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Bringing Science and Technology Studies to Bear on Communication Studies Research

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Science and Technology Studies and Communication Study

Editor's Introduction

Communication study has a long, but varied, association with the material aspects of communication itself, both the artifacts like texts and the technologies that produce those artifacts. The preservation of texts has provided the material for study by communication, initially speeches and later journalism, film, and television. But rhetoric and early criticism paid little attention to the means of production, not much concerned with writing or later with printing in its interest in the content. Only well after the flowering of electronic and mechanical communication technologies in the 19th century—the telegraph, the telephone, the motion picture, the radio—did scholars consider how these technologies played a role in communication and themselves affected society. Sociologists at the beginning of the 20th century often viewed technology metaphorically, as the nervous system of the body politic or as a means of circulating intellectual goods.

With the work of Claude Shannon and Warren Weaver, published as *The Mathematical Theory of Communication* in 1949, attention shifted to the technologies themselves. However, as an engineer for the Bell Telephone Company, Shannon came to communication only indirectly—he concerned himself directly with technical systems, with circuits and information capacity in his original paper. Weaver helped to make the leap of seeing Shannon's electrical circuit as a metaphor for human communication. And so, the "sender-message-medium-receiver" model added the sense of technology to communication study, at least as a metaphor. Other scholars extended that metaphor from technical systems even to the interpersonal realm.

At about the same time, the Canadian economist Harold Innis also turned his attention to the material aspect of communication and placed technology at the center of communication study. Having begun with the economics of trade and later of pulp and paper, he became interested in the relationship between culture, transportation, and communication—not the circulation of ideas but the circulation of the materials on which people inscribed ideas. Focused on the material aspects in this way, he hypothesized that cultures relate to time and space through their communication systems. Some communication media (carved stone, for example) extend culture through time while others (lightweight papyrus, as another example) extend more easily across space. Culture, technology, and communication interacted in a complex system.

By the mid-1960s a number of individuals, Marshall McLuhan and Walter Ong, among them, persistently called attention to the physical media of communication and their effects on both communication and society. These "medium theorists" recognized that the means of communication form an inseparable part of communication messages and practices. Beginning with books and intellectual practices in the print revolution, they tried to shed light on the parts of communication taken for granted in the typical focus on message content. For these theorists the material object mattered as much as the intellectual.

Each of scholars calling attention to the materiality of communication came to communication study from the outside—from sociology, electrical engineering, economics, literature, and so on. From the 1930s, another group of scholars also focused on technology but technology of all kinds, not just communication technology. They did not cross as readily into communication study and so remained less well known in the schools of communication. However, those engaged in Science, Technology, and Society Studies (STS) compiled an admirable record of study and developed varied methodologies with which to examine technology. Communication forms only one aspect of their much larger interests, but their interests provide a challenging way to examine communication. Among communication scholars, the Media Ecology group forms one pont of contact with them.

In this issue of TRENDS, Jessica Baldwin-Philippi introduces some of the STS work most relevant to communication study. It adds another chapter to a growing body of literature that argues that communication in its many embodiments forms a highly complex, tightly integrated whole that requires interdisciplinary methods and understanding.

Bringing Science and Technology Studies to Bear on Communication Studies Research

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1. Introduction

As the technological landscape has shifted rapidly over recent decades, the terrain of academic disciplines concerned with actors' engagement with technology has adjusted and expanded as well. Given the ubiquity of technology in our contemporary society, such engagement occurs in nearly all contexts, and is of increasing relevance to academic disciplines ranging across the social sciences and the humanities. Due to the desire and need to investigate the practices and implications of technology use from a variety of disciplinary standpoints, the insights and approaches gleaned from a field that has built itself around investigations of the complexities of technologies—that of Science and Technology Studies (STS)—are becoming more relevant than ever before. As the field of Communication Studies' long standing concern with media and communication technologies becomes both more prevalent and more routinized (Herring, 2004), a nuanced approach to research concerning engagement with, views of, and discourses concerning communication technologies is increasingly necessary. The field of STS, as it has investigated an incredible variety of technologies and their historical, social, and political contexts, contains analytic approaches that are especially beneficial for Communication Studies. Together, STS and Communication Studies approaches provide a fertile ground for research focusing on specific technologies, as well as that which is directed toward the social engagement, development, and societal implications of technology in general. The combination of these approaches can contribute many conceptual insights that can be used across disciplines to better understand the complex, socially situated role of technologies and their processes of creation.

Within Communication Studies, accounts of technology's role within society have traditionally been limited in scope, despite Communication Studies' many methodological approaches to research and objects of study. A consistently large section of the discipline has devoted an overarching emphasis on media content over form or attention to medium. Even the expansion of analyses of content into investigations of interpretation retains an emphasis on content at the expense of attention to technology. Other trajectories of research within the Communication Studies field have given technology more attention, but have done so in a limited way. These practices often focus so heavily on material features and tack so far away from the investigation of content that they become technologically determinist and often lack attention to either content or use. This phenomenon has occurred within the study of technologies past and present, from radio to television to ICTs and Internet-based technologies, and with a growing body of research concerning new media and Internet technologies, approaches that account for the role of new technology in a nuanced and multifaceted manner is of even greater import. In areas of Communications Studies that have begun to account for the role of technology, these accounts are often partial, choosing to ignore content to focus on use, forgetting both when focused on patterns of use, no matter whether the object of focus is historical or contemporary. With the help of theories of STS, hopefully these emphases can better engage one another and be fostered and developed.

Much research within the field of Communication Studies views technology primarily as a vessel through which people encounter content (Fiske 2011, McQuail 2010). Within such a view, media content is the overwhelming focus of analysis, and technologies simply allow greater, fewer, or more specific groups of people to engage this material. (Even Lasswell's, 1948, simplified but seemingly inclusive description of Communication Studies as studying "Who says what to whom, through what channel and with what effect?" locates the central topic of study as that of content.)

The discipline as a whole has a deep dedication to the methodological approach of content analysis (Berelson, 1952; Krippendorf, 2004) and rhetorical/textual analysis (McKee 2003), and the descriptive and illuminating function that these approaches contain. Perhaps stemming from its historical roots of understanding communication through a lens of strong effects, the goal of much research is to show the presence and/or absence of certain ideas, discourses, patterns of terms, and so on, in order to argue that such content affects readers and society in any number of ways. Even as a hypodermic model of communication has long been considered naïve across the discipline (Katz & Lazarsfeld, 1955; Lazarsfeld, Berelson, & Gaudet 1944) much work still focuses on analyzing content and assuming its effects on readers and/or society.

The act of overlooking the relationship between the form of technology and its content occurs across various subdivisions of Communication Studies, even among seemingly disparate parts of the discipline. The counter to critiques of the hypodermic model of communication—the "weak effects" or "negotiated reading" (Hall 1973; Hall, Critcher, Jefferson, Clarke, & Roberts, 1978) trajectory of the discipline—contains an equal drive to analyze the content of messages rather than attend to the role of technologies in circulating such messages. Almost acting as an inverse to the strong effects tradition, these projects analyze interpretations of content (rather than the media content itself) in order to explain the discourses at play, highlight certain ideologies that are present, or show how certain ideas or populations are privileged by interpretations of media content. These canonical Communication Studies and groundbreaking research projects such as Ang (1985) and Morley (1980) have focused on the interpretation of media messages, but have often overlooked the structuring role of media technologies as active in transmitting these texts to be interpreted.

Of course, a sizable facet of Communication Studies has long observed the role of technology (Benjamin, 1968/2008; McLuhan, 1964/1994; Kittler, 2010). While overtly determinist readings such as McLuhan's (19641994) "the medium is the message" are no longer the custom in Communication Studies, this emphasis on the material capabilities of technologies—often argued to lead to either a utopian or distopian outcome—remains (Ong, 1982; Rheingold, 1993; Negroponte, 1995). These habits of focusing on techno-

logical capabilities come at the expense of inquiry of use or content, focusing on an object, rather than on objects as they are engaged in society (Whittaker, 2003). In such research, accounts of the potential uses of technologies stand in for both investigation of their actual practices of use and analysis of their content or lived effects. Media histories attend to the material components of technologies and their processes of technological development and evolution differently, but seldom focus on the content of these technologies. Instead, they often focus on the cultural factors that led to advancements in material technologies. As research concerning ICTs has grown increasingly common within Communication Studies research, projects detailing when, how, and why individuals use ICTs to communicate and the contents of these engagements span a variety of Internet technologies, from social media to blogs, to websites, to email, and so on (Lievrouw & Livingstone, 2006; Jenkins, 2006). Productive and nuanced analyses of the ways that ICTs are shaped by users to complement existing social, political, and economic conditions and needs (Mansell & Silverstone 1996) give depth to how the discipline sees technology. Still, while these studies provide accounts of the types of communication that are currently taking place and the details of such processes, they often fall short of reflecting upon the ways that the technologies themselves may have meanings that are associated or socially constructed within such use.

Some of the best accounts of the impact or role of media technologies in society go beyond discussions of their use and evolution to discuss the ways in which they gain cultural meaning or significance through people's engagement with them (Douglas, 1987; Ling & Pederson 2005; Marvin, 1988; Silverstone, 1994; Thompson, 2002). These accounts manage to bring together insight into media technology by focusing simultaneously on the processes of production and consumption, and understanding the technology as made up of both material affordances, and as containing socially constructed meaning. In her media history of the radio, Douglas (1987) discusses the material affordances of radio technology, and the way that people used them in ways that were unintended by producers of the technology; she details the ways that these new patterns of use not only gave them new purpose, but new cultural significance as well. Silverstone (1994) discusses the ways that television is used alongside the way it gains meaning among specific social groups and society as a whole. Katz & Sugiyama (2005) investi-

gate the ways that people put the material capabilities of mobile phones to new use and redefine the social meanings of phones, their own personal identities, and their relationship to others in the process. Many of these outstanding examples are specifically rooted within theories of STS, and they represent the productive ways that Communication Studies can benefit from a Science and Technology perspective. Thus, inroads in combining the two areas of research have occurred, producing detailed and balanced accounts that give multifaceted perspectives on communication technologies, the ways they are engaged, and the social arrangements surrounding such engagement.

Research that can describe and analyze the ways technologies are comprised of both material systems and social contexts is moving towards this goal of a holistic account of the role of communication technologies and productively "highlight the interplay of symbolic content and meaning with the artifacts, practices, and social arrangements that are associated with them" (Boczkowski & Lievrouw, 2008, p. 955). So, some may ask: Why "bring" STS to Communication Studies research when productive facets of its approach may already be making their way into the field? In order to continue to build upon and expand the connections being made within Communication Studies, greater knowledge of the field of STS as a whole (and not just its handful of instantiations within Communication Studies) must occur. A theoretical sense of STS is important, as gaining an understanding of the wide variety of approaches that are available to the study of communication technologies will allow Communication Studies scholars to produce nuanced accounts of media technology in two ways. First, it allows scholars to choose from a wider tool kit of analytical approaches in order to find methods and frames that are relevant and productive for their object of analysis. Second, it allows for projects that bring together greater numbers of these approaches in order to study technologies from a variety of perspectives, thereby producing multifaceted and complex views of media technologies and their role in contemporary society. This interdisciplinary approach can foster continued and consistently and carefully detailed approaches to technology within Communication Studies, rather than relying on exceptional cases that are standouts in the field. While scholars have begun to explore connections between the two fields (Boczkowski & Lievrouw, 2008), Communication Studies would still benefit from a deeper understanding of the field of STS, and the theoretical lenses that it brings to bear on analyses of technologies.

By understanding the disciplinary history, themes, and trajectory of STS, Communication Studies will become more capable of nuanced approaches to its objects of inquiry, and the role of communication technologies within society.

