

Going Negative in Comparative Perspective: Electoral Rules and Campaign Strategies

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Abstract

“Going negative” has practical and normative implications for electoral outcomes in all democracies. But most research on campaign strategy is limited to the two-candidate, plurality context provided by many elected offices in the United States. How do campaign strategies change as a function of electoral rules? In this paper, I use recent campaign strategies observed under three different sets of electoral rules in Brazil to illustrate several lessons overlooked in models derived for single member districts, and I discuss implications for building a general model of campaign strategies. The main conclusions of the paper are that (a) negative campaigning should occur under many other electoral systems, though the patterns and calculus of attacks should be considerably more complex; and (b) uncertainty about public opinion and voting behavior can quickly eliminate negative campaigning, especially as district magnitude increases.

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Introduction

This paper investigates the incentives for “going negative” under varied institutional and electoral settings. Previous work on negative campaigning has focused on two themes: the impact of negative campaign messages on voter participation and election results, and the explanations for negative campaigning. In both cases, most previous work focuses on single-member district elections or electoral college voting - both specific to the United States, with limited application to other countries. In this paper, I consider the strategic behavior of politicians under several different institutional settings and show how the incentives for negative campaigning vary with electoral rules. I also consider how relaxing full-information assumptions of previous models could lead to significantly different conclusions. I proceed by first reviewing the literature on negative campaigning, considering implications for several alternative electoral systems, and finally examining some data from different kinds of elections in Brazil.

Existing Research

With a great deal of consistency, the media, pundits, and voters all express distaste with the notion of negative campaigning. Attacking one’s competitor is seen as dirty politics, hitting below the belt, or uncivilized behavior. Regardless, negative campaigning is clearly a regular part of modern democracies. Rational candidates frequently engage in such tactics, hoping to reduce turnout among supporters of their opponents and among ambivalent voters, while increasing turnout among their own core.

A substantial literature explores the effectiveness of negative campaigning in changing voting behavior. Recently, ? explore the mobilization question with innovative experimental methods. In their experiment, subjects watched identical 15-minute media footage, with the only difference being the content of an embedded political ad. One group watched positive campaign ads, another negative campaign ads. They find that negative campaigning reduces turnout intentions by 5% compared with subjects watching only positive political advertisements. The negative ads provided in their experiment were relatively mild examples of negative campaigning; real attacks, often very personal, repeated over weeks instead of a short experiment, could lower turnout substantially more. They verify their results with an analy-

sis of campaign tone and turnout in the 1992 Senate election, and find a similar pattern: negative campaigns decreased turnout by 4% from purely positive campaigns. The same basic thesis is advanced more comprehensively in (?), argues that negative television advertisements are contributing to falling turnout and increasing voter apathy.

These findings have not gone unchallenged. For example, ? examine survey and aggregate vote intention data, finding no consistent pattern of turnout reduction that can be attributed to attack advertising. They also find that voters that are most attentive to the mass media and politics - and hence mostly likely to see negative campaigning - are least affected by such campaigning. They do note small but consistent differences in attack types' impact: trait attacks slightly reduce turnout while issue attacks slightly increase it.

Further, some would actually argue that negative campaigning's effects are significantly positive on participation and democratic health. Consultants and scholars have observed that negative messages absolutely must be accurate - or they may backfire on attackers with disastrous results. In addition, in his seminal book, ? argues that negative campaigns also increase voter information about candidates. Negative messages may increase voter disillusionment, but they also force candidates to respond to allegations and address questions that they might otherwise avoid in purely positive campaigning. Without any negative campaigning, publicizing the downsides of a candidate's record is left to the media and the interested public. Finally, any campaign activity that increases voters' information levels should also increase their participation - negative campaigning included.

A second line of research investigates explanations for negative campaigning. Especially promising has been recent work using game-theoretic models of campaign strategies. ? offer a two candidate model of campaigning. Candidates have two distinguishing characteristics: their ideal points and their valence. Voters cast fully informed spatial ballots, picking candidates as a function of proximity and valence. Positive campaigning makes voters see them as "closer"; negative campaigning makes their opponents ideology seem more extreme. A core finding is that candidates with stronger personal characteristics, or valence, dedicate more resources to positive campaigning while candidates with weaker valence components are more likely to "go negative".

