental cues around one's neighborhood—casual conversations or eavesdropping on others at bars or bus stops, seeing yard signs and bumper stickers, noting which parties canvass the area—can introduce countervailing information to citizens in their everyday activities and send signals about candidate viability.

Initial inquiries into the sociology of voting in the United States were ambivalent about the relationship between social networks and voter volatility. On the one hand, the Columbia school found that social contexts were largely stable and homogenous, so engagement with one's immediate social milieu made voting preferences all the more stable (Lazarsfeld, Berelson, and Gaudet 1948; Berelson, Lazarsfeld, and McPhee 1954; also see Mutz and

Martin 2001; Walsh 2004). On the other hand, these scholars also concluded that personal contacts and conversations were the most crucial information source among those rare individuals whose vote preferences wavered mid-campaign (Lazarsfeld, Berelson, and Gaudet 1948, 151–52). Recent research confirms the latter view, finding that political discussion networks are heterogeneous and filled with disagreement, thereby exposing individuals to competing and countervailing viewpoints (Huckfeldt, Johnson, and Sprague 2004). Theoretically, this finding indicates that discussion has the *potential* to induce short-term attitude change in the United States. For example, Huckfeldt, Johnson, and Sprague (2004) have shown that discussion (and especially politically heterogeneous networks) makes voters more ambivalent about candidates.

Yet something is missing from these studies of the American case. Despite laying the groundwork for a sociological model of campaign effects and voter volatility, research to this point has instead revealed a cause in search of an effect because of the infrequency of preference change in U.S. campaigns. Indeed, Huckfeldt, Johnson, and Sprague's research program must call on a simulation (albeit a fascinating and useful simulation) to draw conclusions about the impact of interpersonal contacts on volatility (Huckfeldt, Johnson, and Sprague 2004). In short, researchers studying voter volatility are handicapped when they use data from countries with consolidated party systems and relatively deep partisan sympathies. Social networks in such countries have no real political relevance in campaigns—that is, they rarely determine winners and losers.

Momentum Run Mechanisms: Media Exposure or Voter Cascades?

In many elections in new democracies, winners and losers have often been determined by dramatic "momentum runs," when a candidate's (or candidates') expected vote share undergoes major changes, either growing or declining, in a short amount of time (Bartels 1988). In a framework in which mass media is the sole source of campaign information, momentum runs occur when citizens are directly exposed to a shift in the balance of flattering or unflattering news about a particular candidate. This "exposure" model holds that attitude change results only through direct exposure to the actual coverage itself. Citizens must view or hear the media coverage to be affected by it, so attitude conversion occurs only among the exposed and in a social vacuum, as individualized responses to a news story.

A social context model of preference change tracks a much different mechanism of momentum runs: “the information cascade.” In a society with high degrees of social interaction and attitude flexibility, a single citizen’s changed opinion can initiate a chain reaction cascading through society (Bikhchandani, Hirshleifer, and Welch 1992). The original citizen communicates with and influences an acquaintance. That acquaintance in turn communicates with and influences one of his or her own acquaintances, who in turn influences an acquaintance, and so on. In this case, momentum runs are characterized by waves of political “hot talk,” i.e., ongoing conversations exchanging valenced and persuasive messages that are largely favorable (for positive momentum runs) or unfavorable (for negative momentum runs) about a candidate (MacKuen and Brown 1987). These conversations exist in many forms: dispassionate, episodic, heated, reasoned, sophisticated, emotional, harmonious, periodic, etc; yet what they share in common is an exchange of opinion about at least one candidate. Such hot talk may directly influence an individual by providing new and persuasive information, but it also may operate by lending credibility to an already existing but tentative predisposition of the message recipient. The result can be a major shift in aggregate opinion unfolding over a short period of time.

Paradoxically, information cascades are low-information phenomena occurring when individuals either have limited private information or forego using it altogether on the presumption that others’ information is better (Banerjee 1992; Bikhchandani, Hirshleifer, and Welch 1992). Therefore, in sharp contrast to the media exposure model of campaign influence, it is precisely the least knowledgeable and least informed voters, not those highly exposed to mediated political information sources, who should be the most volatile. At the same time, mass media coverage of candidates and events can still play a crucial role in this voter cascade scenario. Negative or positive coverage of a given candidate can trigger voter cascades by converting a few exposed individuals, who then pass on their newfound preferences to acquaintances in conversation. Ruminations about campaign events and media coverage thus ripple and reverberate through the electorate (Huckfeldt, Johnson, and Sprague 2004). In this way, social interaction actually *magnifies* the impact of media coverage because it produces attitude change among those who were never directly exposed to the original coverage itself. Far from posing a trade-off with media influence, discussion may actually magnify it.

What makes socially induced preference change and voter cascades likely? The social network literature from American politics is ambivalent on this point. Though

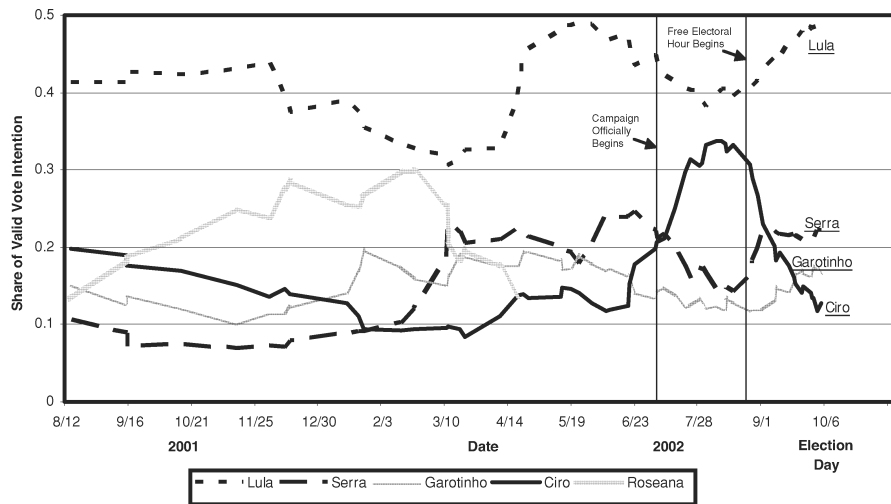
the Columbia school’s classic hypothesis held that “cross pressures” exerted from a network made individuals more likely to switch during campaigns, it was ambivalent about the concept’s precise meaning. In some scenarios, citizens embedded in networks that leaned against their current predispositions were considered to be cross-pressured. “The stability of a preference . . . varies with the chances of social support for it,” so this definition stressed *disagreement* with one’s conversation partners as highly conducive to conversion (Berelson, Lazarsfeld, and McPhee 1954, 126). In many instances, however, the Columbia school considered *heterogeneous* networks supporting multiple opinions to be the source of cross pressures (Lazarsfeld, Berelson, and Gaudet 1948). Huckfeldt, Johnson, and Sprague seem to confirm this latter reading: “Heterogeneous opinion distributions within networks . . . produce an electorate that is more volatile and persuadable” (2004, 177). However, their introduction of the “autoregressive influence” concept is potentially contradictory and therefore continues to muddy the theoretically distinct roles of disagreement and heterogeneity. Autoregressive influence holds that a conversation partner has more influence on a citizen when that partner’s views are shared by others with whom the citizen converses. If true, then heterogeneity will lower the number of people sharing that partner’s views and decrease the probability of interpersonal influence once disagreement, and therefore the potential for attitude change, occurs. Indeed, in multiparty systems the degree of heterogeneity among one’s discussion partners can vary independently of the level of disagreement, a feature lacking in the two-party American case. In short, the theoretically distinct impacts of disagreement and heterogeneity remain poorly understood.

