New Media & Society

Ditching the pack: Digital media in the 2010 Brazilian congressional campaigns

The online version of this article can be found at:

Published by:

$SAGE

Additional services and information for *New Media & Society* can be found at:

Email Alerts: http://nms.sagepub.com/cgi/alerts

Subscriptions: http://nms.sagepub.com/subscriptions

Reprints: http://www.sagepub.com/journalsReprints.nav

Permissions: http://www.sagepub.com/journalsPermissions.nav

>> OnlineFirst Version of Record - Dec 5, 2011

What is This?

Ditching the pack: Digital media in the 2010 Brazilian congressional campaigns

Jason Gilmore
University of Washington, USA

Abstract

Over the past decade Brazil has become well known for its open embrace of new media technologies. In tandem, an increasing number of Brazilian candidates have begun to use web and social media sites as an integral part of their overall campaign efforts. The present study is the first effort at large-scale modeling of these relationships in an emerging Latin American democracy. To explore the relationship between using digital media in a candidate's political campaign strategy and voter support, I built an original dataset of the 2010 elections for the lower house of the Brazilian Congress. I investigate factors such as a candidate's use of web and social networking sites in conjunction with other traditional influences such as candidate gender, age, incumbency, party affiliation, coalition membership and campaign spending. I demonstrate that having a robust web presence and using social media, holding other factors constant, can be a significant contribution to the popularity of a candidate on election day in an open-list proportional representation electoral system such as that in Brazil. Additionally, I demonstrate how this digital media campaign tactic might be specifically beneficial to traditionally disadvantaged candidates in bridging the gap of their under-representation in Brazilian politics.

Keywords

Brazil, digital media, new media, open-list proportional representation, politics, web campaigns

The 2010 Brazilian elections came with a significant media stir as José Ignacio Lula da Silva, the popular Brazilian president, was leaving office and his hand-picked successor,

Corresponding author:
Jason Gilmore, University of Washington, Department of Communication, Box 353740, Seattle,
WA 98195-3740, USA
Email: quijote@u.washington.edu

Dilma Rousseff of the Worker's Party, was touted by most as being all but on her way to becoming the first female president in the country's history. But when election day came and the results pointed to a runoff election between Rousseff and her top competitor a month later, media attention shifted to an unlikely source: a clown. Dressed in bright colors, wearing a blond wig and beanie cap and speaking in a juvenile voice, Francisco Everardo Oliveira Silva, more famously known by his stage name Tiririca (pronounced Chee-dee-dee-ka), stole the show on election day when it was announced that he had won twice as many votes as any other candidate nationwide in the race for Brazil's lower house of Congress. This was not, however, the first time the clown had made headlines in the election cycle.

As a candidate for Federal Deputy in the state of São Paulo, Tiririca had become a national and international news media and internet phenomenon throughout the campaigns. Armed with a multifaceted digital media campaign, which included regularly transmitted political messages via Orkut, YouTube and Flickr pages, and an interactive campaign website and popular Twitter feed, Tiririca was able to increase his visibility and effectively reach voters in a manner few other candidates matched. For instance, in the last week of his campaign, Tiririca's Twitter feed had amassed over 97,000 people following and retweeting his posts. At the same time, his YouTube videos had tallied over 12 million views and were being reposted and blogged about all over the world. Notably, his videos captivated the public both because they were silly and, more importantly, because of the way they mocked the political process. Such mockery was evident in his most widely reposted video in which he famously says: 'What is it that a Federal Deputy does? In reality, I don't know, but vote for me and I'll tell you about it.' Through the use of these and other unorthodox campaign tactics, Tiririca was able to generate a name for himself politically and, in the process, call attention to an issue that plagued many Brazilian voters – the complex and often confusing nature of the electoral process used for the lower house of Congress in Brazil.

In recent years the task of voting for Federal Deputy has become a puzzling one for many Brazilian voters. In each election, voters are tasked with sorting through an unwieldy set of competing candidates – from 37 in the smallest state of Acre to 1169 in the economic powerhouse state of São Paulo – and are only able to choose one of these candidates in their vote for Federal Deputy in their respective states. These candidates become further indistinguishable as voters attempt to sort through a barrage of campaign advertisements on television, radio and via paper flyers that literally litter the streets. To make things more difficult, voters are expected to remember their chosen candidate's four-digit candidate number at the polls because there are no candidate names or pictures on the voting machines. For those in São Paulo – who again had to choose among 1169 candidates – it is no wonder so many of them voted for a famous clown whose online campaign mocked the process and whose candidate number was a memorable 2222.

From Tiririca's YouTube fame to presidential candidate Dilma Rousseff's creation of her own social networking site, the 2010 Brazilian elections were filled with news about the use of digital media in political campaigns. In the race for the lower house of Congress specifically, candidates relied on any number of web and social networking sites to get their message across to voters. Even candidates from smaller parties or with little to no campaign resources had the option of getting their name and platform out on the internet with the increase in free and pre-formatted blog and social media sites. And they used

them all, from Blogger, WordPress, Twitter, Facebook and YouTube to Orkut, Brazil's most popular social networking site.[1] These campaigns for Brazil's lower house elections, then, provide a perfect testing ground for the influence that the use of digital media in campaigns can have on election results within an open-list proportional representation election format in an emerging Latin American democracy.

