

ONLINE APPENDIX

for

“The Dynamics of Partisan Identification when Party Brands Change:
The Case of the Workers Party in Brazil”

Andy Baker

Barry Ames

Anand E. Sokhey

Lucio R. Renno

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A. City Selection and Sampling Protocols

The research design is largely inspired by Huckfeldt and Sprague's¹ classic South Bend study, with the exception that two cities were chosen to create variation in the municipal political context. Juiz de Fora and Caxias do Sul were selected because of differences in the organizational strength of their political parties and the divisiveness of their ideological cleavages. Educational attainment, wealth, size of electorate, and race are similar in the cities. The political system of Juiz de Fora is organized around individual political leaders, and politics is carried out mostly on a personalistic basis. In this sense, Juiz de Fora resembles the personalized and clientelistic style of politician-voter exchange that predominates in most Brazilian cities, but with a service delivery level above the mean for Brazil. 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.

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. Within each city, we chose about 20 neighborhoods using a random 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 ten 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 percent. To obtain around 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. An extra 113 fresh respondents were also introduced in wave 6.

B. Panel Attrition

Here are the number of completed interviews and reinterviews by wave. Please note that 913 fresh respondents entered the panel in wave 2, 1,060 more fresh respondents entered in wave 3, and 113 entered in wave 6. These individuals subsequently became part of the panel, eligible for reinterviewing.

¹ Huckfeldt, Robert and John Sprague (1995). *Citizens, Politics and Social Communication: Information and Influence in an Election Campaign*. NY: Cambridge University Press.

Table B1: Panel Attrition Rates in the Two-City Panel Study

	1	2	3	4	5	6
Total number of interviews	4,882	4,507	5,122	2,744	2,042	1,970
Fresh respondents	4,882	913	1,060	1	1	113
Re-interviews	0	3,594	4,062	2,743	2,041	1,857
Percent re-interviewed as share of those interviewed at least once previously	--	73.6%	70.1%	40.0%	29.8%	27.1%

To re-approximate a representative sample in the face of panel attrition, we employed the technique of weighting cases by their probability of dropout. The idea is to up-weight respondents with a high probability of dropping out (but who, obviously, did not drop out), since they are more representative of individuals who did attrite. Respondents with a low probability of dropping out are down-weighted, since they are less representative of those who are missing in latter waves.

To obtain useful weights, we first estimated logit models (one each for waves 3, 4, 5, and 6) in which the dependent variable was whether the wave 1 respondent dropped out in the later wave. (Dropped out = 1, retained = 0.) As covariates, we used variables such as gender, age, political awareness, SES, labor market status, family size, and perceptions of the respondent by wave 1 interviewers. (These predictors were statistically significant almost 90% of the time. Results are available from the authors upon request.) The predicted probabilities from these logits were then used as sampling weights in all of the analyses. See Vandecasteele and Debels (2007) for technical details.² All that said, we found the effect of the weights on our estimates to be minimal and never of substantive significance.

C. Survey Question Wordings and Construction of Indices

Partisanship. “Do you sympathize (*simpatiza*) with a political party? Yes or no. (If yes) Which one?”

- *Independents*. Answer of “no” to first question.
- *Petistas, pemedebistas, tucanos, and other partisans* are answers of “yes” to the first question and then choice of the corresponding party in the second.

Placement of Lula in ideological space. “Now I’d like to ask some questions about the candidates for the presidency. Do you think that Lula is a politician of the (1) left, (2) center-left, (3) center, (4) center-right, or (5) right?”

² Vandecasteele, Leen, and Annelies Debels. “Attrition in panel data: the effectiveness of weighting.” *European Sociological Review* 23.1 (2007): 81-97.

