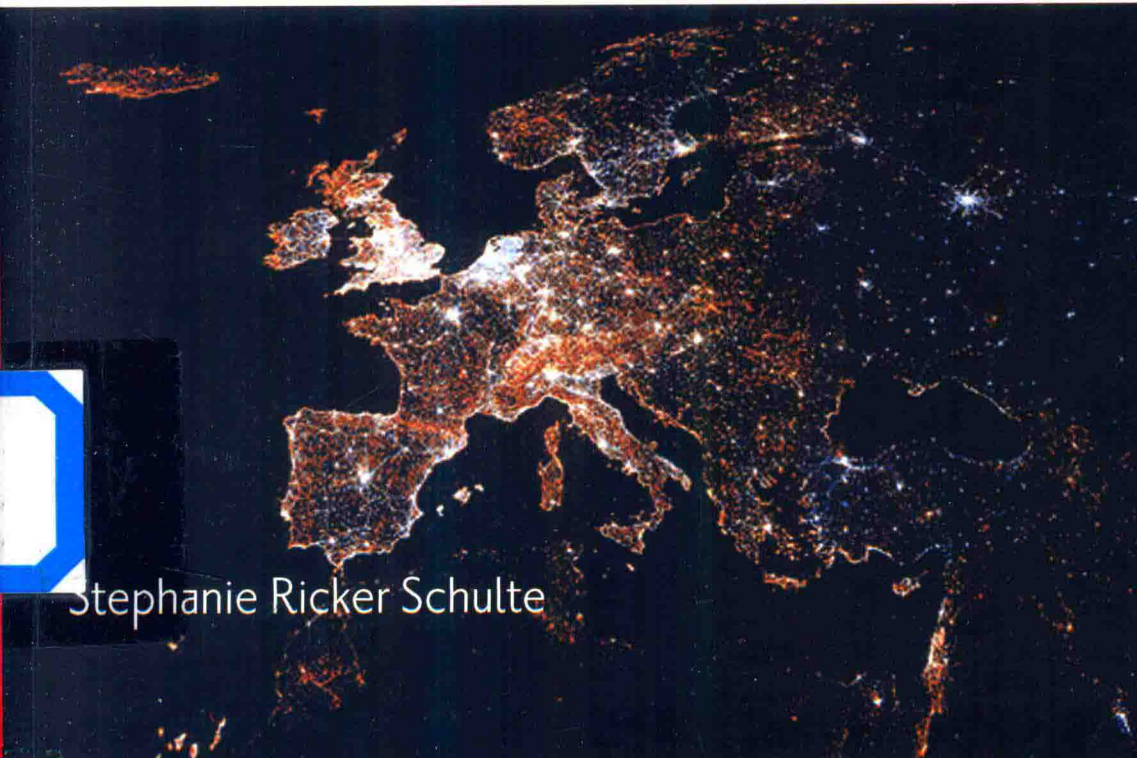




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DECODING THE INTERNET IN GLOBAL POPULAR CULTURE



Stephanie Ricker Schulte

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For Bret Schulte

And for Judith Ricker, Mark Cory, and Charles Ricker

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INTRODUCTION

Humorist Dave Barry's burlesque *Dave Barry in Cyberspace* provided mid-1990s Americans with a how-to manual for participating in what was rapidly becoming *the* new and necessary—if intimidatingly foreign—technological experience: getting online. In it, he described the internet as global public and private network run by Jason, a hormonal thirteen-year-old. After signing up for a “user-friendly interface” with a company like America Online, you could do a variety of things, like “waste time in ways that you never before dreamed possible” and communicate with “millions of people all over the entire globe...many of whom are boring and stupid.” Should you accidentally type an incorrect character, Barry warned, “You will launch U.S. nuclear missiles against Norway.”¹ Dave Barry's comic vision of the internet worked because it played on the different yet overlapping ways the internet was understood in the United States in the last two decades of the twentieth century. The internet was conceptualized simultaneously (and often paradoxically) as a state-sponsored war project, a toy for teenagers, an information superhighway, a virtual reality, a technology for sale and for selling, a major player in global capitalism, as well as a leading framework for comprehending both globalization and the nation's future in it. Comprised of so many competing dreams and investments, the internet was, and continues to be, a major transforming component of life for much of the United States and, increasingly, the world.

