1//introduction

This book is about how infrastructures and strategies for distributing television news online are forged. The idea for a book about distribution of TV news emerged a few days before Thanksgiving in 2009, when I paid my first visit as a researcher to 30 Rockefeller Center, Manhattan's towering General Electric building that is home to the headquarters of NBC News and its cable cousin MSNBC. I was greeted by Will Femia, who had been an online producer there for as long as many people could remember. During our conversation, he reminisced: "One of the things that was most shocking to me getting into the media business was the realization that regular people were making it," he said. "Television to me—prior to working in television—was just like sunlight. You push the button and it just comes off the TV screen."

Femia's quote nicely joined two concerns of media sociology, one well rehearsed and another—I soon realized—far less so. The first, well-trodden concern has been to challenge our often-simplistic assumptions about how media is produced. Indeed, one of the great contributions of media sociology since the 1950s has been to unearth a sense of contingency in the production of news. This is most readily apparent in discussions of the gatekeeping function of the news media. Both scholars and practitioners examining gatekeeping have sought to explain why some issues and events become newsworthy while others remain obscure. Answers have been offered up in the form of classic newsroom ethnographies like "The 'Gate-Keeper'" (White 1950), *Making News* (Tuchman 1978) and *Deciding What's News* (Gans 1980); critical studies of news content such as Stuart

Hall's (1973) "The Determination of News Photographs"; and innumerable lists of news values in the tradition of Johan Galtung and Mari Ruge's (1965) "The Structure of Foreign News." This body of research ultimately dispensed with what Herbert Gans (1980) called "mirror theory"—the naïve assumption, if it ever existed, that news products represent complete, veridical accounts of reality. Instead, these scholars argued that news is a constructed cultural artifact—a picture of reality resulting from situated values and arrangements of resources.

No sooner had it been established that the content of the news media is neither unequivocally "the way it is," nor "all the news that's fit to print," than the attention of sociologists began quickly to encompass the implications of these findings for social movements and societal change. At first this project largely demonstrated the manner in which social movements had been marginalized. Gaye Tuchman (1978), for instance, documented the various ways in which the women's movement was ignored, then maligned and ridiculed by the press, before it ultimately managed to establish itself as a legitimate voice in the mainstream media. In his own take on the news media's framing practices, Todd Gitlin (2003) famously implicated the mass media as a factor in the eventual dissolution of the 1960s student movement, detailing the ways in which Students for a Democratic Society ultimately lost control over their image to the news media. But as Tuchman and Gitlin both pointed out, despite the potential pitfalls that come with coverage, favorable attention from the news media greatly benefits social movements, and many sociological accounts have focused on how media-savvy interest groups adopt "dramaturgical styles of activism" (Epstein 1996, p. 220), carefully packaging their claims in ways that are likely to receive (positive) media attention (Best 1990; Gamson and Modigliani 1989; Hilgartner and Bosk 1988; Ryan 1991).

In short, in the sixty years since Kurt Lewin (1951) and David Manning White (1950) first deemed the news media to be gatekeepers, media sociologists and other scholars of communication have developed a sophisticated language for discussing the various ways in which news organizations form a bottleneck in the public discourse, selectively limiting audiences' access to information, while interest groups tailor their messages to the mass media's whims and attempt to game its various selection mechanisms to bring their concerns to the public. Without questioning the validity or extraordinary depth of scholarship that has gone into developing this lens on the news media, I do wish to argue that some of the most

interesting questions surrounding today's news media lie outside its center of balance.

This brings me to the second concern raised in Femia's description of television content coming "off the screen like sunlight"—the one that will be the primary purview of this book. Online media, like television and other electronic media before them, feel immediate and are often defined by their potential for "liveness" (Couldry 2008; Gans 1980; Bivens 2014). This sense of liveness, or "immediacy," to use Gans's term, is carefully cultivated and an important part of news media's presentation of itself as a form of direct access to world events. Unlike physical newspapers, and their attendant icons of the paper boy and delivery truck, however, we have little intuitive sense of the route that online news takes to get to us. When we can push a button and watch it come off the screen, it is all too easy to forget that online news is *distributed*—that systems of labor, infrastructures, institutions, economics, and numerous stakeholders are all involved in the route it takes to that screen (Downey 2001; Perren 2010). Indeed, just what sort of screen news is delivered to—whether a television, computer, mobile phone, or tablet—is a matter of huge concern, and increasingly contention, among media producers and distributors (Chamberlain 2010; Perren 2010).

