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Do People “Like” Politicians on Facebook? Not Really. Large-Scale Direct Candidate-to-Voter Online Communication as an Outlier Phenomenon

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The online popularity of a few exceptional candidates has led many to suggest that social media have given politicians powerful new ways of communicating directly with voters. Examining whether this is happening on a significant scale, we find that, based on analysis of 224 major party candidates running in competitive districts for the U.S. House of Representatives during the 2010 congressional elections, most politicians online are, in fact, largely ignored by the electorate. Citizens’ attention to candidates online approximates power-law distributions, with a few drawing many followers and most languishing in obscurity. Because large-scale direct online communication between politicians and ordinary people via these platforms is a rare, outlier phenomenon—even in the case of high-stakes, well-resourced campaigns—we suggest that the most relevant political implications of social media take the form of (a) new forums for indirect communication about politics and (b) institutional changes in political communication processes.

Introduction

The spectacular online popularity of a few exceptional candidates like Barack Obama and Sarah Palin has led many to suggest that a new generation of Internet tools—and, in particular, increasingly popular social networking sites such as Facebook, Twitter, and YouTube—have given politicians powerful new ways of communicating directly with people (Golbeck, Grimes, & Rogers, 2010; Gueorguieva, 2008; Iyengar, 2011; Lassen & Brown, 2011; Newman, 2010; Papacharissi, 2009). This notion is familiar from discussions of earlier generations of such Internet tools as websites and e-mails, which were also supposed

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to allow for direct communication between political elites and ordinary citizens (e.g., Coleman & Blumler, 2001). It is a belief that is actively promoted by social media companies and social media consultants who are eager to tap into the hopes and desires of politicians and those who work for them. It is a scenario feared by some journalists, who see their role as intermediaries endangered.

The promise of direct communication seems plausible in light of high levels of Internet use in postindustrial democracies, where access is less of a limiting factor. Vassia Gueorguieva (2008) has suggested that the emergence of social networking sites “created benefits such as increasing the potential for candidate exposure at a low cost or no cost [and] providing lesser known candidates with a viable outlet to divulge their message” (p. 288). Jennifer Golbeck et al. (2010) argue that tools like Twitter provide a forum for “direct communication between Congresspeople and their constituents” (p. 1620). Shanto Iyengar (2011) has recently noted that “the advent of video sharing technology and the rapid growth in the reach of social networking sites [have] opened up vast new possibilities for direct candidate to voter communication” (p. 4). But even as more candidates and citizens *go* online, it is not a given that they actually *communicate* online—that the potential for direct communication is realized. The precondition for this is that people pay attention to politicians on Facebook and similar platforms. As described in this article, a closer examination of candidates’ Web presence suggests that, in most cases, they do not.

We examine whether the dissemination of digital tools has, in fact, facilitated extensive direct communication online between politicians and the people from whom they seek a mandate. Based on an analysis of 224 candidates’ Web presence across campaign websites, Facebook, Twitter, and YouTube in the 112 most competitive House districts in the 2010 U.S. congressional midterm elections, we find that this is not the case. Although most people in the United States are online and most politicians are online, most people and most politicians do not connect online. A small minority of congressional candidates do draw significant numbers of website visitors, Facebook supporters, Twitter followers, and YouTube viewers. But most politicians count their online audiences in the low thousands or even hundreds. The median number of Facebook supporters among the 224 candidates in our data set is 1,806, and the median number of Twitter followers is 365. (The districts they seek to represent have an average population of about 700,000.) Candidates’ online popularity is not normally distributed, with many candidates reaching significant numbers of people, but it is highly skewed, approximating the power-law distributions found in other areas online, such as website visits, inbound links, and numbers of downloads (Hindman, 2008; Russell, 2011; Shirky, 2003). A few politicians draw a lot of attention, but most draw very little, suggesting that large-scale direct candidate-to-voter communication via social media is the exception, not the rule. Such inequalities are often obscured by survey results reporting that a certain percentage of the adult population follows politicians on Facebook or Twitter or gets campaign information online (Smith 2011a, 2011b).

We argue that the often-overlooked actual distribution of citizens’ attention to candidates’ Web presence has important consequences for how we understand the political implications of social media and other online platforms for political communication. Because most people do not “like” most politicians on Facebook, follow their Twitter feeds, and so on, large-scale direct communication via social media sites is a rare, outlier phenomenon, something that happens only in a small minority of electoral contests, even when large numbers of people use these tools for other purposes. This reality reflects the pull dynamics of a mixed and high-choice media environment where people’s (variable and often low) interest in particular politicians

is central to understanding whether candidates succeed in reaching citizens online (Bimber & Davis, 2003; Neuman, Park, & Panek, 2012; Prior, 2007). Our findings in this respect reflect results from research in areas other than electoral politics (Russell 2011; Shirky 2003). Elsewhere (Vaccari & Nielsen, 2013), we use multivariate regression models to identify the causal factors behind these differences and find that, although district-level socioeconomic characteristics have little effect on candidates' online popularity, challengers and candidates in open-seat races tend to attract larger audiences online, as do candidates who are more visible on political blogs. Surprisingly, how intensely candidates are covered by news media, how popular they are in opinion polls, and how much money they spend during the campaign produce no significant effect. In this article, we focus on documenting the central features of congressional candidates' Web presence in the 2010 U.S. midterm elections and examine the conceptual implications for how we understand the role of social media as part of political communication processes.

Adopting a distinction common in both marketing and Web development, we start from the observation that, similar to earlier digital media such as campaign websites, social media are primarily pull media, premised on people opting in. As Bruce Bimber and Richard Davis (2003, pp. 145–157) have argued, the reach and effects of online campaigning are constrained by the "selective" nature of most Internet environments, which are characterized by high volumes of political information, many sources, and much choice afforded to users. As long as most voters pay little attention to politicians and exhibit limited interest in politics, push media such as advertising (including online advertising), direct mail, canvassing, and phone banking are more plausible means for direct communication with citizens. Sometimes, the push/pull distinction is seen as analogous to "old" media (one-way, top-down, mass) versus "new" media (interactive, decentralized, individualized) (Holbert, Garrett, & Gleason, 2010). But it seems more useful to see the distinction as having to do with broad differences in the dominant ways of engaging with different kinds of media and contents. In both marketing and Web development, *push* refers to strategies targeting people regardless of whether they want the information (through television advertising, direct mail, telemarketing, and various forms of online advertising) and are contrasted to *pull* strategies, where the aim is to make the people targeted actively opt in and engage with the message. In these fields, the Internet has long been seen as primarily a pull environment, just as scholars of digital politics have characterized the Internet as a "selective" (Bimber & Davis, 2003) or "lean-forward" (Chadwick, 2006, p. 175) environment (though many forms of online advertising, political and otherwise, represent push strategies and rely on push technologies).