To give an overview of such an interdisciplinary and diverse field as STS proves difficult due to the field's wide-ranging methods, objects, and insights that resist categorization and demand attention to contingent situations. Moreover, STS scholars' self-proclaimed "aversion to universalistic claims" (Lynch, 2008, p. 9) positions reviews of the field as versions, rather than singularly correct accounts. In an effort to abide by the discipline's understanding of itself, and in accordance with STS scholar Sergio Sismondo's skeptical comment: "STS in one lesson? Not really" (2008, p. 13), I aim to provide but one view of STS's main tenets and their relationship to Communication Studies. Thus, rather than simply providing an overview of the theoretical milestones or methods and objects of analysis within the field, I find that STS is most productively understood through two major analytic lenses that are recurrent emphases within the breadth of the field as a whole. For this reason, this review focuses on these fundamental, cross-disciplinary approaches to inquiry, how they have become the backbone of research in STS, and the ways in which they are highly translatable to Communication Studies as well. First, STS has expanded the way we think of "invention." Second, it has explored a wide variety of ways that complex social relationships can be explored and analyzed. These fundamental themes have gradually shaped researchers' understandings of specific technologies as well as the role of technology within society. They also provide productive analytical insights for any discipline's study of technology, including an emphasis on the way that texts necessitate analysis of both their production and use; and they provide an insight that the binary relationship between object and process must be destabilized. In order to productively use STS within the field of Communication Studies, knowledge of its history and development as a field becomes necessary. In many ways, the history of STS directly relates to ideas and concepts that are at play within Communication Studies. I point out such connections within this overview, and note spaces that contain potential for further overlap as well. Following a short overview of the lineages of STS, these analytic approaches to the field will be discussed, and their interdisciplinary insights will be explored.

2. STS as a Field

The field of STS, like its objects of inquiry, reveals that origin stories are always more complicated than they appear on the surface. Providing any "history" of a discipline is difficult, but extremely so for STS, due to its emphasis on the contingency of characterizations of knowledge. Because, as STS scholar Michael Lynch (2008) has argued, "disciplinary histories and characterizations of the state of knowledge are topics and resources for STS" (p. 9), its own history must then be relayed as complex and as having many versions of its own lineage. Although the area of study coalesced in the mid-1970s, STS is, in many ways, better understood as the result of innovation and invention among other related fields, whose theoretical underpinnings can be seen in disciplines and philosophies extending far prior to its rise as a field in itself.

Theoretical groundings of social construction such as Kuhn's (1962) *Structure of Scientific Revolutions*, and Berger and Luckmann's (1966) *The Social Construction of Reality*, provided the foundations for understanding science—and the knowledge and artifacts it produced—as a situated, social activity. These theories claim that "an adequate understanding of 'reality *sui generis*' of society requires inquiry into the manner in which this reality is constructed" (Berger & Luckmann, 1966, p. 18). These theories of social construction are deeply, even if not explicitly, related to Communication Studies, as the process of social construction occurs through public discourse in which definitions, ideas, and knowledge circulate among people and throughout public texts. One need not agree with a Habermasian notion of a single, bounded, rational public in order to see this connection. Rather, the emphasis here is on the process of discourse among individuals in society that produces shared understandings of the world in which they live. These can center around circulated texts (Anderson 1991), or can exist in multiple forms and/or counterpublics (Warner, 2005) and they can shift—in terms of their knowledge, size, and the people who inhabit them.

A foundational argument of political theorist John Dewey (1988) also gestures toward the way that the public sphere, which necessarily involves not only sets of individual actors but greater institutions as well, affects what is considered knowledge and fact, asserting that solidified "facts" are no more than "traditions in which are enshrined the emotions and imaginations of so many human beings, as well as the force of the established institutions" (p. 246). As thoughts such as these considered the intertwined nature of society and technology, they contained nascent kernels of the field that would come to be STS

As an observable and distinguishable area of inquiry, STS "began" as two independent fields with split foci of theory and object—Sociology of Scientific Knowledge (SSK) and the Social Shaping of Technology (SST), respectively. Though these divisions existed a long time, scholars now consider these separations unproductive and have condemned them (Barnes, 1982; Pinch & Bijker, 1984) due to the fact that "the divisions between science and technology are not between the abstract functions of knowing and doing. Rather they are social" (Layton, 1977, p. 209). STS represents the combined result of their shared emphases on the situated and collective processes that contribute to the creation of scientific thought and material goods and the desire to understand their complexities and consequences. Investigations into the way that scientific knowledge is socially constructed have been the subject of genres of Communication Studies research, such as the inquiry into the Rhetoric of Science, which investigates the persuasive structure, topoi, and epistemology of scientific findings, arguments, and knowledge (Gross, 1990). Even subsequent critiques and evolutions of this subfield (Gaonkar, 1997) are closely related to ideas found within STS, and can potentially be expanded upon through further interdisciplinary overlap between the two fields.

Within STS, scholars began to look for the causes of knowledge—not only how errors in knowledge were often seen as truth, but how seemingly correct knowledge becomes popularly accepted (Bloor, 1976/1991). As the sites and methods of research shifted toward an emphasis on research concerning what happened in scientific laboratories (Latour & Woolgar, 1979; Woolgar, 1982), the roles of individuals acting together (rather than society as a whole) became an emphasis of the field (Collins, 1982; Mendelsohn, Weingart, & Whitley, 1977), as did a turn toward investigating objects of technology rather than just ideas

(Pinch & Bijker, 1984). To better understand these the way that objects of technology come to be understood by the public(s) in specific ways, STS is dedicated to understanding the way that science and technology are "patterned by the conditions of [their] creation and use" (Williams & Edge, 1996, p. 866). But this influence is not a one-way interaction. STS also approaches science and technology as simultaneously shaping and shaped by society (Bijker & Law, 1992; Law & Bijker, 1992) in a process of co-construction (Jasonoff, 2004) involving both society and technology as active agents.

Alongside theories of how science and technology come to exist, STS has been built on the belief that the concrete or material value of both scientific "facts" and technological artifacts are not to be taken as the whole story. They are both influenced by values and practices in production, and engage, encourage, or discourage values and practices as they are used. They are not "black boxes" that fail to influence the content or meaning of what is produced, but sources and spaces of complex interaction that affects both the input and output of any interaction with a technology (Whitley, 1972). Wanting to attend to these complexities, the discipline is "united by an insistence that the 'black-box' of technology must be opened" (Williams & Edge, 1996, p. 866), and an approach that stresses both the content of technology and knowledge and the process of innovation. Additionally, these black boxes have impacts and meanings that are both material and symbolic. Their material and technical capabilities allow users to take certain actions, and they also "serve as symbols that enable work and, through it, the creation of scientific knowledge and technical results" (Sismondo, 2008, p. 16).

In its efforts to illuminate black boxed technologies, STS has focused upon many objects of analysis, from light bulbs (Bijker, 1997; Marvin, 1988) to weather maps (Edwards, 2010) to methods of categorization (Bowker and Star, 1999). Today, newer media technologies are the subject of STS research (Lievrouw & Livingstone, 2006; Woolgar, 2002), and are the very same objects of analysis taken up be Communications Studies research as well. Within STS, this vast object domain not only leads to information about particular artifacts, but it has also become a "source of critical insight into the conceptual underpinnings of modern social and political theory" (Lynch, 2008, p. 10), and its turn toward new media provides insight into social and political theories concerning the digital era in which we exist. This outlook is shared by research concerning media and communication technologies that is undertaken within the discipline of Communication Studies, and can contribute to the field's understandings of technology— not only as it mediates social behavior, but as social and political in its own right. Among the insights into studies of socio-political relationships, two major approaches to inquiry have been fostered and extended by STS: expanding the concept of invention, and exploring the various ways that social relations can be organized and analyzed. Throughout its numerous instantiations, the STS lens has shown that attention to these topics can produce a better understanding of technologies and lead to a deeper theoretical understanding of sociality and the process of creation. Thus, by familiarizing themselves with major concepts of STS-based inquiry, Communication Studies researchers can better analyze communication technologies and their role in society. As it is a lens through which to view the world, STS can contribute to furthering these complex understandings of society across numerous disciplines and spaces of inquiry.

3. Expanding "Inventing"

A fundamental advancement in the mode of inquiry for STS has been to expand the ways in which we can understand the concept of invention. We can easily overlook the definition of invention as only meaning a technology or the creation of a new technology, but STS does not concede this simple answer, nor should Communication Studies. Instead, it calls for questioning the processes that go into creating an artifact, and troubles reified understandings of such artifacts. The result is a much more complex understanding of technological invention as a fluid concept that is neither just a process nor an object, and involves both material capabilities and practices of meaning-making. The field of STS expands, complicates, and strives to contribute to questions concerning what counts as (an) invention, which actors are involved, and over what

period of time invention takes place, and forces us to reconsider the way we may reify the concept in our own work. This helps Communication Studies on multiple levels. First, it highlights the role of technologies at the outset of inquiry. In highlighting invented objects, STS argues that research concerning content (as is the focus of most Communication Studies research) must be fundamentally linked to discussions of the media technology to which any content is connected. Second, it highlights technologies in a way that is less static than that offered by many theorists within Communication Studies, due to its view of invention as a continuous process that results in an understanding of technology that, depending on its content and patterns on use, can develop multiple, socially contingent meanings. Bringing this STS approach to bear on Communication Studies will not only reaffirm the need to research conditions of technology use (in addition to production), but will necessitate that we view technologies as evolving and gaining socially situated, multiple meanings.

STS's own origin story serves to indicate the way that it has contributed to expanding the concept of invention. Eliding academic attempts to separate the fields of science and technology, or privilege one above the other, STS combines the previously separate object domains of knowledge and material goods, attributing the invention of both to situated social interaction. By investigating the tools of science and technology using the same methodological rubric, STS considers the processes of creating both the "fact and artefact" (Pinch & Bijker, 1984) invention of the same level. Moreover, the use of "invention" as both an action that is undertaken and the material result of this action implies that both the process of invention and the object that is an invention must be considered in order to fully understand any technology or technological advancement. The discipline of STS takes this collapsing of invention in both its noun and verb form seriously, and approaches all invented objects as inextricable from the complex and active process by which they come to be. Thus, whenever this review refers to objects as "inventions," the process of their creation is implicit. This language is not meant to say that inventions are static objects, but to more easily refer to their material nature and diminish confusion among readers.

Invention—as a process or product—is active. Just as the action of inventing suggests agency and movement, so too should the objects of invention. Within STS, objects of invention are not understood to simply be passive objects for use, but as agentive participants in (and influences on) the social world in which they function. Latour (1987, 1992, 1994, 1996) has long and forcefully highlighted this point, suggesting that "objects do *do* something, they are not merely the screens or the retroprojectors of our social life" (1996, p. 236, emphasis original). This active quality influences the everyday ways that human actors engage with technology, and is of fundamental importance for the discipline of STS. Describing the agency of invented objects, he discusses the need to understand both human actors and non-human inventions as equally effective within the system of influence, calling them both "actants" and describing non-human objects as the missing element of the social, "the hidden and despised social masses who make up our morality" (1992, p. 153). (Latour attributes the term "actant" to the field of semiotics, as used by Greimas & Courtes, 1982.) In using this terminology and in joining human actors and non-human inventions, Latour dispels ideas of inventions as passive black boxes and calls for research that gets at this mutually interactive and agentive process. STS not only understands both the process and product as invention, but it has radically rearticulated the relationship between material inventions and their creators (from traditional "inventors" to users), and expanded the understanding of temporal interpretations of production. This view forces Communication Studies to go beyond a content-based approach and acknowledge the relationships between material technologies and a text's content, interpretative possibilities, and its role in society. In approaching the study of media from this perspective, Communication Studies can gain a sensitivity to the wider interactions within its outlook from STS's long history of grappling with the idea of technology and invention.

STS's conception of invention begins to break out of the realm of production due to the idea that the entirety of the active process of technological engagement must be accounted for—from initial production to use. By viewing invention this way, STS extends invention into the realm of interpretation and use. In doing so, those associated with the process of invention and the temporality of what counts as "invention" extends radically. No longer confined to a specific moment of an object or idea's birth, the concept of invention that STS provides contains many phases of continued innovation and creation. This understanding of invention highlights a new set of agents who count as actors and a variety of practices: feedback from

users, the original creation of new objects by users, fundamentally different uses of the same technology, and the attribution of different meanings to the same technologies. Each of these articulations of invention provides an additional moment at which the process should be attended to and analyzed.

