

## Technology, Freedom, and Democracy: an Evolving Debate



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In his 1983 book *Technologies of Freedom*, Ithiel de Sola Pool wrote that "freedom is fostered when the means of communication are dispersed, decentralized and easily available, as are printing presses and microcomputers" (5). Writing well before the Web was invented, and when email was in its infancy, Pool saw emerging electronic media as potentially heralding a new era of free speech in the United States. Far from considering this outcome an inevitable product of the features of new technology, however, Pool stressed the political nature of the regulation of technology, the persistence of older regulatory frameworks despite technological change, and the real possibility that government control would squelch the freedom-enhancing potential of computer-based communication.

In the twenty-one years since his volume was published, Pool's incipient "technologies of freedom" have evolved into a commercial, multimedia network connecting nearly every country, including many where the same normative and legal protections for free speech do not apply. As these changes have unfolded, scholars have sought to analyze both sides of the reciprocal relationship between governments and their citizens' use of new communication technologies - the impact of state regulation on the freedom of communication, and the impact of this communication on the nature of governments and political regimes. With the Internet's initial growth occurring primarily in the advanced democracies, a first wave of research examined the questions of state regulation and individual liberties. As the Internet began diffusing to developing countries (including a number of authoritarian regimes) in the mid- to late-1990s, scholars also began to address the second ques-

tion, focusing on democracy and democratization. Throughout the ongoing discussion of these issues, a central focus of the debate has been the relative weight of technological characteristics in determining political outcomes.

In this essay I review Pool's book along with several more recent contributions that represent different stages in the debate over technology, freedom, and democracy. Given the interdisciplinary nature of this research question, scholars of law, communications, and public policy have made important contributions to the debate; the books reviewed here reflect that diversity, though all should be accessible to those with only a political science background. In the conclusion I suggest several opportunities for further research in this emerging field of inquiry.

### Media Convergence and the Threat of Government Regulation

In a book that was both unusually prescient for its time and also particularly cognizant of historical context, Pool surveyed the evolution of regulatory frameworks for different media in the United States and outlined the challenges for those who wish to see the First Amendment protection of print media extended to electronic speech via computer networks. The history of strong legal protections for publishing contrasts sharply with the regulatory regime for broadcast media, where authorities have imposed much greater restrictions on who can communicate and what content is allowed on the air. Both of these approaches were initially justi-

Ithiel de Sola Pool (1983). *Technologies of Freedom* (Cambridge, MA: Belknap/Harvard).

Brian Kahin and Charles Nesson eds. (1997). *Borders in Cyberspace: Information Policy and the Global Information Infrastructure*. (Cambridge, MA: MIT Press).

Lawrence Lessig (1999). *Code and Other Laws of Cyberspace* (New York: Basic Books).

Marcus Franda (2002). *Launching Into Cyberspace: Internet Development and Politics in Five World Regions* (Boulder, CO: Lynne Rienner).

Indrajit Banerjee ed. (2003). *Rhetoric and Reality: The Internet Challenge for Democracy in Asia* (Singapore: Eastern Universities Press).

fied on the basis of technological characteristics - the widespread diffusion of the printing press versus the scarcity of frequencies in the broadcast spectrum. Nonetheless, each regime persisted through subsequent technological changes-the development of capital-intensive printing technologies that favored large newspaper publishers over small print shops, and the invention of cable television where the spectrum scarcities of early radio did not apply.

While each regulatory regime evolved separately, Pool argued that they were intersecting with the development of new electronic communications because of the "convergence of modes" - the ability of computer networks to carry print, voice, and video traffic. Given the history of treating new technologies as analogous to old ones, this development raised the question of which regulatory regime would prevail. Pool saw computer communication as similar to the printing press in its minimal expense and ease of accessibility, but he also recognized that the same First Amendment protections would not necessarily be extended.

*Technologies of Freedom* ends on an optimistic note about the American commitment to pluralism as well as the "pliancy and profusion of electronic technology" (251), but one gets the sense that this was more hope than prediction. In the struggle between technologies that may favor freedom and governments that seek to control them, Pool certainly saw the potential for regulators to gain the upper hand.

Pool's perspective was unabashedly libertarian, and many will disagree with his assertion that free markets are more conducive than government regulation to free media, especially in an era where deregulation has allowed for such concentration in the

ownership (and arguably, the content) of the means of communication. On the whole, however, the book was a valuable early contribution, both for its historical perspective and for insisting that the relationship between technology and freedom is determined by both technological characteristics and institutional contexts.