Push media enabling direct candidate-to-voter communication are increasingly employed to target voters on the basis of digital data (gathered from, among other sources, social media) (Howard, 2006; Kreiss, 2012). But our research provides evidence that social networking sites *themselves* remain primarily a pull environment when it comes to candidate-to-voter communication, and they emphasize the importance of the distinction both conceptually and empirically in analyses of digital media and political communication. The power-law distributions of attention documented here suggest that the spread of these platforms only rarely enables the kind of large-scale direct communication between politicians and ordinary people that some scholars have discussed. Thus, their political implications will more often depend on how they are used as platforms for *indirect* communication *about* politics (Chadwick, 2009; Gonzalez-Bailon, Kaltenbrunner, & Banchs, 2010; Wojcieszak & Mutz, 2009) and on how they are integrated into a range of back-end

infrastructural and *institutional* changes in how political organizations organize and communicate (Bimber, 2003; Chadwick, 2007; Hindman, 2008; Karpf, 2012).

We situate our study in the wider discussion of digital media and political communication. We present our methods and data, demonstrate how limited the online support of most candidates is—even in high-stakes, well-resourced elections—and how unevenly online support is distributed, even in a sample of similar competitive congressional districts.

Digital Media and Political Communication

For contemporary political campaigns, Internet tools are integral parts of wider, layered communication strategies. As explained by Barack Obama's 2008 campaign manager David Plouffe (2009, pp. 378–379):

We [tried] to be on our target voters' network TV, cable, satellite, and on-demand; on their radios; all over the Internet; in their mailboxes; on their landlines and their cell phones; if we could; at their doorsteps; and out in their communities. Balanced communications across all mediums is critical in any messaging effort today.

Legacy media such as television and newspapers and inherited forms of campaign communications such as direct mail, canvassing, and phone banking continue to be central to processes of political communication, but campaign websites and, increasingly, a wider Web presence across a range of Internet platforms—including social media sites such as Facebook, Twitter, and YouTube—are today integral to how campaigns try to communicate (Bennett & Iyengar, 2008). By the time of the 2010 midterm congressional elections, an active online engagement well beyond simply having a website was part of the definition of what a professionally run campaign amounted to, and the vast majority of campaigns used several different social media platforms as part of their overall arsenal (Gulati & Williams, 2011).

Part of the reason for the rapid diffusion of Internet tools among competitive campaigns is that the effectiveness of inherited campaign communications such as television advertisements and direct mail is being questioned as audiences continue to fragment and direct impacts on political behavior are sometimes hard to substantiate (Bennett & Iyengar, 2008; Green & Gerber, 2008), suggesting that the Internet and various social media sites—increasingly integral parts of everyday life for much of the population—might be necessary complements to other forms of political communication. The Pew Internet and American Life Project reported that 75% of U.S. adults were Internet users in 2010, and about 45% used one or more social networking sites (Smith, 2011b, p. 3). These high and growing levels of use suggest considerable potential for political communication via Internet tools.

Scholars have approached the question of what the rise of digital media means for political communication processes in different ways. As noted from the outset, a wide range of work has sought to understand what digital technologies mean for indirect communication about politics (in terms of citizens' conversations on social media sites) as well as for the institutional infrastructures for political communication (for example, in terms of how campaigns target voters for contacts). When it comes to understanding the

implications of specific forms of digital communication via websites, social networking sites, and video-sharing platforms, some scholars have focused on how politicians use these tools and have argued that they facilitate large-scale direct communication with citizens; others have focused on people's actual political behavior online and cautioned against assuming that campaigns will reach large audiences on the Web. We might think of these as, respectively, a supply-side approach and a demand-side approach to digital political communication.

On the supply side, scholars focused on politicians' behavior have claimed that the Web in its various forms allows politicians to communicate directly with citizens on a large scale. For instance, Zizi Papacharissi (2009) sees the rise of Internet communications as giving "elites [the ability] to communicate directly with the electorate" (p. 235). Empirical studies along these lines have focused on both campaign communications and constituency communications. Vassia Gueorguieva (2008) highlighted the growing percentage of Americans who report that the Internet is their primary source of campaign news and argued that social media would provide candidates with low cost-exposure and enable less well-known candidates to reach voters directly without having to rely on intermediaries such as the news media. The assumption is repeated in later work, including that of Shanto Iyengar (2011), who uses the 2008 Obama campaign to illustrate how "information technology provides [candidates] with a means of bypassing the media and reaching voters directly" (p. 4). This assumption also underlies several studies of the role of Twitter in constituency communications (Golbeck et al., 2010; Lassen & Brown, 2011).

The notion of direct communication between politicians and ordinary people via these tools is not confined to the United States. Scholars have suggested the possibility of widespread and large-scale direct online communication between candidates and citizens in studies of countries as different as, for example, Denmark (Skovsgaard & van Dalen, 2013), the Netherlands (Kuikemeier, van Noort, Vliegthart, & de Vreese, 2013), South Africa (Steenkamp & Hyde-Clark, 2013), South Korea (Park, Lim, Sams, Nam, & Park, 2011), and the United Kingdom (Newman, 2010). Although many recognize that tendencies toward self-selection and the centrality of users' (generally low) interest in public affairs complicates political communication on the Internet, these studies tend to focus on politicians' behavior online, analyzing the contents of their websites, social networking site profiles, and so on. The emphasis is on the "vast new possibilities" afforded by digital technologies that reduce the up-front costs of communicating with citizens, and the operating assumption is that (self-interested) politicians will seize these opportunities to engage with constituents and potential voters, as they have seized others in the past (Mayhew, 1974). Because they focus on the supply side of digital political communication—on how political elites use Internet technologies—these studies tend to pay little attention to the different affordances that push and pull aspects of online tools provide and to whether people actually engage with politicians on the Web platforms they use.

In demand-side studies, the focus has been on people's political behavior online (rather than on politicians'), and this line of research suggests that we should not expect large-scale direct communication between people and politicians to be the norm online. Empirical studies have found that digital media mostly allow politicians to "preach to the converted" (Norris, 2003), to reach highly interested and supportive minorities while the vast majority pays no attention (Bimber & Davis, 2003; Margolis & Resnick, 2000). This is because, as a mainly pull environment, the Internet gives users more power to control the contents that are exchanged in the communication process than the mass media do. As a result, for direct communication

between politicians and citizens to happen via, for example, social networking sites, users must choose to engage in such interaction. Digital media allow interested voters to directly connect with elites, but they also provide myriad opportunities for those who are not interested to avoid politics altogether (Prior, 2007). As shown by Matthew Hindman (2008), less than one-tenth of 1% of overall Web traffic is directed to political sites, and only 3% involves news and media sites. This portrayal is consistent with theories of political communication that claim that it is irrational and impractical for most voters to constantly monitor the political landscape (Lupia & McCubbins, 1998; Zaller, 2003). (It may be especially appropriate for U.S. citizens, as many researchers have found modest and uneven interest in electoral politics in the United States (Eliasoph, 1998; Hibbing & Theiss-Morse, 2002). These studies have focused on the demand side of digital politics, parallel to our question here of whether citizens actually engage with politicians online. They are, therefore, crucial in understanding the extent to and conditions under which direct political communication through pull digital media occurs.