Placement of Lula in issue space. (Mean of the following three items)

- *Placement of Lula on the land reform issue.* “Based on what you know about him, does Lula think that the government should give land from large farms to rural landless workers, or should the government not give land? Does Lula agree strongly or only somewhat with this statement?” (1) Lula strongly agrees that the government should give land, (2) Lula slightly agrees that the government should give land, (3) for Lula it depends, (4) Lula slightly agrees that the government should not give land, (5) Lula strongly agrees that the government should not give land.
- *Placement of Lula on the privatization issue.* “Based on what you know about him, does Lula think that privatization is a good thing or a bad thing? Does Lula agree strongly or only somewhat with this statement?” (1) Lula strongly agrees that privatization is a bad thing, (2) Lula slightly agrees that privatization is a bad thing, (3) for Lula it depends, (4) Lula slightly agrees that privatization is a good thing, (5) Lula strongly agrees that privatization is a good thing.
- *Placement of Lula on the social spending issue.* “Based on what you know about him, does Lula think that the government should raise spending on social programs or that the government should not raise spending on social programs? Does Lula agree strongly or only somewhat with this statement?” (1) Lula strongly agrees that the government should raise social spending, (2) Lula slightly agrees that the government should raise social spending, (3) for Lula it depends, (4) Lula slightly agrees that the government should not raise social spending, (5) Lula strongly agrees that the government should not raise social spending.

Perceptions of Lula’s corruptness. (Scores -- then reversed -- from the first component extracted from a principal components analysis of these three items.)

- *Lula’s honesty.* “Do you think that Lula is (4) very honest, (3) honest, (2) a little bit honest, or (1) not honest at all?”
- *Corruption in Lula administration.* “We would like you to evaluate the performance of the Lula government in some specific areas. Please give a grade to the government’s performance from 0 to 10, where 0 is the lowest grade, 5 is an average grade, and 10 is the highest grade. What about corruption?”
- *Corruption in Lula administration vs. FHC administration.* “Now we’re going to ask some questions to compare the government of Lula with the government of Fernando Henrique Cardoso. In your opinion, in the Lula government is there more corruption, less corruption, or is there no difference in corruption with the Cardoso government? (1) More corruption, (2) no difference, (3) less corruption.

Lula’s personal traits (Scores from the first component extracted from a principal components analysis of these three items.)

- *Lula's intelligence.* Changing the subject a little, thinking about Lula, do you think that he is (4) very intelligent (*inteligente*), (3) intelligent, (2) a little bit intelligent, or (1) not intelligent at all.”
- *Lula's resoluteness.* Do you think that Lula is (4) very resolute (*decidido*), (3) resolute, (2) a little bit resolute, (1) not resolute at all.”
- *Lula's compassion.* Do you think that Lula is (4) very compassionate (*solidário*), (3) compassionate, (2) a little bit compassionate, or (1) not compassionate at all.”

Presidential approval of Lula. “Do you think that President Lula is doing a job that is (5) wonderful, (4) good, (3) normal, (2) bad, or (1) terrible?”

Retrospective economic evaluations. (Mean of the following two items)

- *Retrospective sociotropic evaluations.* “Speaking generally about the country in the last 12 months, do you think that the economic situation (5) improved a lot, (4) improved a little, (3) stayed the same, (2) worsened a little, (1) worsened a lot.”
- *Retrospective egocentric evaluations.* “In relation to your personal economic situation, in the last 12 months, do you think that the economic situation (5) improved a lot, (4) improved a little, (3) stayed the same, (2) worsened a little, (1) worsened a lot.”

Discussants. (Waves 2 and 5) “Could you please indicate the names of the three people with whom you most talk about politics?” (Waves 3 and 6) “In the interview that you did last time, you mentioned some people with whom you converse about politics.”

(Followed by the following in all four waves) “If the election for president were today, for which candidate do you think [named discussant x] would vote? [2002] Anthony Garotinho, Ciro Gomes, José Serra, Lula, or some other candidate? [2006] Cristovam Buarque, Geraldo Alckmin, Heloisa Helena, José Maria Eymael, Luciano Bivar, Lula, Rui Pimenta, Ana Maria Rangel or some other candidate?”