Both James Carey (1989) and Richard John (1995) remind us that we as a culture once associated the spread of information with the physical movement of messengers, before widespread adoption of electronic communication technologies, and the rhetoric of "eclipsing time and transcending space" that accompanied them, ultimately allowed us to largely divorce our notions of "transportation" and "communication" (Carey 1989, p. 14). Even as information now follows complex and shifting communication networks, these systems are regularly rendered invisible to the news consumer. In other words, the transport of news and information has been considerably "black-boxed" (Latour 1987). But even in the so-called information age, when communication seems so immediate, information must travel a route to reach us—and tracing that path brings a host of sociologically interesting relationships into focus.

THE CONVERSATION ECONOMY

In his 2005 book *The Search,* John Battelle—a founding editor of *Wired* and former CEO of the defunct Silicon Valley trade journal *The Industry Standard*—offered up a concept that has since become known among

the digerati as the "conversation economy." More and more, he noted, web users seemed to be accessing news stories not by clicking through the homepages of news outlets, but by way of search engines and their associated news portals, or by following links shared by friends and acquaintances in various forms of online conversation. He argued that such trends put publications like the *Wall Street Journal* and the *Economist* at a disadvantage. These sites, which were built on a subscription model, put their stories behind paywalls, which in turn restricted the ability of search engines to index them, and of friends to share content with nonsubscribers. Moreover, the two practices—search and sharing—tend to work synergistically to direct traffic online. The more often the link to a story is shared in blogs, discussion forums, and on social networks, the higher it will rise in the results of search engines that rank pages partly by counting backlinks (Halavais 2009; Introna and Nissenbaum 2000), and the more easily it will be found and shared in the future. Battelle predicted that as search and sharing continued to become more prominent methods of access to news, the influence—and subsequently the readership and revenue—of paywalled publications would begin declining apace, while their relatively open counterparts reaped the benefits. While the paywall debate isn't over yet for many news sites, and much of the language surrounding the issue has shifted to other metaphors, like "metering," some aspects of Battelle's predictions have proved prescient. In particular, a great deal of traffic to news sites today is directed by sharing and search (Dwyer 2010; Riley and Usher 2010). In the first quarter of 2011, MSNBC.com reported that around 10 percent of its video traffic came from clips embedded on other sites, while ABCNews.com divulged that 70 percent of its video views were directed through links and search (Plesser 2011b, 2011c). Around the same time, the Pew Internet and American Life Project (Purcell et al. 2010) confirmed that link sharing had become an exceedingly common way of spreading and encountering news, reporting that "75% of online news consumers say they get news forwarded through email or posts on social networking sites and 52% say they share links to news with others via those means. 51% of social networking site (e.g. Facebook) users who are also online news consumers say that on a typical day they get news items from people they follow. Another 23% of this cohort follow news organizations or individual journalists on social networking sites" (p. 4). Similarly, by 2009 Facebook had already surpassed Google News in the number of users it directed to news media websites, and was soon generating over twice as many clickthroughs to news sites (Hopkins 2010).

These substantial shifts have not gone unnoticed or unaddressed by journalists and media organizations. There is both anecdotal (Foremski 2010) and ethnographic (Riley and Usher 2010) evidence to the effect that online journalists have begun to select story topics partially on the basis of whether an article is likely to generate page views through sharing and search. And companies like Demand Media, at one point predicted by some to become the most lucrative technology startup since Google (Kerner 2010), have begun commissioning journalists to write stories on subjects suggested by algorithms that comb through search engine queries in pursuit of trending topics likely to generate the most page views (C. Anderson 2011). Indeed, metrics like the page view have fast become a major force in the editorial cultures of many online publications (C. Anderson 2011, 2013; MacGregor 2007; Outing 2005; Riley and Usher 2010). The idea that sharing drives traffic has become such conventional wisdom that it has led media economists like Tim Dwyer (2010) to remark that "on the web, news organizations are focusing somewhat less on bringing audiences in and more on pushing content out" (p. 50).

Simply put, if the problem media sociologists have traditionally considered has been something like "How do nonjournalists attempt to get their messages distributed by journalists?" we appear to have entered a phase in which much of news work revolves around a somewhat different concern: How do journalists get nonjournalists to distribute *their* messages?

Indeed, it's tempting to look at all the Facebook "Like" buttons, embeddable video players, social media accounts, and RSS feeds cranked out by television providers and imagine that media organizations are doing everything they can to spread their content. "Spreadability" (Jenkins et al. 2013) is indeed important, but such affordances are also only one side of a wider ledger, with the other side being about constraints.