Brazil as an Ideal Case

Brazil constitutes an ideal case for studying network and neighborhood effects on campaign volatility in countries where parties have weak roots in the electorate.⁴ To be sure, Brazilian partisans do exist, and some scholars have argued that partisanship does influence voting behavior (Camargos 2001; Singer 1999). Only about 30–40% of the population, however, claims a partisan identification (Carreirão and Kinzo 2004; Kinzo 2004; Mainwaring 1999). Elites have created a fragmented (the 2002 lower house had 8.5 effective parties) party system driven by high district magnitude and an open-list PR electoral system that complicates the provision of clear partisan cues

⁴In calling Brazil a weak-party system, we refer solely to the party in the electorate, ignoring the debate about parties in the legislative arena (Ames 2002; Figueiredo and Limongi 2001).

FIGURE 1 Evolution of Vote Intentions for Major Presidential Candidates, 2002



Note: Lines are smoothed (two-period moving average) results from all national polls (Datafolha, IBOPE, Vox Populi, CNT) and represent proportion of valid vote intentions for each candidate. Actual election results are indicated by placement of underlined candidate names. Two minor candidates that received less than one percent of the vote are omitted. Lula's 61 percent to 39 percent second round victory on 27 October over Serra is not pictured.

(Ames 2002; Laakso and Taagapera 1979). Indeed, with the exception of the leftist Workers Party (PT),⁵ party labels provide limited information about candidate ideology or policy stances. For example, in a 1999 poll administered four years after his first election and five months after his re-election, only 36% of respondents correctly identified President Fernando Henrique Cardoso's party affiliation.⁶

Are social contacts a plausible alternative source of information for Brazil's many independents? According to self-reports from surveys as far back as 1989 (the year of Brazil's first direct presidential election in 29 years) the most-used political information source was discussion with friends and family, outdistancing journalistic sources and campaign propaganda (Straubhaar, Olsen, and Nunes 1993). Does this combination of traits lead to volatile election campaigns?

Momentum Runs and Volatility in Brazilian Elections

Preference volatility is commonplace in Brazil's recent electoral history, characterizing three of the four direct presidential elections that have occurred since democ-

ratization in 1985. In the 1989 and 1994 campaigns, the eventual winners began with less than 20% of the expected vote. The October 2002 context was equally volatile. This election will be remembered most for the convincing victory of a nonelite, left-leaning candidate, Luiz Inácio Lula da Silva. Indeed, aside from the 2000 contest in Mexico, no election in the region has received more international attention since Latin American countries began democratizing in the 1980s. Still, despite Lula's impressive margin of victory and the popular interpretation that his victory granted a leftist mandate, his success was hardly a foregone conclusion during the lengthy precampaign and campaign season. Two different candidates, *neither of whom survived to the majority run-off election*, were technically tied with Lula at different junctures.

Figure 1 illustrates this volatility by plotting vote intentions for the five main candidates during the 14 months preceding the first round election on 6 October. The figure provides context for these numbers by providing a time line of important events, including the campaign's legal start and the initiation of the Free Electoral Hour (*horário gratuito de propaganda eleitoral*), i.e., the seven-week period in which all television and radio stations must devote two hours per day to campaign commercials. Lula's competitors, in order of finish, were José Serra, the incumbent party's candidate and Lula's second-round opponent; Anthony Garotinho, a populist evangelical and former governor of Rio de Janeiro state; and Ciro Gomes, a former governor and finance minister running for the second

⁵Indeed, over one-half to two-thirds of Brazil's partisans are PT sympathizers (Samuels 2006).

⁶This result is from a four-city sample used and described in Baker (2003).

time. Vote intentions are also displayed for Roseana Sarney, an early strong candidate from Brazil's clientelistic right who departed the race in April amidst a corruption scandal.

Lula's vote intentions followed a wavy path, although, except for a few statistical ties, he was always the frontrunner. More telling, however, are the seismograph-like patterns and fierce jockeying for position among Lula's challengers, movements made all the more important by Brazil's majority run-off system. Roseana in February, Serra in March, and Ciro in August all held seemingly solid second place positions while nipping at Lula's heels.⁷ At the peak of their ephemeral favorable momentum runs, Roseana and Ciro were technically tied with Lula in some polls. Ciro rode the most erratic roller coaster, zooming from fourth to second and then falling to a disgraced fourth in the six weeks preceding Election Day. Even third-place finisher Garotinho added some suspense at the end of the campaign by making a run at Serra's second-round spot.

Data

The political consequences of individual-level volatility are clearly evident in the rolling cross-section surveys of Figure 1. Pinpointing the determinants of short-term preference change, however, requires panel data, which provides observations of voters who both do and do not change their minds. Our data come from a 2002 three-wave panel study of eligible voters in two mid-sized Brazilian cities: Caxias do Sul, in the southern state of Rio Grande do Sul, and Juiz de Fora, in Brazil's second largest state, Minas Gerais. Wave one of the survey occurred in March and April, four months before the party-nominating conventions. Wave two took place in August, after the first debate and just before the Free Electoral Hour began. Wave three occurred in October between the two election rounds. The initial sample size in wave one was 2,500 respondents per city. Sixty-two percent of these respondents remained in the panel for all three waves, and about 1,000 new respondents were added in each of waves two and three. Appendix A reports city and respondent selection protocols as well as question wordings.

