

# Social Science Computer Review

<http://ssc.sagepub.com>

---

## **Closing the Gap, Raising the Bar: Candidate Web Site Communication in the 2006 Campaigns for Congress**

Girish J. "Jeff" Gulati and Christine B. Williams  
*Social Science Computer Review* 2007; 25; 443  
DOI: 10.1177/0894439307305624

The online version of this article can be found at:  
<http://ssc.sagepub.com/cgi/content/abstract/25/4/443>

---

Published by:



<http://www.sagepublications.com>

**Additional services and information for *Social Science Computer Review* can be found at:**

**Email Alerts:** <http://ssc.sagepub.com/cgi/alerts>

**Subscriptions:** <http://ssc.sagepub.com/subscriptions>

**Reprints:** <http://www.sagepub.com/journalsReprints.nav>

**Permissions:** <http://www.sagepub.com/journalsPermissions.nav>

**Citations** (this article cites 16 articles hosted on the SAGE Journals Online and HighWire Press platforms):  
<http://ssc.sagepub.com/cgi/content/refs/25/4/443>

# Closing the Gap, Raising the Bar

## Candidate Web Site Communication in the 2006 Campaigns for Congress

Girish J. "Jeff" Gulati

Christine B. Williams

*Bentley College, Waltham, Massachusetts*

This article examines online campaigning for the U.S. Congress in 2006. Increases in web presence have slowed, but with minor-party candidates closing the gap with major-party candidates in Senate races. A content analysis of the campaign web sites of every Senate and House candidate reveals that baseline informational web content and features have become standardized but that Senate sites are more sophisticated technologically. Multivariate analyses reveal that financial resources underwrite the highest levels of content and constitute a moving hurdle for disadvantaged candidates. Democrats, Greens, and challengers demonstrated more interest in relationship building, and the competitiveness of the race increased the likelihood of using the web site for mobilizing supporters. Features and functionality that allow citizens to coproduce content and interact in two-way communication are not being adopted widely, and it is an open question how candidates might integrate new social networking tools into their campaign strategies.

**Keywords:** *campaign web sites; online campaigns; 2006 midterm elections; U.S. Senate; U.S. House*

In the 2006 midterm elections, even more campaigns and interest groups had an online presence, and their activities had matured relative to previous years (Rainie & Horrigan, 2007). Moreover, citizens seeking information about U.S. Senate races increased fivefold compared to the 2002 midterm election level and doubled for U.S. House races. Although mainstream media continued to dominate the content that citizens viewed online, 20% reported going directly to a candidate's web site to learn about the campaign (Rainie & Horrigan, 2007). Television remained the medium of choice, but the Internet's financial role continued to enlarge. Estimates put the total for online fund-raising at \$100 million and online campaign advertising at \$40 million (Cornfield & Rainie, 2006).

Candidate web sites are now a fixture of the electoral landscape. Early academic studies of web sites as a campaign medium were descriptive, focusing initially on a particular election year, a single campaign, or the level of office (Bimber & Davis, 2003; D'Alessio, 1997; Dulio, Goff, & Thurber, 1999; Foot & Schneider, 2002; Klotz, 1997; Puopolo, 2001; Williams, Aylesworth, & Chapman, 2002). A number of recent studies have compared web sites

---

**Authors' Note:** The authors would like to thank Kevin Breen, David Cawley, William Henderson, Tristan Ostronic, Maria Skaletsky, and Alan Simonian for all their assistance on this project and ensuring its completion in a timely manner.

across levels of office (Greer & LaPointe, 2004; Herrnson, Stokes-Brown, & Hindman, 2007), examined similarities and differences among various political systems (Gibson, Margolis, Resnick, & Ward, 2003; Norris, 2001; Van Dijk, 2005; Ward, Gibson, & Lusoli, 2006), and analyzed in-depth specific web site features and campaign functions (Connors, 2005; Druckman, Kifer, & Parkin, 2006; Endres & Warnick, 2004; Xenos & Foot, 2005). Finally, several studies have begun to offer historical perspectives on campaign web site design and use (Chadwick, 2006; Foot & Schneider, 2006), the role and function of web sites, and their electoral and political impact (Bimber & Davis, 2003; Gibson & McAllister, 2006).

Our knowledge of candidate and party campaign web sites, drawn from research on recent elections, shows several trends. First, all actors have increased their web presence, and certain content and functionality or tools have become standard features on these sites. For example, nearly all web sites include information about their producer: candidate biographies, campaign contacts, speeches, and the like (Benoit & Benoit, 2005; Williams & Gulati, 2006). By 2000, secure servers for credit card transactions had become available, such that most campaigns now raise money online. They typically also collect information from visitors who wish to receive campaign e-mails or volunteer to work for the campaign (Benoit & Benoit, 2005; Connors, 2005). Informational content (replication and transmission of content produced offline, or "brochureware") remains dominant; two-way communication and interactive formats (aimed at relationship building or engagement as well as mobilization) are less common (Bimber & Davis, 2003; Gulati, 2003; Kamark, 2002; Klotz, 2007; Williams et al., 2002).

Second, there are significant differences in the quality of content and technological sophistication of campaign web sites. These differences have been associated with producer, constituency, and election characteristics. For example, challengers often have a greater web presence, a different and sometimes more significant issue focus than incumbents (Druckman et al., 2006; Xenos & Foot, 2005). Similarly, major parties and their candidates have more developed sites than minor ones or independents (Gibson et al., 2003; Greer & LaPointe, 2004; Gulati, 2003; Jankowski & van Os, 2004). Other studies have found that younger candidates and Whites have a greater web presence, as well as higher quality and sophistication than their counterparts (Herrnson et al., 2007), and that female candidates put greater emphasis on issues and interactive content (Druckman et al., 2006; Puopolo, 2001). Most studies have shown that the candidate's financial wherewithal is an important differentiator. Constituency characteristics that matter to web site development have included lower percentages of minority voters and senior citizens and higher percentages of college-educated, high-income, and urban or suburban dwellers, which all correlate with high Internet usage (Herrnson et al., 2007; Williams & Gulati, 2006). Various election characteristics, such as higher levels of office (Greer & LaPointe, 2004; Herrnson et al., 2007), electoral competition (Gulati, 2003; Xenos & Foot, 2005), electoral systems, and political culture (Gibson et al., 2003; Herrnson et al., 2007; Jankowski & van Os, 2004; Lusoli, 2005; Lusoli, Gibson, & Ward, in press; Ward et al., 2006) also have predicted greater web presence, content quality, and technological sophistication.

A comparative assessment of web sites is complicated by the evolution of technologies and their strategic applications by campaigns over time. To aid in this task, researchers have proposed various developmental orderings of content and functionality (tools or activities). Most treatments distinguish between passive informational content and those features or

tools that facilitate user manipulation of, or interaction with, the content, other users, and/or the campaign enterprise (Gibson & Ward, 2000; Lusoli, 2005; and others). The lowest level or stage is the establishment of a web presence and posting of informational content that has been reproduced from other offline media sources, archived, and transmitted to web site viewers. The highest level or stage affords web site users some degree of coproduction of content (from personalization to blog entries or online chats and virtual town meetings), two-way communication, and follow-up offline or online activity. Foot and Schneider's (2006) hierarchy of campaign web site practice is among the most thorough and empirically substantiated to date. They find that the informational level is foundational to all others, whereas involving and contacting are independent practices but foundational to the highest level, mobilizing.<sup>1</sup>

Finally, comparative assessment of campaign web sites requires analysts to identify and distinguish among the various producer and user perspectives. Government entities, political parties, candidates, and news media organizations are among those who produce web sites containing election-related content, but they do so for very different reasons. Although the consumers of their contents are presumed to be citizens, they also include some uniquely differentiated subgroups such as campaign staffers and journalists. Moreover, members of the general public who visit a campaign web site have varying degrees of interest in or support for its producer, as well as different demographic profiles and other qualities that a campaign might wish to (micro) target. Lusoli (2005) makes a useful basic distinction between the public and political dimensions of the websphere. Contact information, voter registration information, privacy policies, and e-news bulletins are illustrative of the public electoral space. In contrast, the political electoral space is action oriented and includes candidate endorsements, election materials for distribution, and opportunities for donating and volunteering. Some of these are standard, low-level informational features (posting an endorsement); those that facilitate interactions with other actors (distribution lists or materials) represent high-level mobilization efforts.

