



New ICTs and the Study of Political Communication

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What is the relationship between new information and communication technologies (ICTs) and the study of global political communication? This article reflects briefly on four important aspects of this complex question. We begin at the most concrete level, outlining several prominent empirical opportunities and challenges created by a globally interconnected digital communication network. Next, we examine how new ICTs matter, exploring the mechanisms through which diverse contemporary technologies alter the dynamics of political communication. Third, we consider what the changing landscape of mediated communication means for political communication theory. There is tension between the opportunity to advance existing theory and the need for radical new theorizing, and we argue that both approaches are relevant. We conclude by mapping out important research opportunities located at the intersection of new ICTs and political communication.

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Significance of Technology for Empirical Research

New ICTs have profound implications for how political communication scholars conduct their work. Rather than detailing every aspect of the transformation, we briefly outline three significant opportunities: new forms of experimentation, new ways of collecting data, and new analytic techniques. First, political communication researchers can use the substantial processing power of low-cost computers to conduct novel experiments utilizing unique manipulations (for a thorough review, see Iyengar, 2011). From morphing the face of a prominent political figure so that it more closely resembles study participants' faces to manipulating the sources to which real-time news stories are attributed, new ICTs allow scholars to conduct research that had previously been impossible. We are just beginning to understand what we can do with these technologies, and we anticipate continued innovation.

Second, there are new ways of collecting data about people's behavior. With some three-quarters of Americans going online (Pew Internet & American Life Project, 2009), and growing numbers of international users (Commission of the European Communities, 2009; International Telecommunication Union, 2010; Löff & Seybert, 2009), it is increasingly feasible to reach diverse samples via the Internet (though the digital divide persists; see Servaes & Heinderyckx, 2002). Online panels are progressively more representative of country-level populations (Couper & Miller, 2008), and other nontraditional "markets" for finding and recruiting study participants are emerging (e.g., Amazon's Mechanical Turk; see Kittur, Chi, & Suh, 2008).

Improvements in online panels are due in part to innovative recruitment strategies, such as recruiting via traditional RDD sampling (e.g., Knowledge Networks) or matching online respondents to the demographic characteristics of a random sample (e.g., YouGov, formerly Polimetrix). Opt-in online panels, which provide financial rewards for participation (e.g., the E-Rewards panel, Harris Interactive), are also increasingly popular, perhaps due to their comparatively low cost, but these nonprobability samples do exhibit important limitations. They tend to be skewed toward politically engaged and knowledgeable individuals (Chang & Krosnick, 2009), and more important, they sometimes differ from random-digit-dial (RDD, a widely trusted technique) telephone surveys when comparing relationships between variables and changes in variables over time (Pasek & Krosnick, 2010). Limitations such as these raise important questions about our ability to generalize from nonprobability online samples; however, opt-in panels are quite inexpensive and may be effective in experimental settings where they can provide more demographic diversity than is typically found in college-student samples.

In contrast to opt-in panels, Internet-based surveys using probability samples are a very effective means of collecting representative data, even outperforming RDD telephone surveys in terms of random measurement error, survey satisficing, and social desirability response bias (Chang & Krosnick, 2009). Open questions about these evolving methods do remain. For instance, might the reduced accountability associated with online surveys contribute to response set bias, and might panel conditioning lead online panelists to be more attentive to online media (for related discussions, see Chang & Krosnick, 2009, pp. 646, 648)? Nevertheless, these data collection techniques are promising. Online panels are an increasingly attractive alternative, given the high costs and declining response rates (Curtin, Presser, & Singer, 2005) associated with traditional telephone and face-to-face surveys.

If purposefully collected research data represent one opportunity for political communication scholars, implicit data collection represents the other. Operators of advanced digital telecommunication systems are able to collect vast stores of information describing users' behaviors, creating opportunities for what has been termed "computational social science" (Lazer et al., 2009). When you place a cell phone call, the network operator knows the number of the caller and the person called, the duration of the call, where the caller was when the call was placed, and much more. When you visit a website, the site operator knows which site referred you (a search engine, a blog, etc.), where your computer is located on the network (which can approximate geographic location), and in some cases, when you last visited the site and how often you do so. There are exceptions: Some individuals go to great lengths to anonymize their online identity, preventing web servers from collecting much of this information. Even then, though, online activities are logged. The difference is that, in these cases, only Internet service providers (ISPs)—and anyone the ISPs choose to share information with (e.g., the FBI's use of Carnivore and NarusInsight)—have access to these data. In aggregate, these types of information create a vast digital trace of the lives we live, online and off. Political communication scholars presumably can learn a great deal from these data, which offer insight into the types of content that individuals choose to use (or to avoid), how they share information with one another, the significance regarding information consumption of one's location geographically and within social networks, and much more.