### **The Libertarian "Gotcha": The Impossibility of State Control**

A libertarian perspective on the regulation of communications media has been a common one among American scholars, and similar sentiments prevailed during the mid-1990s as the incipient electronic media of *Technologies of Freedom* gave way to the global Internet. In contrast to Pool's emphasis on the threat of government regulation, however, much of the early analysis of the Internet argued for the impossibility of effective government control - a position James Boyle once described as the "libertarian gotcha" (Lessig 1999: 5). This position, expressed in the 1997 edited volume *Borders in Cyberspace*, derives from two key characteristics of the Internet: its global, transborder nature and the particular technological tools it offers for concealing communication. In assessing the relative freedom of technology use, *Borders in Cyberspace* thus takes a step away from Pool's emphasis on the influence of regulatory institutions and places greater weight on the nature of the technology.

The contributors to *Borders in Cyberspace*, who are mostly legal scholars, emphasize the difficulty of territorially-based regulation of the Internet by nation-states. Post and

Johnson's opening essay is perhaps the best statement of the legal issues involved. Noting several prominent lawsuits of the mid-1990s, such as Germany's effort to stop U.S.-based

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Compuserve from allowing German residents to access online pornography, Post and Johnson argue that the rise of the global Internet poses complications for legal systems built on territorial jurisdiction, and that cyberspace will only be effectively governed if it is considered a separate "place" with its own set of rules. Michael Froomkin's essay adds additional perspective on the Internet's technological characteristics, showing how the network was designed to route around impediments to the free flow of information and how cryptography and anonymizing technologies can make it difficult to identify the sender of a message or its contents. In contrast to Pool's concerns about the challenges to free speech online, Froomkin argues that "any government that allows its citizens to become a part of the global electronic network will be forced to live with a freedom of speech even greater than that contemplated by the authors of the First Amendment" (148).

While most of the chapters in *Borders* focus on how well-established

democracies can regulate use of the Internet, Kedzie's chapter takes an explicitly global approach and examines the other side of this reciprocal relationship: the effect of computer-based communication on governments and regime type. In doing so, Kedzie takes a step beyond Pool's argument, hypothesizing that multidirectional, reciprocal communication technologies like email are conducive to democracy in a way that broadcast, print, and bidirectional media like the telephone are not. To test this hypothesis, Kedzie estimates a series of statistical models of the cross-national relationship between connectivity to email networks and the Freedom House scores for civil and political liberties. He finds a persistent correlation between these two variables across different models and functional forms, though he is appropriately cautious about interpreting causality and suggests that the most likely relationship between the two is a virtuous circle. One may quibble with Kedzie's vagueness about causal mechanisms or certain elements of his operationalization and statistical analysis,<sup>1</sup> but his results do suggest an interesting empirical relationship that is worthy of further testing.

### **The Sources of Effective Regulation: Flexible Technology and Institutional Constraints**

On the whole, *Borders in Cyberspace* is a useful statement of the optimistic view of communication technology, freedom, and democracy, but its perspective draws heavily on technological determinism and there are limitations to its conception of the nature of the Internet. Lawrence Lessig's *Code and Other Laws of Cyberspace*

responds to these drawbacks, seeking both to reinterpret the nature of Internet technology and to bring law and politics back into the discussion of Internet regulation. Lessig's first critique is that the control-frustrating technological characteristics touted by the Internet's libertarian boosters are not necessarily static or characteristic of the Internet as a whole. Encryption technologies may facilitate anonymity, but other features that allow for identification may be added to the Internet, such as the "cookies" that identify repeat visitors to a web site. Different component networks of the Internet can have different technological features, some facilitating greater surveillance and control - America Online, for instance, allows for much greater oversight of users' activity than most university networks.

Lessig's second critique of the libertarian position concerns the difference between perfect and effective control. Limiting every individual's online behavior is not necessary, he argues; strong but imperfect deterrents can be very effective. Technological features are one type of constraint on Internet use, but they can be supplemented by institutional constraints: law (which governments manipulate directly), as well as social norms and market incentives (which can be used as indirect forms of regulation).

According to Lessig, the combination of technological and non-technological constraints can act as an effective deterrent even when it is possible to circumvent these restrictions. Lessig does not fully shift the balance away from the influence of technological characteristics; ultimately he believes that the architecture (or "code") of the Internet is paramount. But by showing that this architecture is flexible, can be directly regulated, and can be supplemented by other forms of regula-

tion, Lessig outlines a complex (if not always clear) interplay that brings non-technological variables back into the argument.

Lessig's main concern is with the commercial control of the Internet in the U.S., and despite the arguments summarized above, he sometimes appears skeptical of governments controlling the Internet elsewhere. In a frequently cited statement, Lessig argues that the United States has "exported to the world, through the architecture of the Internet, a First Amendment in *code* more extreme than our own First Amendment in *law*" (167). But this property can be altered by those who construct the architecture of the Internet. In the U.S., this job is generally done by privately-employed hardware and software engineers; thus Lessig envisions them instituting elements of control that serve primarily commercial purposes. However, when the engineers developing the technological characteristics of computer networks are state employees in authoritarian regimes, the elements of control they implement may serve the interests, for example, of the Chinese government rather than Microsoft. Thus, while Lessig does not spell it out himself, his perspective suggests the possibility of authoritarian regimes exerting control over portions of the global Internet within their purview.