The concept of invention expanded over time within STS, incorporating more and more actors into the fold of production, from user feedback that led to new inventions, to public power in producing the linguistic definition of inventions, and users' abilities to engage in alternative or unforeseen practices. A fundamental expansion of what counts as invention, numerous scholars have documented the processes of user feedback that are endemic to the invention of any technology or idea. Von Hippel (1986) discusses the concept of the lead user as one who holds great power to give feedback to engineers and thus become part of the invention process. In fact, users are even encouraged to be brought into the production process and ways to do so are prescribed by academics (Nambisan, Argarwal, & Tanniru, 1999). Despite Thorpe's (2008) skepticism, the fact that scholars are taking account of the user remains important. In some cases, the role of the user is even greater than simply providing feedback, and scholars and researchers see users as sources of innovation, rather than just extra contributors. Expert users were often in the position of inventing new technologies in order to complete their own work (Urban & and von Hippel,1988). Scientists were often shown to both make small and large changes to already-existing technologies in order to make them more useable or efficient, thus generating entirely new inventions. (These ranged from something as small as swapping out a foil made of gold for one made of copper, to adding entirely new components to machines.) Contemporarily, we may read the advent of user-generated computer programs such as iPhone applications as similar cases in which users innovate alongside producers. By creating original programs for a pre-existing technology, users and producers collaboratively produce new capabilities of the iPhone that re-invent the technology. In all of these cases, the process of invention extends well beyond the time at which the original object was first built. Some projects within Communication Studies have begun to focus on this convergence of production and use, especially in cases concerning ICTs (Jenkins, 2006; Mansell & Silverstone, 1996), but STS can broaden even these understandings even further.

Additionally, STS shows that even after a final version of an object is materially constructed, its "invention" can continue as its meanings, uses, and definitions shift over time, a concept that is fundamentally centered on investigating the way that language and discourses can create the meanings with which technologies are imbued. As such, the project of rhetorical closure of a technology can involve a collaborative interaction among users and producers that expands the temporality in which an invention comes to be defined. For example, deciding what counts as falling under the definition of "steel" became a debate that took place within the public as well as the industry (Misa, 1992). In this case, the process of inventing "steel" encompassed an extremely extended temporal period that went well beyond production. What had been understood as slight variations of the single invention of steel became many inventions such as "wrought iron" and "mild steel" upon public discussion and debate concerning the properties of "steel." Thus, STS's emphasis on discourses as constitutive factors surrounding technological production, definition, and use ties into Communication Studies, and should be given more consideration within the field. Similar shifting rhetoric has surrounded telephony in its shift from a predominantly wired to a wireless technology; television's opposite move from wireless broadcasting to a wired (cable) service has not received as much discussion.

This extension is not limited to defining technologies. Re-invention can also happen through new and different uses of already-existing technologies. In some processes of re-invention, users, wholly independent of producers, began to employ technologies in new ways, producing entirely new results with machines that had the exact same technological capacities. This use can be so different from producers' plans that it reveals entirely new sets of affordances and actually re-invents the device as a new technology. In these instances, small shifts in the types and purposes of use have the potential to radically shift the meaning of a technology, thus creating a new invention. This process exemplifies the claim that "even in the diffusion stage, the process of invention continues" (Bijker, 1992, p. 97). Dubbed "innofusion" (Fleck, 1993), the process of invention is enacted in and even after the diffusion phase, and fundamental changes in meaning are re-articulated as acts of re-invention or innovation that takes place externally of the modes of production. As an example of this approach applied to a specific communication technology, consider the different patterns

of use that rural telephone users employed, such as eavesdropping on neighbors, broadcasting music and news on party lines, and the ways these uses fundamentally changed the local meaning of the telephone and the way that users understood the device (Kline, 2000). While the technical processes of use were identical—pick up receiver, dial, and communicate message to someone who is spatially removed—users changed the reasons and meanings for use, fundamentally re-articulating the technology in doing so. Rather than using the telephone as an object for interpersonal interaction that mimicked private conversations, the telephone existed as an invention that emphasized publicity and communal interaction. Similarly, Susan Douglas (1987) investigates the role of radio tinkerers, and the ways they began to forge toward a broadcast paradigm without interference or influence from radio companies. She describes this process as wholly independent, saying "it was the amateurs who pioneered using radio for broadcasting, not Marconi, its inventor, and certainly not David Sarnoff the president of RCA, who rewrote history to make it seem like broadcasting had been his brainchild" (p. 16). In the case of both the phone and the radio, technology that was developed and originally used for direct communication was actively re-invented as a technology that was used for mass dissemination and circulation. While the material components of each technology remained the same, the technology of broadcast was invented through new uses of both the radio and the telephone. Additionally, analysis of computing shows that the definition of "computer" held by early users did not match that of the producers, but it nonetheless became the dominant operating model and ultimate invention of the computer as we now know it (Ceruzzi, 1999). In the case of the telephone, what was once originally marketed as a business tool was reinvented as a social technology by users before advertised as such (Fischer, 1988). In all of these cases, invention occurs long after time in the laboratory is over. By upsetting the temporal frame in which the process of invention occurs, the object of invention can mean different things at numerous different times resulting in an approach that refuses to reify any invention as a single thing with static meaning. An implication of this genre of research is that there is much room for Communication Studies to investigate the ways that communication technologies contain different or shifting meanings among various populations of actors or across time periods or cultures.

By recognizing these nuances to the idea of invention, STS contributes to our understanding of technology, and to a larger understanding of society as it involves interactions with technology. Technologies are seen as active agents within the social process, and production and consumption are no longer defined as binary acts, but as connected and interactive undertakings. These advances are useful throughout a number of disciplines, and they provide a directly practical application within the discipline of Communication studies. STS's emphasis on destabilizing the object/actor binary implicitly argues that it is impossible to understand technology without understanding the social practices of communication and use that surround these objects, thereby necessitating attention to surrounding practices of communication. Within Communication studies, this means that studies focusing on technology as an active agent in the interpretation of media content (as media effects studies do) must look to the creation of texts if they are to understand the process of engaging with any technology. On the other hand, projects that are limited to the realm of production (as many concerning media economy are) must cross over into investigations of use as well. Moreover, its emphasis on connecting production and use traverses categories that are too-often separated, and whose intersection is so often the site for furthering insights pertaining to both spheres and the ways in which they are related (Boczkowski & Lievrouw, 2008).

4. Organizing Social Relationships

Communication Studies research is highly concerned with social relationships. Interpersonal Communication investigates how individuals interact with one another; Organizational Communication focuses on how groups and institutions are assembled in ways that affect their communication processes; Network Theory social network methodologies focuses on larger groups of individuals and organizations. These traditions can certainly begin to inform us about the ways that social relationships factor into engage-

ment with various technologies. In fact, Organizational Communication tells us that the arrangements of individuals and groups affect how they interact, communicate, and conceptualize things (Katz & Kahn, 1966), including how they use technology and what they use it for (Sproull & Kiesler 1991/1998), and how they give meaning to technologies (Orlikowski, 1992; Orlikowski & Gash, 1994), and the ways technologies affect and organize groups in specific ways. Social network theory (Castells, 2010; Monge & Contractor, 2003) provides insight into the expansive social networks involving myriad links between and within individuals and groups that can be observed through—and are often argued to be enabled by—our contemporary media environment. Still, however, STS provides many additional and varied useful analytics for thinking through the role of the social as related to communication technologies as well. For instance, while Communication research often focuses on the ways that institutions and pre-existing organizations or collectives of people engage and interpret technologies, STS also focuses on how technologies can organize and highlight how groups of people are in relation to one another that go beyond preexisting designations and provide new visions of social relations. As STS has pursued these questions of sociality in a variety of ways that supplement and build upon one another, their many approaches to the topic can be of many uses for Communication Studies.

Intimately connected to its project of expanding the idea of invention, STS also enlarges, refines, and contributes to the ways we understand the social relationships involved—the *who* rather than the *what*—in the invention of science and technology. Particularly, STS focuses specifically on how certain social relationships, organization, and internal and external connections among groups and individuals affect the ways that people use, understand, and interpret technologies. Although the discipline of STS is awash in differing articulations of the roles played by social groups, the overarching emphasis on the types of use and meaning-making processes engaged by socially situated groups of actors shows the discipline's dedication to understanding technology—and its meaning and use—as contingent and locally situated. The primary conflict concerning how social relationships are organized hinges on disagreement over whether artifacts and practices are "best seen as *constructions* of individuals or collectivities that belong to social groups" (Law, 1987, p. 111, emphasis original) or as existing "in

terms of a systems metaphor . . . in which the artifacts relate to social, economic, political, and scientific factors" (p. 112). Within these competing paradigms, there lie deeper divisions that produce differing accounts of how social groups are made up or actors within a system are connected.

These allegedly contradictory explanations (that are less contradictory than building upon one another) ultimately form a combined approach from which Communication Studies can benefit as it attempts to fully understand the complexity of social relationships that always interact with technology. STS has, over the years, added to the complexity and insight with which it approaches social relationships, and I chart this progression, pulling from beneficial elements as well as shortcomings of systems theory and other approaches to collective modes of construction. These theories of social interaction are related to concerns of STS as a discipline—such as the flexibility and closure of technological innovation and the relationship between practices of production and consumption—and provide Communication Studies with attention to (and methodologies to investigate) the intricacies of social relations that are a useful analytic by which to unearth potential social consequences and effects associated with technologies. First of all, while Communication Studies has approached topics of communication within a group setting, it has given less thought to how media are invented (and constantly reinvented) within systems of relationships. Second, the various forms of social relationships and how they interact with one another that is the topic of STS can help Communication Studies further its areas of Organizations Communication that focus on how groups use technologies in potentially new and productive ways.

Within STS, one main body of theory argues that a technology's social influences take the form of a system. Whether they are described as "large technological systems" (Hughes, 1983, 1987) involving loose confederacies of individuals, this line of thought refuses to engage in any analysis that might sever groups or objects from their contextually rooted positions. Instead, objects, people, and organizations are understood as inextricably connected and interdependent, and must therefore be studied as a whole, rather than as detachable parts. For systems theorists, practices of the creation and engagement of technologies are understood as a house of cards—try to take one piece out, and you will be left with an indecipherable arrangement and a collapsed system. The systems approach

takes an in depth look at economic, political, social, and technological interactions across a variety of spaces and provides an approach that does not artificially sever some elements or populations of the system from the others. The overall intent of this approach—a call to attend to vast contextual specificities and interrelated events, desires, and acts—has the potential to be incredibly productive to STS and to Communication Studies, as both the form (technology) and content of texts that are the objects of study in each field are often both created and interpreted by systems of actors. Despite its relevance to such scenarios, when used by itself, the systems approach—whether within STS or Communication Studies—finds that much of its practical application leaves something to be desired.

First and foremost, if we are dealing with a system that is so complexly interconnected across economic, political, social, and technical fields, how and where are we to begin? Hughes (1987) provides a rather systematized approach to understanding the temporal patterns of activities that occur within the system, tracing invention, development, innovation, transfer, growth, competition, and consolidation (p. 56). Despite an emphasis on activity amongst many connected actors, and assertions of the pattern's malleability, this model over-emphasizes the role of inventors and producers of technology at the expense of users. This inclination to disregard users is clear within the foundational authors of the approach, and in much of the research it has generated. Remaining entrenched in the production side of technology, this approach sees the important participants to be "engineer-sociologists" (Callon, 1987) as the key to understanding how social relationships affect technology in general, and outside actors are never depicted as builders of the system. In each of these cases, actors are understood to be the engineers who build the technology, rather than the people who use it. While this tradition has—to the dismay to those looking for a more multi-faceted approach—over-emphasized the role of production within and the social relationships therein (Boczkowski & Lievrouw, 2008), its approach can be especially beneficial to Communication Studies, as the discipline often overlooks these very aspects of technology. In this way, it holds great benefit as a supplement or as one of many facets of a multi-perspectival approach that considers the complex interactions of technology use and creation.