Media companies are also using digital rights management (DRM) software to put limits on how far their content can spread; geofencing (which blocks international IPs from accessing content) to enforce national boundaries on the web; authentication tools to make sure that online viewers are offline cable subscribers; domain-blocking measures to ensure that their content isn't embedded on pornographic sites or used to build unauthorized mirrors; IP-blocking tools to keep particular users or institutions from accessing or sharing content, and user-agent banning techniques to control what devices people use to access content. And all these technological means are intertwined with legal, economic, and social engineering (Gillespie 2007; Tryon 2013).

In other words, the questions surrounding online media distribution —concerning who should have access to content, for what purpose, and on whose terms—serve to underscore Raymond Williams's (1975) classic point about television: that "the effect of a technology is in fact a social complex of a . . . central kind" (p. 31). But this observation, which underlies the increasing scholarly interest in "the politics of platforms" (Ananny 2013; Gillespie 2010), has been made far more often about media production and consumption than about distribution; distribution itself has remained a surprisingly understudied topic.

THE DISTRIBUTION GAP

Sitting on my desk right now is a volume with the imposing title *News: A Reader.* Edited by venerable journalism studies scholar Howard Tumber, it represented the state of the art in journalism studies upon its publication in 1999. It is divided into the field's major topics of study, "Definitions of News," "Production of News," "Economics of News," "Sources of News," and "Objectivity and Ideology of News." The 2011 edition of Michael Schudson's book *The Sociology of News* carves up the terrain similarly, though it also includes a sizable section on audience effects.

Generally absent from such compendia and the literature they represent is any discussion of news *distribution* practices. Not, anyway, the sort of practices we think of when we consider the canonical ethnographies written over the years on news organizations, in which we learn the names—or at least the pseudonyms—of reporters, copy chiefs, and managing editors, and the effects of their decisions on media products are mapped in rich detail. Rather, media sociology has tended to skip from production practices to audience effects, leaving a gulf when it comes to the actual process of getting news products out into the world. The perigee here may come in the form of research on the economics and regulation of media industries—but to study these areas is not the same as to examine the mechanics of distribution decisions made in these industries or the lived experience of distributing the news.

In many ways, it's understandable that such issues would lie at the periphery of media sociologists' focus. After all, the print distribution routes and networks of broadcast affiliates that underpinned the activities of leading news organizations appeared relatively stable for much of the twentieth century. Occasionally a pallet of newspapers would fall off a ferry and sink into the ocean (Hetherington 1985), or a group of broadcast affiliates

might refuse to air a controversial television news special (Carter 2004), but on balance the process of getting news from the printing press and the broadcast studio to the consuming audience was stable and standardized enough to go unnoticed. At the very least, it was sufficiently divorced from the day-to-day activities of journalists to warrant its exclusion from a sociology aimed at understanding their professional activities. That's not true anymore.

With the massive shift to online news that has occurred over the past two decades (Pew Project 2011) the process of delivering content to audiences has become an integral part of news work, from search engine optimization of headlines and stories (Riley and Usher 2010) to the maintenance of social media accounts for sharing links and headlines. Media researchers, however, while acknowledging these shifts, have mainly continued to ponder them in terms of traditional categories. Scholars have asked questions about how news organizations' entry into an online information ecosystem might affect news production (Boczkowski 2004, 2010; Lowrey 2006; Mitchelstein and Boczkowski 2009; Paterson and Domingo 2008; Ryfe 2012; Singer 2010), as well as about whether the customization provided by Internet technologies might change news consumption habits and audience effects (Chaffee and Metzger 2001; Mitchelstein and Boczkowski 2010; Negroponte 1995; Sunstein 2007). Insofar as it's been tethered to these traditional foci, research on news has somewhat awkwardly recognized the dramatic influence of new distribution channels on traditional industries without focusing on distribution itself.[1]

Something similar is going on in television studies, where critical theorists have developed a sophisticated language for discussing media texts, as well as audiences and active spectatorship. A healthy literature on production studies has also emerged among television scholars (Mayer, Banks, and Caldwell 2009), as have discussions of media law and economics (Streeter 1996). A small but growing handful of television researchers, however, including Amanda Lotz (2007), Brian Larkin (2008), Michael Newman (2012), Lisa Parks (2012a, 2012b), Alisa Perren (2013), and Chuck Tryon (2013), have begun to examine the world of media distribution in its own right.[2] While these authors remain in the minority, they understand something uniquely important about distribution that I hope to bring to the fore in this book: decisions about distribution, whether made by media executives or file sharers, are—in the barest terms—attempts to control who has access to information and culture, and under what conditions.