## Research Questions

This study concerns itself with four research questions. First, how do congressional candidates' 2006 campaign web sites differ from previous years'? We expect to see diffusion of the innovation continuing, both in terms of the proportion of candidates having a web presence and in the quality of content and technological sophistication those web sites exhibit. Laggards should catch up with leaders, but new innovations will continue to raise the bar.

Second, how do U.S. House candidates' campaign web sites differ from those of Senate candidates? Consistent with other studies, we expect the greatest advances at the highest levels of office. The Senate represents a higher stakes election that generally attracts more attention, greater financial resources, and better known political consultants. Reelection is less certain than in the House; incumbent senators are less likely to run unopposed and more likely to face stronger challengers (Jacobson, 2004). Moreover, the difficulties attached to reaching a more geographically dispersed electorate make the efficiencies of online campaigning more attractive.

Third, what other candidate attributes are associated with higher and lower levels of web site quality and sophistication? Among these, previous research suggests that major-party candidates will outperform those of minor-party and independent status, but the gap may be closing. Although incumbents generally have more resources, the earlier studies discussed above found that they were less inclined to engage in online campaigning. Have expectations about web sites become so widespread in the media and public at large that all candidates now need a respectable presence? One of the most consistent differentiators has been the candidate's financial resources, but it remains to be determined whether this remains true for all types of content and levels of sophistication.

Finally, what electoral and constituency factors explain differences in content quality and technological sophistication of candidates' campaign web sites? The competitiveness of the race seems to encourage web site use and innovation. In addition, constituency characteristics associated with heavy Internet use (a younger, more affluent electorate) seem to generate higher expectations for web sites and make them a more attractive means of reaching voters in densely populated electoral districts such as cities and suburbs.

We apply our assessments of web site quality and sophistication to each of Foot and Schneider's (2006) three domains: information, involvement and engagement (connecting), and mobilization. We expect the evolutionary trajectory of each domain to differ by year, level of office, candidate, electoral, and constituency attributes. The baseline, informational level should show the most standardization across types of candidates and races, whereas the highest, mobilization level should be the most highly differentiated. Within the latter group, those features representing true two-way communication and coproduction of content will be relatively rare. As Stromer-Galley (2000) explained, political campaigns resist using human-interactive features because they undermine their ability to control the message and maintain ambiguity in their communications.

## Data and Method

To examine how congressional candidates campaigned on the World Wide Web in 2006 and to gain insights into how online campaigning has evolved, we conducted a content analysis of the campaign web site of every U.S. Senate and House candidate who had a presence on the World Wide Web in 2006. House races provide a large sample of candidates, allowing us to use multivariate analysis to study different subgroups and form generalizations about Internet campaigning. Senate sites have evolved faster than House sites, thus allowing us to examine some of the more innovative and sophisticated items featured in the most recent election as well as to preview what we might see in the 2008 presidential election.

In 2006, there were 129 candidates running for 33 Senate contests.<sup>2</sup> Of the candidates, 32 were Democrats and 32 were Republicans. Among third-party candidates, 14 ran as Libertarians, 9 ran as Greens, and 21 ran under the banner of a variety of smaller parties. Joseph Lieberman (ID-Connecticut), Bernie Sanders (I-Vermont), and 19 other candidates ran as independents. Approximately 88% ( $n = 114$ ) of the Senate candidates listed a web address for the 2006 campaign. A few of these candidates never developed a site during the campaign or simply redirected visitors to a national or state party site. Excluding these candidates, we had 109 Senate sites for our content analysis.

For the 435 House races, there were 428 Democratic candidates, 388 Republicans, 110 Libertarians, 41 Greens, 70 candidates from smaller third parties, and 65 independents. Of these 1,102 candidates, 81% ( $n = 894$ ) listed a web address. After excluding the undeveloped and nonpersonal sites, we had 865 House sites available for content analysis.

The recent literature on Internet campaigning (Gulati, 2003; Kamark, 2002; Williams & Gulati, 2006; Williams et al., 2002) has examined four major areas of content, features, and tools on candidates' campaign web sites: (a) informational content, (b) involvement and engagement, (c) mobilization, and (d) interactivity. To make valid comparisons with past elections and better assess how the web sites are evolving as a campaign tool, we coded for the presence or absence of 21 forms of content that fall within these four areas and, in most cases, used the exact same wording and coding protocol (see the appendix).

After extensive pretesting, the content analysis of the 979 Senate and House candidates' web sites was conducted throughout October 2006.<sup>3</sup> Four research assistants and one of the authors supervised a staff of 15 coders for the content analysis. Each supervisor was responsible for training and monitoring the work of 4 staff members. After the analysis was completed, approximately 10% of the sites were randomly selected for reliability analysis. The average percentage agreement across all 21 questions was 93.5.<sup>4</sup>

We begin by describing our findings for the U.S. Senate followed by the House of Representatives. Where possible, we compare our results to results from studies of earlier campaigns (Williams & Gulati, 2006).

## Analysis and Findings

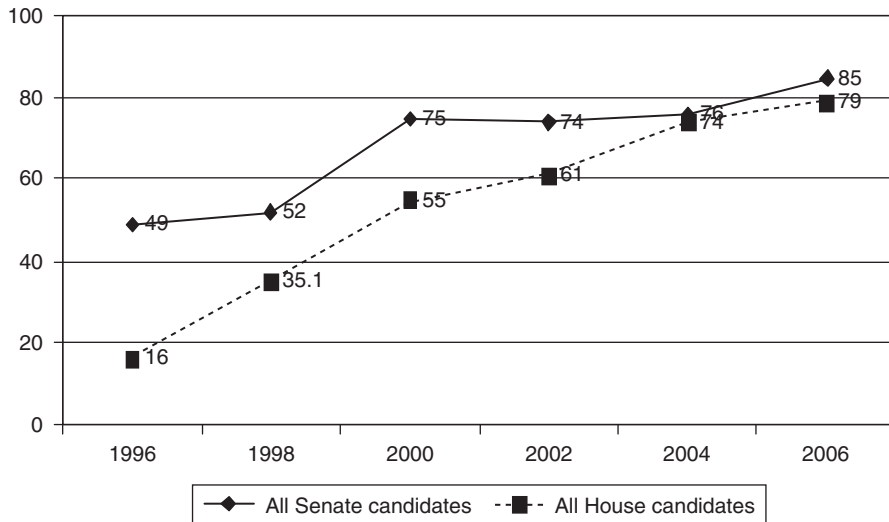
### Web Presence

A record percentage of candidates for the U.S. Senate campaigned via the World Wide Web in 2006. As can be seen in Figure 1, 85% of the Senate candidates had their own personal web sites in 2006. In 2004, only 74% of Senate candidates were online. As Figure 1 also shows, this was the third consecutive election cycle where about three fourths of the candidates were online. Senate candidates' web presence started to level off 6 years ago then reached a new and slightly higher plateau in this last election cycle.

It also was a record-setting year for House online campaigns, as 79% of the candidates posted their own web sites in 2006. But unlike online campaigns in the Senate, each successive election cycle has been accompanied by a steady increase in the percentage of candidates present on the web. Figure 1 also shows that 55% of House candidates campaigned on the web in 2000, increasing to 61% in 2002 and 74% in 2004. Thus, in House races, web site presence continues to increase, albeit more gradually in 2006. If web site adoption has an upper limit, the House could reach a plateau equal to or somewhat lower than the Senate's in another election cycle or two. Adoption rates will likely slow until hold-out candidates who are long-time incumbents retire. Upper limits recognize that some candidates, by choice or circumstance, do not or cannot mount a serious campaign effort through the Internet or any medium of mass communication.