Research on the use of digital media for political campaign purposes has been growing for over a decade (Chadwick, 2006; Chadwick and Howard, 2009; Davis, 1999; Foot and Schneider, 2006; Howard, 2006; Kluver et al., 2007; Xenos and Foot, 2005) and has been touted as one of the most promising areas for research in political communication (Graber and Smith, 2005), yet little empirical research has been conducted on the direct influence that the use of web and social networking sites may have directly on a candidate's yield at the polls on election day. The present study, therefore, addresses two gaps in the existing literature on web campaigning. First, it is the first effort at large-scale empirical modeling of the potential direct influence that web campaigns may have on election outcomes and second, it looks at Brazil's electoral system as a potential explanatory factor for this relationship. I look to distill these relationships by first controlling for the factors that have traditionally been found to influence election outcomes in Brazilian congressional elections such as incumbency, campaign spending, party and political coalition affiliation, as well as gender. To explore these relationships, I draw on data from an original dataset consisting of 1000 candidates for the lower house of the Brazilian Congress in the 2010 national elections. Ultimately, I posit that the use of both web and social networking sites for campaigns in an open-list proportional representation electoral system such as that in Brazil can have a unique and positive outcome for candidates at the polls and that this effect can be amplified for some traditionally disadvantaged candidates as they seek to narrow the gap in their representation in nationally elected political offices.

Digital media and political campaigns

Since its inception, scholars (Chadwick, 2006; Davis, 1999; Foot and Schneider, 2006; Jenkins and Thorburn, 2003) have touted the internet as a tool with the potential for changing both the face and the internal workings of modern-day political campaigns. Principally, they have pointed to the internet's ability to level the playing field for non-affiliated candidates and smaller parties (Chadwick, 2006; Davis et al., 2009). According to Davis et al. (2009), the internet allows candidates who have been historically unable to establish a public persona in the news media to bypass these traditional gatekeepers in order to communicate directly with voters. In doing so candidates are also able to have more control over the information they disseminate to the public (Chadwick, 2006). The recent popularity of social networking sites such as Twitter and Facebook for campaign purposes has also taken this direct connection between candidates and voters to a new level. In addition to providing voters with static information depots (i.e., websites) that can be accessed when a voter is interested in seeking out information, candidates are now able to integrate themselves – and their political platforms – into the social networks and mobile lives of potential voters in order to disseminate their messages past the moment in which a voter chooses to seek them out. Ultimately, digital media tools – from webpages to social media sites – can convert the sometimes two-dimensional traditional media campaigns into dynamic and interactive experiences for voters.

Research on the use of these 'new' media in national campaigns has grown rapidly in recent years (see Chadwick and Howard, 2009), yet little research has empirically tested the direct influence that web campaigns might have on how candidates fare on election day. One potential explanation is that a large portion of research on digital media in campaigns has focused on developed, and therefore more technologically sophisticated, countries. In other words, research on countries that are in the 'post-maturation' phase of internet adoption in which the use of digital media in campaigns is highly sophisticated and all but ubiquitous (Davis et al., 2009). With a majority of candidates employing a diverse range of sophisticated digital media campaign tactics studies have tended to look at issues such as what influences the ways in which politicians and political groups use websites in countries such as Finland (Strandberg, 2009) and Belgium (Hooghe and Teepe, 2007). More recently, however, scholars have begun to look at the role that digital media are beginning to play in the developing world, focusing on countries where there are lower levels of public internet access and where the use of digital media in campaigns is nowhere near as ubiquitous as in developed countries. For example, in 2007 the Internet and Elections Project and Ward et al. (2008) set out to expand the study of digital media in elections to include both developed and developing countries (Kluver et al., 2007). The majority of these studies, however, have not looked at election outcomes, but instead have examined the differences in *how* the technology is used in campaigns and elections in general. The present study, therefore, seeks to further this program of research by testing the impact that the use of digital media can have directly on a candidate's yield at the polls, while taking into account the potential moderating influence that Brazil's open-list proportional representation electoral system may have on this relationship.

Brazil as a case study is ideal for examining these relationships because of its une-qualed embrace of digital media amidst both developed and developing countries. According to Internet World Stats, Brazil has the fifth largest population of internet users in the world (Internet World Stats, 2010). Specifically, it is home to over 75 million inter-net users, a number that grew by almost 10 million users over the last two years. Brazil's wired population is also frequently found in the top ten national users of websites such as Twitter and YouTube, representing 4 and 3.5 percent of international users respectively.[2] Additionally, Brazilian participation in the social networking site Orkut (52 percent of international users), as previously mentioned, is unmatched in the world and Facebook (1.3 percent of international users) has recently begun to take hold despite Orkut's corner on the Brazilian social networking market. With this growing evidence about how 'wired' the Brazilian electorate is becoming, it is increasingly necessary to bridge the gap in research on how this digital activity translates into the political realm.