As internet use began to skyrocket between the 1980s and 2000s, news media, popular culture, and policymakers tried to make sense of the technology. In this period it was not obvious what the internet would be or what it would mean. A number of cultural sites and entities offered different visions of the technology. These representations were by no means univocal, but instead overlapped, contradicted, competed, and dovetailed with one another, sometimes simultaneously. Ultimately, these numerous imaginings

of the internet not only reflected the technology, but also shaped it in often complicated and indirect ways as the internet emerged as a site of transnational commerce, identity, and regulation.

This book delves into the political and cultural meanings—primarily in the United States but also in Europe and elsewhere—that helped make the internet a technology able to revise economic, political, and religious life, a place where life itself happened. Interrogating the narratives that circulated about the internet is a way of examining the larger cultural history of the last thirty years, of exploring who we are as users, humans, consumers, and national and global citizens, as well as a way of understanding and comparing the policy and regulatory practices that governed the internet and its users in the United States and elsewhere.

Networking the Computer

This story begins in the 1980s, when internet technology was “new” to the public. In these early years, understandings of the internet and its potential avenues for development hinged largely on understandings of the still relatively new phenomenon of computing. Hence, a brief history of computer use can illuminate what the internet would later become.² Investigating what media scholar Lisa Gitelman has called a medium’s “novelty years, transitional states, and identity crises,” is especially useful in determining how the technology took shape.³

The release of the first successfully marketed personal computer (the Altair 8800) in 1975 meant that some Americans could have computers at home, but these computers were primarily for enthusiasts. The popularity of home computing really took off in the early 1980s, when computers became easier to use and had more applications. Computing quickly became an important element of American life, as demonstrated powerfully by the January 3, 1983, issue of *Time* magazine, which declared the computer “Man of the Year.”⁴ Although computing became a relatively common domestic activity in the 1980s, sending data between connected computers (“computer networking”) was not widespread in homes until the 1990s and early 2000s. In 1983, there were only 500 host computers—that is, computers with unique Internet Protocol (IP) addresses that could receive material via computer networks.⁵ By 2000, however, there were over 200 million host computers.⁶ Charting this rapid adoption rate, the U.S. Census Bureau report on computer use found that whereas 0 percent of Americans had the internet at home in 1984, by 2010, 80 percent of Americans had home internet access and almost all (96 percent) were internet users.⁷ As both the computer and

internet use gained popularity, two initially separate practices, "computing" and "the internet," began to merge. This terminological melding signaled a conceptual collapse, as computing was increasingly imagined as networking and the computer apparatus was imagined primarily as a gateway to the internet. As the internet lost its body, in a sense, it became easier to imagine the internet as a deterritorialized space or experience rather than a product of hardware.

In addition to the conceptual blurring between computing and networking, the cultural history of the internet has been characterized by terminological slippage of the words "internet" and "web." These terms, which actually indicate different entities, blurred in 1990s news media and popular culture. The World Wide Web ("Web" or "WWW"), a site-linking hypertext system that operates on but is not equivalent to the internet, was developed in 1991 and has become virtually synonymous with the term "internet."⁸ But the term "internet" first appeared in 1974 in reference to a technology that connected numerous networks. The root of the term, "Internet Protocol," (IP) is a phrase used in combination with "Transmission Control Protocol" (TCP) to describe packet-switching, or the process through which computers transfer bits of information over networked wires.⁹ Beginning in the late 1980s and early 1990s, the technologically derived term "internet" became shorthand for all packet-switching or computer networking activities. This term coexisted with a variety of culturally derived terms like science fiction's "cyberspace," and more academic terms for studying cultural formation online such as cyberia, digital-, techno-, cyborg-, and cyberpunk-culture.¹⁰ These terms reflect the variety of visions existing in disparate cultural locations that competed and mixed as they flowed through media representations and academic studies of the internet.

For the purposes of this book I use terms as they were used in the period discussed. This is an attempt to curb presentism in favor of a historical specificity that reflects the particularities of thinking about the internet within each time period. That means, for instance, that what I refer to as "computer networking" in the first chapter, I call "the internet" in the remaining chapters. In addition, when shifts in terminology play important roles in conceptual shifts, I highlight those. For example, in 1990s news media reports and policy debates about the internet stopped using the term "computer-networks" and started using terms such as "virtual reality," "cyberspace," "new frontier," and "information superhighway." Understanding these terminological fluctuations is vital to understanding how and why spatial metaphors dominated 1990s cultural and political visions of the internet because these meanings were not self-evident, as they may seem today.