We take into account both the dissemination of technologies among campaigns (the supply side) and citizens' actual online engagement with specific candidates (the demand side). Empirically, whether direct communication takes place via campaign websites and social media depends on the topology of what we will call politicians' Web presence—not the properties of their website, individual social media profile, or YouTube channel, but their actual online connections with various constituencies across these platforms. Examining politicians' Web presence involves not only studying the take-up and use of various Internet tools by campaigns, nor simply surveying the population to quantify general levels of use, but tending more closely to the platforms where people and politicians actually *meet* online (Foot & Schneider, 2006; Nielsen, 2011). This is the level at which our data from the 2010 midterm elections lead us to suggest that, while virtually every candidate involved in competitive congressional races in 2010 used a wide variety of pull Internet tools to communicate with the electorate, most candidates had limited success in getting people to actively opt in to visit their website, support them on Facebook, follow their Twitter accounts, or view videos on their YouTube channels. Almost all politicians and the majority of the population are online, but most people and politicians do not meet online. Aggregate figures reporting the percentage of the population that follows politics online obscure how unevenly distributed attention to politicians is on the Web, and the large online following gathered by Obama and Palin—or at the congressional level by candidates such as Michele Bachmann (R-MN) and Alan Grayson (D-FL)—is not representative of the average politician's ability to communicate with the electorate. Most politicians' online activities and their political implications are, therefore, better understood by focusing on indirect communication and institutional changes than on the basis of notions of direct communication.

Methods and Data

To map candidates' Web presence in the 2010 U.S. midterm elections and test whether the "vast new possibilities" of direct communication between candidates and voters are, in fact, widely realized in practice, we collected data in 112 comparable competitive House races. The United States is a particularly important national case study because the combination of high levels of Internet use and a competitive, professional, and well-funded campaign environment suggests that candidates will use sophisticated online communications strategies. We sampled districts well in advance of the election without knowing anything about the character of the candidates and campaigns to avoid the tendency to analyze the role and

implications of new technologies primarily on the basis of post hoc analysis of a few individual spectacularly innovative or successful campaigns (such as the Dean campaign in 2004 and the Obama campaign in 2008). To control for district size, we included only House races. To be in a position to systematically examine the role of social media, we wanted a large number of comparable, high-stakes, well-resourced races in which one would expect candidates and campaigns to have both the incentives and the means to make full use of all tools at their disposal. Using the mid-August prospective ratings of districts by *The New York Times*, *Congressional Quarterly*, the *Cook Political Report*, and *Real Clear Politics*, we built a purposive sample that included any race that was classified by any source as either a toss-up, leaning Republican, or leaning Democrat and excluded all districts that were classified by all four sources as "safe" or "solid" for either party. This yielded a total of 112 congressional races in our data set.¹ We focused on Democratic and Republican candidates only, thus excluding minor-party candidates, whose relative lack of resources and visibility strongly affects their online presence, as other research has shown (e.g., Gulati & Williams, 2007).

In each district, we mapped candidates' Web presence and their following across four platforms: their personal websites, their profiles on Facebook and Twitter, and their channels on YouTube. We included websites to assess differences and similarities between Web 1.0 and Web 2.0 tools. We did not include the declining MySpace platform or smaller or less popular platforms such as MeetUp, LinkedIn, and Vimeo. We collected longitudinal data on candidates' presence and popularity on these four online platforms at three stages during the conventional campaign period between Labor Day and Election Day: at the start of the race (September 6–8), in the middle of it (October 2–4), and in the final stage (November 1–2, the date when the election was held). Our coding frame was structured as follows:

- For *campaign websites*, we obtained the site's URL through a Google search and an estimate of its unique monthly visitors from the Site Analytics publicly available service provided by the market research firm Compete (www.compete.com).
- For *Facebook profiles*, we obtained the profile's URL from direct links from candidate websites or, absent these, from a direct search for the candidate's name on Facebook. We then coded the number of "likes" (or "friends," in the rare instances in which a candidate had a personal rather than a public page) for that profile. In case a candidate maintained multiple official profiles, we coded the profile the campaign website linked to.

¹ The congressional districts included are Alabama 2 and 5; Arkansas 1, 2, 3, and 4; Arizona 1, 5, and 8; California 3, 11, 18, 44, 45, and 47; Colorado 3, 4, and 7; Connecticut 4 and 5; Delaware at-large; Florida 2, 8, 12, 16, 22, 24, and 25; Georgia 8 and 12; Hawaii 1; Iowa 1 and 3; Idaho 1; Illinois 8, 10, 11, and 14; Indiana 2, 8, and 9; Kansas 3 and 4; Kentucky 3 and 6; Louisiana 2 and 3; Maryland 1; Massachusetts 10; Michigan 1, 7, and 9; Minnesota 1 and 6; Mississippi 1; Missouri 4; Nebraska 2; Nevada 3; New Hampshire 1 and 2; New Jersey 3, 7, and 12; New Mexico 1 and 2; New York 1, 13, 19, 20, 23, 24, 25, and 29; North Carolina 2, 8, and 11; North Dakota at-large; Ohio 1, 6, 13, 15, 16, and 18; Oregon 5; Pennsylvania 3, 4, 6, 7, 8, 10, 11, 12, 15, and 17; South Carolina 5; South Dakota at-large; Tennessee 4, 6, and 8; Texas 17 and 23; Virginia 2, 5, 9, and 11; Washington 3 and 8; West Virginia 1 and 3; Wisconsin 3, 7, and 8.

- For *Twitter profiles*, which we identified through the same procedure as for Facebook, we coded the number of “followers” for each candidate profile.
- For *YouTube channels*, which we identified through the same procedure as for Facebook and Twitter, we coded the number of “total upload views,” which is the sum of all views of all the videos uploaded to a given channel.