For the second consecutive cycle, more than 90% of the major-party Senate candidates campaigned online (see Table 1). Among Democrats (and the two independents who caucus as Democrats, Mr. Lieberman and Mr. Sanders), 97% had web sites in 2006, with only

**Figure 1**  
**Congressional Campaigns on the World Wide Web, 1996-2006**



incumbent Senator Ben Nelson (D-Nebraska) absent from the web. Last year, 94% of Republicans had campaign web sites. Incumbent Senators Trent Lott (R-Mississippi) and Craig Thomas (R-Wyoming) were the only Republicans who did not campaign online in 2006. For the second consecutive election cycle, however, every major-party challenger and candidate for an open seat had a presence on the web.

Independents and third-party candidates for the Senate saw a significant increase in web presence between 2004 and 2006. Whereas only 54% of minor-party candidates had a web presence in 2004, 77% had a web presence in 2006. The Libertarians led the way with 93% of their candidates present on the web, followed by the Greens with 89%. Although there is a gap of 18% between major- and minor-party candidates, this is the smallest difference between the two groups since the inception of web campaigning and is consistent with other reports (Klotz, 2004; Panagopoulos, 2005).

In House races, Democrats were the most likely to campaign online (88%), followed by Republicans (84%), Greens (63%), and Libertarians (58%). Only 57% of independents and 53% of the smaller third-party candidates campaigned on the web. As a group, 86% of major-party candidates had their own web sites in 2006, whereas only 57% of minor-party candidates had their own sites. Thus, the wide gap we observed in Senate campaigns prior to 2006 still persists in House campaigns.

A multivariate logistic regression analysis of web presence for House candidates confirms that major-party candidates are more likely to campaign online, even after taking electoral and constituency factors into account.<sup>5</sup> But as can be seen in Table 2, the differences between the Greens and Libertarians and the Democrats and Republicans are not significant at the .05 level. What is significant is that unlike their Senate counterparts, House

**Table 1**  
**2006 Congressional Presence on the World Wide Web, by Party**

	Senate		House	
	%	<i>N</i>	%	<i>n</i>
Democrats	97	32	88	428
Republicans	94	32	84	388
Libertarians	93	14	58	110
Greens	89	9	63	41
Other third parties	67	21	53	70
Independents	62	21	57	65
All	84.5	129	78.5	1,102

**Table 2**  
**Multivariate Logit Analysis of 2006 House Campaigns' Web Site Presence**

Independent Variable	B	Standard Error	Wald	Significance
Party (Democrats = reference category)				
Republicans	-0.200	.220	0.823	.364
Libertarians	-0.661	.360	3.369	.066
Greens	-0.729	.449	2.633	.105
Others	-1.128	.349	10.444	.001
Incumbency status (Open seat candidates = reference category)				
Incumbents	-1.885	.429	19.359	.000
Challengers	0.041	.363	0.013	.910
Competitive seat	0.335	.338	0.983	.321
Contributions received (ln)	0.198	.026	57.737	.000
Percentage with college degrees	0.017	.011	2.457	.117
Percentage older than 64	-0.026	.030	0.762	.383
Percentage White	0.013	.005	5.331	.021
Percentage urban	0.002	.006	0.114	.735
Constant	-0.280	.571	0.241	.623
<i>N</i>	1,102			
Percentage correctly predicted	79.4			
-2 log likelihood	928.446			
Chi-squared	218.931			
Pseudo <i>R</i> <sup>2</sup>	.278			

incumbents were less likely to campaign online than either their challengers or candidates for open seats. Because Senate rules prohibit Senators from updating their office web sites during the 60 days before the election but House rules make no such prohibition, House incumbents may have less need to invest in a separate web site. Moreover, because House



reelection rates exceed those for the Senate, representatives have less need to engage in campaign activities across the board.

Another important factor in explaining web presence is money. House candidates with more financial resources are more likely to campaign online than candidates with fewer resources. Whereas it is understandable that more money is needed to produce and present sophisticated content in the most accessible way, it costs very little to launch a web site. Today, a candidate can set up a profile for free on such popular web sites such as Blogspot and MySpace. The observed relationship between money and web presence may indicate that many of the candidates without web sites are simply not serious candidates. Not only do they seem to be investing little time in fund-raising, but they also do not seem to be very interested in promoting their own candidacy.

### Informational Content

Since the first online campaigns, the most fully developed characteristic of candidates' web sites has been the availability of campaign information. Its prevalence is explained by the fact that web sites represent a cost-effective means of communicating at any time of the day the most up-to-date information about candidates and their campaigns to the public and the media. A candidate can use a variety of media formats on the web site to provide details about their personal qualities, background, and record of accomplishments unfiltered and without concern for space limitations (Bimber & Davis, 2003; Ireland & Nash, 2001). The absence of space limitations allows a candidate to elaborate fully, in a variety of ways, and to archive that content on the site, making it easy for voters, journalists, and other observers to acquire a more comprehensive view of the candidate and the campaign. This content usually is generated by the campaign itself but also can originate from a national party organization, the media, and campaign supporters whose content is either posted on the site or made available through a link to the external source.

As the first column of data in Table 3 shows, 98% of the Senate web sites that we analyzed had information about the candidates' issues positions, either directly on the home page or on a separate page dedicated specifically to issues. The percentage of candidates posting information about issues has risen steadily during the past few years and represents an encouraging trend. In 2000, 57% of the campaigns included this information on their web sites, rising to about 75% in 2002 and 93% in 2004. Although candidates often are criticized for avoiding a discussion of the issues (Jacobson, 2004; Mayhew, 1974), it seems that when given the opportunity for unfiltered communication with the electorate, most Senate candidates are now more eager to reveal their stands on the issues and details of their policy proposals. As substantive news coverage of campaigns continues to decline, and horse race coverage in particular increases (Gulati, Just, & Crigler, 2004), this is a welcome development.

Almost all of the campaigns posted their e-mail address (89%) and the candidate's biography (87%) on the web site. In addition, 73% of the campaigns either posted or linked to news about the campaign. Major-party candidates were more likely than minor-party candidates, however, to include a bio and news. As the second column of data in Table 3 shows, 96% of Democratic and Republican candidates included a bio page, and 96% included campaign news, either on the site or through external links. In contrast, the third column in

**Table 3**  
**Political Content on 2006 Senate Campaign Web Sites by Party (in percentages)**

	All Candidates	Major-Party Candidates	Minor-Party Candidates
Position papers/issue positions	98	100	97
E-mail address provided	89	90	87
Candidate biography	87	96 <sup>a</sup>	78 <sup>a</sup>
Campaign news	73	96 <sup>a</sup>	53 <sup>a</sup>
Audio or video clips	66	92 <sup>a</sup>	31 <sup>a</sup>

a. The difference ( $\chi^2$ ) between major- and minor-party candidates is statistically significant at the .05 level.

**Table 4**  
**Political Content on 2006 House Campaign Web Sites, by Party (in percentages)**

	All Candidates	Major-Party Candidates	Minor-Party Candidates
Candidate biography	89	95 <sup>a</sup>	67 <sup>a</sup>
E-mail address provided	87	88	83
Position papers/issue positions	77	77	80
Campaign news	62	68 <sup>a</sup>	39 <sup>a</sup>
Audio or video clips	40	44 <sup>a</sup>	25 <sup>a</sup>

a. The difference ( $\chi^2$ ) between major- and minor-party candidates is statistically significant at the .05 level.

the same table shows that only 78% of independents and third-party candidates included a bio, and only 53% included news about the campaign.

Among the House candidates who did campaign online, the results mirror the Senate findings. As Table 4 shows, 89% posted biographical information either on their home page or on a separate page, and 87% of the House candidates provided the campaign's e-mail address on the site. Fewer House than Senate candidates posted information about their issue positions (77%) and news about their campaigns (62%). For these categories of content, House campaign web sites were less informative than Senate sites.

In most cases, there was a significant gap between major- and minor-party candidates in how informative their web sites were, and the gap was fairly substantial. Whereas 95% of Democrats and Republicans posted their biographies, only 67% of minor-party candidates did so. In addition, major-party candidates were significantly more likely to post campaign news than minor-party candidates. However, there was no difference in the propensity of major- and minor-party candidates to express their issue positions and provide their e-mail addresses on their web sites.