One of the most important is that of ?. They offer a nonspatial model for two and three candidates races, where candidates simultaneously allocate resources between negative and positive campaigning in order to maximize

their lead over their opponent. In their model, negative campaigning reduces turnout and hurts both attacker and victim, and positive campaigning increases turnout. Their model leads to a number of intuitive conclusions: leading candidates are less likely to attack; trailing candidates are more likely to attack; candidates increase positive campaigning as the fraction of undecided voters increases; and with three candidates, candidates do not engage in negative campaigning against the weakest of the three.

These findings are empirically verified in the work of ?. They asked political consultants to choose between negative and positive campaigns given certain hypothetical situations corresponding to theoretical predictions of ?'s model. The consultants all chose strategies predicted by that model: going negative when behind, going positive when ahead, and so on.

Finally, more recent work includes ?. Following ?, his electoral model includes a spatial policy dimension and a valence or personal image dimension. He fixes policy locations and only allows campaigning on image. His conclusions largely reiterate the findings of ?. Note that there are other formal models of peripheral interest. One is on inverse campaigning, where parties identify program beneficiaries in an effort to convince voters they are *not* expected program beneficiaries.(?)

I seek to begin to extend previous work to cover different institutional contexts. All the above research applies most directly to single-member districts, but most legislators globally are elected from multi-member districts, some with very complex electoral formulas. The SMD models discussed above may reveal little about political behavior outside the United States. One illustration of these limitations comes from (?). They extend ?'s predictions to Russian Presidential elections, with little success. That is, actual patterns of negative advertising diverge substantially from formal theoretical predictions. They attribute these differences to incumbency, voter commitment, campaign style "stickiness", and institutional rules, and call for additional research in this area.

In this paper, I consider how formal theory of campaign strategies might be extended to several different institutional contexts and under substantially more realistic contextual assumptions. I illustrate by examining three types of elections in Brazil: open-list proportional representation, single-member districts, and run-off majoritarian rules. Each of these provided varied, and sometimes quite complex incentives for negative campaigning. However, in practice the frequency of such strategies is not consistent, with no negative campaigning where we would expect at least some, and more negative cam-

paigning that we would expect in other contexts.

I will argue that In adapting these, I consider the implications of an additional adjustment in existing theoretical work. All models above assume that candidates have full information about all candidates starting support levels. The real world is much less certain. Even with modern polling and in simple SMD electoral environments, there can be substantial uncertainty about which candidate leads until the ballots are all counted. Uncertainty is only magnified in high-district magnitude districts with many candidates and many seats open. I show how changing two assumptions of existing work - SMD and full information - has a substantial impact on the behavior of candidates.

Campaigns and Advertising in Brazil

All Brazilian politicians are elected via one of four possible electoral rules: simple single-member plurality elections (1/3 of the Senate and mayors of smaller cities); multi-member plurality elections (2/3 of the Senate), open-list proportional representation (city councils, state legislatures, and the Chamber of Deputies), and run-off majority elections (President, Governors, and mayors of large cities). State and national elections are all held concurrently every four years (the Senate deviates slightly, as discussed below). All city elections are also held concurrently every four years, half way through national mandates.

Campaign activities in Brazil can be categorized into three primary sets of activities. First, live speeches and “press the flesh” meetings with communities and organizations. Personalism remains an important part of Brazilian politics, and candidates spend substantial amounts of time in community meetings and making appearances at rallies and other events. Second, volunteers and paid workers advance the candidate’s image and message in various ways, including door-to-door campaigning, waving flags and banners on busy street corners, and organizing a machine to deal with constituents requests for various kinds of assistance from campaigns.¹ Third, candidates participate in the government sponsored *Horário Eleitoral Gratuito* (literally Free Electoral Hour, or HEG), free media time provided regularly to candidates to broadcast their prepared campaign messages.

¹Voters might request that candidates help resolve pension issues, find a job, or obtain a needed drug prescription.

Media time is allocated to parties on the basis of their performance in the previous election; parties make their own decisions on allocating time among candidates. The largest proportion of time is allocated to Presidential candidates, with decreasing amounts to gubernatorial, senatorial, federal deputy, and state deputy candidates, respectively.