Web campaigns and the Brazilian Congressional elections

As noted above, there is increasing interest in expanding research on digital media in political campaigns to a more international level. According to Anstead and Chadwick (2009), one of the most pressing needs as research becomes more international and com-parative is for studies to take into account the potential moderating impact that a country's political and electoral systems may have on the distinct impacts and uses of web campaigning. Specifically they argue that different electoral structures 'have the

potential to catalyze or to retard the development of internet campaigning because they render new communication technologies more or less useful to candidates and parties seeking office' (Anstead and Chadwick, 2009: 57). The Brazilian open-list proportional representation (open-list PR) electoral system is specifically suited for exploring the use of digital media in election campaigns as well as its direct impact on election outcomes for three reasons. First, the Brazilian lower house elections are highly competitive and involve large, and highly indistinguishable, packs of candidates for each race (Mainwaring, 1999). Specifically, because the list of candidates is 'open,' candidates have to compete with the entire statewide list of candidates, including competitors from their own party (Mainwaring, 1991; Samuels, 2001c). Furthermore, the indistinguishable quality in these large packs of candidates can at times be exacerbated by traditional media campaigns. In other words, the saturation of advertisements in newspapers, radio and television can be overwhelming for voters. For example, during the two Brazilian 'political hours' of campaign advertisements on television each day, voters can get overwhelmed with the continuous blur of the 15-second spots candidates are provided with. Candidates across the political spectrum, therefore, are hard pressed to find new and creative ways beyond traditional media campaigns to set themselves apart from the overcrowded pools of competitors involved in each race.

Second, and more importantly, candidates for Brazil's lower house of Congress are still in what Davis et al. (2009) describe as the 'experimentation and exploration' phase of digital media adoption for political purposes. In essence this means that a grand majority of candidates are still unfamiliar with the medium's potential for political campaigns. Unlike in the *hypermedia* campaigns described by Howard (2006) in US elections where candidates use a number of sophisticated digital media tools in their campaigns, digital media have yet to be fully adopted in Brazilian campaigns. For instance, only 40 percent of candidates in the race for the Brazilian Chamber of Deputies in 2010 had any form of campaign presence on the web. This meant that there was no guarantee that voters who were interested in finding out more information on a candidate would actually find that information, giving a potential strategic advantage to those who had at least some form of web presence. Furthermore, this advantage was evident at the polls. Of those candidates in the top 30 percentile of vote totals at the polls, a full 72 percent had at least some form of web presence. In contrast, of those candidates in the bottom 30 percentile of vote totals, only 15 percent had any form of web presence.

Finally, because digital media offers all candidates the same range of free tools with which to establish direct links with potential voters and further disseminate their campaign platforms, the choice to use these tools should be beneficial to candidates across the political spectrum regardless of other potential political advantages (i.e., campaign spending, incumbency, etc.). In other words, the use of digital media should be independently influential on candidate popularity even when first accounting for other traditional factors that scholarship has found to impact a Brazilian candidate's yield at the polls including incumbency (Samuels, 2001a), campaign spending (Samuels, 2001b; Samuels, 2002), party affiliation (Ames, 1995), party coalition affiliation (Ames et al., 2008) and gender (Araújo, 2010; Miguel, 2008).[3] I therefore do not expect campaign web presence to be the sole predictor of candidate electoral outcomes. I do, however, expect it to play a distinct and unique role in a candidate's overall campaign strategy and success.

Additionally, although offering voters a single digital media option (e.g., a website or Twitter feed) can be helpful for candidates to get their message out, I expect that the more digital media options that a candidate provides for supporters to find out about them on the internet the better their chances of garnering voter support at the polls becomes. In other words, the wider the range of digital portals a candidate offers (e.g., a website plus an Okut page and a Twitter feed) the greater their chances will be of connecting with voters and yielding more support at the polls. In light of these perspectives, I offer my first hypothesis:

> H1: There will be positive and *unique* relationship between the robustness of a candidate's web campaign and their popularity at the polls after controlling for traditional factors such as candidate AGE and campaign spending, incumbency, party affiliation, party coalition affiliation and gender.

While the above hypothesis addresses the impact of web presence in general on election results, it is in turn important to discover what types of internet tools are more effective than others in a Brazilian candidate's toolbox. Specifically I am interested in determining the role that websites and social networking sites individually play in election outcomes. Websites alone are powerful tools of information dissemination and, in the case of the Brazilian elections, offered an avenue by which candidates could provide a more in-depth look into what set them apart from their competitors. Websites provided candidates with a way to transform their paper fliers and their 15-second spots on the Brazilian political hours on television into gateways through which they could entice voters to learn more. This was true not only for candidates with elaborate websites that linked to social networking sites, asked for donations and organized rallies, but also for those candidates with little to no budget who used simple sites or free blog pages to simply communicate their platform. In total, 36 percent of all candidates in the 2010 elections had some form of campaign website. In fact, websites were the most widely used of all web tools by candidates in the election cycle and appeared to offer a significant advantage to those who chose to tap into their campaign potential. For instance, of those candidates who were in the top 30 percent of vote getters, 69 percent had an official website for their campaign, while only 11 percent of those in the bottom 30 percent of vote-getters did. We can safely aver, therefore, that websites are likely to be some of the most useful and influential web tools in a Brazilian candidate's campaign.