### **Generalizing the Argument: Internet Regulation in Developing Countries**

Marcus Franda's *Launching into Cyberspace* is motivated by this basic question of whether countries outside of the advanced democracies have accepted or resisted the free flow of

information on the Internet. Franda positions himself somewhere between the libertarian perspective of *Borders in Cyberspace* and the image of pervasive control in Lessig's *Code*, stressing political culture and regime-related variables in explaining how and why developing country governments seek to regulate the Internet. While the new democracies of Eastern Europe have sought to satisfy the freedom of information requirements necessary for joining the European Union, Arab governments of the Middle East have taken a more cautious approach because of their sensitivity to political dissent and pornography, and Saudi Arabia and the United Arab Emirates have implemented extensive mechanisms for Internet censorship. Likewise, China seeks technological control of the Internet in part by channeling international traffic through a gateway largely controlled by state-owned China Telecom.

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Franda views the question of Internet regulation in developing countries through the lens of the international regime for Internet governance, and his analysis asks whether states that oppose the principles of this regime seek to engage with and reshape it or simply pursue their own national policies. While this angle is intriguing, its application in *Launching into Cyberspace* is problematic for several

reasons. First, it is questionable whether governance of the Internet actually does promote the free flow of content, as Franda assumes; most states have agreed on other elements of openness such as non-proprietary technological standards, but they have widely contrasting preferences about content regulation (Drezner forthcoming). To the extent that states implement national policies restricting free information flow, Franda interprets this behavior as deviant and "isolationist," and he is skeptical of its sustainability without offering a compelling explanation. But this focus on Internet regulation as a knee-jerk reaction to supposedly global norms de-emphasizes the reasons why authoritarian regimes proactively seek to guide Internet development according to a national plan. Top-down control of network infrastructure facilitates not only the censorship of public Internet use, but also improving information flow between different ministries to boost governmental efficiency, or prioritizing Internet development in certain key industries when international bandwidth is limited.

The principal value of *Launching into Cyberspace* lies in its bringing empirical evidence to bear on the question of Internet development outside of the advanced democracies. Franda's book is one of the first to gather cross-national qualitative data on this question and analyze it within a single theoretical framework, and his global focus is welcome given that many studies look within one region only. Unfortunately, the evidence from different cases is presented in a somewhat uneven and ad-hoc fashion, complicating systematic comparisons between them. To some extent this characteristic may spring from Franda's rather unwieldy focus on 42 countries. Nonetheless, *Launching into Cyberspace* is an important step

away from the preponderance of anecdotal evidence about the Internet in the developing world, much of which reached the same sort of conclusions as early libertarian statements about the Internet in the advanced democracies.

### Shifting the Focus: Internet Use and Democratization

While dealing centrally with the question of whether developing countries resist the free flow of information online, Franda does not directly address the question posed by Kedzie - whether the global diffusion of the Internet has implications for democracy. This question is the one taken up in the recent edited volume *Rhetoric and Reality*, which looks at the political impact of the Internet in nine Asian countries ranging from Singapore to Japan. In the introduction to the book, Indrajit Banerjee accepts that the Internet's architecture may make it difficult to control, but he pays greater attention to the social, political, and economic conditions prevailing in different countries and how these act as moderating variables between the Internet and any political impact. Since the Internet is an active medium, he argues, its impact depends on how users employ it. This explicit focus on Internet users is a productive one, moving beyond Franda's more top-down focus on government regulation.

Several contributions to *Rhetoric and Reality* offer particularly useful case studies. Kluver and Qiu's chapter on China is probably the strongest in the volume. While they cover the standard topic of online dissent by the Falun Gong and pro-democracy activists, they argue that the more

significant political impact of Internet use lies in two less-heralded areas: e-government (which facilitates surveillance but may also reduce corruption) and online chat rooms (which permit criticism of government policies, but also serve as a useful barometer of public opinion). Banerjee and Yeo's chapter on Singapore emphasizes citizens' political apathy in the context of successful economic development and the government's efforts to encourage self-censorship among a population that is aware of being frequently monitored. The authors also raise a theme first touched upon by Pool—the government's efforts to regulate the Internet by bringing it under the regime for broadcast media where mechanisms of control are already well-established.