Gubernatorial candidates typically have longer presentations outlining their programs and policies, criticizing their opponents or an incumbent, and simply promoting their image. The larger parties' presentations are highly professionalized infomercials. Smaller parties may just have enough time for a candidate to self-identify and announce their name. At the other extreme are the state deputy candidates. Some have enough time to make brief presentations; others merely have their name and number flash upon the screen.²

Thus, the primary television outlet for campaigns is not paid advertising or infomercials a la Perot, but free media time provided to candidates. This deviates in several ways from other countries' "open-market" electoral advertising environments. First, media time is provided in proportion to previous support, not financial resources. This prevents a Perot from appearing from out of nowhere and buying substantial media resources. But otherwise it might be not that different from financing-based systems - one would expect the parties with the most electoral support to have most of the financial resources.

A second difference are the restrictions on the nature of the messages provide. Federal law places restrictions on advertisements that ridicule or otherwise "disrespect" opposing candidates. Thus negative advertisements can assail issues, but should not attack or ridicule personalities. Should candidates violate these provisions, the victim of the unfair attack is granted free response time on a subsequent evening. In some cases, candidates' presentations are not shown if the electoral judicial authority deems them inappropriate. The rules do not, however, restrict negative campaigning in general. Candidates may assail each others' policy records and accomplishments, as long as they do not exceed these restrictions.

For this project, I rely on the 1998 elections in the Federal District,

²An extreme example is that of "Eneas", who used his tiny party's seconds to shout his name. His style struck a chord, and his party has grown substantially in subsequent elections.

Candidates are identified by name and electoral registration number. Voters cast ballots by entering a candidate's number into an electronic voting machine.

Brasília. My research assistant watched videotapes of the electoral hours shown in September and October, and recorded the following information for each candidate making an appearance:

1. Candidate name, party, and electoral number.
2. The candidate's policy positions discussed.
3. The candidate's image cultivation.
4. The candidate's attacks on other candidates, including the target of the attack and the nature (policy or personal characteristic) of the attack.
5. The length of the presentation.
6. A number of other variables not relevant to this project.

Single-member districts; high information: The Brazilian Senate

I now consider the theoretical incentives, empirical patterns, and implications for negative campaigning by examining campaigns for Senate, Governor, and both the state legislature and national Chamber of deputies. I begin with the Senate. The Brazilian Senate has eighty-one members, three from each of the twenty-six states and three from the Federal District of Brasília. Senators serve staggered eight-year terms. Elections are held every four years, concurrent with the other federal and state elections. Consequently, every four years, either one or two seats are open in each state. One-third of the Senators were elected in 1990 and again in 1998; two-thirds were elected in 1994 and 2002.

Senators are elected via simple plurality rules: the top vote-getters take office, without any party vote pooling. In “one-third” years, when there is one open seat per state, this is effectively a single-member plurality electoral system. Each party nominates one candidate, voters cast a single vote, and whichever candidate receives the most votes wins. In “two-third” years, when two seats are open, parties nominate two candidates, voters cast two votes (not for the same candidate), and the top two-vote getters take office.

In 1998, the Senate held a “one-third” election, so effectively each state acted as a single member district. In this case, the basic incentives described

by ? should hold: the front-runner should be less-likely to attack, all others should attack (at least partially) the front-runner.

Table 1 lists the candidates, their parties, the nature of their advertisements, and their final vote share from this election. The 1998 election was primarily a contest between the candidates of the Brazilian Democratic Movement Party (PMDB - Luiz Estevão) and the Worker's Party (PT - Arlete), with one strong third candidate: Carvalho of the Popular Socialist Party (PPS). Ultimately, Estevão won easily, with 48% of the vote to Arlete's 36%.

In this single-member plurality election, behavior corresponds relatively closely to the predictions of formal theory. The front-runner never goes negative, choosing to "stay above" negative campaigning. His messages portray him as a competent leader who will get the job done, independent of political parties and the President, but willing and able to work with him. The second-place candidate does go negative and targets the leader. She portrays herself as a strong woman, that can be "counted on", and promises to work for expanding community health programs. She attacks the Senate front-runner, Estevã as a populist willing to trade "votes for a bowl of soup". The third-place candidate attacks both front-runners.