The Senate and House differences based on party status suggest that a high priority for minor-party candidates is to raise issues and promote issue stances that are important to them, which may not otherwise be reported in the news media. Their efforts in this regard duplicate those of major-party candidates. On the other hand, minor-party candidates may be disinclined to post bios because doing so would call attention to their untraditional or spare political credentials. With respect to the paucity of campaign news, minor-party candidates

may hold fewer campaign events and have lower activity levels to report than major-party candidates.

One form of content that demonstrated considerable growth from past election cycles was the use of streaming and downloadable audio and video. This could include either professionally produced campaign advertisements and videos or "home-made" clips of campaign events. It also may include a welcome message from the candidate. Only a third of the Senate campaigns included audio or video on their web sites in 2000. By 2004, slightly more than half did so. In 2006, 66% of Senate candidates had some form of video available on their web sites. The gap between major- and minor-party candidates was widest for this form of content compared to all others.

In contrast, as can be seen in Table 3, only 40% of House candidates provided visitors with audio or video clips. Moreover, Republicans and Democrats were nearly twice as likely as independents and third-party candidates to post audio or video items.

The gap in integrating more sophisticated multimedia tools suggests that the candidates who are better financed and running more professional campaigns stand to benefit more from the Internet, despite the gap in web presence having nearly disappeared. Video content should become even more prevalent in future web campaigns as more Americans access the Internet through a broadband connection and come to expect content to be delivered in this format. As video becomes easier to produce and store, more minor-party candidates may catch up in taking advantage of this tool. However, as one sophistication gap closes, advancing technological innovation may open another.

## **Involvement and Engagement**

Another important function of web sites is to reinforce supporters' commitment to the campaign by helping them to understand their stake in the campaign or at least to feel that their involvement in the campaign matters. Features and content that facilitate contact and associations with the campaign and other supporters already involved are distinguishable from informational content in that the latter tends to be one directional, from the candidate to the web user (Foot & Schneider, 2006). These features are interactive in only a limited sense, however, because they do not establish genuine two-way communication or respond to a visitor's input or request.

A common way for campaigns to help their supporters feel that they are involved in some way is to facilitate their making a financial contribution online. One of the most significant innovations of the 2000 presidential campaigns was the use of the Internet as a fund-raising tool (Bimber & Davis, 2003). In 2004, both President Bush and Senator Kerry raised a large portion of their funds via the Internet, and most small donors made their contributions online (Graf, Reeher, Mablin, & Panagopoulos, 2006; Rainie, Cornfield, & Horrigan, 2005). As can be seen in Table 5, we found that 74% of the web sites had a feature that allowed supporters to donate money to the campaign with their credit card, a slight increase from 2 years ago.

The second most prevalent feature used to engage supporters was a volunteer form that allowed a supporter to provide his or her contact information and then submit the form to the campaign electronically. A majority of the Senate web sites (53%) also included a way for supporters to sign up online for the campaign's e-newsletter or another form of electronic

**Table 5**  
**Engagement and Involvement Features on 2006 Senate Campaign**  
**Web Sites, by Party (in percentages)**

	All Candidates	Major-Party Candidates	Minor-Party Candidates
Donations by credit card	74	94 <sup>a</sup>	47 <sup>a</sup>
Online volunteer form	64	90 <sup>a</sup>	27 <sup>a</sup>
E-newsletter sign-up	53	77 <sup>a</sup>	18 <sup>a</sup>
Facebook Election Pulse profile	40	50 <sup>a</sup>	17 <sup>a</sup>
Blog	39	45	31
Voting information	31	44 <sup>a</sup>	13 <sup>a</sup>
Candidate's schedule	29	34	22
RSS updates	18	21	13
Online poll	8	10	5

Note: RSS = Really Simple Syndication.

a. The difference ( $\chi^2$ ) between major- and minor-party candidates is statistically significant at the .05 level.

updates.<sup>6</sup> In addition, only 31% of the web sites included information on how to vote absentee or general information about registering to vote and polling locations, which was similar to what was found 2 years earlier. A more recent innovation for alerting supporters about new or updated content on the web site is through a newsfeed, such as Really Simple Syndication (RSS). Only 18% of the campaign web sites included this feature in 2006.

Three fourths of House candidates provided their supporters a means to donate online by using a credit card (see Table 6). The second most prevalent feature used to facilitate associations between supporters was the electronic volunteer sign-up form, which was found on 69% of the House campaign web sites. A majority (52%) of the web sites included a way for supporters to subscribe to the campaign's e-newsletter or to receive e-mail updates about the campaign. In addition, 29% of the House campaigns posted the candidate's schedule on the site, and 34% included voter registration and voting information. With respect to these five features, we found no significant differences between House and Senate candidates, as can be seen by comparing the first columns of data in Tables 5 and 6.

Two other more recent innovations for connecting like-minded people via the Internet are campaign weblogs (i.e., blogs) and social networking sites. Whereas in earlier campaigns, supporters, opponents, and observers debated the merits of a candidate or issue on user-created newsnet discussion boards and chat rooms, today's campaigns have started their own blogs and created profiles on Facebook and MySpace. Although blogs received considerable hype in 2004, social networking sites (including YouTube) were the web tools that caught the eye of the media in 2006. Among 2006 Senate candidates, 40% expanded on the profile created specifically for them by Facebook in their Election Pulse campaign, and 39% started a campaign blog.

We found that candidates for the House were about half as likely as their Senate counterparts to adopt more recent innovations in online campaigning. Specifically, less than one fourth of the House campaigns had blogs, and only 15% had developed their Facebook profiles.<sup>7</sup> In addition, only 8% of the candidates included an RSS option on their web sites, and

**Table 6**  
**Engagement and Involvement Features on 2006 House Campaign Web Sites, by Party (in percentages)**

	All Candidates	Major-Party Candidates	Minor-Party Candidates
Donations by credit card	75	83 <sup>a</sup>	38 <sup>a</sup>
Online volunteer form	69	81 <sup>a</sup>	17 <sup>a</sup>
E-newsletter sign-up	52	59 <sup>a</sup>	19 <sup>a</sup>
Voting information	34	37 <sup>a</sup>	23 <sup>a</sup>
Candidate's schedule	29	35 <sup>a</sup>	20 <sup>a</sup>
Blog	23	23	21
Facebook Election Pulse profile	15	18 <sup>a</sup>	5 <sup>a</sup>
RSS updates	8	8	8
Online poll	5	5	5

Note: RSS = Really Simply Syndication.

a. The difference ( $\chi^2$ ) between major- and minor-party candidates is statistically significant at the .05 level.

only 5% included an opportunity for a visitor to participate in an online poll. These data confirm that Senate rather than House campaigns constitute the early adopters of web site innovations. They have greater scale, financial and consulting resources, and competitive incentives to support this technological experimentation.

Two services that citizens would like more campaigns to provide (Johnson, 2001) but that have received little attention from the candidates themselves are posting of the candidates' itineraries and opportunities to participate in online polls. Only 29% of the candidates posted their schedules online, and only 8% included online polls. Whereas roughly the same percentage of campaigns included online polls in 2004 and 2006, significantly fewer campaigns posted their candidates' schedules in 2006.

There were substantial differences between the major- and minor-party Senate candidates in the number of features they included to engage their supporters. As can be seen by comparing the second and third columns of data in Table 5, major-party candidates were more likely to process credit card contributions online, allow online volunteer and newsletter sign-ups, and provide information on voting than minor-party candidates. In some sense, this indicates progress for minor-party candidates because they lagged behind in many more features in 2004.

In the online House campaigns, there also were substantial differences between major- and minor-party candidates' use of their web sites to engage their supporters and encourage their involvement. Comparing the second and third columns of Table 6 shows that Democrats and Republicans were more likely to use their sites to offer online volunteer forms, e-newsletter subscriptions, and voting information; process credit card transactions; and post their schedules. They also were more likely to expand on their Facebook profile. With respect to hosting a campaign blog, offering RSS, and conducting an online poll, major- and minor-party candidates displayed virtually no difference. These latter innovations occur at much lower incidence levels than for the Senate, which suggests that the major-/minor-party digital divide we observed there and for many other features does not materialize until an innovation reaches a threshold takeoff point.