In an effort to extend beyond views that privilege this engineer-focused approach to research, Latour (1987) and others have put forth the concept of actor-network theory (ANT). This line of thought contends that "actors" within a system extend far beyond engineers or those who create and build technology—that "an actor network is reducible neither to an actor alone nor to a network. Like a network, it is composed of a series of heterogeneous elements, animate and inanimate, that have been linked together" (Callon, 1987, p. 93). As discussed in the preceding section, not only does Latour argue that engineers themselves are interrelated subjects whose interaction with others necessarily implies that these others are also actors, but he argues that technologies themselves—springs, lab equipment, computers, etc—are also actors. By providing the title of actors across the board and discarding the idea of an independent, atomistic actor in the question, ANT has made great leaps toward destabilizing our understandings of who/what counts as social. Accordingly, productive thought about the ways that agents interact with one another and are never truly atomistic individuals has produced an attention to the complex and intricate web of social relations within systems theory. Still, the space of interaction that is the area of such complex analysis often remains limited to the spaces of production, even in the case of highly nuanced work such as that of Latour and Woolgar (1979). Thus, even if they are influenced by a variety of factors, actants who literally build technology—not users, politicians, or even financial backers—still hold the privileged position within the field of study. By focusing on production as the central system of any technology, these approaches overlook the fact that the social interactions among users can change a technology's purpose and meaning, and therefore must be accounted for. Without doing so, not only is an entire set of actors unrecognized for their ability to change technology through use, but the process of technological creation and construction becomes misleadingly limited as well. Figurative "building" of a technology occurs outside of and after production, and must be attended to if we are to really understand the complex ways technologies are understood and used in society. Although this approach may over-emphasize the realm of technological production, it becomes a much more productive approach when used in tandem with some traditional approaches to Communication Studies research. First of all, by combining an emphasis on the social relationships that go into producing a technology with Organizational Communication's emphasis on social relationships in technology use, a multifaceted approach to technology results. Second, by combining

these studies with the social relationships of those who literally build technologies with those of media economy (McChesney 2000; Herman & McChesney, 2001; Schiller, 1989), Communication Studies and STS can work in unison to create a more holistic approach to research concerned with the creation of media texts.

Additionally, the systems approach often implicitly argues that social relations that go into technology creation and use tend toward processes of "closure" that result in agreed upon and common uses and meanings. While scholars are careful to assert that closure is not final and can occur repeatedly (Bijker, Hughes & Pinch, 1987, p. 11), there is still a teleology toward stability that results in an incorrect understanding of technologies as reified and static objects. Law (1987) articulates this disciplinary emphasis, arguing: "*the stability and form of artifacts should be seen as a function of the interaction of heterogeneous elements as these are shaped and assimilated into a network*" (p. 113, emphasis original). Even in the corresponding analyses of technologies' "flexibility" in terms of the places where their uses and affordances were open to interpretation, the end result is closure. While some technologies' meanings and uses do appear to stabilize or close (especially in terms of its technical elements), taking the perspective that any technology is stable and static, no matter how common or everyday it may be, is inherently limiting to our understandings of the way it functions socially. For example, the very same email system can be used for communication that is interpersonal, or for disseminating a message to members of a public who are unknown. Its meaning to users can range from a tool to increase social interaction, an appliance used only for efficiency, or a tool by which to minimize power differentials. Each of these "meanings" or associations makes it clear that even a "closed" technology of a single email server by no means implies closure of the meanings of a technology, or of that technology as a whole. As a productive way around systems theory's emphasis on producers and an implicit move away from an emphasis on closure, theories of collective construction attend to social groups that construct both artifacts and intellectual thought, and give attention to people "doing things together" (Becker, 1986) to engage with technology that covers the realm of users in addition to producers.

One of the most beneficial elements of the collective construction approach is its focus on a variety of social groups, rather than just the group that physically builds a technology. By focusing on groups of actors,

rather than individuals who are only linked through their shared existence within a system of production, similarities of interests, needs, uses, and understandings of a technology that occur within various populations become more apparent. Additionally, differences across groups provide interesting insight to contingent social situations as they relate to any technology. A car can be evaluated as a good invention either by its gas mileage, safety rating, or capacity for speed, with different machines succeeding at each of those categories. Due to the fact that, "for different social groups, the artifact presents itself as essentially different artifacts" (Bijker, 1992, p. 76), and the very definition of any technology as a specific object is thereby complicated. Ultimately, theories concerning social groups argue that the only way to get at these different facets is to look beyond actors who built a technology or created a theory, to populations—types of potential users, investors, etc.—with specific needs or desires for an object or approaches to a scientific theory. There are many articulations of how these social groups should be approached and categorized, and each version has different implications for the study of STS and Communication Studies. From the tradition of EPOR [Empirical Program of Relativism], we have the idea of "core sets" (Collins, 1981), from SCOT [Social Construction of Technology] there are a few varieties of "relevant social groups" (Kline & Pinch, 1999), in addition to "social worlds" (Clarke & Star, 2008).

Actors within core sets are defined by similarities within the production of knowledge rather than objects; they represent "the scientists most intimately involved win a controversial research topic" (Pinch & Bijker, 1984, p. 410). Like systems-focused approaches, core sets are also confined to the realm of initial creation or production, but they do extend a little further than simply the engineers creating a technology, or the person who invented a theory. Core sets involve those who contribute to theories, as well as those who engage in controversies and arguments with each other (Collins, 1981), even if they are outside the laboratory in which technologies are produced. For example, a scientist's academic lineage can pertain to who counts as its core set. In the case of Kranakis's (1999) discussion of bridges, each scientist's competing and diverse core set included the academic tradition from whence he came. Because this is still relegated to the production side of the equation, "relevant social groups" represent a more fruitful approach to social relations. Spurred on by the apparent "interpretive flexibility" of technologies (the

fact that many variations of one technology can occur), the "key requirement" of relevant social groups is that "all members of a social group share the same set of meanings, attached to a specific artefact" (Pinch & Bijker, 1984, p. 414). Problems may arise when these groups are created by researchers on the basis of a priori categories (such as gender or class), rather than by an historical ethnographic process of understanding the various potential uses and needs of populations (thus, women only become a relevant social group regarding the light bulb when a researcher discovers electric companies marketed to them as such, as Bijker, 1992, argues). In doing so, this approach groups social organizations according to the act of use and asserts: "the same artifact can mean different things to different social groups of users" (Kline & Pinch, 1999, p. 112). Pinch and Bijker's (1984) original analysis of the bicycle focuses on different groups of producers, women cyclists, sport cyclists, etc., thereby exemplifying the different needs and uses of various populations. This method of analyzing social relationships thus allows simultaneous insight into both the production and use of technologies, and acknowledges that the meaning and value of technologies comes to exist within social interactions and communication within and among groups of users.

While systems approaches to STS succeed at providing highly detailed and refined looks at a set of interactions, the benefit of this collaborative construction approach lies in its ability to reflect upon both producers and users as wielding similar levels of influence on technologies' stabilization, uses, and meanings—and even to privilege the agency of users in the later stages of a technology or idea's development. It introduces moments of re-invention or innovation that are outside the laboratory, or that are "offstage" in addition to Law and Callon's (1992) "backstage and front stage" of production (p. 51) and allows us to see the variety of actors involved in the process. Not only does this method frame users as actors, but it also helps reduce the sharp divide that is often assumed to exist between production and consumption. It allows us to understand the specifics of ongoing processes of invention that are the subject of the earlier section of this paper. Nonetheless, these collective construction formulae are still potentially problematic. They attempt to look at social groups as bounded interactions when, in reality, many influences bear upon these groups' needs and practices of use. By focusing on certain groups there is a need to artificially separate them from influential

social conditions, which creates a definite risk of losing sight of the complexity of the whole situation. The social worlds framework (SWF) (Strauss, 1978) is an approach that brings together the productive elements of systems theory, but situates itself as focusing on processes of collective construction. (This framework predates Strauss as well, and, according to Clarke and Star, 2008, originally dates back to Mead, 1938/1972.) Not only does the SWF bring together elements of systems and social groups, but its approach is extremely valuable to the project of bringing STS together with Communication Studies.

Social worlds are described as "universes of discourse" (Strauss, 1978), or "shared discursive spaces that are profoundly relational" (Clarke & Star, 2008). Because these universes are made up of situated groups of actors, similarities to the project of collective construction are clear. The task of initial work in the area was "to make the group the focal center and to build from its discoveries in concrete situations, a knowledge of the whole" (Eubank as cited in Meltzer, Petras, & Reynolds, 1975, p. 42). Alongside this emphasis on the social, objects such as technologies or scientific theories are understood as "boundary objects" around which multiple, often divergent perspectives, uses, and meanings are constructed. Thus, social world frameworks do not focus on one social group (as do collective construction projects), but rather on multiple ones as they interact with a common object and with one another to create a network. So SWF does not sever social groups as some argue approaches such as SCOT do, and it emphasizes groups of collective construction while situating them within a system of the social world as a whole. Taking cues from systems theory, the social worlds framework describes the social worlds approach as "relentlessly ecological" (Clarke & Star, 2008), and emphasizes the relationships of "the arrays of people and *things*" (p. 113), similarly to Latour's actants. Social worlds frameworks are, on the whole, quite similar to ANT, but are also "insistently pluralist" (Clarke & Star, 2008, p. 123) and attentive to the effects of use, whereas ANT often stays within the realm of production. Again, by creating an approach that analyzes both production and use, social worlds frameworks are attentive to the need for an analysis that approaches objects from all perspectives. If we abide by the system theory-influenced statement that technology's role "can be understood only if the artifact in question is seen as being interrelated with a wide range of non-technological and specifically social

factors" (Law, 1987, p. 113) and the claim that, even when engaging the same object, "different groups have essentially different technologies" (Bijker's, 1992, p. 76), SWF is a productive theory and method by which to get at both of these occurrences. This approach is able to account for interactions within the system, while also capable of looking outside the system to where meanings are being made in different formats by other social groups.

Although this blending of systems theories with a group focus and work within the often-separated spaces of production and consumption are extremely fruitful, they are not the only productive moves of SWF. Another particularly productive gain from SWF is that "social worlds framework emphasized a key interactionist assumption that cooperation can proceed without consensus" (Clarke & Star, 2008, p. 125) and groups are often "demonstrating the capacity for ongoing *disunity*" (Banzanger, as cited in Clarke & Star, 2008, p. 125). Thus, closure is not a preoccupation for SWF. In rejecting a teleology of closure, this approach provides an approach for the radically destabilized form of invention that the preceding section argues to be a benefit STS provides. By acknowledging that multiple, often conflicting, meanings circulate around a technology, closure becomes both unnecessary, and an overly-simplified answer. Not only are social worlds complex and contingent, they are inherently rooted in communicative practice, which makes SWF an especially productive lens through which to undertake interdisciplinary work in the realm of Communication Studies. Originally defined as "universes of discourse" (Mead, 1938/1972) or "shared discursive spaces" (Strauss, 1978), social worlds are places where uses and meanings are defined and debated, all of which occurs through a process of communication that takes place through a variety of channels. The meaning-making discourses, interactions, and processes of use that are the subject of SWF are the touchstones of research in communication studies as well. Moreover, SWF gives an aptly detailed understanding of "discourse" as something that not only involves the words used to make meaning and communicate with others, but the texts that circulate, and the uses and practices associated with an object or idea. For SWF then, technologies can only be fully understood via the processes of communication by which they are surrounded, and the fields of Communication and STS are necessarily intertwined.

The numerous and complex approaches to social relationships that STS provides give researchers from all disciplines multiple options with which to study any number of interactions. Additionally, STS's emphasis on the social reminds Communication Studies that technologies are never "closed," gives us the tools to avoid reifying technologies as we study them, and takes up the project of de-simplification that is necessary to further the study of media technologies across all disciplines. Just as looking at the complexity of "invention" moves toward showing the organizations of social relationships between users and producers, the emphasis on social complexity begins to illuminate the fluidity of invention and approach it with a humanistic lens. These two interrelated and mutually informing topics hold equally heavy importance to the field, and to the contributions that STS makes to Communication Studies. While these two topics do bleed into one another a bit, they have roots in fundamentally different approaches—one emphasizing the object, the other emphasizing the arrangement of social relationships. Together or separately, they are both important to STS and to Communication Studies.