The data we rely on here have varying degrees of validity. Different measures of website traffic have varying advantages and disadvantages, and most are plagued by considerable uncertainty when dealing with low levels of unique visitors.² YouTube video views may be slightly inflated, because the system does not discount multiple views of the same videos for users who are not registered with the site or who have not logged in during their session. (This may slightly overestimate the number of times individual citizens have watched YouTube videos on these channels, but the bias it introduces works against rather than for our main argument.) The data collected on social media sites are generally behavioral and thus should be considerably more valid. However, there have been cases, most prominently that of former House Speaker Newt Gingrich, of candidates allegedly paying “follow agencies” for generating thousands of fake user accounts to create the appearance of online support for a particular campaign, so this data too should be treated with some caution.

The coding was performed by the authors, one of whom coded all Republican candidates, the other all Democratic ones. To assess intercoder reliability, we randomly sampled 10% of the districts at each longitudinal stage, and each author coded the websites that the other had coded. With respect to candidates’ popularity on social networking sites, the coders were in disagreement in identifying the relevant profile in only 2 out of 62 candidates for Facebook, 2 for YouTube, and 1 for Twitter. When differences between the coders emerged, they were discussed and resolved by consensus, resulting in standard operating procedures that were employed in subsequent coding and contributed to increasing reliability in the November coding compared to the previous two coding periods.

The Topology of Candidates’ Web Presence in the 2010 Midterm Elections

The data highlight four features of the topology of congressional candidates’ Web presence in the 2010 midterm elections central to understanding political communication online. All four suggest that these

² Similar to any data coming from commercial sources, the limitations of our measures of website traffic must be acknowledged. First, Compete combines a randomly selected national sample with data from Internet service providers. Because they often come from local cable providers, these data tend to be concentrated in some geographic areas, which may overrepresent some regions. Second, monthly unique visitors is a less precise audience metric than other figures such as page views, visits, or time spent on the site. However, no such measure was available through any other publicly accessible source. In our view, however, alternative data sources are likely to support our findings. As we will show, the distribution patterns for website traffic closely resemble those for other measures of online popularity and strongly correlate with them (see Table 3), so they pass the test of criterion validity.

pull digital campaign environments, where communication occurs only if *both* candidates and citizens opt in, rarely lead to widespread direct communication, thus emphasizing the need for a more differentiated understanding of the political implications of digital media. The first feature is the *limited reach* most candidates have online in terms of the absolute number of people who support, follow, view, or visit them on various sites. The second feature is the *highly concentrated and unequal distribution of attention* to candidates' online efforts across the 112 districts analyzed, where a handful of candidates attracted tens of thousands of people while most remained relatively obscure. The third feature is the *strong correlation between attention across different platforms*, where candidates who have a highly visible presence on any one site are likely to be prominent on others, too. The fourth feature of candidates' Web presence is that, although attention to candidates generally increased over the two months from early September to Election Day on November 2, *the overall patterns of limited reach, concentrated attention, and cross-platform correlation remain in place throughout the campaign*. We will discuss each of these four features in turn. In our analysis of each, we use the following four measures of how visible (in terms of supporters, followers, etc.) a candidate is on a given platform in a given month: number of Facebook supporters and Twitter followers at the time of a given observation, YouTube video views over the month since the last observation, and unique visitors to campaign websites.

Figures 1 to 4 show the distribution of attention on each platform in November, ordered by the amount of attention each candidate attracted and broken down by party affiliation (including only candidates actually using a given tool). Each figure is accompanied by a box listing the median number of supporters/followers/views/visits in the same month. These figures clearly demonstrate the limited reach of most congressional candidates' Web presence in 2010. Putting aside party differences (which may, to a large extent, depend on an electoral environment that was hostile to incumbent Democrats and need not be replicated in the future), the median amount of attention paid to candidates on each of the four platforms examined suggests that most have small online followings, despite a widespread dissemination of all these tools among both campaigns and the citizens they try to appeal to. Virtually all (222 of the 224) candidates sampled were on Facebook, the most popular social networking site in the United States in 2010, with an estimated 125 million active users.

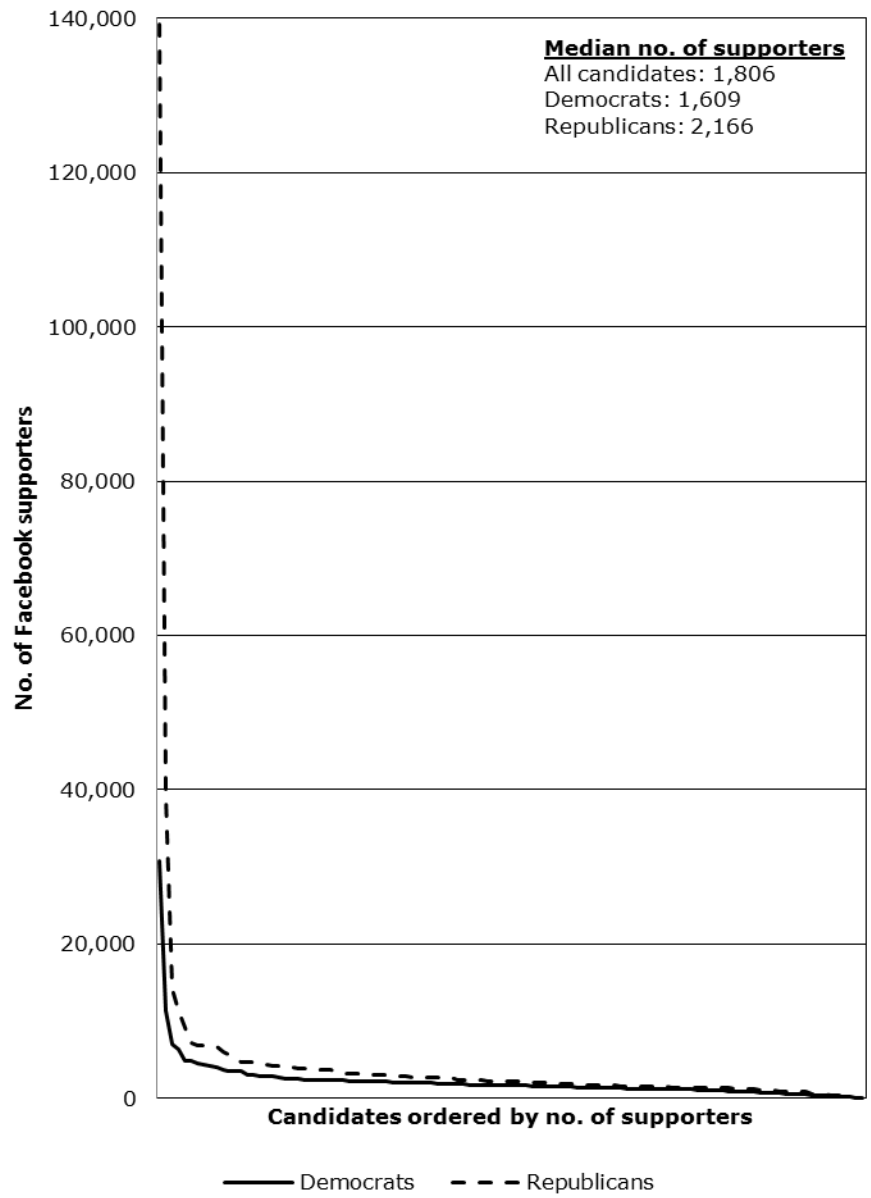


Figure 1. Facebook Supporters (November).