The military used variously networked computer systems during the 1970s and 1980s—including computers networked via satellites, radio waves, telephone lines, timesharing lines, and private intranets. These systems laid the groundwork for what we now understand as “the internet,” a term popularized when computer networking became a mass phenomenon in the 1990s. In 1991, the National Science Foundation (NSF) created NSFNET, a networking system that linked the military’s packet-switching system (which originated as ARPANET) with computers located at several universities including Princeton, the University of California at San Diego, and Cornell. These university links benefited the military because computer science departments (primarily their graduate students) helped maintain the finicky computer systems.¹¹ The departments benefited by being able to use the network, train their students, and attain (university or military) resources. The NSF and ARPA provided the initial technological backbone onto which commercial computer networking technologies were built.¹²

Computer networking in the early years was no easy practice since it required not only expensive equipment, but also a highly technical knowledge base. Technological developments in the mid-1990s, however, made networking easier and thereby promoted public use of what was increasingly called the “internet.” In 1993, the internet’s user interface became graphic, not merely textual. Mosaic, a groundbreaking program, allowed users to attach hyperlinks to images and to post images on websites. Because Mosaic was so much more visually appealing and easy to use, “for most people, for business, and for society at large, the internet was born in 1995.”¹³ One of the first “product-oriented” programs designed as a commercial enterprise, Mosaic became Netscape Navigator, the first commercial browser developed explicitly to make money and not simply to develop or extend the networked world. Thus, Mosaic not only changed the functionality and cultural understanding of computer networking, but also sparked one of the first commercial technology wars—namely, the one between Netscape and Microsoft, which was also developing its own commercial browser, Internet Explorer.¹⁴ Corporate technological developments such as Mosaic also helped shape internet technologies as well as American visions of their potentials. Extending the capacities of the initially military and university systems, commercial innovators helped make the internet a virtual reality as well as a marketplace, in large part by advancing the technology’s graphical capabilities, which, in turn, made it easier for users, news media, and popular culture producers to imagine the internet as an experiential “space” different from previous computing activities.

As computing became networking and as the public began doing both, actors ranging from corporations, the military, journalists, popular culture producers to computer users themselves became involved in defining what the internet was, what it meant for users, the nation, and the economy, and what it could and should be in the future. As historian Paul Edwards argues, the 1980s and 1990s were in many ways the most critical decades in the shaping of public understandings of the internet because representations of the internet began appearing in mainstream films, newspapers, magazines, and advertisements and transforming the ways that people thought about the internet. These representations and transformations, he argues, were tied to larger political shifts at the end of the Cold War, newly globalized trade patterns, and social shifts as Americans struggled with the rapid restructuring of communication and entertainment.¹⁵

This book begins in that same rich period, charting the trajectory of narratives that were laid out in news media, popular culture, and public policy, as well as by users themselves, that increasingly imagined the internet as less a technological medium and more a cultural experience. As this book's title suggests, through this process I seek to recover the underlying assumptions involved in the adoption and development of this technology some of which have been erased or at least diminished by our present uses and the accepted memories of the internet. Only by interrogating the "intersection of authority and amnesia," can we understand, for example, how "hello" became the protocol answer for telephone calls instead of something else, like "ahoy!"¹⁶ Recovering the origins of today's prevailing understanding of the internet from among the oft-forgotten false starts and competing models that also shaped the technology, its uses, and meanings requires an investigation into the discourses that surrounded and supported internet technology and into the complicated and intertwined powers that produced it culturally, politically, socially, and historically. This inquiry necessitates interdisciplinary engagement with a diverse set of models and literatures, spanning history, policy studies, economics, as well as internet and science studies, cultural and media studies, communication, and studies of globalization and nationalism.