Social networking sites, in contrast, add a new dynamic to a candidate's campaign and have the potential of extending the campaign into a voter's social world as well as their mobile communication devices. According to Grant et al. (2010), social networking sites such as Twitter, Facebook and Orkut offer politicians options for connection and interactivity with their constituencies in a manner unseen before in democratic elections. Social networking sites work not only to bypass traditional gatekeepers and connect politicians directly to the voters, they also allow them to tap into their voters' own social networks as a way of shoring up further support. Additionally, with the advent and recent spread of mobile phones with smart apps that allow people around the world easy and quick connections to these sites, politicians are now able to foster an ongoing conversation with voters that can be accessed anywhere and at any point in time during the day. The overall

appeal of social networking, however, is the fact that it allows users a feeling of personal 'interaction' with the politicians they support. According to a 2010 study by the Pew Global Attitudes Project, Brazil has the sixth largest percentage of social networking users in the world with 84 percent of its 75 million internet users connected to some form of social networking site on a regular basis (Pew, 2010). In other words, a large portion of the Brazilian public was primed for those politicians who saw the value of online social networking campaigns. And although a wide range of social media sites were free for candidates to use for campaign purposes, only 31 percent of all candidates for the lower house of the Brazilian Congress actually used a social networking site for campaign purposes, again giving a strategic advantage to those who did use these new technologies.

The question then remains, however, of which social networking sites had the largest impact on the 2010 elections. Two sites stand apart from the pack in Brazilian online social networking as well as in the campaigns. As we have seen, Orkut has been the Brazilian public's top choice for social networking and so it would be reasonable to assert that it would be a central influence on electoral outcomes as well. In addition, Twitter use has begun to surge in both Brazilian society and in the elections. In 2010 campaigns, it stood above the rest (including Orkut) with 30 percent of all candidates using an active Twitter feed for campaign purposes. Facebook and YouTube, in contrast, were used far less than the other sites with only 10 percent of candidates using either site respectively. In light of these perspectives I offer the following hypothesis:

> H2: In the Brazilian election for the Chamber of Deputies, a candidate's use of a website, Orkut and Twitter will be stronger predictors of their popularity at the polls than will their use of Facebook or YouTube.

Finally, we have seen how digital media campaigns can play a central role in shoring up public support for candidates across the political spectrum, but in the present study I am also interested in exploring the role that these campaigns may play in helping traditionally disadvantaged candidates narrow their gap in representation in the Brazilian Chamber of Deputies. As mentioned previously, the internet has been touted by scholars (Chadwick, 2006; Davis, 1999) as a means through which under-represented groups in politics – such as smaller party and female candidates, as well as non-incumbents and those with less campaign funds to spend – can gain a larger proportion of national and local elected offices. With low overall web use for campaign purposes in general (40 percent of candidates) in the 2010 campaign, therefore, we may find that those candidates who chose to create and maintain some form of online presence improved their chances of setting themselves apart from their competitors and in turn gaining enough votes to earn a seat in the Chamber of Deputies. The use of these websites and social networking sites might then serve as more effective tools of garnering extra voter support for traditionally disadvantaged candidates than for their more politically entrenched competitors. In light of these perspectives, I offer a final research question:

> RQ1: In the Brazilian election for the Chamber of Deputies, which groups of traditionally disadvantaged candidates benefit most from the use of digital media tools for campaign purposes?

Methods

In order to explore these factors, I created an original dataset tracking the use of digital media sites for 1000 candidates for the lower house of the Brazilian Congress in the 2010 national election held on 2 October. Candidates were proportionately selected from all 26 Brazilian states as well as the Federal District, which is treated as a state during national congressional races. The dataset represents roughly 20 percent of the 5283 viable candidates nationwide competing for the 513 total open seats in the lower house of the Brazilian Congress. Such a large sample was chosen because it allowed for each state, regardless of size, to have a sufficiently large representation of candidates in the final dataset. Candidates were then selected in a three-part process. First, I determined the percentage of congressional seats allotted to each individual state. That percentage was then used to determine the amount of candidates that would be sampled from each state's pool of candidates. For example, the states of Goiás and Minas Gerais are allotted 3 percent and 10 percent of the total seats in the lower house of Congress respectively; therefore 30 candidates were selected from Goiás and 100 for Minas Gerais. Finally, I randomly sampled these sets of candidates from the official, and publicly available, list of viable candidates for each state from the Brazilian Superior Electoral Court website, Brazil's official electoral commission (Tribunal Superior Eleitoral, n.d.).

Demographic and campaign information about each individual candidate including age, gender, party and coalition affiliation, and campaign spending, was also collected from the Brazilian Superior Electoral Court website. The study population was comprised of a significantly larger male (83%) population than female. Age of the candidates was recorded in years and ranged from 21 to 87 ($Mdn = 48$, $SD = 11.08$). Because candidates hailed from one of 28 distinct political parties, 'party affiliation' as a variable was recoded into three categories: minor (30%); medium-sized (45%); and large (25%) parties.[4] In addition, a candidate's coalition affiliation was coded into one of four categories: unaffiliated (26%); in a coalition with other small or medium parties (27%); in a coalition with the two minor of the four large parties (10%); and in a coalition with one of the two top parties (37%). Finally, campaign spending for each individual candidate was recorded and then recoded into quartiles (low, medium-low, medium-high, high), proportionally representing the range of spending in each individual state.