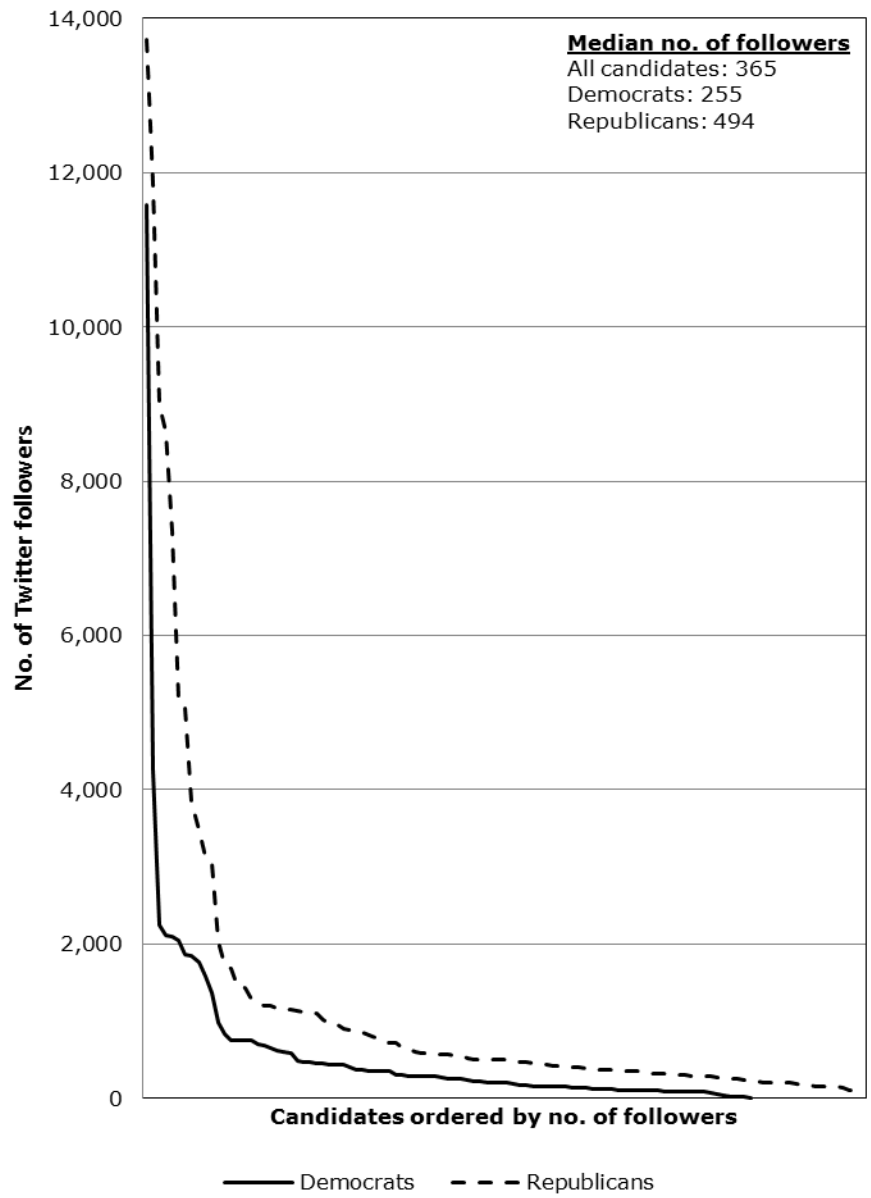


Figure 2. Twitter followers (November).

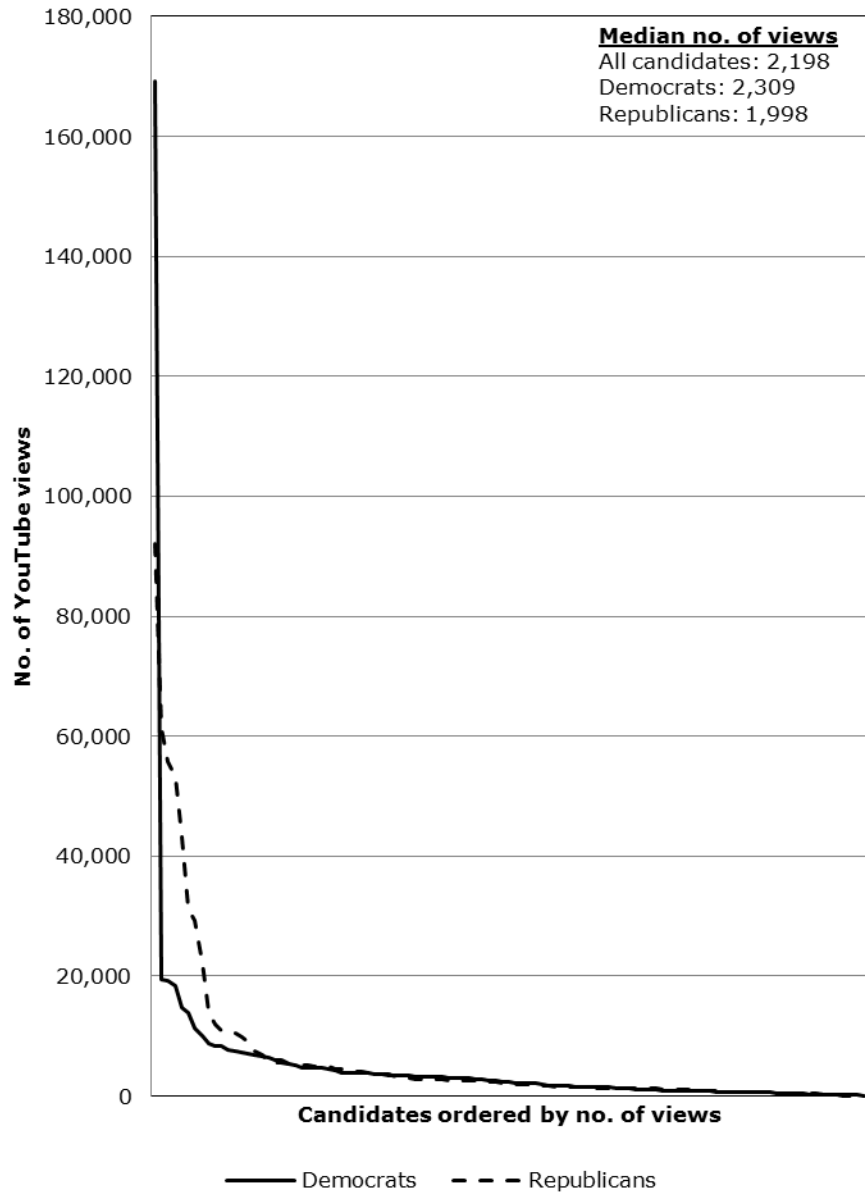


Figure 3. YouTube views (November).