(This question was also asked for the gubernatorial election in waves 2 and 3.)

- *Support for PT in discussant network* (waves 2 and 3). Number of “Lula” plus PT gubernatorial candidate responses to vote question.
- *Opposition to PT in discussant network* (waves 2 and 3). Number of non-Lula plus non-PT-gubernatorial-candidate responses to vote question.
- *Support for PT in discussant network* (waves 5 and 6). Number of “Lula” responses to vote question.
- *Opposition to PT in discussant network* (waves 5 and 6). Number of non-Lula candidate responses to vote question.

Note: Discussants were double counted if they were voting both for Lula and the PT's gubernatorial candidate. A question on discussants' gubernatorial vote was not asked in waves 5 and 6, so these measures count only the number of Lula-voting discussants.

Political awareness. The proportion (converted to a z -score) of multiple choice questions a person answered correctly. Questions were objective queries of knowledge about politics, especially political leaders and their parties. Questions varied by wave and are available from the authors upon request.

SES. (Scores from the first component extracted from a principal components analysis of these three items.)

- *Monthly family income (logged).* What is the total income, more or less, of your family per month, summing all income of those who work or have any income source?"
- *Neighborhood income (logged).* Estimated using aggregated, neighborhood-level income calculated in previous question.
- *Education level (logged).* "What grade did you study to or are you studying in now?"

D. Measurement Validity of the Partisanship Item

Scholars of mass partisanship outside the U.S. are far from unanimous on how to word survey queries of party ID. Wordings that ask respondents to report their partisan "sympathy," "preference," "closeness," "inclination," or "identity" (to name a few) have all been used. Fortunately, Baker and Renno (2015) show that our choice of the "sympathy" wording over other possibilities is largely inconsequential for our substantive conclusions about the dynamics of mass partisanship in Brazil.

To be more specific, Baker and Renno (2015) randomly assigned different wordings on a party ID question to respondents of the 2014 Brazilian Electoral Panel Study. Four different wording treatments were used: (1) one used the "sympathy" wording of the two-city panel study (and of LAPOP and some other Brazilian surveys), (2) one used the party "preference" wording of Datafolha (e.g., Samuels 2006), (3) one used an "identity" wording ("are you a petista?") modeled on the ANES formulation,³ and (4) one used a "way of thinking" wording ("which party best represents your way of thinking?") that has appeared on some other Brazilian and Russian surveys (e.g., the 2006 Brazilian National Election Study).

The experiment revealed four main findings. First, regarding test-retest reliability, wording has almost no effect on rates of intertemporal partisan stability. The one minor exception to this is that the "sympathy" wording produces slightly higher rates of stability through time. Our two-city results may thus slightly exaggerate rates of partisan stability, but by less than 10 percentage points if at all. Second, regarding predictive validity, the correlations between PT party ID and other political evaluations (e.g., evaluations of Dilma and Lula) are relatively high (roughly +.5) and are virtually invariant to question wording. Third, regarding convergent validity, wording has no effect on the strength of the correlation between responses to different pairs of differently worded questions asked in the same cross-section. Fourth, wording *does* affect the marginal distribution of responses. For example, the "sympathy"

³ For example, item V000519 in the 2000 ANES Time Series Study (available at: <http://www.electionstudies.org>).

wording invokes a relatively low share of respondents (21%) to declare partisanship while the “preference” wording invokes a relatively high share (44%). This is only problematic, however, if attempting to draw substantive conclusions about partisanship when comparing mean differences in rates of partisanship across differently worded questions – something we do not do in this article. In short, the Baker and Renno (2015) results suggest that party ID question wording yields at most minor effects on things like rates of intertemporal stability and correlations with other variables.