The other candidates from very small parties focus exclusively on self-promotion, without bothering to discuss their opponents. Their behavior does not fit with theoretical predictions - they should be going negative to increase their relative vote share. However their behavior is relatively meaningless - combined they do not total 1% of the vote. Finally, one might explain their behavior as repeated game behavior. Self-promotion and increasing their vote share will increase their media time in subsequent elections, though they effectively write off the current election.

Single-member district run-off election: high information

Gubernatorial elections in Brazil provide a slightly different institutional environment for analysis. Governors are elected in run-off plurality elections. Voters cast single votes for candidates in the first round. If the top-vote getter does not exceed a plurality threshold, the top-two candidates go to a second round. Note that this system implies a substantially more complex set of calculations for campaign strategy. If candidates believe that a single front-runner has emerged and may win all in the first round, they should all

Table 1: Senate Elections, Brasília, 1998

Name	Votes		Advertisements		
	Tot.	%	Num	Neg	Target
Arlete (PT)	347663	36%	1	1	Estevão
Estevão (PMDB)	460947	48%	2	0	
Companheiro (PSTU)	1401	0%	2	0	
Carvalho (PPS)	154028	16%	2	2	Estevão & Cristovam
Caetano (PSDC)	820	0%	1	0	
Mendonça (PCO)	274	0%	1	0	
Blank/Null	106375				

attack that front-runner. If it is apparent that the campaign will go on to a second round, competition should be over the second seat - staying alive until the second round. In all the models described above, uncertainty is not an issue, but in a close race it could substantially change candidates' allocation of attack messages.

An example (Table 2) illustrates. It shows hypothetical vote shares for gubernatorial elections. In the top part of the table, Miriam wins easily in the first round with 51% of the votes. In this case, negative campaigning should be directed primarily (and perhaps exclusively) at Miriam. In the second part of the table, no candidate received enough for a first-round victory, so Miriam and João square off in the second round. In this case, negative campaigning by laggards should be much more targeted either exclusively against João, or against both, as laggards try to win votes to advance to the second round. In round one, Miriam should go positive, João may go positive or begin to attack Miriam in anticipation of round two. In round two, both may go negative, but the second-place candidate should be more negative than the front-runner.

Table 3 lists the candidates, their vote shares, and campaign strategies for the federal district in 1998. Cristovam Buarque of the PT was elected to the governorship in 1994, and stood for re-election. His opponent was Joaquim Roriz, a more conservative semi-populist candidate. Roriz was the

Table 2: Hypothetical Election Results

Candidate	One-Round	
	Round 1 Vote %	Round 2 Vote %
Miriam	55% *	
João	29%	
Angelica	11%	
Darcy	3%	
Carlos	2%	

Candidate	Two-Round	
	Round 1 Vote %	Round 2 Vote %
Miriam	35% *	52% *
João	30% *	48%
Angelica	20%	
Darcy	11%	
Carlos	4%	

* denotes winner

first governor of Brasília, from 1991-1994.³ From the beginning, it was clear that these two would likely go to a second round election. This implies that campaign strategy in the first round should have reflected the two front-runners advancing largely positive campaigns, with laggards attacking the weaker of the two. In round two, the pattern is effectively a two-candidate single-member district race, so the leader should be more positive than the laggard, following ?.

The first-round results do *not* concur with formal theoretic predictions; the second round does. In the first round, the front-runner, Cristovam, goes negative against the runner-up, Roriz, showing indices of disapproval from Roriz' first term in office and accusing Roriz of false advertising in his campaign. Roriz behaves like the early leader - only one of his messages is negative, and it is a general statement about his being better than all other candidates, not specific attacks on all or any candidates. His typical message emphasizes his policies: zero tolerance policing, continuing and expanding existing programs, and salary increases. The third-place candidate, Arruda of the PSDB, attacks both front-runners, though the attack ought to be focused on the weaker of the two. In the second round, Roriz is the front-runner and behavioral patterns are as expected. The leader, Roriz, only goes negative in one presentation; Cristovam attacks Roriz in both advertisements.