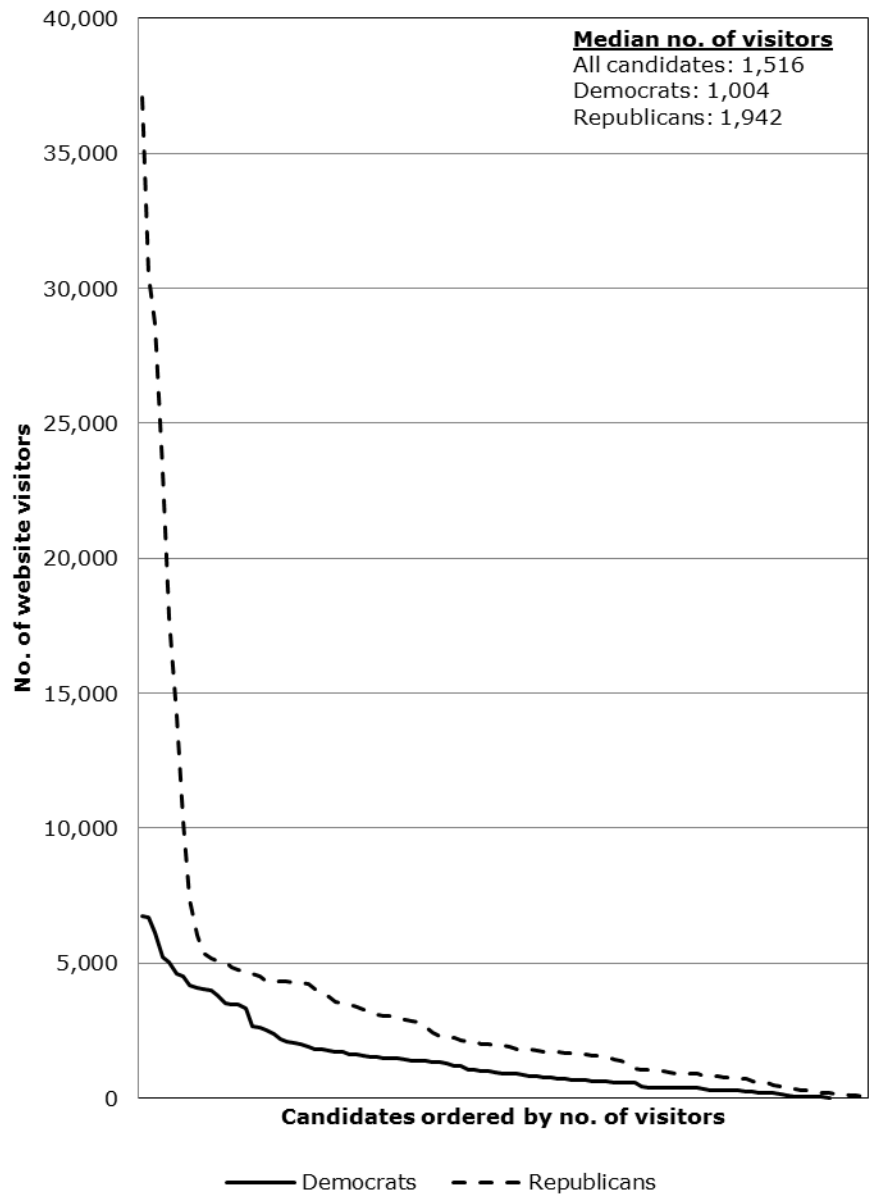


Figure 4. Website traffic (November).

The median candidate had 1,806 supporters by Election Day, and 95% of the candidates had fewer than 7,000 supporters. On Twitter—the third most popular social networking site in the United States in 2010 (after Facebook and MySpace), with tens of millions of user accounts—the median candidate had just 365 followers. 203 candidates had profiles on this platform, and 95% had fewer than 3,500 followers. Of the 217 candidates who had a YouTube channel, the median candidate generated a total of 2,198 views across all their posted videos between early October and early November; 95% of candidates in the sample generated fewer than 19,000 views.³ All 224 candidates had a campaign website. According to Compete, the median site attracted 1,516 unique visitors in November, and 95% had fewer than 6,000 unique visitors (see Table 1).

Table 1. Adoption Rate and Median Amounts of Attention in November 2010.

Platform	Adoption rate	Median audience	95% of candidates had fewer than . . .
Facebook	99%	1,806	7,000 supporters
Twitter	91%	365	3,500 followers
YouTube	97%	2,198	19,000 video views
Website	100%	1,516	6,000 unique visitors

To put these numbers into perspective, consider that House candidates run in districts with an average population of around 700,000. In a midterm election with low turnout expected, their vote goal will be 100,000 or more and their target audiences for television advertisements, direct mail, and field programs will be 250,000 or more, depending on the resources available. In terms of direct communication with the electorate, 1,806 Facebook supporters or 2,198 YouTube video views is not a lot, and given the very high number of users on these platforms, low penetration is an unlikely explanation for the relative absence of interest in candidates online. Although 75% of the adult population are Internet users and 45% are active

³ The fact that the YouTube numbers are higher than those for Facebook and Twitter does not necessarily mean that candidates attract more attention on YouTube compared to other online campaign channels. While one can only like or follow a candidate once on Facebook and Twitter (and can stop doing so), and while one need visit a candidate website only once a month to be counted as a unique monthly user, the total number of views on a candidate's YouTube channel is cumulative over time and additive across all videos uploaded. Because most campaigns host dozens of videos on their YouTube channels, the total views of videos on their channels are probably considerably higher than the number of unique video viewers. A measure of the latter is, unfortunately, not available to the public and is only poorly represented by the number of channel subscribers, because very few people subscribe to candidates' YouTube channels: In November, the mean number of subscribers to our candidates' channels was 61 and the median number was 14.

on one or more social networking sites (Smith, 2011a), cute babies often attract more attention online than the men and women seeking election to the House of Representatives.