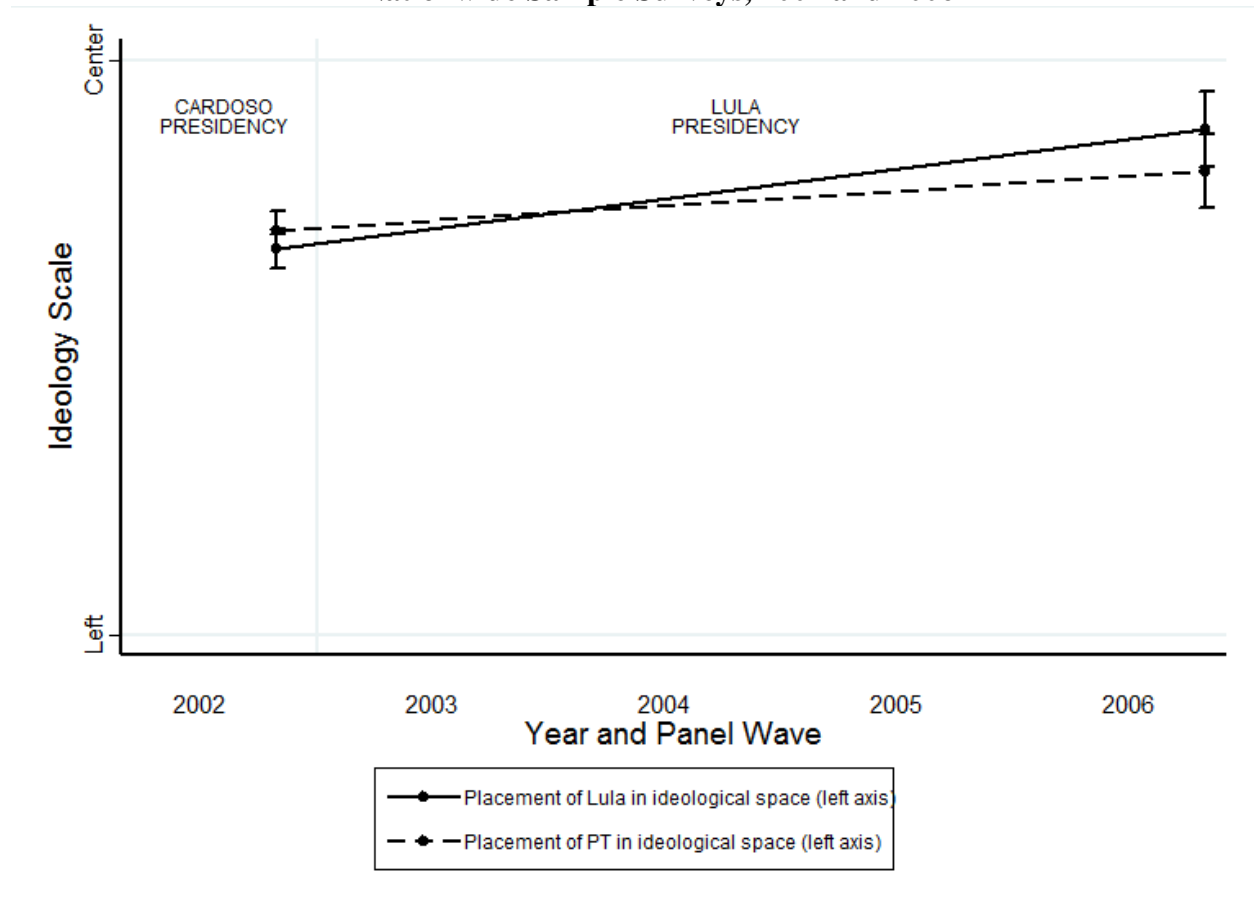
E. Generalizability to the National Context

An obvious concern with our analysis is whether our findings from two mid-sized cities generalize to the national context in Brazil. Using nationally representative surveys, we can show that several important political trends occurring at the national level are also found in our data. This suggests that our main findings are neither highly atypical nor contingent on our choice of cities. We cannot test for the presence of all of our findings in these nationwide surveys—if we could, we would of course simply have used the nationwide surveys in the first place. The nationwide surveys have shortcomings: (1) there was no nationwide panel study spanning the crucial period of 2002 to 2006, and (2) the nationwide studies are missing important questions (especially on perceptions of candidate honesty). Still, we can use the nationwide surveys to illuminate some important trends.