DISTRIBUTION ROUTES AS SOCIOTECHNICAL SYSTEMS

While television and journalism studies have so often remained production-focused, scholars in the field of science and technology studies have developed sophisticated lenses for examining how products are made to move. Historians and sociologists of sociotechnical systems have looked at, among other things, the construction of power distribution networks (Hughes 1979, 1983), shipping routes (Law 1986, 1987), railway systems (Law and Mol 2002), public transit lines (Bugos 2000), freeway systems, and digital packet routing (Hughes 1998).[3] If, as I have posited, a major reason that media distribution systems have remained understudied is that during much of the twentieth century they were stable enough to fade into the background, another way of putting this is that these systems had become infrastructure. And as Star and Bowker (2002) point out, a primary feature of infrastructure is that it tends to remain invisible until it is disrupted, making it stubbornly difficult to study. This is another reason for my turn to science and technology studies, where infrastructure and its potential to influence human activity have long been a subject of fascination.

A particularly useful framework put forward by systems scholar John Law is that of heterogeneous engineering. Law (1987) initially uses as an example the *volta,* a portion of the Portuguese trade route to India that required centuries' worth of economic, legal, social, scientific, and technical engineering. The construction of the volta required the enrollment of numerous recalcitrant agents, both human and technical, that simultaneously served as resources and shaping forces for the system builders—in this case, merchants seeking to create a working trade route. The winds and currents that helped to carry ships to their destination immensely complicated their return. The celestial charts and other tools created in response by astronomers enabled creative navigational solutions to these problems, but were illegible to semi-literate sailors, the training of whom put further stresses on the system. When finally all the pieces were in place, their influence, writes Law, was quite literally inscribed on the map:

> The volta can thus be seen as a geographical expression of a struggle between heterogeneous bits and pieces assembled by the Portuguese system builders and their adversaries, that is, the winds, the currents, and the capes. It traces on a map the solution available to the Portuguese. It depicts what the Portuguese were able to impose on the dis-

sociating forces of the ocean with the forces they had available. (Law 1987, p. 120)

The Portuguese were interested in acquiring and distributing trade goods, not television news, but there is a universal point here. Again, it's easy to forget that online media products are distributed. But while there are differences between information and physical objects (Benkler 2006; Child and McGrath 2001; Hess and Ostrom 2003)—between the Portuguese merchants' desire to accumulate goods and the need of contemporary media workers to push information across services and devices—both trade goods and television programs travel a route to get from one place to another. In both cases the path they take reflects the interests and limitations of myriad heterogeneous systems and actors. Portuguese ships traveling the volta threaded a needle between an inhospitable desert coast on one side and unfavorable winds and currents on the other. And their route was equally influenced and displaced by the interests and limited malleability of sailors and royalty, navigational astronomers and shipwrights, so that at each turn they took advantage of opportunities these agents provided while simultaneously slipping skillfully between the limits imposed by all of them. I want to think of online distribution in much the same way, as an "inscription on the map of the solutions available" to content providers. In this way I hope to illuminate how the route that video and other information takes to our screens is at once the result of heterogeneous resources (at times precariously) lashed together, and the threading of needles—weaving between the limits imposed by all these resources and those enrolled in competing systems.

In short, what Law suggests about the volta I find utterly engrossing and intriguing for the study of media: that a sort of archeological interest in the various kinks, epicycles, and roundabouts found in a distribution route can uncover the leverage of powerful actors and the mark of material agency, that it can expose sociotechnical systems at work and lay bare the influence of infrastructure. In a day and age when broadband access to the Internet has reached a majority of Americans, and when cloud services and peer-to-peer technologies have the potential to create instantaneous and remarkably efficient flows of information, such roundabouts turn out to be myriad. Newscasts that air live over cable channels and traditional broadcast networks are often time delayed, paywalled, or recut when they

appear online; at times they crop up in unexpected places and sometimes they don't appear at all.

As video content wends its way to us online, it also goes through intermediaries that most viewers have never heard of. Tremor Video, for example, is a company that—among many other things—converts streaming video from numerous providers, ranging from Disney to CBS News, into a plethora of special formats tailored to our ever-growing menagerie of mobile devices, and then packages advertising with it on its way to the consumer. YuMe is another company with major industry clients. It scans the blogs, homepages, and other sites on which users place embeddable videos and determines whether a page is "brand-safe" (that is, features no objectionable content) before displaying paid ads with a clip. Yet another firm, Nexidia, produces software that makes audio recordings searchable by keyword. Its clients include intelligence-gathering operations interested in data-mining phone conversations (some sources suggest it even provided the software that the National Security Agency (NSA) used to scrutinize phone calls during its widely publicized warrantless wiretapping scandal), as well as television providers like MSNBC looking to make their videos easier to find in online search results.