The Internet as Discursive Object

Although the last three decades brought many innovations in internet technology, its core function has not changed much. Bits of information travel faster, more accurately, and over fiber optics or wireless connections instead of cable wires, yet the internet's goal is still to transfer bits from one computing device to another. But the internet is not merely technology, and neither

can a careful history of the internet be merely technological. As Manuel Castells argues, the "internet is, above all else, a cultural creation."¹⁷ Indeed, the internet's cultural meaning has been as complicated as its technological functions, if not more so. The internet was (and continues to be) a culturally-constituted, historical object and a "subject of history," meaning that qualities essential in the technology itself did not alone determine the ways it was, and is, understood.¹⁸ Cultural representations, popular practices, and public policies produced often competing narratives about the internet and shaped its development. Film makers, software designers, marketers, journalists, and others all have different intentions when creating visions of the internet. In light of these and other forces shaping the ways that people engage the internet and ways that the internet itself took shape, this book argues that technology (and not just the language used to describe it) is culturally flexible and not fixed by its material parameters. For television scholar Anna McCarthy, the variety of meanings that emerge about communication technologies reveal a technology's ability to serve as an "apparatus capable of linking everyday locations and their subjects to wider, abstract realms of commerce, culture, and control."¹⁹ Likewise, the number of shifting and conflicting conceptualizations of the internet I have already noted in the brief history sketched above reinforces that this notion of flexibility is similarly relevant to historicizing and theorizing the internet.

In its attention to historical specificity and discursive construction, this book differs from many studies, which treat the internet as a static medium, alternately without a history or with a history that was determined or driven by technological development itself.²⁰ These problematic studies replace broad and multimodal historical scope with limited and progressive narratives of "heroic" individuals who forged the early networks—"prophets" who predicted the direction of the internet. In this way, technological histories of innovators becomes less a history of culturally-shaped technologies and more a "history of prognostication."²¹ The effect is to "naturalize or essentialize media," or to "cede to them a history that is more powerfully theirs than ours."²² Making history teleological masks structures of power in that it strips agency from cultural and social forces and makes technology seem as if it developed on its own.²³ Constance Penley and Andrew Ross, who were two early critics of technological determinism in framing internet research, write, "Technologies are not repressively foisted upon passive populations, any more than the power to realize their repressive potential is in the hands of a conspiring few. They are developed at any one time and place in accord with a complex set of existing rules or rational procedures, institutional histories, technical possibilities, and, last, but not least, popular desires."²⁴ At the

same time, some have noted this as a problem of youth, arguing that the field of internet studies is “under construction—with boundaries not yet set, with borders not yet fully erected, and with a canon not yet established.”²⁵

This book develops the field by building on the work done in science studies to dismantle technological determinism and by writing in direct opposition to technological determinist impulses that have characterized internet studies in past decades.²⁶ In studying the internet as a culturally constituted, historical object this book puts “intention” back into the study of technology.²⁷ Throughout, I attend to the internet’s culture (on- and offline), its history (national, international, technical, and economic), and its many spheres of contest (in popular representations and policy formulations). For example, instead of simply rehearsing the tired utopian-dystopian binary that focuses on whether the internet will liberate or oppress us—what Jeffrey Sconce calls an “irrational bifurcation” and Erik Davis pithily terms a “Manichean” battle between the “doomsdays of the neo-Luddites” and the “gleaming Tomorrows of the techno-utopians”—this book focuses on how, why, and where this binary emerged, on how it functioned culturally, and on those whose interests it served.²⁸ Telling the story of these and other conflicting visions of the internet builds on the work of technology scholars by tackling the history of internet technology as the history of power struggles between and among corporate giants, Congress members, journalists, academics, hackers, and others.²⁹ Since technology is embedded in history and culture and not outside of either, the following chapters investigate the internet within cultural and historical tensions, including tensions in academic debates, as histories of the internet are themselves invested in and investing competing knowledge about the internet.³⁰

Discourse and Power

The following chapters trace productive historical and cultural tensions, those struggles for power among a range of actors which functioned to discursively construct the internet. While the term “discourse” is also used in the field of rhetoric, I mean “discourse” here in the broader cultural sense associated with the work of Michel Foucault. Here, discourse includes whole ways of conceiving the world and of framing problems and solutions. It incorporates a panoply of popular representations including policies, “expert” knowledge, and personal narratives used to navigate the world. Discourse is also a modality through which power is exercised and contested. Hence, discourse is itself constitutive and revelatory of power relations rather than deployed by already-existing power blocs. Discourse, then, is “not a conspiracy, nor