The other unique aspect of the dataset is that it contains—besides standard measures of political traits, media exposure, and demographics—rarely measured attributes of respondents' social contexts. To measure the architecture of social networks, we asked respondents during the August and October waves for information about

their political discussants. In August we asked the following question: "Could you please indicate the names of the three people with whom you most talk about politics?" This name generator performed well, producing 2.12 discussants per respondent with only 18.4% offering none.⁸ Respondents also reported their perception of each discussant's vote preference, a question repeated in October. The dataset also includes a November round of interviews (after the 27 October run-off election) with a 2,400-respondent sample of these named discussants. For clarity, we differentiate interviewees as "main respondents," those gathered through random sampling and interviewed in at least one of the three panel waves, and "discussants," those mentioned by main respondents in the August network "name generator."

A final unique feature of the survey design is that neighborhoods (clearly circumscribed and legally defined entities in Brazil) constitute the primary sampling unit. In each city we interviewed more than 100 individuals in each of about 20 randomly chosen neighborhoods. This number of interviews allows us to capture aggregate characteristics of the respondents' neighborhood milieus. In 2002 the distribution of preferences within these neighborhood microenvironments ranged from highly competitive, four-candidate races to scenarios in which only two candidates had noteworthy support.

Who Is Volatile? Hypotheses and Results

What factors can help explain why some Brazilians were more likely to change their minds than others during the 2002 campaign? And how, if it all, did networks and neighborhoods exert an influence over preference volatility? Among those who had a candidate preference in August and did vote in October (each city had about 84% turnout), 32% switched candidates. Switchers were clearly a minority of voters, yet their numbers were high by international standards, an indication that politically consequential shifts at the aggregate level can be induced by vote switching among just a minority of voters.

To explain vote volatility at the individual level we estimate a binary probit model. The dependent variable, *Voter switched*, indicates whether respondents changed their minds between August and October: This variable equals one for citizens voting (in round one) for a

⁷We use Brazilian nicknaming conventions, which for some candidates use only the first name.

⁸For comparison, in a seven-nation dataset querying a much larger pool of potential discussants, Gibson (2001) found an average network size of 2.06.

candidate who was not their preferred choice in August and zero for citizens who did vote for their August preference. Because we are interested in preference change and not movement to or from indecision, we limit the analysis to those with a candidate preference in August and October.

Social Context Hypotheses

Our tests of social context hypotheses accomplish two goals. First, they will determine whether certain characteristics of networks and neighborhoods do indeed influence the likelihood of vote switching. We are not claiming that political discussion or neighborhood influence per se make citizens more volatile. Indeed, the correlations between propensity to switch and overall frequency of political discussion—or between propensity to switch and raw number of discussants—are minuscule. Highly partisan voters with rigid preferences are certainly no less likely to discuss politics than independents. Rather, and this is the second goal, we seek to document the *types* of social contexts that made preference change more or less likely. In doing so, we intend to address the aforementioned theoretical and conceptual ambiguities lingering in the U.S.-dominated social context literature.

To this end, we capture the *disagreement* aspect of cross pressures by considering the extent to which prevailing opinion within main respondents' networks reinforced their August beliefs. Contrast an August Lula voter listing three pro-Serra discussants with another August Lula voter listing three pro-Lula discussants. The latter main respondent embedded in a network of disagreeing individuals should have been more likely to switch. To capture this possibility, we include a simple measure of *Network disagreement with main respondent*, which counts the number of discussants (from zero to three) in each main respondent's network who had a vote preference in August differing from the main respondent's August preference.⁹ We expect this variable to increase the probability of vote switching. Brazil's multiparty system affords the opportunity to control simultaneously for disagreement and heterogeneity. We capture the *heterogeneity* interpretation of cross pressures by measuring the diversity of opinions supported in main respondents' networks. *Network heterogeneity* is the number (from zero to three) of different presidential candidates supported in the main respondent's discussant network in August. When main respondents reported no discussants or knew none of their discussants' preferences, the variable is scored zero.

⁹August discussant preferences are measured using main respondents' perceptions of them. The October data showed these to be incorrect only 14% of the time.

Because of the aforementioned theoretical ambivalence of this variable, we conduct a two-tailed hypothesis test. Compare an August Lula voter listing three pro-Serra discussants with another August Lula voter listing one pro-Serra discussant, one pro-Ciro discussant, and one pro-Garotinho discussant. Disagreement is constant in both cases but heterogeneity is greater in the latter case. The standard heterogeneity argument would posit a greater probability of switching in the former case. However, the autoregressive influence argument posits a higher probability of switching in the latter case, since discussants speak with a discordant, not a unified, voice. A discussant's persuasive argument may be more fruitful if it is reinforced by that of other discussants, meaning heterogeneity *mutes* the propensity to switch preferences.

The causal mechanisms of neighborhood effects also remain a black box, so we seek to discern what factors make neighborhood influence likely *and* how precisely this influence occurs. As we did with networks, we depart with previous scholars by parsing the potential cross pressures of neighborhood into aspects of disagreement and heterogeneity. *Neighborhood disagreement with main respondent* measures the extent to which the balance of neighborhood opinion countervailed the respondent in August. This variable is the share of neighborhood residents that disagreed with the main respondent in August. Neighborhood heterogeneity may also play a role, although again theoretical expectations are ambivalent. Citizens living in truly competitive, multiparty neighborhoods—where the four major candidates received equal levels of support—may have been more volatile than residents of two-candidate dominant neighborhoods because their neighborhood context exposed them to a wide and balanced array of valenced messages. Neighborhoods with a competitive balance may also present more candidates as electorally viable than those with skewed support (Mutz 1998). By contrast, however, heterogeneity in the neighborhood may send confused and contradictory countervailing messages, thus encouraging citizens to stick to their guns. Thus, *Neighborhood heterogeneity* is the effective number of presidential candidates supported by each neighborhood's main respondents in August. We conduct a two-tailed test for this variable. Finally, we also test whether casual conversations are in fact the conduit for neighborhood influence.

Media Exposure and Political Characteristics

We include a number of different variables measuring the media exposure hypothesis. In particular, we gauge

whether direct consumption of news coverage and campaign commercials exposed respondents to information that countervailed or reinforced their August preferences. Appendix B details our coding of the most popular media outlets (two national television news programs, one national news magazine, and three local newspapers) in the two cities. The results are consistent for almost all media sources: Lula received the most positive coverage while Ciro received the most negative coverage, due largely to reports on a series of gaffes he committed.

We thus create a measure of *Overall media exposure* and test to see if it encouraged Ciro's August supporters to switch and Lula's supporters to stand pat, with Serra's and Garotinho's supporters falling somewhere in between. This requires interacting overall media exposure and August preference, essentially creating four different variables. We create a separate variable, however, for exposure to the one important media source (*Tribuna de Minas*) that reported much more unfavorable coverage of Serra than of Ciro.