All data linked to an individual candidate's campaign web presence were collected during the final two weeks of campaigning before the national election on 3 October 2010. All searches for candidate web pages were conducted on Brazil's top search engine (google.com.br) and consisted of two steps. First, the candidates' full names were entered into the search engine along with the state they were running in. Second, if there were no results for candidate websites, a second search was conducted where the candidates' official electoral names and numbers were entered into the search engine. These methods were chosen in order to emulate the experience an everyday Brazilian might have in searching for any given political candidate online. In each search, the first four pages of results were examined in-depth in order to identify whether or not the candidate had a campaign website. Furthermore, because many candidates used free blog sites such as Wordpress or Blogger for their main campaign web presence, blogs in these cases were also coded as websites. These sites also helped in identifying if candidates used any

social media sites as well for campaign purposes because in many cases links to these sites were clearly apparent on the candidates' home pages. In cases where there were no links to social media sites or when candidates were found to not have a website, separate searches were conducted for each candidate on the following social media sites: Twitter, Facebook, Orkut and YouTube. Finally, two composite variables were created for 'total social media use' and for 'robust web presence.' The former was created by adding the total amount of social media sites (including Twitter, Orkut, Facebook and YouTube) used by each candidate for campaign purposes. The latter, robust web presence, is a variable constructed to account for the total range of a candidate's web presence and is calculated by adding together the total amount of web and social media sites that each candidate offers into a single variable.

The final election outcome variable, candidate popularity, was also recorded from the Brazilian Superior Electoral Court website and was recoded according to the proportion of votes each candidate received in their respective state elections. Specifically, I broke the complete listings of election outcomes (percent of votes received) into deciles for the entire set of viable candidates in each state. I then identified where each of the sampled candidates fell in those deciles and coded each candidate accordingly. Again, because the Brazilian elections for the lower house of Congress works on a system where candidates compete against the entire pool of state candidates, this approach allowed for the most nuanced look possible at how the use of digital media impacts their likelihood of ultimately winning a seat in the Brazilian Chamber of Deputies.

Results

All hypotheses were examined across the entire sampled population of 1000 candidates.

Hypothesis 1

The first hypothesis addressed the predictive power of a candidate's robust web presence on national election outcomes. Specifically, I predicted that having a robust web presence for campaign purposes would be a significant and unique predictor for candidate popularity after controlling for candidate spending, incumbency and gender, as well as party and coalition affiliation, and would also be central in predicting candidate popularity. To test this hypothesis, sequential linear regressions were run with *candidate popularity* as the dependent variable. The first set of independent variables in the equation consisted of candidate age, gender, party size, incumbency, campaign spending, coalition affiliation and party size. The second set of variables consisted of a single variable measuring the robustness of candidate web presence (see Table 1).

From Table 1 we can see a story begin to emerge. First, as expected, the robustness of candidates' web presence was a significant and unique predictor for their popularity at the polls, even after controlling for the other factors that have traditionally been cited as influential in Brazilian elections. These findings suggest that offering voters one or more online avenues by which they could connect with or find out more about a given candidate was a strategically beneficial tool in shoring up support for candidates across the

Table 1. Sequential regression analysis predicting election outcomes.

	Equation 1	Equation 2
Constant	.00	.02
Age	.00	.02
Gender	−.12***	−.11***
Incumbency	.08**	.07**
Party size	.12***	.10**
Coalition	−.01	.01
Campaign spending	.57***	.46***
Robust web presence		.22***
$R^2_{Adjusted}$	.47	.51
Change in $R^2_{Adjusted}$		.04

*$p < .05$, **$p < .01$,***$p < .001$

political spectrum. Second, in terms of popularity, the robustness of a candidate's web presence was second only to campaign spending and had a standardized beta ($\beta = .22$) twice as large as any other factor in the equation including incumbency ($\beta = .07$) and party affiliation ($\beta = .10$). These findings suggest that having a robust web presence was more influential in attracting voter support than whether or not candidates were incumbents or how influential their parties were. Finally, the predictor variables explained a full 51 percent of variation in candidate popularity suggesting that the collection of variables exerted significant general predictive power in the eventual outcomes of the Brazilian congressional elections.

Hypothesis 2

The second hypothesis delves further into the distinct types of candidate web presence that could be most influential in candidate popularity. Specifically, I hypothesized that having a website alone would be a significant predictor of candidate popularity. Additionally, I hypothesized that the use of the social media sites Twitter and Orkut would be more impactful on a candidate's popularity than their use of YouTube or Facebook. To test this hypothesis, sequential linear regressions were run with *candidate popularity* as the dependent variable. The independent control variables consisted of: candidate age, gender, party size, incumbency, campaign spending and coalition affiliation. The next set of independent variables were about whether or not candidates had a website, a Twitter feed, a Facebook page, an Orkut page or a YouTube page (see Table 2).

There are several findings of note in Table 2. First, hypothesis 2 was partially supported in that having a website was a significant predictor for candidate popularity. Although such a simple web presence was not as significant as campaign spending, it had a standardized beta ($\beta = .09$) similar in size as party affiliation ($\beta = .10$) and was slightly larger than candidate incumbency ($\beta = .07$). These findings, therefore, support the argument that in such a complex electoral process such as that of Brazil, websites

Table 2. Sequential regression analysis for types of digital media sites.