5. Conclusion

Together, these emphases within the field of STS provide researchers across a spectrum of disciplines with ways to better understand the role of technology within society. By expanding our ideas of ways to understand the process and object of invention, STS complicates our very understanding of how to approach any object of analysis. This approach asks researchers to attend to the ways that technologies and science always remain fluid and inherently connected to the process of their own creation. As such, it reflects a dedication to avoiding the reification of its own objects of inquiry. STS's focus on social relations and wide range of lenses through which to understand the ways these relationships are organized provides methodological approaches that are applicable across a wide range of potential research questions, whether entire systems or individual groups of users are the subject of inquiry. Additionally, it provides analytical

bridges between traditional methodological divides such as a system/group focus and succeeds in bringing the relationships between users and producers into the scope of analysis. Together, these two analytics that provide nuanced understandings of invention and social relationships also interact to contribute to a better understanding of each other, and should be understood as contributing to Communication Studies in specific methodological ways that affect how scholars answer research questions, as well as large-scale conceptual ways that affect the scope of the questions being asked. Together, these two overarching focuses—an expanded idea of "invention," and a profusion of complex views of social relationships—also benefit other disciplines that attempt to broach the topic of technology, and will be of great interdisciplinary benefit as researchers attempt to better understand our technologically-laced lives.

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Book Reviews

Adamo, Gregory. *African Americans in Television: Behind the Scenes.* New York: Peter Lang, 2010. Pp. x, 200. ISBN 978-1-4331-1040-5 (cloth) $119.95; 978-1-4331-1039-9 (paper) $32.95.

African Americans in Television: Behind the Scenes explores television and race from the perspective of industry writers, producers, directors, and executives. Adamo uses the qualitative method of interviews to explore "how African American workers see themselves in the production process" (p. 12). Adamo argues that listening to those directly involved in bringing diversity to television helps uncover the process whereby difference is created and recreated both in the workplace and on the television screen. The book chapters are primarily organized around emergent themes from the series of interviews.

The book opens with a Prologue focused on black television in the '90s. Adamo states "this book tells the largely victorious story of a transforming time in American television history" (p. 4). Through the book's seven chapters, Adamo achieves his goal of finding out "how members of a minority group long denied access to positions of power in television respond to the opportunity to create television programs" (p. 4).

The introductory chapter "explains the importance of listening to the stories of African American television workers in order to understand both the obstacles and opportunities they face" (p. 5). In this chapter, Adamo provides background on entertainment media production and on Stuart Hall's circuit of culture model, which provides the theoretical underpinning for this study. In addition, he provides background about the interview process and related challenges.

Chapter 2, "Getting In—Staying In," explains "how writers, directors, and other creators enter the television business and move ahead in the system" (p. 5). Adamo states, "there are no clearly delineated steps for entrance and advancement in the television business" (p. 21). Therefore, the chapter focuses on interview themes which include (a) education, (b) Affirmative Action, (c) internship and professional development, (d) contacts and networking, and (e) mentoring and observation. Overall, the chapter concludes with the

point that "getting in and staying in the television business remains dependent on social connections" (p. 41).

"The Production System" (Chapter 3) "outlines the culture of production and how television shows are created" (p. 5). Specifically, the television production cycle—which includes 12 steps—is discussed along with "how those involved describe navigating from concept to seeing their program on the television screen" (p. 43).

Chapter 4, on workplace culture, "explores the workplace, issues of difference, and African American workers often 'otherized' by the majority-dominated industry" (p. 5-6). A focus is placed on "the way African Americans talk about the political elements in the workplace of entertainment television" (p. 59). Some of emergent themes emphasized in this chapter include (a) the creative process, (b) staff diversity, (c) gendered racism, (d) "you are a black guy, so you must be funny," and (e) speaking up. The chapter also explores how the television workplace may be affected by organizational pressure from advocacy groups such as the NAACP and the Congressional Black Caucus. Finally, the chapter discusses the current state of the three television networks and cable.

Chapter 5, "The Central Role of African American Writers," "discusses the role of African American writers, how they are sometimes limited in the kinds of work they are allowed to do and their desires to create images that reflect their lived experiences" (p. 6). Special attention is given to Tim Reid, "who worked his way up from actor to writer to producer but who moved out of Hollywood in order to produce the kind of work that he could not do within that system" (p. 97).

Chapter 6, "Three Showrunners," that is, those responsible for a program, "tells the story of three African American showrunners, women who have created and produced successful television programs centered on Black characters" (p. 6). The first focus is on Felicia Henderson's African American Drama, *Soul Food,* which airs on Showtime. The second focus is on Meg DeLoatch's romantic comedy, *Eve,* on UPN. The third focus is on Mara Brock Akil's eight-seasons sitcom, *Girlfriends*, also on UPN. The stories told through the interviews from these writers are rich with description. Adamo argues that "these three African American women and their work are real life illustrations of Stuart Hall's circuit of culture" (p. 148).

Chapter 7, "The New Television World," is an "exploration of the rapidly changing television workplace and industry" (p. 6). Adamo argues that "the industry structures, from production through scheduling and promotion are changing in the face of more niche audiences, new delivery systems, and smaller audiences for network shows resulting in fewer advertising dollars to produce high-cost programs" (p. 149). Thus, the final chapter addresses how the industry, advocacy groups, and creators face such challenges.

The back matter of the book includes show summaries, a listing of interviewees, a bibliography, and two indices—one is an index of television shows referenced in the book. Specifically, the 38 show summaries include *Any Day Now, Buddies, The Corner, The Cosby Show, Cosby, A Different World, The District, Eve, Everybody Hates Chris, Family Matters, Frank's Place, Frasier, The Fresh Prince of Bel Air, Friends, Girlfriends, Goode Behavior, He's the Mayor, Homeboys in Outer Space, Homicide: Life on the Street, I Spy, The Jeffersons, Just Shoot Me, Linc's, Living Single, Moesha, One on One, The Parent'Hood, The Practice, Roc, The Rockford Files, The Secret Diary of Desmond Pfeiffer, Sex and the City, The Sinbad Show, Sister Sister, Soul Food, South Central, The Wayans Bros.,* and *WKRP in Cincinnati.*

Finally, a list of interviewees, position titles the individuals held at the time of the interview, and interview dates are provided. The list of interviewees include Mike Ajakwe, Jr., Mara Brock Akil, James L. Anderson, Frank Dawson, Meg DeLoatch, Leonard R. Garner, Felicia D. Henderson, Sharon Johnson, Martin Jones, Rose Catherine Pinkney, Oz Scott, Kim Sizemore, Shirley Salomon, Daphne Maxwell Reid, Tim Reid, Vida Spears, and Ron Taylor.

The book may be useful in courses focused on race and media as well as African Americans and popular culture. The book captures the voices of those behind the scenes giving another perspective of media representations from the vantage point of creators.

—Jennifer F. Wood
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Arnett, Ronald C., Janie M. Harden Fritz, and **Leeanne M. Bell**. *Communication Ethics Literacy: Dialogue and Difference*. Los Angeles: Sage Publications, 2009. Pp. xiv, 272. ISBN 978-14129-4214-0 (paper) $48.95.

The book is a student-friendly guide that combines theory and practice. It reviews classic communication ethics approaches and discusses dialogue and difference in public and private life. Difference presupposes the multiple views of the good, and communication ethics literally assumes the importance of understanding and learning from differences from the other. Dialogue pre-supposes the link that one can establish in spite of the difference.

Introducing communication ethics as a pragmatic survival skill in a world of difference, the authors offer a learning model that frames communication ethics as arising from a set of goods found within particular narratives, traditions or virtue structures that guide human life. The authors argue that we live in a time of different understandings of the "good." The reality of difference as the defining characteristic of this era makes the study of communication ethics necessary in order to live and work with others effectively. So this book considers the study and practice of communication ethics a pragmatic necessity.

The book has three sections (a) communication ethics approaches, (b) communication ethics in contexts, and (3) the pragmatics of communication ethics.

The first section consists of five chapters that outline the importance of communication ethics in this moment in time, the history of communication, and the specific approach of this work—dialogic ethics with learning as the first principle of this form of communication ethics. The second section examines contextual approaches to the field of communication. This section offers chapters that integrate communication ethics and public discourse, interpersonal communication, organizational communication, intercultural communication, business and professional communication, and health care communication. The third section examines the implication of communication ethics literacy for engaging this historical moment, recognizing the importance of difference, learning, and dialogue.

The book applies theories to everyday life with examples drawn from multiple perspectives, including education and personal as well as professional life. It also presents "the dialogical learning model" as a framework, offering guidelines for ethical decision making in several communicative contexts, such as interpersonal, intercultural, and organized settings. The final part of each chapter connects with humanities studies, with Victor Hugo's *Les Misérables* as a classic example of ethical struggles that make the human condition.

The Hugo novel serves as a humanities case study for engagement and application of what is referred to throughout the book, following Paul Ricoeur, as the "metaphors of communication ethics praxis." The term "metaphor" suggests that our understanding rests within "fuzzy clarity." In fact, communication ethics does not live in precise definitions of right and wrong. From its beginnings with Aristotle, communication ethics may be relative—not only what is just good, but what is the right amount at the right time, in the right place—knowing fully well that the right answer requires us always to make a judgment each time, as per the requisites. In reality communication ethics remains tied, from its very conception to learning, adaptation, and change.

The authors suggest that communication ethics has historically begun with the "oughts" of telling the Other what the good life should be. At its worst, communication ethics found a home in the self-assurance of hegemonic proclamations of imperialism and colonialism. So this book begins with a more modest and demanding "ought"—learn, and when one must tell, do so without forgetting that this era finds its identity in difference.

The book collects together the thoughts of authors like Sissela Bok, Clifford Christians, Michael Traber, Kwame Anthony Appiah, Alasdair MacIntyre, Martin Buber, Richard Bernstein, James Chesebro, and other contemporary authors. Their thoughts have not been well digested and integrated by the authors of the book, as these are presented in very abstract language. Often in books on communication ethics there is a tendency to mix it up with media ethics. It is good to see that this book does not make that mistake and strictly sticks to communication ethics alone.

The book is intended as a text for undergraduate courses in communication ethics, as well as for other communication courses where ethics constitutes a major portion of study. But unfortunately, the language is too philosophical and first timers may find it hard to bite into the book.

—Jacob Srampickal S.J.
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Bornstein, Davis and **Susan Davis**. *Social Entrepreneurship: What Everyone Needs to Know.*

For those who are thinking of how to change the world, new communication technologies are in the spotlight lately. The Arab Spring has surprised the region and the world as to how quickly power can shift. But the wellspring of this change stems more from the sources of repression and anger than from technology. Furthermore, the consequences of this sudden shift in power, if dramatic, are far from clear. The field of communication has long been a part of the discourse for change, first a half century ago with leading thinkers in the field of development communication with the likes of Daniel Lerner (1958), Everett Rogers (1962) and Wilbur Schramm (1964). And in recent times the cell phone, the World Wide Web and social technologies have been recruited into the latest campaigns for development and social change. The most recent paradigm for how communication and its technologies can foster change has placed people and their participation squarely in the center of the process. But participation is not the only approach to communication and change that might make the Millennium Development Goals of the United Nations a reality. The present small volume may have something to add.

Social Entrepreneurship is an emerging social phenomenon over the past several decades that has yet to find an agreed upon definition, but its actions have helped toward a practical understanding of how it can foster social change. As the authors argue in the Introduction, there have been three phases of activity in the new "citizen sector" of society (that is, neither business nor government). The first was the emergence of leaders who "systematically identify people with innovative ideas and practical models for achieving major social impact" (p. xx) who achieved attention and garnered support for their social change efforts. The next step was to bring business strategy, finance, and management into the emerging social organizations of innovation and change. Many in business schools began to apply their expertise to social enterprise. The current stage is the evolving notion that not only can social organizations promote change but a belief that everyone can be a change maker.

This slim volume is divided into three parts: Defining Social Entrepreneurship; Challenges for Causing Change; and Envisioning an Innovative Society. Each section has a series of short responses to questions posed by the authors. The thrust of the book is for clear and readable prose to answer basic questions about this emerging field of research and, more importantly, of practice. The first section tries to define the field by first sketching some history of entrepreneurship in business and then showing how this morphed in the later 20th century into more applications with social rather than for-profit goals. The early pioneers were Muhammad Yunus, founder of the Noble Prize-winning Grameen Bank in Bangladesh, and Bill Drayton, founder of the Ashoka organization that has over the past 30 years mentored over 2,000 social entrepreneurs from around the world. Other more recent organizations like Ashoka and Grameen are the Echoing Green Foundation, New Profit Inc., Geneva-based Schwab Foundation, and the Skoll Foundation. In answering the question of what social entrepreneurs do, they quote two other authors trying to define the term a few years ago "that the role of the social entrepreneur is to move society from a 'stable but inherently unjust equilibrium' to a 'new, stable equilibrium' that releases potential and alleviates suffering on a major scale" (p. 21). The authors also address the difference between business and social entrepreneurship by arguing that the basic difference is what each tries to maximize: the first is profit and the second is the particular social purpose (relieving poverty, improving health care for the elderly, providing lighting for rural areas of developing countries, etc.). There are other brief answers to other aspects of the phenomenon like its difference from government, its relationship with activism, and its connection with promoting democracy.