We also consider exposure to the Free Electoral Hour, whose well-thought out and highly produced commercial segments (some lasting as long as 10 minutes) are deemed by many to be the primary source of ebbs and flows in vote shares. Respondent self-reports of *Free Electoral Hour exposure* are also parsed by August preference, although theoretical expectations are less straightforward here. Many observers attributed Ciro's demise to the Free Electoral Hour, as the start of his decline coincided with negative attacks against him in Serra's campaign commercials. At the same time, our coding (Appendix B) indicates that during the entire seven weeks of the Free Electoral Hour, Serra was the most attacked, although he received the most time overall.

Partisan intensity discerns whether Brazil's partisan minority does indeed exhibit sympathies that limit campaign volatility. This variable equals zero for independents, one for weak partisans, and two for strong partisans. Dummy variables control for *PT sympathizer* and *PSDB sympathizer*, as many scholars consider only Lula's PT, and perhaps Serra's PSDB, to contain a critical mass of true partisans having an affective identification with party symbols and principles (Camargos 2001; Samuels 2006; Singer 1999). The fact that the PT and PSDB were the only major parties to nominate their own candidates also makes it worth considering their partisans separately. *Party contact* assesses the degree to which party canvassing influenced preference change. A score of +1 is given to respondents contacted by a party or candidate that was *not* their August preference, a scenario we expect to make switching more likely. Respondents contacted by their preferred party or candidate in August are scored -1,

a scenario we expect to reinforce their standing preference. All other respondents are coded zero.

Another crucial variable is political awareness or knowledge. The voter cascades model, as well as a substantial amount of political science research, posit the least aware (because they tend to have the least coherent and rigid preferences) as the most likely to switch (Bartels 1988; Lazarsfeld, Berelson, and Gaudet 1948; Zaller 2004). To test this, the model includes *Political awareness*, the results of each respondent's performance on a short "quiz" about objective political facts. To isolate the impact of awareness and the other variables *per se*, we also control for potentially confounding demographic variables, including gender, education, income, and age. Candidate fixed effects indicate who the respondent preferred in August. We also run an additional model with neighborhood fixed effects to test the robustness of the neighborhood findings.

Results

Table 1 reports the results of a set of statistical models. Three different models test the robustness of the findings. Model 1 is the "Preferred Model" because it is the most parsimonious and contains all the measures discussed above. Remaining models are discussed in turn. The impact of social context in model 1 is overwhelming and clarifies some ambiguities about contextual influence. The coefficients for network and neighborhood disagreement are highly statistically significant and properly signed. Those corresponding to network and neighborhood heterogeneity, for which we conducted two-tailed tests, are also statistically significant, although the heterogeneity at these two levels operates in divergent directions.

Figure 2 depicts the substantive impact of these variables using the preferred model's predicted probabilities. Panel A portrays four general network types and their frequencies. Each network features a main respondent whose August candidate preference is represented by a circle. In all but the case of the lone "singleton," the main respondent communicates (as indicated by the connecting lines) with three discussants, and different shapes represent different candidate preferences. Based on August main respondent interviews, the electorate was divided as follows: 22% were singletons (no discussants or knew none of their discussants' preferences), 36% were reinforced (only agreeing discussants), and 42% were countervailed (at least one disagreeing discussant). Much of the vote switching took place among this last group. Compare singletons, who had a .27 probability of switching, with "reinforced" discussants, who had only a .20 probability of switching. In contrast, vote switching boomed when citizens were

TABLE 1 Sources of August to October Preference Change among Main Respondents

		(1) Preferred Model	(2) Neighborhood Fixed Effects	(3) Alternative Neigh. Heterogeneity
Social Context				
Network Disagreement with Main Respondent		.251** (.048)	.257** (.050)	.250** (.048)
Network Heterogeneity		-.225** (.051)	-.219** (.054)	-.227** (.051)
Neighborhood Disagreement with Main Respondent		.846** (.268)	.778** (.292)	.960** (.275)
Neighborhood Heterogeneity		.152* (.071)	.140** (.050)	
Neighborhood Heterogeneity among Non-Preferred Candidates				.245** (.079)
Media Exposure				
Overall Media Exposure (coverage was pro-Lula, anti-Ciro) among August supporters of:	Lula	.119 (.075)	.116 (.078)	.131 (.075)
	Serra	-.088 (.103)	-.080 (.105)	-.081 (.101)
	Garotinho	.102 (.138)	.074 (.137)	.077 (.141)
	Ciro	.126* (.060)	.125* (.063)	.122* (.059)
Free Electoral Hour Exposure among August supporters of:	Lula	-.016 (.043)	-.014 (.043)	-.018 (.043)
	Serra	-.043 (.045)	-.054 (.047)	-.044 (.045)
	Garotinho	-.027 (.039)	-.037 (.040)	-.024 (.039)
	Ciro	-.023 (.033)	-.023 (.035)	-.024 (.033)
<i>Tribuna de Minas</i> Exposure (coverage was anti-Serra) among August supporters of:	Serra	.085* (.051)	.083* (.055)	.071 (.051)
	Others	.005 (.027)	.007 (.028)	.008 (.027)
Political Characteristics				
Partisan Intensity		.021 (.039)	.021 (.041)	.019 (.040)
Party Contact		.053 (.083)	.073 (.083)	.039 (.083)
PT Sympathizer		-.011 (.101)	-.016 (.107)	-.005 (.102)
PSDB Sympathizer		-.349* (.204)	-.331 (.211)	-.352 (.203)
Political Awareness		-.227** (.049)	-.226** (.049)	-.225** (.048)

(continued on next page)

TABLE 1 Sources of August to October Preference Change among Main Respondents (continued)

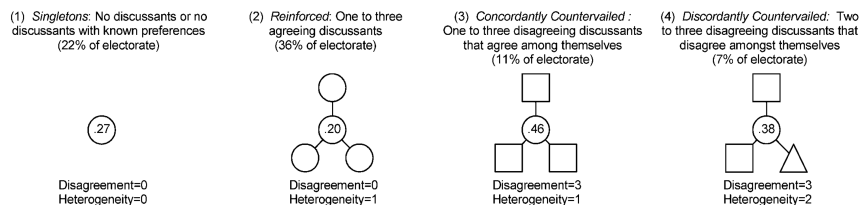
	(1) Preferred Model	(2) Neighborhood Fixed Effects	(3) Alternative Neigh. Heterogeneity
<i>Demographics</i>			
Education	-.021* (.011)	-.020* (.011)	-.020* (.011)
Age	-.005* (.002)	-.005* (.002)	-.004* (.002)
Natural Log of Monthly Family Income	-.045 (.038)	-.030 (.041)	-.040 (.039)
Woman	.045 (.053)	.059 (.057)	.045 (.055)
Juiz de Fora Resident	-.051 (.071)	.073 (.083)	-.064 (.069)
<i>Candidate Fixed Effects</i>			
Lula Supporter in August	-1.907** (.152)	-1.958** (.158)	-1.984** (.153)
Serra Supporter in August	-1.255** (.144)	-1.237** (.151)	-1.290** (.145)
Garotinho Supporter in August	-1.362** (.173)	-1.366** (.179)	-1.452** (.180)
Constant	.400 (.431)	.179 (.469)	.221 (.466)

**p < .01, *p < .05. Directions of hypotheses mentioned in text.

Note: Dependent variable is *Voter switched*, a binary measure of whether main respondent (1) switched or (0) did not switch preferences between August and October. Entries are binary probit coefficients with robust standard errors in parentheses. Standard errors are corrected for clustering within the 50 neighborhoods (primary sampling units) and stratification by city. Forty-seven fixed effects coefficients are not shown for model 2. Results are from 10 multiply imputed data sets (King et al. 2001; Honaker et al. 2001). N = 2,688.