Despite a number of useful insights, *Rhetoric and Reality* generally falls short of its potential as a comparative endeavor. Several other chapters are weaker in their analysis, consisting of somewhat ad-hoc surveys of Internet use in each country without a central argument. The book's introduction anticipates this criticism and appropriately points out the exploratory nature of the research, but more could arguably have been done even in a preliminary study. The volume lacks a concluding chapter, for instance, that could have drawn the disparate evidence from each case into a common comparative perspective. Another problem lies in the lack of a shared conceptualization of the study's main dependent variable, democracy. The concept is alternatively treated as a Western notion concerning procedures for electing representatives; a diminished subtype ("contextualized democracy") involving restrictions on the media; a normative concept where "the people" have equal voice in government, and a situation of

good governance and Weberian bureaucracy. The introduction notes the contested nature of the concept and argues that "there can be no single conception and experience of democracy in Asia" (8). But establishing common definitions for the purpose of analytic clarity is different from assuming that citizens conceive of or experience democracy similarly in each country.

### **Conclusion: Research Opportunities for Comparative Politics**

What can we say about the study of technology, freedom, and democracy more than twenty years after the publication of Pool's pioneering volume? Clearly, while technology itself advances rapidly, the comparative study of its social and political impacts is still in its infancy. Problems of data availability persist, especially when studying the Internet in authoritarian regimes. Nonetheless, there is potential for scholars of comparative politics to make a significant contribution to this stream of research in the future.

As research begins to examine the impact of Internet use on authoritarian rule, a number of insights from the field of comparative regime analysis can contribute to our understanding of this dynamic. While the mainstream literature on democratization has generally been silent on the role of communication technologies (Kalathil and Boas 2003: 3-4), scholarship in this field has carefully examined the concept of democracy and the types of processes that result in transitions from authoritarian rule. Since communication technologies are ultimately

tools employed by political actors, their role in democratization is likely to come in areas already identified, such as the organization of popular protest. At the same time, an appreciation of the complex set of processes involved in democratization helps us realize that Internet-facilitated protest does not equal incipient regime change—an assumption of many anecdotal statements about the Internet in authoritarian regimes. It is also important to recognize that if we are interested in the political impact of the Internet in authoritarian regimes, democratization is not the only relevant dependent variable. As Kluver and Qiu note in their chapter in *Rhetoric and Reality*, state use of the Internet for the reform of public administration in China may be more politically salient than online dissent, even if its implications for democracy are uncertain or mixed.

In contrast to the burgeoning research on state control of the Internet in authoritarian regimes, much of the early research on government regulation of the Internet in the advanced democracies has given way to concerns over commercial control. Nonetheless, the issue of state control of the Internet and its implications for civil liberties in the advanced democracies is an increasingly important question in the current international security environment. Here, there is potential for comparison between democracies and authoritarian or semi-authoritarian regimes. For example, there are striking similarities between Russia's System for Operational-Investigative Activities (SORM) and the United States' Carnivore program, both of which require Internet service providers to install hardware and software that facilitate monitoring by domestic intelligence agencies. The major difference may be the degree

of judicial oversight of this exercise of executive power.

In pursuing these and other research questions related to technology, freedom, and democracy, a number of methodologies and approaches will prove useful. Pool's analysis highlights the value of historical institutionalism: regulatory regimes do not spring out of nowhere when new

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technologies appear. The Internet may seem like a fundamentally new phenomenon, but the ability of many governments to regulate Internet use and development depends upon the capacity of previously established institutions to control other media and to promote the development of science and technology.

Kedzie's initial quantitative analysis into communication technology and democracy also highlights the potential contribution of this relatively unexplored avenue. Data on relevant indicators are plentiful: the World Bank's World Development Indicators include annual statistics on Internet hosts and number of users, and cross-national data on democracy and its more traditional covariates are available from a variety of sources. A time-series cross-sectional analysis from the mid-1990s to the present would update

Kedzie's initial inquiry and could address some of the methodological doubts that remain in his study. Further statistical analysis of this relationship would still leave unresolved questions of the nature of causality, but combined with small-N qualitative studies that probe causal mechanisms, quantitative analysis could form a productive research program.

Most significantly, political scientists can bring their understanding of politics to bear on a question that has often been addressed by people with a stronger understanding of technology. Many concepts that are central to political science remain under-analyzed in current research on technology, freedom, and democracy. The question of state capacity is central to the efforts of any government to either control the Internet or promote its development. Likewise, the problematic assumption that unrestricted data flow is necessary for economic prosperity in an interconnected world could be refined through the better application of insights from political economy. An understanding of technology is undoubtedly important for research in this field. However, it is even more important to remember Pool's argument that technology only sets the stage for what are ultimately political struggles with political outcomes.

## Notes

<sup>1</sup> In terms of Kedzie's operationalization, the number of email users in a country would better fit with his theory than the number of hosts, and using data more recent than 1993 would be useful given that the global diffusion of the Internet was only incipient at that point. As for Kedzie's statistical analysis, the model estimating change in democracy over time does not appear to control for non-technological predictors (as his static models do).