In the second part of the book, the authors tackle the practical problems of running a social entrepreneurial organization. These problems begin with the bottom line of finance. There are today an increasing number of options from fund raising with foundations and government grants to "impact investors" who provide a significant amount of venture capital in critical areas of both social and business enterprise. To the question of whether the field can attract talented workers, they provide a number of sources that seem to indicate that this is a growth area of careers instead of brief periods of volunteerism. There is a sophisticated if brief section on the need for evaluation of social enterprises and a concluding section on how social entrepreneurs are

innovating by using partnerships to continue with their missions of social change.

The final section of the book takes on the more difficult project of how to change whole societies rather than focusing on solving a single social problem. The authors begin with some basic social theory that does not sit well within the structure of the book, but they soon turn their attention to what schools and universities could and are doing to foster student interest in careers in the field. The research indicates that universities are increasingly interested in the field from a number of disciplinary platforms including business, public policy, and other social sciences and journalism. The problems how government might interface with social ventures is brought up several times, but from the discussion here it seems that there is less opportunity of changing government bureaucracy than in other areas. More promising areas of partnerships with business and more general philanthropy are illustrated with a number of cases of success. A comment on how journalism (Bornstein's profession) can connect with this area is discussed briefly, and the book ends with a final pitch for readers of all ages to think of how they can enter the field with rewarding work.

This book does not focus on communication, except in the case of journalism, but it can be envisioned as a promising model for adoption by the field of communication for development and social change. Many of its goals and practices already fit well within the experiences and goals of this communication subfield. It seems that it is only a matter of time that their paths cross to the benefit of both.

The book has an extensive appendix with much practical information, plus a significant and up-to-date bibliography and index.

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Deuze, Mark. *Managing Media Work*. Los Angeles, London, New Delhi: Sage Publications, 2011. Pp. xii, 307. ISBN 978-1-4129-7124-9 (paper) $41.95.

Most communication students, even those studying the more applied areas like journalism, video production, or web design, get very few courses, if any, on the business or management side of their chosen areas. In introducing this collection, Mark Deuze writes, "One of the most problematic results from this curious phenomenon is that students who enter media industries may understand the impact this industry has on audiences and politics (as these are the dominant areas of media and communication research and teaching), but generally they are not empowered to understand how and why the industry works the way it does or how contemporary worldwide social and technological changes and challenges—such as globalization, individualization, convergence, and fragmentation—affect the everyday managerial and creative practices throughout the industry" (p. x). The book provides a corrective by bringing together 24 essays by managers and management scholars. Each received a simple charge from the editor: "how they see their work contributing to a critical understanding of the management of media work" (p. ix). The emphasis here includes managing people, managing business, and managing content. The book divides the responses, then, into four sections: "management and the creative industries"; "media work, policy, and economics"; media professions (subdivided into journalism; television and film; advertising, public relations, and marketing; and new media); and "future perspectives."

The first section, on management, depends more on theory than on practice. Deuze and Brian Steward sketch out a general approach, dividing management tasks into macro-, meso-, and micro-levels. Bozena Mierzejewska offers an overview of management theory relevant to media work: strategic management theory; structural theories (that is, those that examine the "relationships between organizational structure and performance outcomes," p. 16), transnational management theory, organizational culture, and technology and innovation theories (including diffusion, product development, and uses and gratifications theories). Chris Bilton in Chapter 3 examines key issues in managing media content. "Attention has shifted from the *what* of content to the *how* of delivery, branding, and customer relationships—in other words, toward man-

agement" (p. 31, emphasis in original). This reflects a change in the culture industries and in the objects of culture, moving from what Benjamin described as a loss of aura of art in an age of mechanical reproduction through a commodification of art to the emergence of marketing or branding as cultural industries and art. In business terms, this describes a deep shift in the value chain (p. 37). In the last essay in the section Lucy Küng suggests ways to manage strategy and innovation in a fast changing industry. While each of the essays provides an interesting perspective, the section seems somewhat theory-driven and not particularly easy to apply. A teacher adopting this book would need to help the student to bridge the gap between the theory and the more practical things they would encounter in a media career.

The second part (policy and economics) comes closest to what the students might meet in an overview or survey course of issues in the media. Terry Flew examines shifting government policy towards the media, putting the question in the context of the economic theories of John Maynard Keynes, Joseph Schumpeter, and Karl Marx—perhaps a surprising trio but one which works well to provide the background for much current media policy. In this helpful chapter, he then places policy decisions on a line "between regulation and promotion" (p. 63), that is, between government attempts to regulate media ownership or content on the one hand and government attempts to develop the media through infrastructure or direct tax aid, on the other. Extending this perspective to the global arena, Philip Napoli looks at how governments have acted to deregulate the media in both structural and behavioral areas. The former addresses questions of governmental relaxation of media ownership rules (private media companies in previous government monopoly systems or the number of media outlets one owner can control in independent regulatory systems), while the latter examines how governments have repealed limits on media behavior (like the repeal of the Fairness Doctrine in the U.S. or content restrictions on cable or satellite systems in Europe). However, governments have not completely deregulated; many have shifted regulatory interest, guarding online privacy for instance. The chapter provides a very good overview of this rapidly changing area that provides the context for most management. The last chapter in this section, by Toby Miller, examines the current international division of cultural labor, showing how media firms divide cre-

ative and other labor across national boundaries. Miller identifies the following cultural industries: "music; sports; museums; education; the manufacturing and recycling of computers, televisions, electronic games, and telephones; and the production and distribution of texts from film, TV, radio, music, the press, and electronic games" (p. 91). Within these, he locates six groups of workers: creators, artisans, impresarios, proprietors and executives, critics, and audiences (as those who work to pay for content). Much of this labor takes places in different locations for any given product. To illustrate this, he offers case studies of television production and electronic games.

Part 3 is really the heart of the book, turning from academic sources to practitioners in the areas where most graduates will work. Four of the essays in this section address journalism. Jane Singer "surveys changes to journalism since the rise of the Internet as a popular medium, as well as the challenges of managing the transition. It touches on shifts in journalists' tasks, roles and self-perceptions, and occupational culture" (p. 103). The changes include the various tasks companies expect journalists to perform as well as the effects of these changes on how journalists think of themselves. Deuze and Fortunati describe the role of managers in a world of convergent journalism, since these will most likely supervise graduates entering the field, even though the work has become more individualized and flexible.

> All the processes analyzed in this chapter suggest that we are witnessing a shift towards a new stage of industrialization in the news sector. The gradual transition toward a post-industrial and precarious organization of labor in journalism is the result of a business strategy that through the computerization of newsrooms and the development of convergence has consistently aimed to reduce costs and effect more managerial control over reports and editors. (pp. 117-118)

But this kind of convergence and dependence on managerial systems has its drawbacks. Pablo Boczkowski situates a discussion of the challenges of management in the digital world with a story of how, as a field experiment, an Irish student managed to temporarily insert a fabricated quotation in the Wikipedia entry for the late composer Maurice Jarre, which news organizations around the world picked up as part of their obituaries. He uses the case to illustrate the shift from news to information and the risks to managers in dealing with a flood of unverified or unverifiable

information. Lastly, Tim Marjoribanks provides more real-world analysis by looking at work in multinational media companies like News Corporation, Bertelsmann, and Time-Warner. In this view, two key issues facing managers are technical innovation and journalism standards.

The next subsection addresses film and television, another sector that technology has broadly affected. Keith Randle explains how television and films organize production. After sketching the production process of each, he looks a how people have adjusted to structural change to build careers and the strategies they have developed for reducing uncertainty. Alisa Perren limits her discussion to film, tracking the development of independent production companies and their impact on labor. Key elements emerge with the weakening of labor unions, the introduction of new technology, the increase of location filming, and the use of multimedia, multi-platform products. People examining visual media today tend to talk of "screens" or a "screen-based industry" since the visual material can appear on theatrical screens, flat-screen televisions, computer monitors, portable telephones, and pad computers (and probably more in the future). Charles Davis offers a look at employment in this industry, exploring "the implications of growing self-employment in the screen media section, the shifting loci of opportunity for new entrants, and the range of entrepreneurial ambitions and capabilities at play" (p. 173). Finally, Susan Christopherson "examine[s] the labor demand and labor supply conditions that underpin the contemporary crisis facing the self-employed freelance workforce in film and television in the United States, looking particularly at the role of the producer, who stands between conglomerate demands for cost reduction and the production company whose members must produce a viable product" (p. 180). The producer, she argues, has lost creative control but gained production responsibility.

Advertising and marketing offer yet more jobs in the media sector. Agency based, these typically require a higher degree of centralized management. Liz McFall takes a sociological approach to the ad agency, suggesting a number of relevant social theories. Considering these theories, she draws a key implication:

> Managing advertising work is not about managing the transfer of value or meaning from one sphere to another or about managing the relations between individuals or advertising structures. Rather it is about understanding the material and distributed nature of the work and the processes and translations among different participants involved in production. (p. 195)

The agency structure allows management of people, ideas, and processes. Sean Nixon offers a slightly different perspective as he tracks the industry changes "from full-service agency to 3-D marketing consultants" (p. 199). Using case studies, he shows the process at work across the industry.

Advertising differs from other creative work, Chris Hackley and Amy Rungpaka Tiwsakul suggest, because its three main crafts (creative, planning, and account management) face open challenges in the day-to-day operation of agencies (p. 211). This both keeps union power down and, they argue, boosts creative tension. It also brings in challenges of how to manage workers. The new media environment and the globalization of communication adds yet more complexity, according to Marina Vujnovic and Dean Kruckeberg. To guide their analysis, they look at the different networks, alliances, publics, and stakeholders in the new media world. These essays together begin to suggest the new world that managers face, managing people, clients, content, media, and regulations.

The last career considered in this section did not exist a generation ago. It deals with digital production: games and music, primarily. Aphra Kerr examines the "culture of gamework." "We need to pay attention to the range of actors (human and nonhuman) in game production networks, the difference in power between these actors, and the experiences of workers with the development companies and those external actors they engage with" (p. 225). Crossing traditional corporate boundaries, the careers of game developers also raise significant work-life balance issues. Eric Harvey takes a different tack in considering digital music. In addition to the music workers, managers have also to face key legal issues: digital rights management, copyright, and changes in distribution. Most readers of Trends will know of the challenges to traditional distribution (and the issues of music piracy). Managers have to negotiate these as well as promote their products. Rosalind Gill offers direct advice to new media workers as they must "manage the self" (p. 249). She describes 10 key features of new media work, including love of the work, entrepreneurialism, short-term insecure employment, low pay, long hours, do-it-yourself learning, and built-in inequalities. She urges not hopelessness, but a new attitude to work.

The final section of the book discusses future perspectives. These include how to manage media companies through this period of digital transition (Annet Aris) and organizing networks or networking (Geert Lovink and Ned Rossiter). Each essay offers solid advice and real-world experience.

Managing Media Work fills an important gap in communication teaching because it calls attention to the world in which the graduates will function. The idea of management applies, Deuze and his contributors argue, to people and their day-to-day work, to their careers, to the various media content they produce, to the legal and regulatory environments, and to the economic health of the industries. The essays provide an eye-opening look at this somewhat hidden part of communication.

The books contains an index; individual chapters have reference lists.

—Paul A. Soukup, S.J.
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Hardy, Jonathan. *Cross-Media Promotion*. New York: Peter Lang, 2010. Pp. xvii, 334. ISBN 978-1-4331-0146-5 (cloth) $149.95; 978-1-4331-0137-3 (paper) $36.95.