These white-label or "business-to-business" companies are players in the media ecosystem that remain largely, and often entirely, invisible to end consumers, and have until now remained equally unstudied by researchers and media critics. But they become visible when we begin to pay attention to the path that content takes to consumers. They play an essential role in determining where and when television content is available—and to whom—one that aligns neatly with more traditional concerns of media scholars about the terms on which we access and participate in our culture. Moreover, social and technical dynamics that influence the path of content, making it variously easier or harder to move, access, and manipulate on particular terms, not only exist in the distribution pipeline to end users, but also are at work as content moves within and between big media organizations, which today are more often than not assembled out of many smaller companies, all with their own legacy publishing platforms and organizational subcultures. Getting all these to work together harmoniously within a large media corporation is as much a feat of heterogeneous engineering as is navigating the commercial, legal, and technical hazards of digital distribution to end users. Thus, the dynamics and challenges of production and distribution are not quite so distinct as they are often taken to

be, and in fact may be more intimately related than at any time in recent memory (Ananny 2013).

This fragmented state of affairs within media organizations, and the process of navigating it, has variously been described to me by television news workers and executives as "innovative," "messed up," "crazy," and "chaotic." Organizational scholars prefer terms like "heterarchic" (Stark 1999, 2009) or "postbureaucratic" (Kellogg et al. 2006). Still, even as organizational researchers have begun to describe trends toward fragmentation and liminality within media firms, their findings remain in stark contrast to the picture of these institutions painted by classic media sociology, which in foregrounding the norms of journalism as a pervasive and remarkable achievement of professional socialization has tended to privilege structure over the agency of both individuals and distinct groups within large media institutions (Cottle 2007; Bivens 2014). It is also a jarring departure from accounts of vertical integration by some media economists, which depict the concentration of media firms as a shoehorning of smaller media outlets into organizational hierarchies that squelch agency and diversity in favor of command and control.

But if media scholars are just beginning to grapple with the controlled chaos that exists within large contemporary media organizations, the same presence of myriad, loosely coupled firms and teams existing within and across organizations (alongside more traditional managerial hierarchies) is a hallmark of the "postmodern" style of systems building and management described by scholars of science and technology, like Thomas Hughes (1998), in which "discontinuous change is the expectation of project professionals" (p. 302). For this reason, and more broadly owing to their facility for explicating emerging, technologically mediated social structures, the history and sociology of sociotechnical systems have become of increasing interest to organizational scholars (Chia 1995; Girard and Stark 2002; Grabher 2002; Jackson et al. 2002; Kellogg et al. 2006; Neff and Stark 2004), and the tools of systems scholars can be neatly applied back to media to create a better understanding of contemporary firms and how they innovate.

This brings me to a final reason for shifting my analytical lens to the realm of the sociology of sociotechnical systems: a great deal of contemporary literature about online television and news has criticized traditional media organizations for failing to change with the times. There is now an established body of work on the reluctance of "legacy" media organizations to adopt new technologies and business models over the past two decades.[4]

But as Dwyer (2010) has noted, in the second decade of the twenty-first century, "traditional media have evolved to the point where online platforms are now integrated and necessary components of their businesses" (p. 52). A focus on systems sociology appropriately reframes the issue of the "reluctance to adopt" Internet technologies and practices as "the challenges of embracing" these new developments. This is particularly true of the framework of heterogeneous engineering, which opens our eyes to the incredible diversity of resources that are necessary to create a new, reliable sociotechnical system like a distribution route or a social publishing platform. Ultimately, then, while this book at times draws from—and hopefully contributes to—the fields of journalism and television studies, it is ultimately about networked distribution systems and how they are forged. My hope is that, taken this way, this book will have the potential to contribute to our understanding of how it is that a great diversity of media products make their way to the screens sitting atop our desks, gracing our living rooms, and tucked in our pockets.