Some contextual knowledge helps understand these patterns and suggests further revisions to the theory. Nearly all the PSDB votes from the first round transferred to Roriz in the second. Cristovam's party, the PT, is very ideological and disciplined and tends to mobilize consistent support among partisans, and consistent opposition among others. So while Roriz was not the initial front-runner, he may have anticipated being the stronger candidate in the second round.

Arruda's attack on both candidates also deserves comment. It may reflect uncertainty about which candidate was leading - suggesting that the full information assumptions of the models are inappropriate. Or it may be a multi-election strategy to break the PMDB-PT dominance of Brasiliense elections.

³The federal district received full political autonomy on January 1st, 1991.

Table 3: Gubernatorial Elections, Brasília, 1998

First Round					
Name	Votes		Advertisements		
	Tot.	%	Num	Neg	Target
Cristovam (PT)	426312	43%	2	2	Roriz
Roriz (PMDB)	391906	39%	2	1	All Others
Cariello (PSTU)	1842	0%	2	2	Roriz & Cristovam
Oliveira (PSDC)	607	0%	2	0	
Rosa (PCO)	231	0%	1	1	Roriz & Cristovam
Arruda (PSDB)	178212	18%	2	1	Roriz & Cristovam ⁴
Blank/Null	72398				

Second Round					
Name	Votes		Advertisements		
	Tot.	%	Num	Neg	Target
Cristovam (PT)	501523	45%	2	2	Roriz
Roriz (PMDB)	537753	52%	2	1	Cristovam
Blank/Null	25646				

Table 4: Hypothetical Election Results

Rank	Party X		Party Y		Party Z	
	Candidate	Votes	Candidate	Votes	Candidate	Votes
1	Miriam	7	Ruy	11	Cesar	18
2	João	6	Eudoro	7	Marta	8
3	Angelica	4	Jorge	6	Trinidade	7
4	Darcy	3	Udson	4	Ze	4
5	Carlos	2	Patricia	1	Walter	1
List votes	Party X	1	Party Y	8	Party Z	2
Total votes		23		37		40
Seats		1		1		2

Parameters: 4 seats, 3 parties, 15 candidates, and 100 voters.

Open-list Proportional Representation with High District Magnitude and High Uncertainty

I now consider the case of open-list proportional representation (OLPR). This set of electoral rules has been widely alleged to be “disastrous” for intra-party competition, because it is said to foster intra-party competition for votes. Under OLPR, citizens cast a single vote, either for an individual candidate or for a party list (in Brazil, most vote for an individual). After election results are tallied, seats are distributed in two steps. First, seats are distributed to parties in proportion to the share of the votes received by all their candidates. Second, seats are distributed within the parties to the top vote-getters.

Table 4 illustrates. In this hypothetical district, there are 4 seats, 3 parties, 5 candidates per party, and 100 voters. Seats are distributed among the parties according to their total vote share, and within the parties to the top vote-getters: Miriam (party X), in Ruy (party Y), and Cesar and Marta (party Z).

The complex incentives for attacking one’s copartisan with negative ads are readily apparent in this example. Some candidates have strong incentives for “going negative” within their own party. Consider the plight of João. He received 6 votes and was not elected. To earn a seat, he could either focus on earning an additional 17 votes for his party - or on reducing Miriam’s vote share by 2. A focused negative campaign on Miriam could knock her down

to second place without costing the party a seat, leading to João's election. Other candidates might go negative on another party. Eudoro's (party B) easiest (fewest votes) to election would be to reduce Party X's vote share by just 3 votes - that would earn a second seat for Party B, which Eudoro would receive. So Eudoro should attack either Party Z in general, or Cesar, who has the most votes to lose. Leaders should self-promote if there are undecided voters available for wooing; otherwise they may go negative against their own party or other parties, according to a similar calculus.

Table 5 summarizes behavior for the two open-list proportional representation elections held in 1998 in Brasília, for the Chamber of Deputies and for the Legislative Chamber (state assembly). The candidate/seat ratio is staggering. There are more than ten candidates for each Chamber seat, and a stunning 25 candidates for each district legislative seat. With over 20 parties, there should be many candidates with incentives for going negative on their own copartisans or on other parties in an effort to push their party or themselves over the electoral threshold.