**Table 7**  
**Mobilization Tools on 2006 Senate Campaign Web Sites, by Party (in percentages)**

	All Candidates	Major-Party Candidates	Minor-Party Candidates
Online volunteer form	64	90 <sup>a</sup>	27 <sup>a</sup>
Downloadable materials	36	40	29
Tell a friend	34	48 <sup>a</sup>	13 <sup>a</sup>
Campaign materials and merchandise	27	38 <sup>a</sup>	13 <sup>a</sup>
Event form	17	23 <sup>a</sup>	9 <sup>a</sup>
Letter to the editor	17	27 <sup>a</sup>	2 <sup>a</sup>
Foreign language content	13	18 <sup>a</sup>	7 <sup>a</sup>

a. The difference ( $\chi^2$ ) between major- and minor-party candidates is statistically significant at the .05 level.

## Mobilization

Whereas reinforcing supporters' commitment to the candidate is essential for any campaign to remain competitive, transforming those committed supporters into activists or advocates for the campaign is what may be needed to carry the candidate to victory. Although assembling a group of engaged volunteers can be an important way to build community within a campaign, these volunteers also can be used to spread the candidate's message and persuade others to vote for the candidate and possibly even to work for the campaign. For that reason, we also include the feature of an electronic volunteer sign-up as a mobilization tool. In most cases, this feature allows supporters not only to provide their contact information but also to indicate the specific activities that they would be willing to do.<sup>8</sup>

As Table 7 reports, the online volunteer sign-up form is the most prevalent mobilization tool found on candidates' web sites. Only two other mobilization tools—downloadable campaign materials and tell-a-friend—are found on more than one third of the web sites. The ability to obtain information on acquiring campaign merchandise and materials, either for purchase or from the campaign to distribute, was found on 27% of the sites. The ability to express a desire to host an event and to be directed to the e-mail address of the local newspaper for purposes of writing a letter to the editor was found on 17% of the campaign sites. Along with the tell-a-friend feature, these were three relatively new tools widely used on the web in 2006. Minor-party candidates lagged behind significantly in featuring each of these new tools. Downloadable materials (e.g., fliers and brochures in PDF format) produced the only nonsignificant difference between major- and minor-party candidates.

Turning to the House campaigns, an online volunteer form was the only online tool among those used for transforming supporters into advocates that we found on more than one fifth of the web sites. As Table 8 reports, only 18% of the House candidates had campaign materials that could be downloaded from the site, and only 15% provided information on acquiring campaign merchandise and materials. Few House candidates provided an electronic means for scheduling a campaign event or house party (16%), means for forwarding the campaign's web address to a friend (12%), or a direct link to the local newspaper's web page for submitting letters to the editor. And only 4% had some content available in a foreign language. House candidates lagged behind their Senate counterparts in all but two mobilization tools, volunteer and event-scheduling forms.

**Table 8**  
**Mobilization Tools on 2006 House Campaign Web Sites by Party**

	All Candidates	Major-Party Candidates	Minor-Party Candidates
Online volunteer form	69	81 <sup>a</sup>	17 <sup>a</sup>
Downloadable materials	18	18	16
Event form	16	19 <sup>a</sup>	2 <sup>a</sup>
Campaign materials and merchandise	15	16 <sup>a</sup>	10 <sup>a</sup>
Tell a friend	12	14 <sup>a</sup>	4 <sup>a</sup>
Letter to the editor	8	10 <sup>a</sup>	3 <sup>a</sup>
Foreign language content	4	4	3

a. The difference ( $\chi^2$ ) between major- and minor-party candidates is statistically significant at the .05 level.

## Interactivity

Just two Senate candidates—James Webb (D-Virginia) and Rae Vogeler (G-Wisconsin)—included the capability to conduct live chats, a technology that has existed for some time. These chats allow visitors to interact with the campaign in real time, approximating true two-way communication by simulating the feel of a town hall meeting. Clearly, fully integrating live chats into a campaign demands much of a candidate's time and, unlike a moderated blog, makes it difficult for the candidate to control the nature and tone of the conversation (Stromer-Galley, 2000). Until user expectations and demand increase and resistance from established providers diminishes (Sifry, 2004), it is unlikely that this innovation will be actualized and diffused. Only nine House candidates, including incumbent David Wu (D-Oregon) and new member Zach Space (D-Ohio), included the capability to conduct live chats.

## Multivariate Analysis

To identify more precisely which Senate candidates were more likely to include the various forms of informational content, engagement features, and mobilization tools on their campaign web sites and the reasons for the variation, we constructed three additive indices from 17 of the 20 items discussed above.<sup>9</sup> We then regressed these indices on party affiliation, incumbency status, electoral vulnerability, campaign resources, and four indicators of citizen-demand for the Internet.<sup>10</sup>

As can be seen in the first column of Table 9, the most informative Senate candidates were those with the most resources and those from states that are more urban and have fewer minorities. All of the partisan difference that we observed in the bivariate analysis disappeared once other variables were taken into account. It is not surprising that money is highly significant in explaining content because it can be quite expensive to produce professional-quality video and archive it on a web site. Thus, Democrats and Republicans are more informative than minor-party candidates because they have more resources for producing and delivering content. In addition, viewers need a broadband connection for video clips to be accessible, a service that is more prevalent among White households and less available in rural areas.

Money also has a significant impact on the extent to which candidates use their web sites to engage their supporters. Most of these services require an experienced staff person to

**Table 9**  
**Multivariate Analysis of Informational Content, Engagement Features, and**  
**Mobilization Tools on 2006 Senate Web Sites**

Independent Variable	Content	Engagement	Mobilization
Party (Democrats = reference category)			
Republicans	-.011 (.045)	-.076 (.052)	-.201*** (.050)
Libertarians	-.155 (.099)	-.306*** (.113)	-.321*** (.109)
Greens	.150 (.098)	.017 (.112)	-.095 (.108)
Others	-.083 (.095)	-.365*** (.108)	-.301*** (.104)
Incumbency status (open seat candidates = reference category)			
Incumbents	-.022 (.058)	.144 (.067)	.050 (.064)
Challengers	-.050 (.069)	.009** (.079)	.089 (.076)
Competitive seat	-.014 (.039)	.021 (.045)	.079* (.043)
Contributions received (ln)	.029** (.012)	.026* (.013)	.011 (.013)
Percentage with college degrees	-.003 (.005)	-.001 (.006)	-.005 (.005)
Percentage older than 64	.004 (.010)	.000 (.012)	-.001 (.011)
Percentage White	.003** (.001)	-.002 (.002)	.001 (.002)
Percentage urban	.004** (.002)	-.002 (.002)	.002 (.002)
Intercept	.640*** (.216)	.477* (.247)	.472* (.237)
<i>N</i>	109	109	109
Adjusted <i>R</i> <sup>2</sup>	.402	.532	.417

Note: Entries are unstandardized regression coefficients with standard errors in parentheses.

\* $p < .10$ . \*\* $p < .05$ . \*\*\* $p < .01$ .

manage the flow of information coming into and out of the campaign. For example, it may be relatively easy to provide a feature wherein a supporter enters his or her e-mail address to receive updates or an e-newsletter. It is a more time-consuming matter, however, to organize all the addresses into a database and then actually to produce the newsletter for distribution. But as can be seen in the second column of Table 10, the major-party candidates and the Greens were more likely to engage supporters, regardless of their financial situation. Also, challengers were more likely to use their web sites to connect supporters with others in the campaign. Thus, whereas resources are important for engaging supporters on the web, candidates who already are engaging their supporters offline may find that replicating those services online can be done fairly easily.