[Continue reading below]

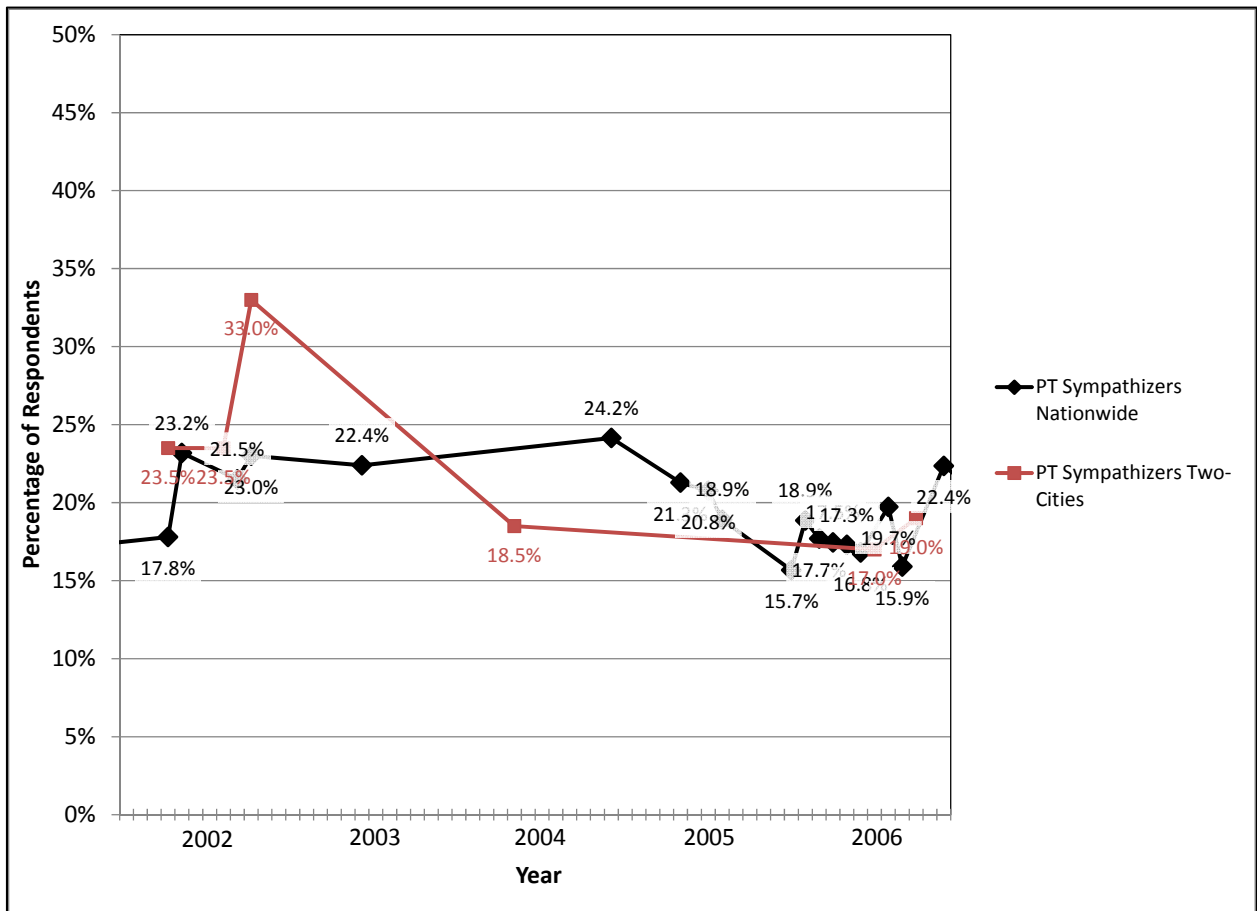
The first test is whether voters nationwide perceived the rightward move by Lula and the PT, like respondents in the two-city data did. (See Figure 2 in the paper). Figure A.1 shows that they certainly did. In the nationwide 2002 Brazilian Election Study, the average placement of Lula on a 0 (left) to 10 (right) ideological scale was 3.36, whereas in the nationwide 2006 Brazilian Election Study, the average placement of Lula was 4.40. Perceptions of the PT in ideological space also shifted rightward over these two surveys, although the size of this shift was a bit smaller (from 3.52 to 4.04) Both of these shifts are significant at $p < .05$.