Anonymous aggregated data is a promising avenue for conducting political research, as it affords unique opportunities for structural, multilevel, and macro-level analyses. But if tracking-intensive environments offer scholars opportunity, they also pose threats. Companies are understandably protective of proprietary data, in no small part because attempts to share data with researchers have backfired in the past. When so much information is collected, protecting people's privacy is no small feat. The simple fact that a search can be conducted anonymously, or that identifiers can be removed before data are disseminated, does not necessarily prevent someone with access to your entire stream of searches from learning a great deal about you (see Barbaro & Zeller, Jr., 2006). Furthermore, most people assume that searches are ephemeral—presumably explaining why people are comfortable searching for their own social security number or advice on how to commit crimes. Thus, the simple act of recording search activity, though commonplace throughout the industry, could be seen as an invasion of privacy. Witness the backlash when Google started tailoring ads shown to its email users based on the content of their email (Gmail Privacy Page, 2004). The sense that the digital technologies we rely on every day represent a private domain is as resilient as it is wrong. As scholars begin to tap into these data pools, as they almost certainly will, criticism is likely to follow (for example, see Parry, 2011). And what happens when analyses applied to relatively open media spaces are applied to populations without civil liberties? The ethics of dealing with these types of data are an unexplored minefield.

Even potential solutions can be problematic. Companies that collect these data, and researchers who use them, might strive to protect users by keeping the data under lock and key. But this poses a profound threat to one of the principles of scientific inquiry: the principle that scientists should be allowed to examine the data on which colleagues base their claims. The more closely guarded the data, the harder it becomes for scientists to share them and expose their research to the healthy scrutiny of their peers. We are not suggesting that these data cannot be used ethically, only that designing appropriate protections requires careful thought. Another obstacle in the path of research is the uncontrollable

volatility of online material, which makes data collection and storage extremely problematic in the absence of systematic archiving. In sum, a new era of empirical political communication research is dawning, and there is much that we do not yet understand. The data are rich, and the opportunities for new understanding are immense, but we must proceed carefully.

Third, the significant computational power of inexpensive personal computers affords scholars the ability to pursue new types of analysis, such as social network analysis (SNA), agent-based modeling, and automated textual analysis. SNA takes the perspective that populations and their discourses contain multiple complex and connected structures (Scott, 1991). Rather than presume group membership or boundaries, network analysis imputes these attributes from observed patterns of interconnection. Thus, structures emerge out of collections of conversations, reflecting the choices individuals make about who they speak to and how often. Network analysis of political discussions, in particular, can reveal patterns of subgroupings and internal divisions (e.g., Himelboim, Gleave, & Smith, 2009). Like a map of a physical landscape, depending on one's goals, different locations, people, and groups are likely to be more strategic than others. This form of analysis identifies key people and groups in a number of strategic locations throughout the map. Network analysis of the content of these exchanges (e.g., the texts contained in social media discussions) can also reveal structured differences in language use of groups within the network. This allows us to consider, for example, whether homophily extends from the social level to the level of message content. Do subgroups within discussion networks make selective use of some terms and exclude other terms and phrases that appear only in competing subgroups? The resulting maps can illustrate the landscape of a discussion, demonstrating that some word pairs appear with greater frequency in some communities than in others.

Agent-based modeling is another computationally intensive research approach for studying political communication (Bullock, 2009; Fowler, 2005; Huckfeldt, Johnson, & Sprague, 2004). The "agents" in these models, including their traits (e.g., political ideology) and decision rules (e.g., agents with a shared ideology are more likely to interact than those that differ), are digital representations of political actors that have been modeled on the real world. Furthermore, many traits are dynamic, changing in response to prior interactions. For example, agent-based models of conversations in social media can incorporate representations of an agent's current activity level and the status of other agents that fluctuate over time. As agents interact with one another repeatedly, agent-based models simulate the emergent products of millions of individual pairs of interactions, often in very little time. As a result, we can observe a range of possible aggregate social outcomes based on small changes in individual-level behavior. Thus, agent-based models are to empirical data what meteorological models are to satellite maps of weather. Each can help us to understand the other better, and refinements of our understanding based on one approach can lead to new insights in the other. Put another way, agent-based models improve through comparison with increasingly timely and detailed observation of the naturally occurring phenomena.