The author begins by defining his topic of cross-media promotion very simply as "the promotion of one media service or product through another" (p. xv). This sounds very unthreatening and that is part of the premise of the book: this practice has arisen over the past 25 years as the media industries have continued to converge and consolidate to the point that we now have only a few mega-media industries who have dominance in the market and power over all smaller competitors and have captured the attention of a great swath of public attention. And all of this has happened, in the United States at least, so gradually and unobtrusively that it all seems very "normal." What Hardy does in the book is to argue that this seemingly simple practice of self promotion and cross-platform promotion by media industries with a variety of media platforms is not "normal" and poses a number of threats to audiences and democratic societies—and furthermore, that regulators have been unaccountably lax in safeguarding the separation between commerce and content and accepted both the growth of media concentration and the commercialization of media content so that it has become hard to tell the difference between ads

and programming. The argument is written from the perspective of Europe and more especially the UK where the U.S. pattern foreshadows what is beginning to happen there.

The book is divided into four parts: Part I on "Contexts" describes the relatively unregulated U.S. market and how cross promotion, or synergy as it is better known here, has grown with the concentration of media companies since the late 1980s; along with the various ways that different policy frameworks approach the issue (Liberal Democracy, Neoliberalism, Libertarian-ism, Consumer Welfare, Postmodern, and Critical Political Economy or CPE). It may come as no surprise that the author, who teaches political economy at Goldsmiths College in London comes down to political economy as the best approach to solving the problem in the UK and Europe. He does add a caveat, that the CPE tends to focus on concerns of journalistic speech over entertainment content and thereby minimizes a huge part of media content in the debate.

Part II, "Cross-Media Promotion in Media Industries," looks at three examples in what the author calls commercial intertextuality in entertainment media, the practice of cross promotion in news media, and finally a look at the case of the Murdoch-owned News International newspapers in the UK and their successful editorial promotion of SkyDigital in which Murdoch had a controlling interest. In Chapter 3 on the entertainment media, the author highlights an area where he believes regulators, policy makers, and culturalist academics have been unconcerned or overly optimistic. He quotes cultural analysts like Hesmondhalgh and Jenkins who see relatively stronger agency among critics and audiences than do critical political economists like Meehan and Couldry who see a structural power of media companies to define the content space with cross promotion in the large blockbuster genres like Harry Potter. Though favoring the latter authors, he admits that the debate needs to continue over the agency of audience vs. industry. In Chapter 4 Hardy analyzes the convergence of news into large companies which control news media across all platforms in the U.S. What he shows is clear to anyone who attends to the news in almost any form: that news content has shifted over the last deacdes to more entertainment, commercialization, and cross promotion of owner interests. The decline of print news is alluded to briefly but that is not the focus of the chapter which argues for a better

and stronger line between corporate and journalistic interests. The chapter on the Murdoch power in the UK news media simply underlines the thesis of the book about the use of cross-media promotion by newspapers to help achieve corporate goals through editorial support for a Murdoch-controlled entity. He ends the chapter with this complaint about response by those defending news integrity: "Liberal discourses on journalistic ethics . . . tend to concentrate on professional conduct, and individual capacities, rather than structural constraints, and so engage with the consequences but not the dynamics of corporate influence on media content, including entertainment content" (p. 151).

The third part of this book, "Media Policy and Regulation," tends to concentrate on the UK and to some extent on European Union concerns. Hardy admits that the issue of cross-media promotion has not garnered much attention either in the U.S. (where there is light regulation at best) or in the UK. He spends a good section of the chapter on the Sadler Enquiry of 1991 on cross-media promotion even though he admits that it got little attention by policy makers and regulators. He then asks the obvious question: why has it gotten so little attention? He makes a brief historical diversion into the general deregulation of media in Europe since the 1980s, the technological transition to digital media, and the introduction of new technologies and the concentration of ownership. These historical shifts over the last 25 years have been accompanied by shifts in regulation that have emphasized a neoliberal emphasis on competitiveness and markets and concentrate more on regulation of competition. The following chapter (Chapter 7) spends some detail on the digitalization of television in the UK and its consequences. Simply put, the introduction of cable and satellite television meant a decline of the commercial terrestrial television and an increase in the need to use every means to compete for audiences including an increase of program trailers and self-promotion of own content, promotion of commercial services and products, and in- program promotion (e.g., product placements). Even the BBC began commercial services to compete. A detailed Chapter 9 on product placement policies in the U.S. television and films (very well developed but lightly to not regulated) and the UK (practice beginning, light reluation) gives a picture of advertising increasingly invading content in the film and TV media. The author cites some regulation in both countries but

concludes that what has advanced as a practice strongly in the U.S. is beginning in the UK.

In the final section of the book on Promotional Speech and Media Reform, the author summarizes the situation at present:

> As media markets have become more competitive, firms have been able to obtain competitive advantages by extending the reach of promotions and reducing marketing costs through intra-firm promotions. Multi-sectoral integration has increased the scope for intra-firm promotion. CMP has thus been fuelled by changes in media ownership, assisted by deregulatory politics involving the relaxation of ownership, content, and behavioral regulations. CMP has been greatly facilitated by technological changes enabling the redistribution and repurposing of content across a variety of digital media. (p. 267)

The remainder of the chapter concentrates on what can be done to promote better regulation of this media situation. The conclusion is an argument for an expanded concept of citizenship, a critique of market liberalism, and a more complex model of how the market should be organized, all interesting ideas but abstract ideals that do not seem to reach the realm of political realism. Nevertheless, the book has raised a set of serious concerns for academics, policy makers, and regulators. A book worth a serious look by one and all.

The book has extensive chapter notes, a large bibliography, and a thorough index.

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Jones, Phil. *Communicating Strategy*. Aldershot Hampshire, England: Gower Press, 2008. Pp. 179. ISBN 978-0-566-08810-0 (paper) $44.95. Website price, $40.46 (available at http://www.ashgate.com/default.aspx?page=295).

Communication scholars will recognize various theoretical perspectives in Phil Jones' *Communicating Strategy.* His focus on audience is Aristotelian; his emphasis on message recalls Fisher's narrative paradigm, and his dependence on relationships is a nod to phenomenologists. These connections are certainly not the intent of this practical guide on how to establish and communicate strategy in organizations, but they do provide a framework from which communication scholars might most appreciate this book.

Communication consultants, conversely, will appreciate this book for its practical advice for framing and selling organizational strategy. Jones argues that communicating strategy is the most important thing an organization can do, but full treatment of how to do it, he says, did not exist before this book. He draws from ideas related to communication and relationships, organizational culture, rhetorical strategy, wittingly or unwittingly, to drive home the importance of understanding the selling of strategy. Clearly, this book takes on the communication of strategy from those in positions of power to those in subordinate positions.

The term *strategy* is an ambiguous term. Jones summarizes uses of the term which can mean many things including policy, plan, choice, purpose, and patterns of behavior (among others). He gives the most attention to strategy as change. In the chapter "Ten Heresies," Jones turns upside down common myths about organizational behavior. People in organizations are "not stupid," he says, and they are also trustworthy, they are part of active and productive informal communication networks, and they will actually embrace change that may result in increased job satisfaction. Theses axioms set the tone for subsequent chapters about basic organizational behavior. Chapter 3 underscores the importance of building relationships with organizational stakeholders. This is perhaps the most important chapter in the text as it encourages readers to identify fundamentals of interpersonal communication as building blocks for strong networks. In Chapter 4 the author equates strategy with change, arguing that "when you are communicating strategy, you are communicating change" (p. 43). The chapter lays out some theoretical models of change, but more notably introduces the concept of organization members often being of one of two mindsets—"away" thinking, or constantly thinking of how they'd like to be away from the organization, and "toward thinking," which is thinking that moves individuals toward something (p. 52). Differentiation among these approaches allows strategy (change) to be the goal of "toward" thinking. Jones also points to two metaphors useful for communicating change—the "burning platform" and "leaving bus." Asking organization members to depart from a burning platform (e.g., participate in moving "toward" change) implies that staying is not an option unless one wants to be burned. The "leaving bus" metaphor implies that members have choice to join change or be left behind. One assumes that many other metaphors might be rhetorically apt in communicating strategy, but Jones' point is that a driving metaphor such as these must be an organizing principle of the organizational strategy narrative.

Along with organizing metaphors, Jones takes on the variable of the audience. Chapter 5 ("What's in it for…") implores communicators to think from the receivers' perspective, as if the leader communicating the strategy were "one of them." This "second position," taking the perspective of the other, is a sort of alter-casting that allows the strategist to experience everything from the tone of the message to practical issues such as how financial compensation will be affected by changes in strategy. Chapter 6 is essentially about framing the message. Jones says, "First, we have to decide what the message is and how to articulate it," and the next sentence is "so what is in the story?" a clear indication that the author sees the communication of strategy as a *narrative* (p. 85). The narrative presents a compelling future (vision), an enunciation of organizational values, and a plan for reaching targets. The narrative is captured in a strategy map, a "one-page picture of the strategy that you can use to tell the story of the strategy of your organization" (p. 107). This process of story development and distilling the strategy down to key elements helps clarify the strategy to avoid depending on "hope and magic," Jones' phrase for basing strategy on accentuation of positive characteristics that, in reality, are based on empty analysis (p. 97). Telling the story effectively with strong metaphors, quotations from stakeholders, and well-chosen sensory language is a crucial step.

Executing the narrative involves very strategic language choices and anticipation of responses to the story. Jones goes on to say that the management team must be aligned in telling the story, a story that must originate with the chief executive, and be carried consistently among the ranks of an organization. As a management consultant, Jones' sees his role as a director engaging the primary actors in organizational dramas to enact story elements in a coherent way. If management teams are not consistent with their narrative, organization members will perceive the message to be incongruent with organizational life. In Chapter 9 the author refers to the incongruence of organizational systems and the narrative strategy itself as creating a "handcuffed organization." Jones completes his book with an implementation strategy that refers to previous chapters in ways that readers can apply fundamental practices.

One of the most valuable features of this book is the questions posed by the author. In each chapter, Jones lays out questions that require readers to come to grips with the extent of their knowledge of his concepts as they relate to the readers' organizations. The questions are not for review, not for contemplation at the ends of chapters, but instead seem to create an ongoing internal dialogue to allow the reader to collaborate with Jones on customizing the materials for his or her needs. For example, regarding relationships, Jones asks "who are the highly connected people in your organization? . . . how well plugged into them are you?" (p. 30-31). Regarding change, Jones asks "where do you need to confront changes?" (p. 62), and "what sort of resistance are you up against?" (p. 64).

Readers of this review should be aware of who might benefit most from this book. While an undercurrent of traditional and contemporary scholarship on organizational narratives, organizational culture, change, rhetorical strategy, group communication, and other elements of the scope of communication are present, they are not addressed in a scholarly fashion. Instead, the material is presented as a prescription for improved communication of organizational strategy, a term used in a loose fashion such that it is accessible to many readers looking for advice on organizational improvement, yet potentially dissatisfying to those looking for a body of work that could contribute to our understanding or strategic communication as a growing field in the communication discipline.

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Rockhurst University

Jönsson, Mats and **Patrick Lundell** (Eds.). *Media and Monarchy in Sweden*. Göteborg, Sweden: Nordicom, 2009. Pp. 154. ISBN 978-91-89471-77-1 (paper) SEK 240; €25.

While many English speakers may know only little about the monarchy in Sweden, this collection does not require that knowledge. Rather the contributors to this volume use the idea of monarchy as a lens through which to study the media. And media the editors regard broadly. The idea of monarchy exists in relationship with other social formations: monarchy/aristocracy and common people; monarchy and democratic forms of government; monarchy and the public. This last pairing begins to suggest a role for media, in the root meaning of something that comes in between. Royalty, as royalty, must maintain a distance from other social formations—too much familiarity and the royal becomes common. Here the media play a key role: to publicize the monarchy and the members of a royal family even while they guard their privacy. Over time the relationship becomes symbiotic, with reporters on the royal beat respectful and needing access (therefore, they follow the rules set out by the palace) and the royal family needing the publicity afforded by the media (therefore, they allow access). Media as presented in this volume range from the 15th century to the 21st, from altars, statues, public appearances, and weddings through film and websites.