**Figure E1: Mean Placement of Lula and the PT in Ideological Space:
Nationwide Sample Surveys, 2002 and 2006**



Our second test looks at aggregate rates of *petismo* nationwide and in our two cities (Figure A.2 has these results). The nationwide results are from the Datafolha survey reported in Figure 1. It is important to point out that these two series use different question wordings to gauge partisanship: the nationwide sample queries partisan “preference,” whereas the two-city sample queries partisan “sympathy.” Despite this, the two trends are very similar, both in terms of levels and dynamics. The one exception to this is the wave 3 (October 2002) results, in which the two-city sample picked up a surprisingly large number of (presumably) PT bandwagoners who expressed sympathy for the party after Lula’s victory. While this might nudge our results to exaggerate the links between *lulismo* and *petismo*, it is crucial to point out that this link exists (in Table 3) even in models that do not include wave 3.

**Figure E2: Rates of *Petismo*:
Nationwide and Two-City Samples, 2002 to 2006**



Our third and final test is whether bounded partisanship characterizes *petismo* at the national-level. We use the 2010 Brazilian Electoral Panel Study to assess this. This 3-wave panel study occurred in the months leading up to and just after the 2010 presidential election. Table A.1 reports these results, in the same format as those presented in Table 1. Bounded partisanship strongly characterizes the pattern of churn into and out of the PT: Declared *petistas* were almost exclusively either *petistas* or independents in the previous wave. Recall from Tables 1 and 2 in the paper that for non-programmatic parties, the pattern of bounded partisanship was weaker, with more porous boundaries among the non-programmatic parties. That is indeed confirmed here: Declared PMDB and PSDB supporters were far more likely than *petistas* to have been sympathizers of competing parties in previous waves, although the two most common outcomes were partisan stability and independence.

Table E2: Dynamics of Partisan Identification in Brazil, 2010

Inner cells are column percentages

		<u>PID in March 2010 (Wave 1)</u>					Column %
		PT	PMDB	PSDB	Other party	Independent	
<u>PID in August 2010 (Wave 2)</u>	PT	58.2	14.6	13.0	18.2	15.7	23.6
	PMDB	1.2	39.0	13.0	2.3	3.1	4.6
	PSDB	3.6	4.9	39.1	2.3	2.8	3.9
	Other Party	1.8	0.0	8.7	40.9	3.7	5.2
	Independent	35.2	41.5	26.1	36.4	74.7	62.7
	Row %	18.5	4.6	2.6	4.9	69.3	N=890
		<u>PID in August 2010 (Wave 2)</u>					Column %
		PT	PMDB	PSDB	Other party	Independent	
<u>PID in Nov. 2010 (Wave 3)</u>	PT	58.0	5.0	7.1	10.8	16.2	60.5
	PMDB	1.7	40.0	0.0	5.4	3.6	25.0
	PSDB	2.3	15.0	46.4	2.7	2.7	5.1
	Other Party	2.8	5.0	7.1	37.8	2.2	4.9
	Independent	35.2	35.0	39.3	43.2	75.4	4.5
	Row %	24.0	5.5	3.8	5.1	61.6	N=732

Source: 2010 Brazilian Electoral Panel Study