There are many forms of automated textual analysis that may prove useful to political communication scholars. For example, researchers have sought to automatically detect political bias in news coverage by observing co-occurrences of terms connoting political party and those reflecting evaluative judgments, (e.g., "Republican" and "good"; see Holtzman, Schott, Jones, Balota, & Yarkoni,

2011), or by looking for disproportionate use of phrases favored by one party over another in newspaper writing (Gentzkow & Shapiro, 2010b). Computation linguistics has been used to identify deceptive opinion posts on review sites (Ott, Choi, Cardie, & Hancock, 2011), and to flag potentially inaccurate political information posted online (Ennals, Byler, Agosta, & Rosario, 2010). And automated classifiers, trained using human-coded data, have been used to automatically determine whether millions of blog comments contain political content (Munson & Resnick, 2011).

All of these techniques require significant expertise in order to be implemented correctly, and some may require programming skills that typically fall outside the purview of social science. We do not mean this as an argument against employing them; the opportunities represented here are immense. Instead, we suggest it may be increasingly important for political communication scholars to engage in interdisciplinary collaboration.

Sociotechnical Change

Next, we turn to some of the theoretical questions facing the field. When examining the nature of sociotechnical change, we take as our starting point an assertion: New ICTs have the power to alter the way politics are done. From political discussion to political deliberation, and ultimately, to political engagement, technologies have altered the nature of democratic discourse. Whether one is looking back over the past decade or the past centuries, it is clear that innovative modes of communication matter. Consider a few examples. In the 19th century, a network of semaphore towers that traversed France played an important role in the Napoleonic Wars (Holzmann & Pehrson, 1994). The telephone system and direct mail helped to consolidate the power of interest groups in the United States during the early 20th century, with radio and television contributing to the emergence of the mass audience (Bimber, 2003). In the 1980s, the armed resistance to the South African apartheid regime used a computerized encryption scheme to transmit messages between Nelson Mandela, the imprisoned ANC leader, and other important leaders of the movement (Garrett & Edward, 2007). Most recently, self-reports and usage data suggest that social media were an integral part of the Arab Spring (Mourtada & Salem, 2011). Although it is too soon to claim a definitive causal influence—and there are reasons to question the strong assertions made in the news media about their role (Morozov, 2011a, 2011b)—the prominence of these technologies suggests that they did play some part in the waves of protest that swept over North Africa and the Middle East in early 2011. In sum, we have witnessed changes in political talk and mobilization—some striking, others subtle—associated with online communication (Bimber, 2003; Boulianne, 2009; Chadwick & Howard, 2009; Gil De Zúñiga, Puig-I-Abril, & Rojas, 2009; Mossberger, Tolbert, & McNeal, 2008). These broad patterns leave no doubt that new communicative capabilities are catalysts (and, in some cases, enablers) for change in political behavior. The more interesting question concerns the role that these capabilities play and the conditions under which these transformations occur.

How do technological affordances translate into social change? Most political communication scholars are quick to dismiss hard technological determinism, which is encapsulated in Marx's phrase, "The [hand-mill] gives you society with the feudal lord; the steam-mill, society with the industrial capitalist" (1920, p. 119). More generally speaking, this is the notion that technologies evolve along a predictable trajectory, and that technological change inexorably brings with it social change (Heilbroner,

1994; Innis, 1951; McLuhan, 1964). Scholars have demonstrated that such claims only appear viable when society is viewed from great distance, through a macro-social lens (Misa, 1994). The more closely one examines the phenomena that are changing, the more visible the role of individual intentions and social pressures become. Despite scholars' rejection of the label, however, technological deterministic discourse has not spared political communication. We see this every time scholars eschew what people are capable of and are willing to do for what new technologies make possible.² For example, scholars have suggested that the Internet will transform otherwise thoughtful citizens into Balkanized, polarized, and potentially violent, mobs (Ayres, 1999; Galston, 2003; Sunstein, 2001). We do not dispute that these outcomes are possible, but we object to characterizations of them as inevitable outgrowths of a specific technologically mediated communication environment. In fact, there is evidence that online polarization differs greatly across societies, with the U.S. case being a rather extreme one (Etling et al., 2010). Studying the "possible" is much easier than tackling the complex interaction between technological capabilities and those who would use them. Assertive predictions about people's future behavior based on mere possibilities offered by new technologies maintain a regrettable confusion between offer and demand, between the technology that is available and how it will actually be appropriated by any number of users.