THE CASE OF MSNBC

In *Digitizing the News,* Pablo Boczkowski (2004) wrote about the efforts of print news organizations to develop their initial online presence. Just over ten years later, the U.S. print news industry has been digitized—or rather, the part that hasn't is rapidly disappearing. The Pew Project for Excellence in Journalism (2010) estimates that over the previous decade, American newspapers lost roughly 30 percent or $1.6 billion in annual reporting and editing capacity. National news magazines, like *Time* and *Newsweek,* have also lost substantial resources. While the economic recession greatly accelerated the decline in the organizational resources of news outlets, the larger story has been a shift by audiences to online news consumption. The resulting pressure to monetize online distribution has led to what Nikki Usher and Patricia Riley (2010) have referred to as a "transform or die" mantra at many news organizations with regard to digitization and the adoption of new media technologies.

Television has not been exempt from American journalism's revenue crisis. Network television news has lost over half of its reporting resources since the 1980s (Gold 2010a, 2010b; Stelter 2010a), while local news divisions have suffered as well (Pew Project 2010). Among the major American legacy news media, only cable channels have avoided this major dropoff in revenue and resources in the wake of the recession, though even this

may be changing (Pew Project 2013). Moreover, as broadband penetration in the United States has increased and more distribution channels for television programming have opened up online, providing potential avenues for consumers to bypass traditional cable and broadcast delivery mechanisms, the economic future of television as a whole and cable in particular has become subject to uncertainty and speculation, much as the world of print journalism was a decade ago (Glaser 2010; Lotz 2007; Tryon 2013).

Meanwhile, the economic future of journalism more broadly remains in such flux that journalism professor Jay Rosen (2011) has declared, "A common mistake in seeking out the next business model for news is to begin by positing that such a model exists within the known universe." In short, journalism, television, cable, and—to add a wrinkle—the Internet itself are all evolving in rapid and often uncertain ways. And at the nexus of these volatile industries is a small but rapidly growing group of individuals and firms whose job it is to develop and maintain online distribution channels for what is still understood to be television news programming. Their work, and the tensions surrounding it, provide a fulcrum from which to pry analytically in new ways at some of the largest shifts within our media landscape.

This project began in 2009 with a series of interviews with online producers, software developers, and executives at the news divisions of each of the three major broadcast networks, and my continuing discussions with individuals at all these companies are reflected in this book. But the distribution networks by which media and information travel are as varied as the providers are numerous, and as I highlighted earlier, large media companies are sufficiently full of staffs, project teams, partnerships, subsidiaries, and vendor relationships that to study any one organization at scale is in fact to take on responsibility for documenting a host of interlocking case studies. As such, while keeping an eye on the broader landscape, I ultimately chose to focus on one company, MSNBC, as an exemplar.

MSNBC is a rich case: as a hybrid company built to link television and the Internet, it struggled with how to innovate through new forms of distribution while sustaining its reputation in a traditional medium. The protean network of alliances and tensions that ultimately resulted in MSNBC's acquisition and reimagining by Comcast centered around distribution concerns as well, and provide a fascinating example of how media conglomerates shift and evolve in response to these issues.

The distribution network established by MSNBC is a hybrid, too, full

of competing internal efforts, third-party information platforms, networks bought and incorporated, and kludged solutions to complex technical demands. To learn more about the challenges of embracing new media within legacy media organizations, as opposed to the reticence toward them chronicled in earlier scholarship, I searched for groups that were pursuing online distribution aggressively. Consequently my primary field sites within MSNBC included the popular *Rachel Maddow Show,* which vigorously pursued changes to MSNBC's online strategy; MSNBC.com's East Coast offices, where producers adapt television content for the web; and Newsvine, a subsidiary of MSNBC.com that built a great deal of the technological infrastructure through which content from MSNBC and NBC News programs was put online.[5] While I focused on these groups, over the course of fifty interviews I also spoke with individuals responsible for many other properties and projects at NBC News, MSNBC TV, and the MSNBC Digital Network (which in 2012 became part of NBC News Digital), as well as people in related positions at other firms and networks. The book also examines how MSNBC's online video player technology was assembled, as well as its next-generation content management system, Sky-Pad. It ultimately narrates how online distribution strategies at large media organizations are forged not necessarily from the top down, but just as often "horizontally" (Girard and Stark 2002; Kellogg et al. 2006; Neff and Stark 2004; Stark 1999)—that is, through the actions of small teams and individuals throughout the company (and sometimes outside of it), each working toward their own provincial objectives.[6]

STRUCTURE OF THE BOOK

Prior to launching into the book's main arguments and cases I set the stage in Chapter 2, where I lay out the broad importance of studying media distribution, delineating how research and critique in this area has the potential to inform our view of a wide array of traditional concerns in media scholarship. Part 1 of the book then follows the path taken by MSNBC television programs as they made their way to online audiences, highlighting the role of different actors and artifacts along the way and introducing conceptual tools for analyzing them. In Chapter 3, I suggest that the way to understand media distribution is through the notion of the "sociotechnical system," which comes from the field of science and technology studies. Like the power grids, public transit systems, and shipping routes studied

by scholars of systems, media distribution involves a complex network of technologies, economic forces, social norms, and institutional actors.