FIGURE 2 Predicted Probabilities of Vote Switching among Main Respondents (MRs)

Panel A: Impact of Network Heterogeneity and Network Disagreement with MR



Note: Figures are different network configurations with MR in center. Different shapes represent varying candidate choices. The remaining 24% of the electorate had at least one agreeing discussant and one disagreeing discussant.

Panel B: Impact of August Neighborhood Characteristics

	Heterogeneity: Effective Number of Candidates Supported in August		
	2.3 (15 th percentile)	2.9 (50 th percentile)	3.5 (95 th percentile)
Disagreement: 40 (5 th percentile) Percent of Neighborhood that Disagreed with MR	0.17	0.19	0.22
65 (50 th percentile)	0.22	0.25	0.28
90 (95 th percentile)	0.29	0.32	0.35

Note: Predicted probabilities in Panels A and B are from Model 1 in Table 1. To generate the predicted probabilities, the remaining continuous variables were held at their means and the remaining categorical variables were held at their medians.

countervailed: .46 when they were unanimously countervailed by three discussants, falling to .38 when these discussants spoke with discordant voices. Discussion networks, therefore, both discouraged and encouraged vote switching, but their overall effects were impressive.

The influence of the neighborhood microenvironment was also statistically and substantively significant. Model 2 in Table 1 confirms the robustness of these results, indicating that they are invariant to the inclusion of neighborhood fixed effects. Panel B of Figure 2 depicts the substantive impact of the neighborhood variables. Neighborhoods actually held a greater capacity than immediate discussion networks for exposing individuals to countervailing opinions, as even main respondents living in the most agreeable neighborhoods had a disagreement rate of 40%. The neighborhood agreement variable had an impact over most of its range of about 12 to 13 percentage points. Heterogeneity at the neighborhood level also had a positive, albeit smaller, impact on the probability of switching, in contrast to the negative influence of heterogeneity in discussion networks.

Why does heterogeneity operate differently at these two levels, and what are the mechanisms of neighborhood influence? Within discussion networks, social influence occurs through direct persuasion and argumentation. Heterogeneity therefore supplies individuals with multiple perspectives and counterarguments about alternative candidates, making it less likely that one nonpreferred option will emerge as an untainted alternative. In contrast, neighborhoods encompass a broader collective than discussant networks, so they serve as heuristics about candidates' electoral viability (Mutz 1998). More effective candidates in a neighborhood's preference distribution mean more viable candidates in that neighborhood, providing a greater incentive to switch. Indeed, when we created an alternative measure of heterogeneity in August, by counting the effective number of candidates in the neighborhood among each respondent's three nonpreferred nominees, the variable's impact *grows*. Model 3 in Table 1 shows the results.

If this explanation is correct, then citizens should have at least a vague sense of where their neighborhoods stand (Canache 1996). Is this realistic? For most Brazilian neighborhoods, the answer is "yes." Main respondents were rather accurate in knowing their neighborhoods' political leanings. We use a survey question, *Perceived disagreement with neighborhood*, that asked respondents whether they thought their own families' political beliefs were (1) similar, (2) different, or (3) very different from those of other families in the neighborhood. The zero-order correlation between the neighborhood means of this variable and the neighborhood's effective number of candidates (in round

TABLE 2 Main Respondent Knowledge of Neighborhood Preferences: Match between Objective and Perceived Agreement

	(1)	(2)
Neighborhood Disagreement with Main Respondent	.817** (.102)	.471** (.197)
Neighborhood Disagreement with Main Respondent × Frequency of Discussion with Other Neighborhood Residents		.180* (.079)
Frequency of Discussion with Other Neighborhood Residents		-.152 (.052)
Cutpoint 1,2	.864 (.070)	.573 (.135)
Cutpoint 2,3	2.122 (.086)	1.834 (.150)

**p < .01, *p < .05.

Note: Dependent variable is *Perceived disagreement with neighborhood*, an ordinal measure of whether main respondents believed the neighborhood held (1) similar, (2) different, or (3) very different political beliefs compared to their families'. Entries are ordered probit coefficients with robust standard errors in parentheses. Standard errors are corrected for clustering within the 50 neighborhoods (primary sampling units) and stratification by city. Results are from 10 multiply imputed data sets (King et al. 2001; Honaker et al. 2001). Frequency of discussion is centered at its mean to ease interpretation in column 2. N = 3,732.

one) was +.28.¹⁰ This correlation also existed at the individual level, as column 1 of Table 2 indicates. The ordered probit results in Table 2 indicate that objective disagreement between oneself and the neighborhood (measured with the same neighborhood disagreement variable in Table 1) is a highly significant predictor of perceived congruence between one's family and the neighborhood.

But how do citizens acquire knowledge of neighborhood preferences? Most Brazilian neighborhoods feature a rich array of casual meeting places where discussion and deliberation occur—open-air restaurants and bars, athletic fields, bus stops—not to mention more formal meeting places such as churches, community centers, health clinics, and social clubs. Many politically relevant conversations occur in these venues that would not be captured by a discussant name generator. As column 2 of Table 2 shows, using a measure of *Frequency of political discussion with other neighborhood residents*, the match between

¹⁰By definition, the higher is the effective number of candidates, the more likely two randomly chosen voters are to disagree with one another.

perceived and objective agreement is enhanced by discussion with neighbors.