Because research often receives more attention when it tries to anticipate the future, scholars sometimes overlook the lessons that can be learned from studying the present and the past, and from taking stock of the many ways in which uses and events evolved unexpectedly. Research contemplating the future of political communication should resist being dragged along by baseless prophecies and wishful predictions that belong more to advocacy or wild guessing than to sound science. Technological hype should not be driving research; it should remain just one (though a crucial one) among many elements of the context in which political communication takes place. In some cases, social science may even have the potential to shape technological innovation (Garrett & Resnick, in press). The requirements or expectations of society that are identified by research can inform the agenda of engineers and entrepreneurs, with the ultimate goal of contributing to, maintaining, or enhancing the healthy democratic functioning of our changing societies.

The Future of Political Communication Theory

Changing technologies and changing practices raise an important question concerning political communication theory. Namely, how must theory evolve in response to these transformations? We suggest three possible answers to this question, delineating boundary conditions that separate each from the others. One answer is that the new communication environment provides both the incentive and the opportunity to examine well-established theoretical mechanisms in new ways, thereby deepening—and possibly challenging—our understanding. That is, new technologies can change the way we think about both the implications and the mechanisms of important communication phenomena. Ideologically motivated selective exposure is a case in point. All but dismissed by the 1970s, the topic lay virtually dormant until the rise of the Internet, which brought with it visions of a hyper-personalized automated

² See (Leonardi, 2009) for a related discussion set in the context of organizational communication.

news environment (Negroponte, 1996). Despite a historic lack of empirical evidence for selectivity, the prospect of individuals easily choosing among a wide range of ideologically extreme sources brought renewed attention to the issue (Sunstein, 2001). Thanks in part to the unique attributes of Internet-based research, scholars have been able to shed new light on the phenomenon, looking at it using novel experimental manipulations (Iyengar & Hahn, 2009), content analyses (Hargittai, Gallo, & Kane, 2008), surveys (Garrett, 2009; Stroud, 2008), and media usage data (Gentzkow & Shapiro, 2010a). These studies have contributed to a clearer understanding of how individuals' attitudes shape their exposure to political information, and they have demonstrated that selective exposure continues to be a useful theoretical tool, despite dramatic technological change. The approach to theory exemplified here also serves as a sensible foil to over-zealous claims that "new" media are fundamentally distinct from earlier technologies (Eveland, 2003), and that "everything is different online," pushing back on deterministic tendencies by focusing on our understanding of people.

A second answer to the question of how theory will change is that theoretical mechanisms which have proved fruitful in the past must evolve. For instance, although media may still be relevant to agenda setting, what it means and how it operates is fundamentally revolutionized. Thus, there is a particularly rich future for agenda-setting research, as Benkler's (2006) view, in which bottom-up flows defined in the networked public sphere confronts Hindman's (2009) view which posits that radical changes in media forms have not changed the fact that elites are still in charge: *Plus ça change, plus c'est la même chose*. Similarly, empirical and theoretical exploration of the networked public sphere (Friedland, Hove, & Rojas, 2006) may help to alleviate the tension between an increasingly complex sociopolitical system and citizens' limited motivations and abilities to participate in democracy. Whether the public sphere will be nurtured and renewed by network technologies, challenging political elites' status quo, remains an important open question. What is clear, though, is that this theory must evolve to accommodate a rapidly changing technological reality. Scholars must continue to address the significance of the "networked" aspects of the public sphere, as well as the effects that different network attributes may have within the dynamic of generating a more informed society and functional public opinion. We readily acknowledge that the mechanisms which shape human behavior are evolving in response to new technological affordances, and that adapting our theoretical frameworks may be the most appropriate response.