By way of example, I introduce MSNBC and its inner workings in the period between 2010 and 2011, and outline the path that MSNBC's television content took between the time it was recorded and the moment when it was ready to appear on online viewers' screens. In laying out this "chain of custody" of various actors (human and technological) handling television content on the way to the consumer, I preview many of the examples and concerns that will be explored in greater detail in later chapters.

This tracing of the path of content continues throughout Part 1, highlighting how at each turn particular technologies, market concerns, and institutional actors made themselves felt in ways that influenced which audiences got to see what. Chapter 4 examines the construction of MSNBC.com's web video player, the primary means by which NBC's cable and broadcast news programs were seen online. Each of the video player's features and idiosyncrasies was the result of a complex negotiation between different parties within Microsoft and NBC Universal, as well as a response to market pressures and legal concerns. In Chapter 5 I explore "off-site" and mobile distribution of MSNBC video, including the development of functionality that allowed the video player to be embedded on users' personal websites and various technical solutions developed or purchased by MSNBC .com for piping its video to phones and tablets. This discussion introduces and examines the role of several "business-to-business" companies that I dub "transparent intermediaries" (Braun 2014)—that is, companies and technical infrastructures whose existence and operation go generally undetected by end users, but who play a major role in sculpting the business models that media companies use in the online video marketplace.

While scholars of technology have often highlighted the way that technologies are "black-boxed" (Latour 1987)—stabilized and closed down into usable tools—the video player and mobile solutions described in Chapters 4 and 5 were under rapid development at the same time that they appeared stable to end users. Deconstructing their various parts and telling the story behind them serves as a model for how we might begin to think about online distribution in a more complex and nuanced manner.

Part 2 of the book explores MSNBC and its online distribution platforms from the vantage points of different system builders within the larger organization, examining how small teams pursuing provincial objectives

can generate changes within a much larger postbureaucratic organization. This exploration begins in Chapter 6 with the development of conceptual tools for considering large contemporary media organizations, which I then take to two of the book's major exemplars. This chapter contains some of the main conceptual arguments of the book, many of which apply broadly to the study of news and media work.

In Chapters 7 and 8, I examine the case of Newsvine, a Seattle-based, news-themed social network acquired by the MSNBC Digital Network in 2007 that became the basis for a new content management system used to put MSNBC TV and NBC News content online. While the original Newsvine site still exists, under MSNBC ownership the startup behind it served largely as an internal software development firm, responsible for much of the technological infrastructure that underpinned the online presence of MSNBC's primetime television programs by the end of 2011. In this context Newsvine had become a "white-label" intermediary, in the sense that its brand and its role in delivering content were largely invisible to end users. The infrastructure that Newsvine built for MSNBC, however, was constructed on top of the original software framework that powered the startup's existing social news site. These two chapters tell the story of Newsvine, from its origins until the time it became an MSNBC property, and how its attempt to design a dual-purpose platform that simultaneously powered both MSNBC's mainstream media sites and its own social news venture ultimately resulted in unexpected changes to both how MSNBC content was delivered and how the original social news site functioned. While Newsvine's origins as a company, a software platform, and an online community initially had nothing to do with television, they left indelible marks on MSNBC, and offer a prime example of how system builders whose interests appear at first glance to be far removed from TV are increasingly becoming central to the process of television distribution and important to understand.

Chapters 9 and 10 explore the case of the *Rachel Maddow Show,* and highlight how MSNBC evolved not just in response to external pressures, but also via internal disruption. Hired by MSNBC as a primetime host in late 2008, Rachel Maddow had gained much of her prior celebrity through the Internet. She and the staff she hired at MSNBC were determined to pursue an online strategy that was far more aggressive than those of previous programs ("We realized pretty early on that MSNBC.com was not our website. And so therefore if we wanted to have anything useful online, that

we were going to have to do it ourselves."). These two chapters tell the story of how the *Rachel Maddow Show* forged a new and different online strategy that ultimately became the model for other MSNBC television programs.