	Prior block	β
Website		.09**
Twitter		.16***
Orkut		.03
Facebook		−.01
YouTube		−.01
R^2_{Adjusted}	.47	.51
Change in R^2_{Adjusted}		.04

*$p < .05$, **$p < .01$, ***$p < .001$

provided voters with an easy avenue to information about specific candidates that they would have otherwise struggled to find. Websites, then, served as a helpful link between candidates and their potential constituents. Second, even though websites facilitate contact with voters, they do not open candidates up to social networks the way other social networking sites do. It is therefore surprising that candidate use of Orkut, Brazil's favored social networking site, for campaign purposes was not found to have a significant impact ($\beta = .03$) on candidate popularity. This is perhaps tied to the fact that Orkut is a closed circuit web community where only people who already have an Orkut account can view candidate pages. Fourth, candidate use of Twitter feeds was not only the only significant predictor for candidate popularity among all the social networking sites, it also had the second largest standardized beta ($\beta = .16$) of all predictors, behind only campaign spending. These findings, then, suggest that Twitter may play a distinct, and in turn more effective, role than do the other methods of campaign web presence. This is most likely due to the fact that Twitter not only opens up avenues for candidates to voters' social networks, but also provides a simple way to deliver important voting information such as candidate numbers to voters on Election Day. Twitter pages can also be used to convey small chunks of voting information (i.e., candidate numbers) in a potentially portable manner, as in cases of certain mobile telephones. Additionally, Twitter lends itself to political campaigning because of its open format where anyone who searches for a candidate's page can both find it and instantly access it.

Research Question 1

The final research question addressed the potential differences in how the robustness of a candidate's web presence might influence the performance at the polls of traditionally disadvantaged candidates. To explore this research question, I conducted sequential linear regressions with *candidate popularity* as the dependent variable. The first set of independent variables consisted of candidate age, gender, incumbency, party size, coalition affiliation and campaign spending. The final set tested the interaction effects between robustness of web presence and each of the other variables from the first set (see Table 3).

Table 3. Interactive relationship between robustness of web presence in campaigns and candidate age, gender, incumbency, party size, coalition affiliation and campaign spending.

	Equation 1	Equation 2
Age	.02	.02
Gender	−.11***	−.14***
Incumbent	.07**	.14**
Party size	.10***	.09**
Coalition	−.02	−.01
Campaign spending	.46***	.53***
Robust web presence	.22***	.11
Interactions		
Age * Web		.01
Gender * Web		.27**
Incumbency * Web		−.08+
Party size * Web		.02
Coalition * Web		.11
Campaign spending * Web		−.30***
$R^2_{Adjusted}$	.51	.52

$^{+}p < .10$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

There are several findings of note in Table 3. First, the findings show there to be a significant difference in the relationship between candidate popularity and a robust campaign web presence for female candidate versus their male counterparts. Specifically, the standardized beta for the interaction effect ($\beta = .27$) was almost twice as large as any other factor in the final equation, save the variables related to campaign spending. Second, there was a marginal interaction effect ($\beta = .08$) pointing to the potential that digital media tools provided to non-incumbents as opposed to their incumbent competitors. These findings suggest that while having a robust web presence might be a strategic tool for all candidates, it might play more of a central role in helping certain groups of traditionally disadvantaged candidates make a name for themselves in the bustling packs of competing congressional candidates. On the other hand, web presence for traditionally advantaged candidates may be but one of a more diverse toolbox of beneficial factors that can contribute to their popularity at the polls. These findings then lend credence to the argument that the use of distinct types of digital media may, in fact, be a tool with which certain disadvantaged groups can work to gain more proportional representation in the Brazilian lower house of Congress. Third, the findings show there to be a significant difference in the power that digital media tools provided candidates who had less money to spend on their campaigns. Specifically, the standardized beta for the interaction effect ($\beta = -.30$) was the largest of the interaction effects and second only to candidate campaign spending. These findings suggest that because these digital media tools are free to candidates across the political spectrum they are more strategically beneficial to those candidates who don't have the funds to invest in a wider range of campaign promotion tools, whereas candidates with larger budgets are able to invest in more promotional tools that can catch

voters' attention in a number of distinct ways. It is noteworthy that the model did not show this advantage to be evident across all disadvantaged groups. Specifically, younger candidates as well as those not affiliated with coalitions or in smaller parties did not necessarily benefit more from digital media tools than did their more politically influential competitors. These findings, however, do not suggest that these groups did not benefit from the use of digital media, simply that they benefited in a similar manner to their more advantaged counterparts.

Discussion

The present study has several implications for present and future research on the impacts of digital media on elections in both the developed and developing world, as well as in democratic countries in all their varying styles and stages of democratization. First, the findings of this study support the claim that the internet is fundamentally changing the way modern-day political campaigns are conducted throughout the globe (Chadwick, 2006; Davis, 1999; Foot and Schneider, 2006; Jenkins and Thorburn, 2003). In the case of the 2010 Brazilian elections we see empirical evidence pointing to a direct impact that using websites and social networking sites can have on election results. This study, therefore, suggests that in electoral systems such as in Brazil, where the digital divide is evident even in politics, the use of digital media tools gives politicians a clear competitive advantage as they try to set themselves apart from the heavily populated packs of candidates in each race. Furthermore, these results then point to the central power that digital media can play as an integral part of a candidate's overall campaign strategy, specifically in a developing country such as Brazil where many politicians are still learning the full range of benefits that using digital media tools can have for political purposes.