**Table 10**  
**Multivariate Analysis of Informational Content, Engagement Features, and**  
**Mobilization Tools on 2006 House Web Sites**

Independent Variable	Content	Engagement	Mobilization
Party (Democrats = reference category)			
Republicans	-.030 (.023)	-.081*** (.019)	-.042*** (.012)
Libertarians	-.002 (.052)	-.193*** (.042)	-.070** (.028)
Greens	.024 (.066)	-.098* (.053)	-.082** (.035)
Others	.029 (.046)	-.211*** (.037)	-.088*** (.025)
Incumbency status (open seat candidates = reference category)			
Incumbents	-.054 (.039)	-.094*** (.031)	-.035* (.021)
Challengers	.098*** (.037)	.019 (.030)	-.010 (.020)
Competitive seat	.064* (.033)	.013 (.026)	.030* (.018)
Contributions received (ln)	.024*** (.003)	.023*** (.003)	.012*** (.002)
Percentage with college degrees	.0004 (.001)	.001 (.001)	.001 (.001)
Percentage older than 64	.004 (.003)	-.003 (.003)	-.004** (.002)
Percentage White	.0005 (.001)	.0005 (.001)	.0003 (.000)
Percentage urban	.001 (.001)	.0004 (.001)	.001 (.000)
Intercept	.265*** (.072)	.283*** (.058)	.158*** (.039)
<i>N</i>	865	865	865
Adjusted <i>R</i> <sup>2</sup>	.109	.287	.244

Note: Entries are unstandardized regression coefficients with standard errors in parentheses.

\* $p < .10$ . \*\* $p < .05$ . \*\*\* $p < .01$ .

The third column of Table 9 displays the results of the multivariate analysis of mobilization. In this case, money does not have a significant impact. Rather, Senate candidates in the most competitive races are the most likely to use the web for transforming supporters into advocates. Where the outcome is not in doubt, there may be little need for campaigns to invest time in these tools. At the same time, these tools are relatively inexpensive to maintain and thus do not require a large budget to implement.

What is surprising in these results is that Republicans were significantly less likely than Democrats to use the web for mobilizing voters. It was the Republicans who put great emphasis on house parties and personal contact to turn out their vote in 2002 and 2004, and they used the web to facilitate those forms of mobilization. Factors that might explain why

2006 was different could look to the nature of a midterm election or to the parties' changed competitive positions. Possibly the Republican Party organization was not equipped to mobilize voters for congressional-level (state and district) offices in the way it had been for the presidential election of 2004. Or web site mobilization was not seen as an effective means to overcome negative perceptions of congressional candidates linked by party affiliation to a now unpopular Republican administration. On the other hand, it may be the case that Democrats (and Greens) simply outdid the Republicans this election. Another possibility is that the two major parties are beginning to use the web very differently in their mobilization strategies, with Republicans abandoning the web and Democrats integrating it much deeper into their overall campaign strategy.

Using the same additive index and model, we replicated our multivariate analysis for the features on the House sites. As was the case for Senate sites, the partisan difference that we observed in the bivariate analysis disappeared once other variables were taken into account. As can be seen in the first column of Table 10, the most informative House candidates were those with the most resources. Although none of the constituency variables mattered, two other electoral factors matter: Candidates challenging incumbents and those running in the most competitive races were more informative. Thus, in races for the House, candidates who began in a disadvantaged position, regardless of party, not only had the most incentive to use their web sites for presenting themselves to the public but took advantage of the opportunity. And they were even more likely to pursue the opportunity in cases where the outcome of the race was in doubt.

Money, party affiliation, and incumbency status also were important factors explaining the extent to which House candidates used their web sites to engage their supporters. But in contrast to what we observed in the analysis of the Senate sites, House Democratic candidates were the most likely to use the web for connecting supporters with the campaign. In addition, challengers were the most likely to use their web sites for engaging supporters, whereas incumbents were the least likely to do so. Again, because incumbents also have an office web site, they may not see the need to invest the time to manage these services, unless they already have covered most of their other campaign activities and then still have plenty of excess funds available for other activities.

The third column of Table 10 displays the results of the multivariate analysis of mobilization, which are generally similar to the results observed for engagement. Democratic candidates were the most likely to use the web for mobilizing their supporters, whereas Republicans did not behave any differently than the minor-party candidates. Again this gap between Democrats and Republicans is surprising given the emphasis on mobilization that Republican consultants and strategists employed as recently as the 2004 presidential election. Incumbents also were less likely to use the web for mobilizing their supporters, but the gap between challengers and open seat candidates was not significant. In contrast to what we observed for the Senate, both money and competitiveness were significant in explaining mobilization. Although candidates see mobilization tools as necessary for winning a campaign in both Senate and House races, it is a standard set of features in online campaigning only for those House campaigns with the most financial resources. Finally, in contrast to Senate sites, one constituency factor was significant in explaining the number of mobilization tools on House sites. Candidates running in districts with more senior citizens

were less likely to employ online mobilization tools than were candidates in districts with fewer senior citizens. It may be the case that in a smaller constituency, older voters expect candidates to use more face-to-face methods of encouraging advocacy for the campaign, and thus, candidates redirect fewer resources to online campaigning.

## Conclusions and Discussion

By 2006, increases in web presence had slowed and appeared at or near a plateau. Third-party and independent candidates have closed the gap with major-party candidates in Senate races, but not in the lower-level House races. Absent a serious challenge, incumbents and poorly financed candidates for the House tend to forgo posting a campaign web site.

In terms of informational content, House candidates, particularly those from third parties and independents, were not as likely as those running for the Senate to post information about their issue positions. Biographies and campaign news were less prevalent, and the difference between major- and minor-party candidates was pronounced, but a majority of each group included these informational features. These findings confirm our expectation that baseline informational web content has become standardized. On the other hand, technologically sophisticated audio and video content showed the largest gap between the two levels of office and among the major-party candidates and third-party and independent candidates. Only for major-party Senate campaigns did audio and video content achieve saturation level.

House and Senate candidates were equally likely to involve and engage visitors by providing the means to donate online or request an e-newsletter. Online volunteer sign-up was the most prevalent mobilization tool for both levels of office, but the percentages dwindled for other means of sharing or distributing web content to others. Only about one third of the campaigns posted the candidate's schedule or voter registration information. Third-party and independent candidates lagged behind on all involvement and mobilization features. These findings illustrate the greater emphasis campaigns place on political activities relative to public ones (Lusoli, 2005). Finally, although small percentages of congressional candidates took advantage of the newest innovations and interactive features in 2006, Senate races led the way.

Multivariate regression analyses provided additional insights into which candidate, electoral, and constituency factors explained differences in web site content and sophistication. Results varied for House and Senate campaigns, as well as across the three content domains. Financial resources underwrite the highest levels of informational and engagement content, although we also found that the web sites of Democrats, Greens, and challengers demonstrated more interest in relationship building. This seems to reflect both a difference in party philosophy (the former two cases) and a greater need to establish a connection with voters (the latter two cases). Democrats also hold an edge in mobilization content, but the competitiveness of the race emerges as an additional factor. Volunteers are an important resource that can tip the balance, mattering as much in close House races as money, which can be harder to raise than for the higher visibility Senate seats.

The 2006 midterm elections witnessed three trends that offer a preview of what to expect in 2008. First, lower offices, third parties, and less well-financed candidates can and do close the gap with higher status peers on baseline web site features and functionality. Moreover, their increasing use of campaign web sites to lay out issue positions suggests the World Wide Web affords them better coverage than these candidates would garner in mainstream media outlets. The converse also holds: Higher office seekers who are affiliated with either major party and financially well endowed will be the first and most likely to deploy cutting-edge web site features and technology. Disadvantaged candidates face a moving target as the innovation bar is raised each election cycle. Finally, we find more evidence that web site features and functionality by which citizens coproduce content and interact in two-way communication with the campaign and each other are not being adopted widely or quickly. That will require removing the disincentives of high investment of time and low control over message and increasing the demand for such services from political activists and other key constituencies.

One of the major innovations of the 2006 midterm elections emerged not on campaign web sites but on social network sites such as Facebook, MySpace, and YouTube. Facebook profiles typically included informational content such as photographs, statements on policy positions, and qualifications for office. These became, in effect, mini campaign web sites that Facebook members could find by searching for the candidate by name, party, or geographic location. The feature involved and engaged members because they could register support for the candidate, post comments on the candidate's "wall," and invite their friends to become supporters. Facebook then displayed the number of supporters for each candidate and calculated the percentage of "votes" that a candidate had in his or her race.<sup>11</sup> The site facilitated mobilization by including a link to Rock the Vote, which provides voter registration and other election information targeted at young people.