As is the case in presidential politics, where both Obama and Palin generated much interest online and attracted many supporters and other politicians struggled, a handful of congressional candidates do stand out from the crowd. On Facebook, the most noteworthy are Rep. Michele Bachmann (R), reelected in her Minnesota district, and Rep. Alan Grayson (D), who lost his district in Florida. Both are prominent across the Web (as well as on cable news channels). Bachmann had 139,203 Facebook supporters by Election Day, and Grayson had 30,807. Of 222 candidates on Facebook, only 6 had more than 10,000 supporters.

This is not unique to this platform.⁴ Attention is highly concentrated across the board. Because of the inequalities observed, averages tell us little about candidates' visibility online, and we use medians instead to approximate the modal outcome—this suggests that Steve Kagen (D-WI), with his 1,633 Facebook supporters by November, 88 Twitter followers, 1,009 YouTube video views in the month up to Election Day, and 1,417 unique visitors to his campaign website in November, is more representative of attention to most candidates' Web presence than prominent outliers like Bachmann and Grayson. Kagen is everywhere online, but few people seem to care. While it is crucial to understand what factors explain the high online popularity of the few exceptional outliers, it is equally important to acknowledge that most candidates attract very small audiences on these platforms despite their efforts to be visible on as many sites as possible.

The second important feature of the topology of candidates' Web presence in 2010 is that attention was highly concentrated across all platforms. One way to quantify the concentration of online support across all 224 candidates examined is by calculating the Gini coefficient for each platform (a metric that, for example, Hindman, 2008, has used to analyze the concentration of Internet traffic). The Gini coefficient for a given population and resource takes values between 0 and 1, with higher values corresponding to greater inequality. Table 2 shows the Gini coefficients for Facebook, Twitter, YouTube, and website traffic from September until November.

⁴ On Twitter, Jesse Kelly (R-AZ) and Sean Duffy (R-WI) both had more than 10,000 followers, and, in addition to (some) of the candidates already mentioned, Raul Labrador (R-ID), Rene Ellmers (R-NC), and Jon Runyan (R-NJ) had more than 10,000 unique visitors to their websites in November. Grayson is the only Democrat out of 112 who attracted more than 10,000 supporters, followers, or unique visitors on Facebook, Twitter, or a campaign website.

Table 2. Gini Coefficients for Attention Across All Platforms and Observations.

	September		October		November	
	Democrats	Republicans	Democrats	Republicans	Democrats	Republicans
Facebook	.44	.59	.46	.56	.44	.60
Twitter	.72	.66	.67	.65	.66	.64
YouTube			.68	.73	.73	.74
Website visitors	.57	.54	.51	.50	.51	.59

Note. For YouTube, the October values are calculated as accumulated video views between September and October, and the November values are accumulated video views between October and November.

Concentration varies across the four platforms, with Facebook ranging from a low of .44 to a high of .60, Twitter from .64 to .72, YouTube from .68 to .74, and website traffic from .50 to .59. Facebook and website traffic are the least unequal and vary the least over the two months. But attention across all four platforms throughout all three observations is more concentrated than income is in the United States (estimated at .38 by the OECD (2011)). This strong concentration is also reflected in Figures 1 to 4, which showed a typical power-law distribution of attention on all four platforms.⁵

The third important feature of the topology of candidates' Web presence in 2010 is that attention on any one platform is highly correlated with attention on other platforms. The Internet is a lumpy space in which success on one platform often goes hand in hand with success on other platforms. Table 3 presents Pearson's correlation coefficients between logged values for support on each of the four platforms in

⁵ We used various methods to test whether this was indeed a power law distribution. First, Shapiro-Wilk tests of normality returned values that justify rejecting the null hypothesis that the data are normally distributed (the statistics were .187 for Facebook, .460 for Twitter, .420 for YouTube, and .440 for website traffic; for all of them $p = .000$). Subsequently, we ran ordinary least squares regression models with logged values as variables. Taking Facebook as an example, the dependent variable was the log of "likes" that a candidate received and the independent variable was the log of the number of other candidates that received at least as many "likes" as the candidate in question. The same logic applies to regressions based on Twitter followers, YouTube views, and website visits. The models fit the data very well, with R^2 coefficients of .825 for Facebook likes, .794 for Twitter followers, .821 for YouTube views, and .904 for website traffic. The empirical structure of our data thus closely resembles the pattern we would expect if it followed a pure power-law distribution and is in line with what others have found in other areas of online activity.

November. Each correlation is highly significant ($p = .000$) and rather strong (ranging from .328 to .503).⁶ The strongest correlation was found between support on Facebook and on Twitter, while YouTube video views and website visitors show the weakest correlation. Facebook is most correlated with other platforms, while website visitors are least correlated with the remaining environments, suggesting that social media, which afford easy sharing, drive more traffic to other platforms than simple links on websites.

Table 3. Correlations Between Measures of Attention on Different Platforms.

	Facebook		Twitter		YouTube		Website visitors	
	Pearson's <i>R</i>	<i>n</i>	Pearson's <i>R</i>	<i>n</i>	Pearson's <i>R</i>	<i>n</i>	Pearson's <i>R</i>	<i>n</i>
	coefficient		coefficient		coefficient		coefficient	
Facebook	—	201	.503***	216	.406***	204	.423***	
Twitter	.503***	201	—		.338***	196	.332***	191
YouTube	.406***	216	.338***	196	—		.328***	200
Website visitors	.423***	204	.332***	191	.328***	200	—	

Note. All values are for November and are logged.

*** $p \leq .000$.

The fourth important feature of the topology of candidates' Web presence is its relative stability. While the visibility of most candidates increased across most platforms from September to November, and a few candidates dramatically expanded their Web presence, the overall patterns of limited reach, concentration, and correlation between platforms remained in place throughout the height of the campaign period. Leaving aside those engaged in late primaries and those who joined later, 199 candidates in our data set were on Facebook from September to early November. Over these two months, their combined number of Facebook supporters grew by 30%—more than 150,000 in absolute numbers. But just two candidates, Republicans Michele Bachmann (up by almost 67,000) and Mary Bono Mack (R-CA, up by more than 10,000), account for half of the growth. The median change in the number of supporters among the 199 candidates on Facebook from September to November was just 300. Several of them actually *lost* supporters as they changed profile pages and were unable to draw old supporters from one page to another. Notable among those who lost supporters was Dan Benishek (R-MI), who went from an impressive 22,209 fans in September to a below-median 1,382 in November.⁷ As shown by the relatively stable Gini coefficients

⁶ The values have been logged to take into account the power-law distribution of the data.