Second, the findings in the present study point to the central role that using certain social networking sites can play in yielding results on election day. The findings also suggest that certain internet sites may be more suited for political campaign purposes than others and that this most likely varies depending upon the political and electoral systems, as well as culture. In the present case of Brazil, Twitter stood alone as the only significant predictor of election outcomes, suggesting that the simple popularity of a specific site in a country does not necessarily point to its quality as a tool to access more voters, as in the case of Orkut. This suggests that different cultures may consume their politics through distinct media and that no site alone is best suited for campaign purposes across the globe. Studies have pointed to the role of Facebook and Twitter as contributing to the success in elections around the world (Chen, 2010; Grant et al., 2010). In the case of Brazil we saw that Twitter alone stood out amidst the myriad social networking sites available as effective for campaign purposes. The present study then lends further credence to the argument that there is a range of possible political uses for these sites and that there is variability across cultures and electoral systems. Overall, however, the findings from the present study support the argument that social networking sites such as Twitter and Facebook are fostering new styles of conversation between candidates and voters and that these new connections can play a central role in shoring up voter support. Although there are many lines of research possible in this area, there

are two made evident by the present study. First, future studies should explore the influence that differing levels of sophistication and volume of social media use might also have on election outcomes. Second, research should further examine the impact of other tools that social media technologies provide candidates including fundraising, social organizing and network building.

Third, the findings from this study suggest that the internet may, in fact, be playing a role in helping level the playing field for at least some traditionally under-represented groups in politics (Chadwick, 2006; Davis, 1999). Specifically, the use of websites and social networking sites may help these candidates to build respectable robust public personas in order to gain the trust, legitimacy and respect in their target constituencies. In a country where the use of the internet has yet to reach its full potential, the use of digital media may be a cultural signal of sophistication and modernity in the eyes of a public looking to break down barriers not only between genders, but between classes and even political ideologies. Ultimately, further research should look into how digital media can be used to break down cultural misconceptions that are sometimes unnecessarily tied to under-represented groups in society. If we are truly interested in the potential that digital media has in fostering democratization in the developing world, then we will need to focus on how groups may use it to bridge these gaps in representation at the national and international levels. The findings, however, also illustrated that not all disadvantaged groups benefit in the same ways from the use of digital media. Further research, therefore, should look into the reasons behind why certain groups perhaps benefit more – or in different ways – than others from the use of digital media tools in political campaigns.

Finally, the present study answers Anstead and Chadwick's (2009) call for new avenues of research that look specifically at the different impacts of digital media in the distinct national electoral systems around the world. The present research focused on determining whether or not there can be empirical studies that look at the direct impact digital media can have on election outcomes in an open-list proportional representation system. As the findings suggest, the open-list PR system in Brazil, where more candidates compete without the help of digital media than those who do, is specifically suited to this type of empirical research because there is a clear competitive edge for candidates who use digital media. These candidates are better prepared to provide voters with an easy avenue by which to access further information about themselves and their political platforms. Future research, therefore, can explore the differences between the role that web campaigning plays in distinct open-list PR electoral systems. This, however, is but the tip of the iceberg. For example, in different systems where there are competitive 'first across the finish line' races between a two or three choice candidates, web presence alone might not be an adequate predictor of election outcomes (although, not having a website in an American congressional race would be all but the kiss of death for a campaign in most cases). The present research points to a need for the further sophistication in empirical measurement of the various facets of web campaigning in order to fit the distinct types of electoral systems around the globe. This is not to say that it is imperative that research on digital media focus alone on election outcomes, but that this and similar empirical studies can contribute significantly to the robust and diverse, ongoing academic and real world conversations about the role of digital media in politics around the world.

Funding

Notes

1. See Appendix A for a more extensive layout of how digital media were used in the 2010 elections.
2. All information about international website usage accessed from Alexa at www.alexa.com
3. It is important to mention that a measure of candidate use of traditional media sources such as television or newspapers for campaign promotion was not included in the present study for two reasons. First, it is beyond the purview of the present study to individually account for individual spending on traditional media campaigns. Second, the level of candidate use of traditional media sources for campaign promotion is, to a large extent, accounted for by the amount of funding that is available to a candidate to spend on such campaigns. In other words, the more a candidate has to spend, the more robust their campaign is on television, in newspapers and via campaign flyers.
4. Large parties are those four top Brazilian parties who together hold an absolute majority in both the senate and the lower house of Congress. Medium-sized parties are those who consistently hold either seats in both chambers of Congress or at least more than five seats in the Chamber of Deputies, while minor parties are those whose proportional representation in Congress is minor, holding at most one seat in the Chamber of Deputies.

References

Ames B (1995) Electoral strategy under open-list proportional representation. *American Journal of Political Science* 39: 406–433.

Ames B, Barker A and Rennó LR (2008) Quality of elections in Brazil: Policy, performance, pageantry, or pork? In Kingstone P and Power T (eds) *Democratic Brazil Revisited*. Pittsburgh, PA: University of Pittsburgh Press.

Anstead N and Chadwick A (2009) Parties, election campaigning, and the internet: Toward a comparative institutional approach. In Chadwick A and Howard PN (eds) *Routledge Handbook of Internet Politics*. London: Routledge.