In sum, then, politically colored exchanges with named discussants and casual conversations with neighbors were primary mechanisms for inducing preference change in the final weeks of the 2002 campaign. How did the other variables affect vote switching? Among the media consumption variables, we found that overall media exposure mattered for one group of voters: among *Ciro's* August supporters, exposure to unfavorable coverage appeared to drive them toward other candidates. *Ciro's* August supporters who were highly inattentive to media (10th percentile on media attention) were about 10% less likely to defect than his highly attentive (90th percentile) August supporters. Attention to *Tribuna de Minas* also drove away some of *Serra's* voters, yet these were the only significant findings with respect to media exposure. Indeed, in general, switching occurred among the least informed, as a voter cascade model would predict. Political awareness had a substantial impact: highly aware individuals (90th percentile) were about 30% less likely to switch than the highly unaware (10th percentile). Moreover, education also had a negative impact on the propensity to switch. Perhaps the most surprising result of all, however, is the nonimpact of partisanship. With the not-very-robust exception of PSDB sympathizers, partisans of all stripes in Brazil were just as likely to change their minds during campaigns as were independents, a sign that even expressed partisan sympathies may mask a general susceptibility to campaign appeals and interpersonal influence.

The Political Consequences of Discussion: The *Ciro* Gomes “Fad”

It is clear that discussing politics with disagreeing peers or living in neighborhoods with countervailing political leanings contributes to preference volatility in Brazil, but

what are the concrete political effects of discussion? Does it fuel momentum runs, and can it magnify the impact of media coverage by disseminating media content to the unexposed? To address these questions, let us briefly take a more in-depth look at the dynamics of the 2002 election. In particular, we take a microscope to the 2002 *Ciro* Gomes “fad”—an ephemeral shift, in the language of information cascade scholars, in aggregate opinion or behavior—and consider the impact of political discussion on *Ciro's* roller coaster ride. At his peak in August, when fortuitously the second wave of the panel occurred, *Ciro* was widely expected to be *Lula's* second round opponent. Yet between then and Election Day, *Ciro* lost about 3 million voters *per week* in a rather steady process of decline. Using second- and third-wave survey results, only 29% of his August supporters eventually cast a ballot for him in October. *Lula*, at the other extreme, held on to 92% of his August supporters. In short, an assessment of the concrete political implications of discussion must consider *Ciro's* disastrous candidacy.

Ciro's rise was clearly driven by a wave of favorable hot talk about his candidacy. In August, 28% of respondents said that he was the candidate about whom they talked the most in the previous month, with only 14% citing *Serra* and 8% naming *Garotinho*. The remaining 49% named *Lula*. By October, *Ciro's* percentage on this variable had fallen to 11%, tied for last with *Garotinho*, and *Serra's* (20%) and *Lula's* (60%) late surges in the polls were reflected in their percentages on this variable. *Ciro's* ears were happily red from being so talked about in August, but they bleached white when it mattered in October.

Yet while *Ciro* rode a discussion bubble into second place, his demise was also driven by discussion. For one, the configuration of discussion networks around *Ciro's* August supporters reveals that the social infrastructure of his constituency had some vulnerabilities, making his support susceptible to a media-triggered but cascade-driven collapse. Table 3 demonstrates these stark patterns. Of the four candidates, *Ciro's* August supporters faced the

TABLE 3 Network Disagreement Patterns by August Preference

Among Each Candidate's August Supporters:				
(1) Mean Network Disagreement	(2) Probability of Finding a Disagreeing Discussant if Randomly Chosen: (1 – Candidate's Share of All August Preferences)	(3) Mean Number of Discussants	(4) Observed Network Disagreement/Expected Network Disagreement if Randomly Chosen: (1)/[(2)*(3)]	
<i>Ciro</i>	.80	.71	2.20	.51
<i>Lula</i>	.44	.55	2.24	.36
<i>Serra</i>	.78	.84	2.28	.41
<i>Garotinho</i>	.67	.90	1.89	.39

highest average number of disagreeing discussants (column 1); twice as many, in fact, as eventual winner Lula's largely insulated supporters. That *Ciro's* August supporters encountered more disagreement is natural because adherents of a majority or plurality candidate are less likely to find, all else equal, differently minded discussants in their environment (Huckfeldt, Ikeda, and Pappi 2005). However, Lula's supporters encountered half the level of disagreement of *Ciro's*, despite the fact that Lula did not have twice the support of *Ciro*. Column 4 controls for the confounding effects of discussant availability (column 2) and average number of discussants (column 3) by dividing mean disagreement by the expected level of network agreement if main respondents were to choose discussants randomly from the voting population. The results in column 4 have a concrete interpretation: the probability a given discussant disagrees with the main respondent given (conditioning on) the probability of randomly choosing a differently minded discussant. Differences in these probabilities thus reflect the degree to which main respondents preferred to cluster with like-minded discussants.

The striking pattern is that, when accounting for these variables, the gap between *Ciro's* August supporters and those of the other candidates grows, putting *Ciro's* adherents essentially by themselves at the extreme. In short, *Ciro's* August constituency was much more likely to choose disagreeing discussants, even though it had a relative advantage over Serra's and Garotinho's in finding like-minded ones. We suspect the reasons for this lie in the fact that *Ciro* lacked an obvious social or ideological constituency. As pro- and antigovernment candidates, respectively, Serra and Lula had supporters with somewhat more ideologically driven and therefore more insulated networks (Samuels 2006).¹¹ Garotinho's supporters drew heavily from Brazil's evangelical community, which had ready-made social constructs bringing together like-minded individuals. *Ciro*, in contrast, had no clear social or ideological constituency even at his peak. While he defined his candidacy early as strongly anti-government, *Ciro* was but one of three opposition candidates. His vague policy proposals enabled him to attract endorsements from personalities and politicians ranging from leftist former Communists and academics to figureheads of Brazil's clientelistic right. As a result, his August supporters were more likely to encounter and engage in disagreement in their day-to-day conversations. Based on the importance of the findings on disagreement in

Table 1, this pattern may have planted the seeds for *Ciro's* downfall, since negative information about him, either coming from the media or from another discussant, was more likely to be reinforced within his supporters' networks. Similarly, if a *Ciro* voter in the network switched, this change of heart was more likely to be reinforced by another non-*Ciro* voter in the network.

Conversations, then, that took place in the two months before election day among *Ciro's* August supporters seemed to magnify and spread the negative coverage of his gaffes in the media, enabling these negative sentiments to reach many individuals unexposed to the original reportage. As Table 1 indicated, individual differences in exposure to negative media coverage of *Ciro* did play a role, with exposure increasing the probability of switching from *Ciro* by about 10%. However, talk about *Ciro* actually seemed to flatten out the relationship between media exposure and propensity to switch, thereby ironing out inequalities inherent in media exposure. For example, pro-*Ciro* main respondents in August who had a high share of discussants switching from *Ciro* were far more likely than other *Ciro*-leaners to switch—almost 90% of *Ciro's* August supporters who only had *Ciro*-defecting discussants also defected. Yet, and more importantly, among these same voters media attention did not increase switching. All told, negative media coverage of *Ciro* seemed to trigger a discussion-driven voter cascade that ended the “fad” and *Ciro's* hopes for the presidency.