In fact, there is no real negative campaigning in *all* 178 appearances by these deputies.⁵ Why not? Consider the implications of adding uncertainty, where candidates do not have information about each others' (and thus parties') current levels of support are not. Such a lack of information is not likely in the simplest of OLPR systems. In Chile, district magnitude is limited to two, each party list has only two candidates, and frequently there are usually only two competitive electoral lists. For any candidate, the list of possible outcomes is small, and a basic sense of "who is ahead" is not unreasonably easy to obtain. In most cases, the center-left coalition wins one of the seats, and right list wins the other seat. The challenge in most districts is thus to defeat one's copartisan.

In contrast, consider one of the most complex electoral environments: Brazilian OLPR. The smallest electoral district there elects eight legislators, and parties can run a number of candidates equal to 1.5 times the district magnitude, or 12 if there are 8 legislators. In 1988, the largest district, São Paulo, elected 94 legislators to its state assembly, had 30 parties running, and a total of 661 candidates. In such a context, legislators have difficulty knowing whom to attack. A within-party attack could theoretically include

⁵A handful of advertisements (less than 5%) do assail the President or Governor, but I do not count these as negative campaigning. They are not attacking their competitors, just defining their positions via comparisons with other offices and ideologies. *None* attack other candidates for deputy.

Table 5: Federal and District Deputy Elections, Brasília, 1998

	Federal	District
Seats	8	24
Candidates	87	620
Parties	24	28
Messages		
Total	43	135
Negative	0	0
Avg Length	31 sec	8.5 sec

100 possible targets⁶. A cross-party attack requires choosing between all 662 candidates. And ultimately, making the wrong choice between strategies can be extremely detrimental.

For example, the right level of negative campaigning by João (party X, Table 4) could place him above the electoral threshold. But for this to work, João needs to be sure of his party’s seat total and the positions of his within-party competitors. Without this information, he might waste his resources attacking the wrong candidate - Carlos, or Darcy, for example. Or it might be that João is actually in first place, and likely to be elected - but feedback from negative campaigning might push him below the threshold. The second issue is one of campaign resources. These candidates had only seconds, in some cases *barely* seconds to self-identify. With so little media time, they cannot be expected to make effective, targeted negative statements against candidates.

Conclusion

This paper takes several steps toward a comparative theory of campaign behavior. Previous work offers strong predictions on the nature and target of positive and negative campaigning, relying on formal theory and some empirical evidence. Almost all this work, however, is limited to single-member plurality elections, with the only deviation from this pattern being three candidates in stead of two. As mentioned, the great majority of legislators worldwide are *not* elected from such systems, but instead from the great variety of alternative electoral institutions.

⁶The PPB had 107 candidates for state deputy in 1998 in São Paulo

Using soft rational choice, I've considered the behavioral incentives for going negative under three kinds of electoral systems, each with many candidates: single-member plurality, single-member majority run-off, and open-list proportional representation. The first is identical to the much-studied US system; the others deviate substantially from that standard. In each case, negative campaigning is a viable strategy for certain candidates under certain positions, but the calculus is substantially more complex than under single member districts. In run-off systems, candidates have to weight the possibility of a one-round victory versus that of a run-off when choosing targets of attacks. In open-list proportional representation, negative campaign strategies will vary with the strength of each party list, their own likely position on the list, and the performance of all their colleagues.

When comparing these incentives with actual behavior, some predictions are met, others are not. I have examined several explanations for deviations from predicted behavior. One is the notion of repeated games. In Brazil, parties can increase their media time in subsequent elections with a strong showing in the current election. In formal models, going negative typically reduces current absolute share to maximize relative vote share, so negative campaigning should be a strategy for one-round, not repeated games.

More important is the role of uncertainty. All formal models of negative campaigning rely on the assumption that candidates have full information about all candidates current levels of support, and the impact of their behavior. Adding uncertainty however, could quickly push down the expected payoffs from negative attacks. I argued that this explains the lack of negative advertisements in the open-list proportional representation campaigns. Future versions of this paper will incorporate a formal model of negative campaigning under all three electoral rules with uncertainty. For more complex electoral systems, analytic solutions may become very difficult, suggesting agent-based models as an alternative.

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