The interesting question is whether these social network sites can be appropriated for political purposes as a campaign resource targeted to specific new populations.<sup>12</sup> Other innovations such as blogs and mobile technologies have not lived up to expectations for their election role, and Meetup seems more useful in bringing together people who are geographically dispersed for pursuit of national-level office, as Howard Dean and Wesley Clark did in the 2004 presidential nomination contest. At this point, social network sites would not appear to be substitutes for campaign web sites: They serve a different primary purpose and audience whose reasons for visiting lie elsewhere. Like Meetup, they may serve to identify supporters to each other across spatial boundaries and create a community of interest that can pursue its political objectives through traditional offline activities (Sander, 2005). For the candidates, these social networking sites offer low-cost exposure to a demographic that may be of particular interest or to a volunteer recruitment pool. In contrast to campaign web sites, any other benefit would seem to derive from their potential for long-term relationship building. For the campaigns, however, the interesting question becomes whether their official web sites will acknowledge and promote their social networking profiles or, if they want to take mobilization to the next level, integrate social networking tools into their own campaign strategy.

## Appendix

---

### Coding Protocol

1. Candidate ID #
  2. Candidate Name
  3. Candidate's Biography (on home page or separate section)
  4. Candidate/Campaign News (on home page or separate section)
  5. Issue statements or section (not including discussion of issues in biographical statement; ok if issues clearly identified on home page)
  6. Campaign videos (professionally made videos, such as campaign ads and welcome messages; video coverage of campaign, speeches, events, interviews, etc.; and homemade videos, similar to the material found on YouTube)
  7. Downloadable campaign materials (the only example seems to be a PDF version of a flier or brochure)
  8. RSS (XML and other similar feeders, i.e., My Yahoo or My MSN)
  9. Online Volunteer sign-up forms
  10. E-Newsletter subscription
  11. Information on obtaining or ordering campaign merchandise (does not include check-offs in Volunteer section; includes campaign materials such as signs, banners, stickers and buttons and merchandise such as t-shirts and coffee mugs)
  12. Donations by credit card (make sure you can pay by credit card, not just fill out information and print out the form w/payment; does not include check-offs in Volunteer section)
  13. Voter registration information (this includes knowing where to vote, how and where to register, information on absentee ballot, early voting, etc.)
  14. Foreign-language version or content (this may appear on a filter page, prior to home page)
  15. Campaign schedule (Where will the candidate be? Make sure there is actual content here, about the candidate's future whereabouts. One site simply listed November 7, Election Day, as the only campaign event.)
  16. Can email campaign (this includes traditional email link or a form that pops up to write your message)
  17. Online poll or survey (usually about voters' opinions)
  18. Candidate/Campaign Blog
  19. Online chat (real time chat, could be 24/7 or scheduled chats)
  20. Webcam (e.g., 24/7 coverage of campaign office or of specific event)
  21. Event form (does not include schedule of events; includes allowing a supporter to RSVP or sign-up for a reminder, invite the candidate to an event, organize a new event, host a house party, etc.)
  22. Tell a friend (Is there a way to pass on information to a friend?)
  23. Letter-to-the-editor link/form (this provides supporters with a link to a newspapers online letter-to-the-editor form. We are not counting campaign-written letters that are forwarded to the newspaper.
  24. Initials of Coder:
- 

## Notes

1. According to Foot and Schneider (2006), *informing* refers to the creation of web site features that present information; *involving* refers to those that facilitate affiliation (relationship building) between the site's

producer and visitors; *connecting* involves creating a bridge between site users and a third actor; and *mobilizing* allows users to involve others in the goals and objectives of the campaign, generally by employing online tools in the service of offline activities.

2. Our list of candidates initially was derived from candidates listed on politics1.com, Project Vote Smart, and C-SPAN.org. Once the elections were complete, we removed any candidates who were not included on the "Official List of Nominees for the 110th Congress," obtained from the House of Representatives' Office of the Clerk. The only candidates we excluded from our final data file who were on the official list were write-in candidates who were not included on any official election results.

3. To see how the web sites appeared when they were coded, go to [www.archive.org](http://www.archive.org) and enter the site's complete URL into the WayBackMachine search engine.

4. Because we recorded the initials of all coders, we were able to check if any one coder made too many errors. We identified one such coder and removed all of that coder's work from the analysis. Corrections were made in any case where mistakes were found.

5. The lack of variance on the dependent variable Web Presence is not conducive to performing multivariate logistic regression analysis for our Senate data. Running the same model as with the House resulted in no significant results.

6. For both of these features, we did not have the resources to follow up on whether visitors received a response from the campaign after they expressed an interest in volunteering or receiving the e-newsletter. In 2008, taking a sample of the web sites and tracking responses from the campaign would provide additional insight into how campaigns use the web and specifically how they are using it to engage supporters.

7. Facebook is a self-enrolling online community whose members, prior to 2006, consisted primarily of students, faculty, and staff at U.S. colleges and universities. To allow its members to connect with candidates, Facebook created entries for all U.S. congressional and gubernatorial candidates in September and then allowed the candidates or their campaign staffs to personalize their profiles with everything from photographs to qualifications for office. Because this feature was not part of the candidate's official campaign web site, we did not seek to identify the presence or absence of a Facebook profile as part of our content analysis. Rather, we went directly to Facebook's *Election Pulse* ([http://www.facebook.com/election\\_pulse.php](http://www.facebook.com/election_pulse.php)) and then identified which candidates had personalized their profiles by the end of October.

8. The standard volunteer form allows a supporter to indicate his or her interest in the following activities: scheduler; organize meetings; researcher; schedule events; fund-raiser; accompany candidate to events; press secretary; sign holder on street, fairs, in front of meetings, and so forth; volunteer coordinator; distribute pamphlets; phone caller; write thank you letters; media list organizer; computer expert; Internet expert; and other.

9. Issues, e-mail address, biography, news, and audio/video clips constitute the Content Index. Credit card donations, online volunteer form, e-newsletter sign-up, blog, voting information, and candidate's schedule constitute the Engagement Index. Downloadable materials, tell a friend, campaign materials, event form, letter to the editor, foreign language content, online volunteer form, and voting information constitute the Mobilization Scale.

The items for each scale were selected on the basis of face validity and subjected to a factor analysis to confirm that all the items loaded on a single factor. Those that did not load high were excluded from the index. Items that loaded high on multiple indices were included in each.

10. Vote results were obtained from CNN (<http://www.cnn.com/election/2006/>). When results for minor-party candidates were not available, we obtained the data directly from the state's agency responsible for compiling voting records and results. Campaign finance data were obtained from the Federal Election Commission. Our indicators for citizen demand are the percentage of residents older than 24 with a college degree, the percentage of residents older than 64, and the percentage of residents classified as White. These data are from the 2000 Census and were obtained from the U.S. Bureau of the Census.

11. Barack Obama (D-Illinois), not a candidate for reelection in 2006, had the highest number of supporters with 21,897, followed by Senate candidates Hillary Clinton (D-New York) with 15,444 and Bob Casey (D-Pennsylvania) with 10,062.

12. Eons.com is a social network site aimed at baby boomers; cafemom.com is one of several aimed at mothers. And the Facebook and MySpace demographic is spreading out: Today, less than half of users are between the ages of 18 and 24 (Johnson, 2007, pp. A1, A14).