The third answer is also the most radical: In order to make sense of critical disjunctures in our understanding of the world, a paradigm shift may be required. Bennett and Iyengar (2008) are among the clearest advocates of this perspective, arguing that our ability to make sense of political communication in a high-choice, politically diverse, low-marginal-cost communication environment that blurs traditional communication categories (e.g., public and private, mass or interpersonal, etc.) is stymied by undertheorizing. In their view, scholars are facing empirical paradoxes that simply cannot be resolved with the existing body of theory; instead, we must rethink "the nature of audiences, messages, and delivery technologies in political communication processes" (ibid., p. 716). One could argue that this strategy differs from the second more in degree than approach. Both are premised on the notion that existing tools for understanding political communication are insufficient, and that innovation is required. But an epistemological paradigm shift requires, by definition, the rejection of a prior worldview precipitated by an inability to resolve anomalies within it (see Holbert, Garrett, & Gleason, 2010). This is a contentious premise around which the present authors could not reach consensus. On the one hand,

people use media to engage in political communication in ways that are dramatically different from the past, and the patterns of use are unprecedented. On the other hand, it is not yet obvious that these new patterns and media are fundamentally incompatible with evolving theoretical tools. Whatever our individual positions, though, we agree that this is a profoundly important debate which our field must vigorously confront.

Important Research Opportunities

We conclude by identifying three opportunities for fruitful research that have emerged in the face of rapidly changing ICTs. First, the study of deliberation remains an intriguing challenge. A good deal has been learned about how the Internet affects political discussion, as well as about how political discussion can affect public opinion (Brundidge & Rice, 2009; Cappella, Price, & Nir, 2002; Delli Carpini, Cook, & Jacobs, 2004; Eveland Jr. & Hively, 2009; Gastil, Black, & Moscovitz, 2008; Stromer-Galley, 2003; Wojcieszak, 2008; Wojcieszak & Mutz, 2009). Yet the media landscape continues to change dramatically, and opportunities and arenas for political conversation continue to change more rapidly than the research literature. In the short history of the Internet, it was shown that online and offline worlds may complement each other but still differ in terms of key discussion attributes (i.e., incidental exposure to an asynchronous online discussion in a blog cannot be replicated offline); this may have important implications for deliberation. For example, online conversations are often text-based, purposive, and goal-oriented (Berger, 2009, p. 270), suggesting that this mode of conversation could foster engagement, as these characteristics are known to enhance informational utility and mobilizing effects among discussants (Gil de Zúñiga, Veenstra, Vraga, & Shah, 2010).

More recent developments in digital media mean that political discussion may take place on mobile devices, include video, or be embedded in the richly social content of social networking sites. The implications of these possibilities for deliberative processes are not yet clear, and so much early work on deliberation in online settings should be re-addressed to the new media environments. This is especially urgent in the case of democratizing nations, where digital media are providing, in some cases, the first real opportunities citizens have had for political deliberation. At the same time, many of the big theoretical ideas about deliberation remain contested, such as whether Habermasian ideals are even appropriate standards by which to judge how people communicate about politics (Mutz, 2008; Sanders, 1997).

A second research opportunity involves strengthening the focus of the discipline on the sociology of organizations, fields, and networks, situating communication and flows of information in the context of social ties, shared meaning, changing norms and practices, and encoded collective knowledge. This implies limits on what can be understood about political communication from traditional, individual-level analysis. In one social or organizational context, or one place in a network, a person may act differently than when situated in a different context or network structure. Few behavioral models have been sensitive to context in this way (Bimber, Flanagin, & Stohl, in press). Scholars also too often overlook the fact that online communication networks do not simply circulate information; they embody social capital and encode collective knowledge (Kelly, 2010). When bloggers cite each other, or people email a link to an

article in *The New York Times*, they are not simply communicating or transmitting information; they are enacting social ties.

As a consequence, individual and societal attributes have limited predictive power with respect to important macro-level phenomena, such as revolutions, social movements, and misinformation that “goes viral.” Instead, many of the Internet’s implications for politics reside at higher levels of organization than the atomized public. Crucially important action occurs at these higher levels, even as actions are enabled and constrained by individual behavior. As Castells (1996) and Hindman (2009) have observed, many of the most profound changes shaping our world are in the “back-end” of the sociopolitical system. To understand these phenomena, individual features must be considered in a relational, network context, and modeled to understand how the particular structure of connections among agents with a given distribution of attributes can result in very different outcomes than would occur among agents which bear the same attributes, but are differently connected.

In short, political communication needs to move beyond its preoccupation with individual-level analysis by adding new focus on social structures and institutions. Responding to this challenge requires empirical and theoretical work. Empirically, it entails mapping the dynamics of social media spaces and the patterns of social media behavior. Identifying the cycles through which these ecologies move could prove invaluable. Analytically, many of the tools described in the first section of this article are crucial to meeting this challenge. Working directly with Internet data can help: for example, examining both “content,” such as text, media, and hyperlinks, and behavioral data, which show what people are actually doing online (as opposed to what they report on surveys). Agent-based modeling is another powerful tool for grappling with the challenges that the Internet poses for individual-level research paradigms, focusing as it does on the societal properties that emerge from, and subsequently shape, repeated interactions of individuals. Theoretically, transcending individual-level analysis means that generating or adapting theories which allow us to bridge the gap between social position and individual actions is essential.