Araújo C (2010) The limits of women's quotas in Brazil. *Ids Bulletin* 41(5): 17–24.

Chadwick A (2006) *Internet Politics: States, Citizens, and New Communication Technologies*. New York: Oxford University Press.

Chadwick A and Howard PN (2009) *Routledge Handbook of Internet Politics*. London: Routledge.

Chen P (2010) Adoption and use of digital media in election campaigns: Australia, Canada and New Zealand. *Political Communication Review* 1(1): 3–26.

Davis R (1999) *The Web of Politics: The Internet's Impact on the American Political System*. New York: Oxford University Press.

Davis R, Baumgartner JC, Francia PL and Morris JS (2009) The Internet in U.S. election campaigns. In Chadwick A and Howard PN (eds) *Routledge Handbook of Internet Politics*. London: Routledge.

Foot KA and Schneider SM (2006) *Web Campaigning*. Cambridge: MIT Press.

Graber DA and Smith JM (2005) Political communication faces the 21st Century. *Journal of Communication* 55(3): 479–507.

Grant W, Moon B and Busby Grant J (2010) Digital dialogue? Australian politicians' use of the social network tool Twitter. *Australian Journal of Political Science* 45(4): 579–604.

Hooghe M and Teepe W (2007) Party profiles on the web: An analysis of the logfiles of non-partisan interactive political Internet sites in the 2003 and 2004 election campaigns in Belgium. *New Media & Society* 9(6): 965–985.

Howard PN (2006) *New Media Campaigns and the Managed Citizen*. Cambridge: Cambridge University Press.

Internet World Stats (2010) *Brazil: Internet Stats and Telecom Market Report*. Available at: http://www.internetworldstats.com/sa/br.htm

Jenkins H and Thorburn D (2003) *Democracy and New Media*. Cambridge: MIT Press.

Kluver R, Jankowski N, Foot K and Schneider S (2007) *The Internet and National Elections: A Comparative Study of Web Campaigning*. Hoboken, NJ: Taylor & Francis.

Mainwaring S (1991) Politicians, parties, and electoral systems: Brazil in comparative perspective. *Comparative Politics* 24(1): 21–43.

Mainwaring S (1999) *Rethinking Party Systems in the Third Wave of Democratization: The Case of Brazil*. Stanford, CA: Stanford University Press.

Miguel LF (2008) Political representation and gender in Brazil: Quotas for women and their impact. *Bulletin of Latin American Research* 27(2): 197–214.

Pew Research Center for the People and the Press (2010) *Computer and Cell Phone Usage Up Around the World: Global Publics Embrace Social Networking*. Available at: http://pewglobal.org/2010/12/15/global-publics-embrace-social-networking

Samuels D (2001a) When does every penny count? Intra-party competition and campaign finance in Brazil. *Party Politics* 7(1): 89–102.

Samuels D (2001b) Incumbents and challengers on a level playing field: Assessing the impact of campaign finance in Brazil. *The Journal of Politics* 63(2): 569–584.

Samuels D (2001c) Money, elections, and democracy in Brazil. *Latin American Politics and Society* 43(2): 27–48.

Samuels D (2002) Pork barreling is not credit claiming or advertising: Campaign finance and the sources of the personal vote in Brazil. *The Journal of Politics* 64(3): 845–863.

Strandberg K (2009) Online campaigning: An opening for the outsiders? An analysis of Finnish parliamentary candidates' websites in the 2003 election campaign. *New Media & Society* 11(5): 835–854.

Tribunal Superior Eleitoral (n.d.) *Eleições 2010: Divulgação de Registro de Candidaturas*. Available at: http://divulgacand2010.tse.jus.br/divulgacand2010

Ward S, Owen D, Davis R and Taras D (2008) *Making a Difference: A Comparative View of the Role of the Internet in Election Politics*. Lanham, MA: Lexington Books.

Xenos MA and Foot KA (2005) Politics as usual, or politics unusual? Position taking and dialogue on campaign websites in the 2002 U.S. elections. *Journal of Communication* 55(1): 169–185.

Jason Gilmore is a doctoral candidate in the Department of Communication at the University of Washington. He specializes in the study of political communication and identity politics in the United States and Latin America.

Appendix A

Table A1. Media use by candidate gender, incumbency, party size and campaign spending.

	Candidate Gender		Party size			Incumbency		Campaign spending levels			
	Female	Male	Small party	Medium party	Large party	Not incumbent	Incumbent	Low	Medium-low	Medium-high	High
Website	23.1%	38.6%	20.3%	38.6%	49.6%	32.6%	75.6%	18.5%	36.8%	66.5%	85.9%
Twitter	21.3%	31%	14.2%	30.7%	44.8%	26.6%	62.8%	14.8%	24.3%	59.4%	74.7%
Orkut	6.5%	14.6%	3.7%	14.8%	21.4%	11.1%	38.5%	4.3%	10.8%	32.3%	38.4%
Facebook	7.7%	10.6%	4.4%	10.8%	15.5%	8.2%	32.1%	3.2%	8.6%	21.9%	33.3%
YouTube	5.3%	11.3%	4.1%	11.9%	14.7%	8.7%	29.5%	3.2%	6.5%	22.6%	38.4%