Conclusion

Social context and, in particular, interpersonal discussion were the primary movers of voters in Brazil's 2002 campaign. In a milieu of limited partisanship where most parties do not have consolidated “brand names,” networks of political discussion are the main conduit of preference change. Discussion and horizontally exchanged interpersonal, rather than partisan, cues are the way that many Brazilians voters wind their way through the complex party system elites have created. Persuasive communications across lines of political difference often yielded the desired effect: disagreement was common and consequential, resulting in persuasion on a massive scale. Communication of this disagreement in the form of political “hot talk” had immediate and enormous effects throughout the campaign, creating momentum runs and vote switching that, in the end, determined the election outcome.

Besides pointing out the importance of interpersonal communications, this work also highlights some novel

¹¹ Because of a lackluster economy, Serra tried to distance himself from President Cardoso, a copartisan, during the campaign. Yet ideological conservatives had no alternative. In the survey, Serra's voters were the most favorable toward Cardoso and the most right-leaning.

mechanisms of contextual influence and clarifies some conceptual ambiguities extant in the Americanist social network literature. Political heterogeneity and political disagreement are wholly distinct phenomena, and indeed, within discussion networks, served dialectically opposing roles. Disagreement led to attitude change while heterogeneity discouraged it. At the neighborhood level, however, the degree of heterogeneity served as a heuristic for the electoral viability of candidates, with greater heterogeneity *increasing* the chances that citizens changed their minds. Moreover, casual conversations among neighbors, a dying pastime in the United States (Putnam 2000), were a crucial venue of informational exchange about politics.

Although a more definitive answer surely awaits future research, we suspect that informal communications among neighbors and discussants also play an important role in driving voter volatility and determining voter preferences in other new democracies where partisan cues and party roots in the electorate are weak. Informal discussion with close confidants, casual acquaintances, and even complete strangers is a wholly rational way for citizens to adapt to the lack of standing information in systems without long-established political institutions and/or, as in Brazil, where elites have created a highly complex party system. This is not to deny, of course, that citizens in established democracies do not learn or gain exposure to persuasive information through discussion with peers. It is rather to reiterate that political discussion in new democracies is more *meaningful* and *politically consequential*, as it can yield massive preference change during election campaigns that determines who governs.

What does this suggest about the quality of citizenship in Brazil and other new democracies? Political behavior scholars often portray political independents with volatile preferences not as open-minded and inquisitive but as unaware and manipulable (Lazarsfeld, Berelson, and Gaudet 1948; Campbell et al. 1960). Comparativists favor stable institutions with deep societal roots (Huntington 1969; Mainwaring and Scully 1995). Social network theorists express concerns that deliberation can cause “groupthink” (Asch 1951), with voter cascades as the blind leading the blind, “herd behavior” (Banerjee 1992), or “stampedes” (Schumpeter 1942). The alternative model we considered, the media exposure thesis, paints an equally unimpressive picture of atomized citizens who are politically manipulable by the media, a scenario reminiscent of the pessimistic “mass society” model that was in academic vogue a few decades ago.

The evidence in this article points to none of these scenarios. For one, democratic theorists typically consider deliberation, especially in heterogenous settings, as a public good improving the quality of citizenship

and democracy by promoting political tolerance, engagement, and knowledge (Fishkin 1991; Habermas 1989; Mill 1859). Indeed, the *Ciro Gomes* fad of 2002 in Brazil indicates the ease with which useful media-generated information—that *Ciro* was hot-tempered and potentially lacked judgment—spread throughout society and had important political consequences because of interpersonal ruminations. Far from an atomized society, citizens deliberated and reflected on this information in conversations with others. Moreover, the role and extent of disagreement indicates that 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.

Appendix A

City Selection, Sampling Protocols, and Question Wordings

The research design is largely inspired by Huckfeldt and Sprague’s (1995) classic South Bend study with the exception that two cities were sampled to create variation in the municipal political context. Juiz de Fora and Caxias do Sul were chosen because of differences in the organizational strength of political parties and the divisiveness of ideological cleavages.¹² The political system of Juiz de Fora is organized around individual political leaders, and politics is carried out mostly on a personalistic basis. Parties are weakly institutionalized with shallow roots in the electorate. In this sense, Juiz de Fora resembles the personalized and clientelistic style of politician-voter exchange that predominates in most Brazilian cities. In contrast, Caxias do Sul, like its state of Rio Grande do Sul, has a long tradition of polarization between two clearly distinct ideological positions. There is mutual distaste in the city between left parties, on one side, and center and right parties, on the other. The importance of contextual influence is thus strongly reinforced by the fact that the findings on networks and neighborhoods are robust across these varied milieus.

To generate the March/April first-wave sample of 2500 face-to-face interviews per city, we employed a multistage sampling technique with random selection at each of the following four stages: neighborhoods → census tracts → domiciles → respondents.¹³ Within each city, we chose about 20 neighborhoods using a random

¹²Educational attainment, wealth, size of electorate, and race are similar in both cities.

¹³To adjust for this clustering and stratification in the sampling procedure, we used the “svy” commands in *Stata 8.0* in the statistical procedures shown above.

number generator with goals of approximately 100 interviews per neighborhood. Neighborhoods were sampled with replacement, however, so a small number of highly populated neighborhoods were chosen twice or (in one case) even three times. In these cases, we interviewed 200 or 300 residents. Within each neighborhood, we randomly selected from two to 10 census tracts. Each census tract contains approximately 200 domiciles. Within census tracts, interviewers began at a predetermined geographical point and attempted to interview one randomly chosen person (according to the most-recent-birthday technique) at every sixth domicile.

The first-wave response rate, calculated as the number of completed interviews divided by the number of houses contacted, was 74%. To obtain 1000 replacement respondents in each of waves two and three, interviewers returned to the domicile of the final interview in the previous wave and continued contacting every sixth house. For the second wave in August, all first-wave respondents were contacted and asked for reinterviews, with 74% completing them. Of these, 84% completed a third-wave interview. The discussant wave of interviews occurred over the phone and after the third wave (and second round election) of the main respondents panel.