Having established the provincial and heterarchic manner in which online distribution systems were forged at MSNBC, Part 3 explores how the online company's distribution channels were likewise built to serve a diverse array of online audiences. Chapter 11 explores the notion of the "conversation economy" in more depth, deepening it via a variety of conceptual tools while examining MSNBC.com's strategy of cultivating numerous brands to capture the attention and sharing activity of different niche audiences. Chapter 12 looks at the technical underpinnings of this organizational trend, which came in the form of one of the company's most ambitious infrastructure projects ever—a next-generation content management system called SkyPad. Built to take in and spit out almost any type of multimedia content and allow for the construction of entirely new websites and brands on the fly, SkyPad—and a counterpart called M3, produced by Newsvine—represented an emerging vision for enlisting provincial editorial groups and diverse audiences in the distribution of mainstream media products online. Chapter 13 brings this strategy into focus by examining its ultimate effects on the original Newsvine architecture and closes by considering the nature of the relationships between distribution, audience engagement, and more traditional editorial concerns.

Over the course of the book, the reader will encounter MSNBC from the perspective of numerous different groups both inside and outside the organization. It is, in short, a highly complicated, heterarchic collection of entities with many moving parts, both big and small—exactly what we might expect of a contemporary media organization. What turns out to be surprising is not that MSNBC is complicated or messy, but that the tangle of different actors and cross-purposes that made it up, and somehow allowed it to function successfully, can be rendered in conceptual clarity using the theoretical tools introduced and developed in previous chapters for understanding sociotechnical systems. Following content as it winds its way through the organization to end users, and interrogating the arrangements we encounter along the way, helps uncover the actors, relationships, and important interests that are commonly left out of—and are sometimes even invisible to—scholarly analyses that focus solely on the production of television or its effects on audiences. In other words, the focus on distribution gives us an altogether different (and hopefully

more comprehensive) view of a large media organization and its evolution that not only is valuable in itself, but also speaks in important ways to the more traditional concerns of media scholars. Chapter 14 ties together the conceptual interventions from across the book into a broader approach for examining contemporary, multifaceted media organizations and their efforts at online distribution—a task I argue becomes increasingly important as we concern ourselves with the health of our media institutions and the terms of our access to culture in the new century.

The Epilogue closes the book by providing an update on MSNBC and NBC News's online footprint since their acquisition by Comcast, exploring the restructuring of MSNBC.com into an expanded NBC News Digital and the creation of an entirely new website for the MSNBC cable news channel. While these developments occurred after the initial interview research conducted for the book, I show how they square with and were in many cases precipitated by developments documented therein, and how the trends I have laid out are equally relevant going forward.

NOTES

CHAPTER 1 **Introduction**

1 A notable, historically oriented exception is the aforementioned work of Richard John (1995).

2 See also *Connected Viewing,* an excellent new anthology edited by Jennifer Holt and Kevin Sanson (2013).

3 A few media scholars, including Turow (1992) and Silverstone (1994), have taken a systems perspective on media as well. Their contributions will be explicated in the coming chapters.

4 For an excellent review of such critiques, see Ryfe (2012).

5 In the wake of restructuring that occurred after the primary fieldwork for this book, Newsvine's ownership has shifted to NBCUniversal.

6 For the most part, I have temporally bounded the narrative of this book around the life of MSNBC as a joint venture, beginning with its inception in 1995 as a cooperative project between Microsoft and NBC and ending prior to its ultimate acquisition by Comcast in 2012. This decision has both analytical and highly pragmatic components. Analytically, the time between the joint venture's creation and its dissolution seems a fitting and logical epoch to chronicle in the history of the organization and the landscape that shaped it. From a pragmatic standpoint, the dissolution of the joint venture also led to the migration of many of my sources to other firms and professional opportunities, as well as the end or modification of a number of my original access agreements. In writing this volume, I have tracked the relevant industry news and taken care to follow up with a number of my key sources and other relevant contacts since the time of my fieldwork. In the Epilogue I take up the Comcast acquisition, including its larger meaning for the theories, infrastructures, and trends documented in this volume.

CHAPTER 2 **Why Media Distribution Matters**

1 As John (1995) and Gillespie (2014a) highlight, government regulations surrounding many forms of communication that predate the Internet, such as postal mail or the telephone, proscribe many forms of explicit surveillance. Still, it's worth noting physical analogues to the sorts of digital surveillance referenced here. Lisa Parks (2012b), for instance, uses the example of a speech by Dutch parliamentarian Geert Wilders about the "Islamicization of Europe" in which he argued that the very fact that many Muslim immigrants' satellite dishes were pointed toward stations in their countries