⁷ The occasional profile change by candidates, with the new profile often failing to draw supporters from the old one, made it problematic to measure online support over time. Adding the numbers of supporters across all candidate profiles would have overrepresented popularity due to likely high duplication rates, but ignoring

in Table 2, two months of growth did nothing to change the highly concentrated and unequal distribution of support on Facebook. Likewise, the total number of followers of the 180 candidates who were active on Twitter from early September to early November grew by 17%—just over 23,000. Here, growth was slightly less concentrated, with nine candidates accounting for half the growth and the Gini coefficient accordingly dropping somewhat throughout the campaign among both Democrats and Republicans.

Conclusions

This article has examined whether the 2010 U.S. midterm congressional elections saw widespread direct communication between people and politicians via the pull media of Facebook, Twitter, YouTube, and campaign websites. Based on an analysis of the 112 most competitive congressional districts, it did not. Across all four of the most commonly used Web platforms, and with respect to the vast majority of candidates, the kind of direct candidate-to-voter communication that Golbeck et al. (2010), Gueorguieva (2008), and Iyengar (2011), as well as many other scholars studying digital politics in countries other than the United States, have recently highlighted as something made possible by social networking sites remains exactly that—possible, but not something that actually happens on a large scale for most candidates.

Closer examination of 224 candidates' Web presence reveals a terrain characterized by four features that challenge the notion that candidates communicate directly with significant numbers of citizens online: (1) limited reach in terms of the number of people who follow most campaigns on various platforms; (2) high levels of concentration of attention across all platforms, with a few politicians drawing many people, and most drawing few; (3) considerable correlations between visibility on each platform, where candidates who do well on one also tend to do well on the others; and (4) noticeable growth in the total number of people following candidates in the course of the campaign period without any change in the overall pattern of highly skewed distributions.

These findings challenge the notion that pull Internet tools such as campaign websites and social media profiles facilitate large-scale direct communication between candidates and citizens. Although our analysis supports studies that have shown widespread adoption of new tools for campaign communications among candidates on the supply side (Gulati & Williams, 2007, 2011), the rather small size of their audiences supports the view that much political communication online directly reaches only a small minority on the demand side, most likely those who were already interested in the politician in question (as found for earlier generations of Internet tools; see, e.g., Bimber & Davis, 2003; Norris, 2003). Only a few exceptional politicians attract substantial followings online; most candidates reach very few people, even when they use popular Internet tools like Facebook. This suggests that the few candidates with significant online audiences are not as much ahead of the curve as they are on top of the curve. If the limited number of politicians in our sample who attracted a lot of attention were distinguished by being early adopters of particular platforms, perhaps others could do likewise and achieve similar results. But with adoption rates of the four platforms considered here ranging between 91% and 100% among candidates, and large parts of the adult

a change in a campaign's self-definition of what its official Web presence was would have been arbitrary. We thus chose to take campaigns at their word and measured audiences of those social media profiles their websites linked to.

population already using them regularly, the highly uneven distributions are clearly not the outcome of uneven levels of use. Identifying the causal factors behind this variation is obviously important, and it is a task we take on elsewhere (Vaccari & Nielsen, 2013). This article thoroughly documents the often-overlooked empirical patterns that challenge assumptions and generalizations about online campaigning common in academic research and especially among political professionals and journalists. There is an abundant supply of candidates online on a variety of platforms, but few people pay attention to most of them. As suggested from the outset, this is probably attributable at least in part to the combination of a high-choice media environment (Prior, 2007), where pull dynamics drive media use (Neuman et al., 2012), coupled with most Americans' limited and unevenly distributed interest in politics (Eliasoph, 1998; Hibbing & Theiss-Morse, 2002). In such an environment, push media—including traditional (such as television advertising and direct mail), digital (such as micro-targeting of individual voters through personalized messages delivered on various online outlets, such as search advertising), and mixed (such as data-driven field operations including door-to-door canvassing and phone banking)—remain the most important channels for large-scale direct candidate-to-voter communication. (Our argument also suggests considerable potential for comparative research—if we assume, for example, that candidates in two different countries both characterized by a high-choice media environment adopt the same social media tools for similar political purposes, the outcomes will be significantly different if there are pronounced national differences in the scale and scope of interest in politics.)

As long as the patterns and dynamics identified here are in place, most politicians will not be able to rely on their websites and social media presence to engage in direct communication with the electorate on any significant scale—not so much because politicians do not want to, but because most people do not care much about candidates the way most campaigns are waged in contemporary America. A few exceptional candidates draw large followings online, but most politicians fail to build extensive online audiences. As emphasized from the outset, the little direct communication most politicians manage to engage people in through pull online channels does not mean that the growing popularity of such tools, including social media platforms, has no political implications. We would point in particular to two areas. The first concerns Internet-enabled and sometimes large-scale *indirect* communication *about* politics on various online forums, many of which allow for new forms of sharing, remixing, and commentary (Chadwick, 2009; Gonzalez-Bailon et al., 2010; Wojcieszak & Mutz, 2009). Even if communication to the median 365 Twitter followers may not help a candidate much, what people say about the candidate on Twitter may still matter (especially in cases where journalists start using social media material as part of their news coverage). The second area concerns *institutional* implications as digital technologies are integral to back-end changes in how campaigns are organized and run and in who gets involved in them and how (Bimber, 2003; Chadwick, 2007; Hindman, 2008; Karpf, 2012). Attracting 1,806 Facebook supporters is unlikely to affect an election result, but mobilizing them as volunteers or donors might make a difference, particularly in tight races and party-internal politics such as primaries. Social networking sites and similar pull media may only rarely facilitate large-scale communication between candidates and citizens, but they may become part of the institutional infrastructures (including large-scale databases) major parties and campaigns are building to target voters through other forms of push communication (Bennett & Manheim, 2006; Howard, 2006; Kreiss, 2012). Both kinds of research, whether focused on indirect communication or institutional changes, move beyond analyzing digital political communication primarily in terms of individual-level behavioral effects and relations, and they both deserve more attention.

As long as competition for attention is so fierce and levels of interest so low and uneven, only a few politicians will attract large online audiences that allow them to communicate directly to the electorate to any significant degree via various social networking sites. The rest will have to find other ways, including both traditional means, such as direct mail, field operations, and television advertising, as well as new forms of push marketing online. The topology we have mapped here is one dominated by a few exceptional outliers who attract tens of thousands of supporters and viewers, but where the great majority of candidates—even in well-funded, competitive, high-stakes contests—labor in relative obscurity online. As political communication researchers coming to terms with this new environment, we have to understand both the rare, prominent, and potentially high-impact outlier candidates *and* the much larger majority of politicians who assembled modest online followings. For each Michele Bachmann and Alan Grayson followed by tens of thousands, there are 50 or more Steve Kagens—candidates with a few thousand online supporters who have to find other ways of communicating with the electorate, candidates who probably speak to more people in person in the course of the campaign than they communicate with using Facebook and Twitter.

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