Vote choice. August – “If the election for president of the republic were held today, for whom would you vote? *Ciro Gomes, Lula, José Serra, Anthony Garotinho, or some other candidate?*” October – “For whom did you vote for president in the first round of the election on October 6? *Ciro Gomes, Lula, José Serra, Anthony Garotinho, some other candidate, or did you not vote for anyone?*”

Political awareness. Political awareness quiz questions had a multiple choice format. Awareness is the sum of correct answers (converted to a z-score) to the following questions: 1. “What is the political position of *Ana Corso/Paulo Delgado* [two politicians from the respective cities]? *Council (Corso), federal deputy (Delgado), state deputy, or senator.*” 2. “Who is the Vice-President of Brazil? *Inocência de Oliveira, Marco Maciel (correct), Íris Resende, or Marcello Alencar.*” 3. “What is the party of President *Fernando Henrique Cardoso*? *PTB, PMDB, PSDB (correct), or PFL.*” 4. “Which of the following countries is a member of *Mercosul*? *United States, Argentina (correct), Colombia, or Peru.*” 5. “Which of these politicians is a senator from your state? *José Fogaça/José Alencar (correct), Saturnino Braga, Eduardo Suplicy, or Lindbergh Cury.*” 6. “Who is the President of the Chamber of Deputies? *Roberto Jefferson, José Genoíno, Aécio Neves (correct), or Miro Teixeira?*”

Partisan intensity. “Do you sympathize with any political party? Yes or No?” “Yes” answers are coded as strong

partisans (2). Responses of “No” were followed up with “Is there one party you have a little more sympathy for than the others?” “Yes” answers are coded as weak partisans (1). Responses of “No” to both are independents (0). “Yes” answers to both questions were followed up with “Which party do you sympathize with?” We use wave-one results of this question to avoid endogeneity problems.

Perceived disagreement with neighborhood. “Compared to the other families of this neighborhood, would you say that the political opinions of your family are (1) similar, (2) different, or (3) very different from the opinions of the other families?”

Frequency of political discussion with other neighborhood residents. “How frequently do you talk about politics with people from your neighborhood that are not members of the neighborhood association? (1) Never, (2) rarely, (3) sometimes, (4) frequently.”

Most conversed about candidate. “In the last month, when you’ve talked about politics, about which candidate did you talk the most?”

Party contact. “During this campaign, did some candidate or party activist try to sway your vote, either personally, by the telephone or through a phone message?” If “yes,” “Which party or candidate?” Interviewers listed up to three.

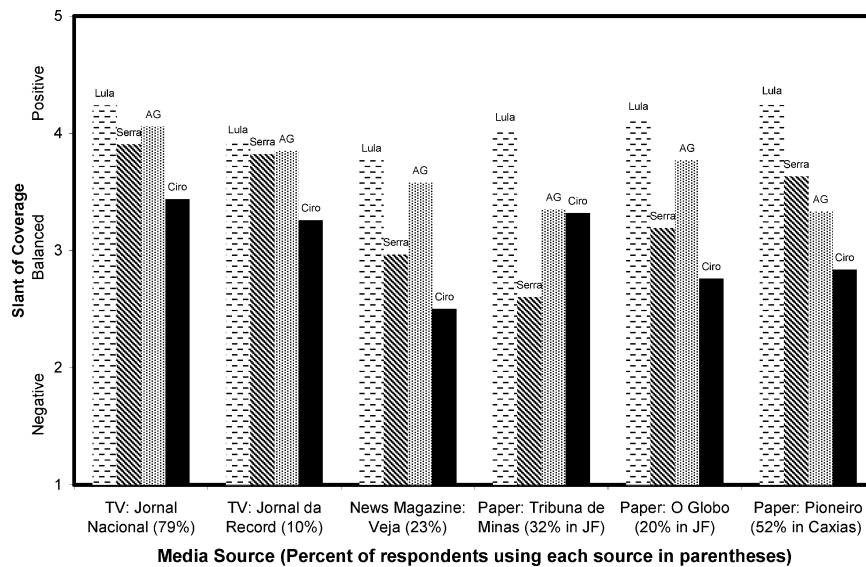
Appendix B

Media Exposure and Content Coding

Free Electoral Hour exposure. “Since August 20, the free electoral hour has been on television and radio. Between the beginning of the free electoral hour in August and the October 6 election, more or less how much time per week did you watch on television and listen on radio to programs about presidential candidates? (0) Never, (1) less than 30 minutes per week, (2) between 30 and 60 minutes per week, (3) between 1 and 2 hours per week, (4) between 2 and 4 hours, (5) more than 4 hours.” Our coding of all HEG segments over its seven-week duration found that Serra was attacked in 28% of his opponents’ segments, Lula in 24%, *Ciro* in 14%, and *Garotinho* in 8%. By law, Serra had 42% of the presidential candidates’ total time allotment, Lula had 21%, *Ciro* had 17%, and *Garotinho* 9%.

Media attention. In wave three, respondents were asked in turn if they watched TV news, read news magazines, read newspapers, and listened to political radio shows. If they responded “yes,” they named up to two sources (one for radio) per category and their frequency of use of each. From these reports we created seven variables that recorded the frequency of exposure to each of their

FIGURE B.1 Evaluative Content of Media Coverage



Note: Height of bars is mean for all coded stories.

seven sources. We ran a factor analysis on these seven variables and only one statistically significant factor emerged: media attention is the factor score from this dimension.

Evaluative content of media stories. To gauge the evaluative content of media sources, coders recorded the following about each story: “Would the candidate(s) mentioned like the fact that this story was aired/published? (1) Would dislike a lot, (2) would dislike a little, (3) balanced coverage, (4) would like a little, (5) would like a lot” (Dalton, Beck, and Huckfeldt 1998). For the four print media sources, all stories appearing between the end of the wave 2 survey (August 21) and the beginning of the wave 3 survey (October 6) were coded. For the two television news programs, every Monday, Wednesday, and Friday broadcast was coded. Figure B.1 reports each outlet’s mean for this variable over this time span.

Because the results are so consistent across media outlets (with the exception of the *Tribuna de Minas*, which we treat differently), we take the liberty of assuming that overall exposure to all media sources increased respondents’ consumption of pro-Lula, anti-Ciro information. This is plausible for two reasons. First, attention to media outlets in our two cities was highly concentrated in the six sources we coded, as indicated by the percentages reported in Figure B.1. Second, the observed pattern fits with expectations: Lula’s more positive coverage stemmed from the persistently good news from the horserace reports and the fact that he was rarely a target of the vitriolic attacks launched by his three challengers, who had resigned themselves to competing among themselves for the second round spot. Ciro, in contrast, committed a se-

ries of gaffes in July and August that the media reported with alacrity.¹⁴

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¹⁴ Among his gaffes, Ciro referred to a caller on a phone-in show as “stupid”; he condescendingly suggested that a “pretty, black” audience member was trying to assume ungranted speaking privileges only because he was Afro-Brazilian; he said he didn’t “give a damn” about international investors and markets; and he joked that his celebrity girlfriend’s primary role in his campaign was to sleep with him.

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