Finally, there are many important questions about how ICTs shape political communication in a global setting. Since their inception, the relevance of (individual-level) models of political communication has been tied, implicitly and explicitly, to electoral systems, which function as the mechanism by which the discipline has been able to bridge what a sociologist would call the micro-macro divide. This has contributed to the criticism of the discipline as being too U.S.-focused, or at least relevant only to certain modes of democratic society. After all, in places where elections do not happen or do not matter, it is hardly important whether a given phenomenon makes a particular category of the population 5% more or less likely to vote, agree with a proposition, prefer one politician over another, etc. And yet, as recent events in the Arab world have highlighted, Internet-era political communication processes are implicated in large-scale political shifts, some with global consequences. Even in societies with open electoral systems, the Internet’s impact on politics is being felt well outside the voting booth, such as in the diminishing power of the news media to constrain elite behavior (Jones, 2009), or the rapid evolution of, and mobilization around, new political identities (Bennett, 2003).

We know that media effects are highly contingent on context, but we also know that digital media have some properties that do not vary much—their speed, decentralized network structure, search as a primary function, etc. In these ways, digital media are as different from analog broadcast media in Sichuan as they are in Silicon Valley. At the same time, however, we must be careful not to exaggerate the similarities. Decentralized networks do have critical nodes (e.g., the Great Firewall of China; see Goldsmith & Wu, 2006); transmission speed is vulnerable on multiple fronts (e.g., different types of Internet connection and the influence of network neutrality on content delivery; see Lee & Wu, 2009); search works differently in different regions of the world (China, again); and users differ in their ability and motivation to navigate the Internet and acquire the information necessary to effectively engage in deliberative politics, regardless of the capabilities of the network itself (Correa, Hinsley, & Gil de Zuñiga, 2010; Hargittai, 2010). But having access to this global communication network is significant, whether via PC or cell phone, dial-up or broadband.

Thus, we are faced with the question of transposition. In the information society more than ever, political actors are on the lookout for innovative practices that work, and then are frantic about transposing them to their own context. And in most cases, it would seem that, in spite of the ever-more globalized world that we live in and the impressively harmonized uses of ICTs, it is as difficult as ever to capitalize on lessons learned. For instance, efforts to replicate the 2008 Obama campaign's success around the world have lead mostly to failures, because the alchemy of each election is so unique (Heinderyckx, 2010). Scholars must reflect on the extent to which the changes in practices and uses are universal, and why. Addressing the tension between common affordances and context sensitivity on a global scale will require international cooperation, particularly in a context where global issues increasingly feed global struggles for attention in fierce global advocacy efforts. It is unclear to what extent it will be possible to identify processes or issues that can be generalized, but there are certainly lessons to be learned here.

Conclusion

In this short article, we have addressed four provocative aspects of the relationship between new ICTs and political communication in a global context. Empirically, the discipline has an opportunity to collect and analyze data on a scale and scope that would have been unimaginable just a few years ago, but there are clear challenges that accompany this. We believe that theoretical issues are even more striking. We have briefly outlined an approach to assessing the relationship between the capabilities afforded by new technologies and the political communication processes that utilize them, arguing that scholars must strive to avoid making deterministic assumptions through remembering that consequences are defined by how technologies are used and by whom, not by what they enable. We also consider what new ICTs mean for the theories that undergird political communication today. There is tension between viewing these technologies collectively as a means of generating new insights into existing theory, as a force requiring adaptation, or as a source of fundamental paradoxes that can only be resolved via paradigm shift. We cannot resolve this tension here, and we argue that it is critical that our scholarly community push this debate forward. Finally, we have gestured toward three promising areas of research. We suggest that we need to deepen our understanding of deliberation in the Internet era; that political

communication scholars would be well served by complementing research focused on individuals with research at the level of organizations, fields, and networks; and that we have an opportunity and a responsibility to grapple with political communication in a global context. It remains to be seen whether lessons from one context can be transposed to another, but faced with a common global network infrastructure that facilitates political communication in many parts of the world, we are certain that we have a great deal to learn.

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