## References

- Benoit, P. J., & Benoit, W. L. (2005). Criteria for evaluating political campaign webpages. *Southern Communication Journal*, 70(3), 230-247.
- Bimber, B., & Davis, R. (2003). *Campaigning online: The Internet in U.S. elections*. New York: Oxford University Press.
- Chadwick, A. (2006). *Internet politics: States, citizens, and new communications technologies*. New York: Oxford University Press.
- Connors, J. (2005, September 1-4). *Meetup, blogs and online involvement: U.S. Senate campaign web sites of 2004*. Paper presented at the annual meeting of the American Political Science Association, Washington, DC.
- Cornfield, M., & Rainie, L. (2006, November 5). The Web era isn't as new as you think. *The Washington Post*, p. B3.
- D'Alessio, D. (1997). Use of the World Wide Web in the 1996 U.S. election. *Electoral Studies*, 16(4), 489-500.
- Druckman, J. N., Kifer, M., & Parkin, M. (2006, April 20-23). *Campaigns in a new media age: How candidates use the World Wide Web*. Paper presented at the annual meeting of the Midwest Political Science Association, Chicago.
- Dulio, D. A., Goff, D. L., & Thurber, J. A. (1999). Untangled Web: Internet use during the 1998 election. *PS: Political Science and Politics*, 32(1), 53-59.
- Endres, D., & Warnick, B. (2004). Text-based interactivity in candidate campaign Web sites: A case study from the 2002 elections. *Western Journal of Communication*, 68(3), 322-342.
- Foot, K. A., & Schneider, S. M. (2002). Online action in campaign 2000: An exploratory analysis of the U.S. political Web sphere. *Journal of Broadcasting and Electronic Media*, 46, 222-244.
- Foot, K. A., & Schneider, S. M. (2006). *Web campaigning*. Cambridge, MA: MIT Press.
- Gibson, R. K., & McAllister, I. (2006). Does cyber-campaigning win votes? Online communication in the 2004 Australian election. *Journal of Elections, Public Opinion, and Parties*, 16(3), 243-263.
- Gibson, R. K., & Ward, S. (2000). A proposed methodology for studying the function and effectiveness of party and candidate Web sites. *Social Science Computer Review*, 18(3), 301-319.
- Gibson, R. K., Margolis, M., Resnick, D., & Ward, S. J. (2003). Election campaigning on the WWW in the USA and UK: A comparative analysis. *Party Politics*, 9(1), 47-75.
- Graf, J., Reeher, G., Mablin, M. J., & Panagopoulos, C. (2006). *Small donors and online giving: A study of donors to the 2004 presidential campaigns*. Washington, DC: Institute of Politics, Democracy & the Internet.
- Greer, J., & LaPointe, M. (2004). Cyber-campaigning grows up: A comparative content analysis of web sites for US Senate and gubernatorial races. In R. K. Gibson, A. Römmerle, & S. J. Ward, *Electronic democracy, mobilisation, organisation, and participation via new ICTs* (pp. 116-132). New York: Routledge.
- Gulati, G. J. (2003, August 28-31). *Campaigning for Congress on the World Wide Web and the implications for strong democracy*. Paper presented at the annual meeting of the American Political Science Association, Philadelphia.
- Gulati, G. J., Just, M., & Crigler, A. (2004). News coverage of political campaigns. In L. L. Kaid (Ed.), *The handbook of political communication research* (pp. 237-256). New York: Lawrence Erlbaum.
- Herrnson, P. S., Stokes-Brown, A. K., & Hindman, M. (2007). Campaign politics and the digital divide: Constituency characteristics, strategic considerations, and candidate Internet use in state legislative elections. *Political Research Quarterly*, 60(1), 31-42.
- Ireland, E., & Nash, P. T. (2001). *Winning campaigns online: Strategies for candidates and causes* (2nd ed.). Bethesda, MD: Science Writers Press.
- Jacobson, G. C. (2004). *The politics of congressional elections* (6th ed.). New York: Addison-Wesley.
- Jankowski, N. W., & van Os, R. (2004, July 8-10). *The 2004 European Parliament election and the Internet: Contribution to a European public sphere?* Paper presented at the annual meeting of Internet Communication in Intelligent Societies, Hong Kong.
- Johnson, C. Y. (2007, March 7). Space for everyone: Social networking websites, once purely teen territory, attract all ages. *The Boston Globe*, pp. A1, A14.

- Johnson, D. W. (2001, October). Constituents and your web site: What citizens want to see on congressional web sites. *Congress Online Project*. Retrieved June 27, 2007, from [http://www.cmfweb.org/storage/cmfweb/documents/cmf\\_pubs/constituentsandwebsites.pdf](http://www.cmfweb.org/storage/cmfweb/documents/cmf_pubs/constituentsandwebsites.pdf)
- Kamark, E. C. (2002). Political campaigning on the Internet: Business as usual? In E. C. Kamark and J. S. Nye Jr. (Eds.), *Governance.com: Democracy in the information age* (pp. 81-103). Washington, DC: Brookings Institution.
- Klotz, R. J. (1997). Positive spin: Senate campaigning on the web. *PS: Political Science and Politics*, 30(3), 482-486.
- Klotz, R. J. (2004). *The politics of Internet communication*. New York: Rowman & Littlefield.
- Klotz, R. J. (2007). Internet campaigning for grassroots and astroturf support. *Social Science Computer Review*, 25(1), 3-12.
- Lusoli, W. (2005). Politics makes strange bedfellows. *Harvard International Journal of Press/Politics*, 10(4), 71-97.
- Lusoli, W., Gibson, R. K., & Ward, S. (in press). Italian elections online: Ten years on. In J. L. Newell (Ed.), *The 2006 Italian elections*. Manchester, UK: Manchester University Press.
- Mayhew, D. (1974). *Congress: The electoral connection*. New Haven, CT: Yale University Press.
- Norris, P. (2001). *Digital divide: Civic engagement, information poverty, and the Internet worldwide*. New York: Cambridge University Press.
- Panagopoulos, C. (2005, April 7-10). *Minor parties and the Internet*. Paper presented at the annual meeting of the Midwest Political Science Association, Chicago.
- Puopolo, S. (2001). The web and U.S. senatorial campaigns 2000. *American Behavioral Scientist*, 44(12), 2030-2047.
- Rainie, L., Cornfield, M., & Horrigan, J. (2005, March). *The Internet and campaign 2004*. Washington, DC: Pew Internet & American Life Project. Retrieved June 27, 2007, from [http://www.pewinternet.org/pdfs/pip\\_2004\\_campaign.pdf](http://www.pewinternet.org/pdfs/pip_2004_campaign.pdf)
- Rainie, L., & Horrigan, J. (2007). *Election 2006 online*. Washington, DC: Pew Internet & American Life Project. Retrieved June 27, 2007, from [http://www.pewinternet.org/pdfs/pip\\_politics\\_2006.pdf](http://www.pewinternet.org/pdfs/pip_politics_2006.pdf)
- Sander, T. H. (2005, September 1-4). *E-associations? Using technology to connect citizens: The case of meetup.com*. Paper presented at the annual meeting of the American Political Science Association, Washington, DC.
- Sifry, M. (2004, November 22). The rise of open-source politics. *The Nation*, pp. 14-20.
- Stromer-Galley, J. (2000). On-line interaction and why candidates avoid it. *Journal of Communication*, 50(4), 111-132.
- Van Dijk, J. A. G. M. (2005). *The deepening divide: Inequality in the informational society*. Thousand Oaks, CA: Sage.
- Ward, S., Gibson, R., & Lusoli, W. (2006, September 7-9). *The same the world over? Candidate campaigning online in the UK and Australia*. Paper presented at the Elections, Parties and Opinion Polls conference, Nottingham, UK.
- Williams, C. B., Aylesworth, A., & Chapman, K. J. (2002). The 2002 e-campaign for U.S. Senate. *Journal of Political Marketing*, 1(4), 39-63.
- Williams, C. B., & Gulati, G. J. (2006, August 31–September 3). *The evolution of online campaigning in congressional elections, 2000-2004*. Paper presented at the annual meeting of the American Political Science Association, Philadelphia.
- Xenos, M. A., & Foot, K. A. (2005). Politics as usual or politics unusual? Position-taking and dialogue on campaign web sites in the 2002 U.S. elections. *Journal of Communication*, 55(1), 169-185.

**Girish J. "Jeff" Gulati** is an assistant professor of political science at Bentley College with primary research interests in political communication and the news media, campaigns and elections, telecommunications policy, and representation theory and practice. He may be contacted at [jgulati@bentley.edu](mailto:jgulati@bentley.edu).

**Christine B. Williams** is a professor of political science at Bentley College and conducts research on political communication, with emphasis on new and emerging technologies. She is also an associate editor for the *Journal of Information Technology and Politics* and serves on the Meetup Politics & Governance Advisory Council.