The book itself grew out of a conference occasioned by an upsurge in interest in the royal family. "We seem to be witnessing a revival and renaissance for royalty in the Swedish media today, and just as elsewhere, the coverage is predominantly directed to a domestic audience" (Jönsson & Lundell, p. 9). Part of this interest, as the editors note, seems to cross cultures; part stems from a Swedish royal wedding in the summer of 2010. The introduction then situates the role of the press, often comparing the situation in Sweden to that in England, calling Queen Victoria "the first British modern mass-media monarch" (p. 16). In this view royalty had to "stage themselves" and depended on other actors in this staging. The collection presented here looks primarily at the Bernadottes, the current Swedish royal family (taking the throne in 1814—literally taking the throne: the first of the line was Jean Baptiste Bernadotte, "a French officer in Napoleon's army," p. 83), although two essays look at earlier monarchs.

Louise Berglund casts her examination back farther in history, to 1406, when Queen Philippa, a daughter of the Lancastrian English King Henry IV, married into the royal family. In order to assure her position and acceptance by the people of Sweden, she dedicated an altar chapel at the monastery at Vadstena. Using the media of art, religion, and pilgrimage, she presented herself to the people in a way that continued, even after her royal line ended (she died childless). Berglund's essay raises interesting issues about the definition and functioning of media; she offers interesting conclusions about the interaction of the key social actors at the end of the medieval period.

Magnus Rodell turns to another unexpected medium, examining 19th century monuments, particularly the dedication of one in 1854 and the newspa-

per coverage of that ceremony. He sets out the key features:

> At inauguration ceremonies of monuments, royalties could serve a twofold function. On the one hand, as heads of the nation, their presence was seen as a prerequisite, and a symbolic sanction of the inauguration as a solemn, public event. This meaning related back to an older, hierarchical, and corporeal society in which the king served as an embodiment of the nation. On the other hand, past or present kings could concurrently be the very object of monumental representation. (p. 33)

The 1854 event adds the complexity of another layer of mediation, in which the rising Swedish press presented the event to the nation, carrying the impact of the monument beyond its specific place in a specific city.

Kristina Wedestedt brings the discussions closer to the present day and present concerns, with her essay about royal weddings. She, too, takes an historical approach, comparing three weddings—of 1888, 1932, and 1976—and examining the press (newspaper and news magazine) coverage of each. The increasing role of photography, made possible by improvements in print technology, presents an obvious difference. The myth-making role of the coverage offers a similarity.

Patrick Lundell looks specifically at newspapers, particularly at a defining moment in the legitimation of the Swedish press and the idea of a free press. In 1897 King Oscar II spoke at an international congress of the press, in Stockholm, an event that the publishers and reporters themselves used to call attention to their role (and the acceptance of that role) in Swedish society. By "borrowing" the king's credibility, they re-positioned themselves in the eyes of their readers. Such a moment requires a bit of imagination for people in the U.S., coming from a very different press tradition and lack of social hierarchy; however, Lundell's argument illustrates it well.

Tommy Gustafsson moves the book from the printed word to film. A 1924 production, *Karl II*, on the life of the warrior King Charles II (died, 1718) became a moment that brought together Swedish history, contemporary parliamentary debate on the role of the military, conservative soldiers and politicians (who financed the film), and a discourse of "hegemonic masculinity." The film, through scripting, casting choices, and production values, presented these complex issues at a key time. A sound version, released 10 years later, continued as a school film for 50 years, offering a particular view of Swedish history, but one divorced from the forces that created the film in the 1920s.

Mats Jönsson's essay moves the chronology into World War II, when the royal family lent their prestige to the sale of defense bonds, in a move to raise money to resist German aggression. Jönsson analyzes the rhetorical presentation of the campaign—across several media—noting that members of the royal family had by the 1940s acquired professional experience in the media, as magazine editors or film producers.

Cecilia Åse offers a look at a more contemporary Sweden. "Drawing on feminist theory in relation to gender and nation, my focus in the present article is on how representations of gender, sexuality, and the female body are intertwined with constructions of national identity in Swedish discourse on monarchy" (p. 99). She calls attention to the fact that Sweden, like so many other countries, regards the country as feminine, as a body politic, with a masculine monarchy. In fact, until relatively recently, only a male could succeed to the throne. The queen's role became one of providing a male heir. In addition, public discourse often centered on an appreciation of a queen's beauty or public presence. The essay does a good job in raising key issues for public discourse around women, using the female members of the royal family to guide the discussion.

Mattias Frihammar provides a lighter touch, telling the story of how an ordinary cloth napkin used by the king at a 2003 sports banquet became an object enshrined in the royal museum. The story passes through a comedian's routine (acting somewhat as a court jester, he involved the king, who spontaneously and playfully used the napkin to fend him off) to a radio disc jockey's picking up the napkin after dinner and making it an object for on-air discussion. The station later made it an object divided up in a promotional raffle. Finally, parts of it come to the museum—a media celebrity made famous by contact with other celebrities. Frihammar's more important point, of course, is the round of reinforcing and self-referential media transactions.

Finally Pelle Snickars brings the volume to a close by examining the digital world of royal web pages, Facebook forgeries, and a palace press office that comes to manage on-line publicity as well as the more traditional kind. The transition charts the changing role of royalty and the varying degrees of respect shown in the various media.

Overall, *Media and Monarchy in Sweden* presents a lively look at the media in many of its forms. It proves most valuable when it catches the reader by surprise. "I never thought of media that way," one finds oneself musing. As a bonus, at least for an American reader, the book presents a wealth of information about a royal family.

Each essay has its own reference list. The book has both an index and an "about the authors" section.

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Santa Clara University

McLuhan, Marshall and **Eric McLuhan**. *Media and Formal Cause.* Houston: NeoPoiesis Press, LLC, 2011. Pp. xi, 167. ISBN 978-0-9832747-0-4 (paper) $18.95.

Of the four causes identified by Aristotle and developed by Thomas Aquinas, formal cause still appears as the most difficult to grasp. The others—material cause, efficient cause, and final cause—fit more easily into people's daily thinking. In an example of a house quoted by Eric McLuhan, the bricks and wood constitute the material cause of the house; the work of the bricklayers and carpenters, the efficient cause; and the goal of a house to live in or to rent, the final cause. But formal cause—often referred to as the plan or blueprint—provides something quite different, and something quite different from a blueprint, whose visual analogy misses the point.

Decades earlier, Marshall McLuhan had argued that the idea of the final cause best describes the media and the media world and its influence on human living. Media, like a final cause, better resemble the ground against which a figure appears; the environment in which people live; the way in which understanding makes sense of things. The concept proves slippery as does its elucidation. But it remains quite important since it demands that we understand media in a way dramatically different from the usual media analysis in communication study. That analysis stays comfortably within the ambit of Aristotle's other three causes: effects studies, persuasion studies, cultural studies, uses and gratifications studies, examinations of the means of production—all of these look to efficient, material, or final causes.

This brief book assembles four previously published essays, along with an introduction by Eric McLuhan, which sets the stage and provides background on the issues:

• Marshall McLuhan's "The Relation of Environment to Anti-Environment" from the *University of Windsor Review* in 1966.
• Marshall McLuhan and Barrington Nevitt's "The Argument: Causality in the Electric World" in *Technology and Culture* of 1973; this appears here together with the two responses also published in 1973 in the original journal.
• Marshall McLuhan's "Formal Causality in Chesterton" from *The Chesterton Review* in 1976.
• Eric McLuhan's "On Formal Cause" from *Explorations in Media Ecology* in 2005.

The Marshall McLuhan essays persuasively raise the issue and include the elder McLuhan's sense that formal cause has to do with the larger context, with the kind of causality that people take for granted or overlook. McLuhan comes at this indirectly, through his overarching concern with the media. Rather than beginning with the philosophic analysis of causality, he begins with the media and comes to philosophy as a means to explain what he has observed.

Eric McLuhan takes the other direction. Knowing his father's concern, he begins with philosophy and goes back to Aristotle's texts to explore just what Aristotle meant in this analysis of causes. The "form or pattern" has much to do with definition, with what makes something what it is, with human understanding. Here, Eric McLuhan notes, the reduction of formal cause to blueprint misleads by reducing it to a thing like the bricks or workers.

By pulling these essays (published over almost 40 years) together into one volume, Eric McLuhan has provided a helpful explanation of a key concern in media ecology and a corrective to much received wisdom in communication studies. The volume repays the effort to work through what for many remain unfamiliar concepts.

The book contains a bibliography and an index. Each individual essay has its own footnotes.

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Owen, John and **Heather Purdey** (Eds.). *International News Reporting: Frontlines and Deadlines*. Malden, MA and Oxford: Wiley-Blackwell, 2009. Pp. xvi, 280. ISBN 978-1-4051-6039-1 (paper) $43.95.

Originally intended as a supplementary text for a course in international journalism taught by John Owen at City University in London, this collection publishes essays from 14 journalists, photojournalists, editors, and other practitioners in order to make the course "both interesting and relevant to upwards of 70 students who came from more than 30 countries in all of the continents" (p. x). In order to do so, Owen set seven goals for the collected essays:

- "Make the class relentlessly relevant"
- "Introduce the students to the best and most respected professional journalists"
- "Provoke reflection on ethical journalistic issues that would confront them in their journalistic lives"
- Gain insight on contemporary stories and events
- Introduce them to technological changes and new media
- "Ensure that these young journalists understood all aspects of safety in journalism"
- "Provide them with awareness of the new body of journalistic literature about trauma and journalism" (pp. xi-xii)

The individual essays range from advice from journalists in the field to explanations of the history, future, and present functioning of international news agencies (the Associated Press, Agence France-Press, and Reuters, for example) or networks like the BBC or the Canadian Broadcasting Corporation. Vaughan Smith's contribution introduces the world of freelance journalism and the role of local employees. Anthony Borden develops this latter theme in great depth, as he explains the "local heroes," those journalists who gather the news in their own countries and get it to the world, often at great risk to themselves in times of conflict. Gary Knight frames his contribution as a letter to a photojournalist just starting out. He covers a number of key points, of necessity rather briefly: objectivity vs. point of view, ethics, use of amateur photography, explicit images, the herd instinct, safety, the business side of photojournalism, and the varieties of photographic equipment.

Several chapters wrestle with new trends in journalism. Nick Pollard introduces the inescapable reality of 24-hour news, providing both a history (ticking off the major conflicts of the last 15 years that led to its development) and a response by the major networks. Richard Sambrook's essay on citizen journalists introduces students to something they should already know: the role of new technologies in

enabling anyone to report, comment, or illustrate the news. For him, this provides a great opportunity. Several others pick up the theme. Ben Hammersley makes full use of the new media and the opportunities that those media present (from digital video cameras to laptop editing systems to satellite phones) as well as the potential competition from citizen journalists. His advice about user-generated content: "If it's a threat to you, you've either found a new colleague to recruit—give them a job and get on with it—or you should move on" (p. 246). His chapter is filled with ideas and practical advice. He is also one of the younger contributors, one who came of professional age in the new media environment. As a complement, Nigel Baker provides an introduction to the new technologies from the institutional side.

The most helpful chapters—because very little about these topics appears elsewhere—address issues of risk, safety, and trauma. Chris Cramer, the honorary president of the International News Safety Institute (INSI), directly discusses risk. Leading with statistics on the number of journalists killed in recent years (171 in 2007 alone), he writes of the macho culture of reporters in the field and the unnecessary risks they take (not wearing protective clothing in war zones, for example). Then he explains what news organizations have done to address risk, including physical safety training courses and post-assignment counseling. In his view, the Iraq war marked a major turning point for news agencies as they saw their journalists targeted. It is not unusual now, he writes, for journalists to travel with armed security, a major change. He includes 10 guidelines from the INSI, which give the aspiring international journalists a sense of what they face. Some of them:

- The preservation of life and safety is paramount...
- Assignments to war and danger zones must be voluntary and only involve experienced news gatherers and those under their direct supervision. . . .
- All journalists and media staff must receive appropriate hostile environment and risk awareness training before being assigned to a danger zone . . .
- Employers must provide efficient safety equipment and medical and health safeguards appropriate to the threat to all staff and freelances assigned to hazardous locations.
- All journalists should be afforded personal insurance while working in hostile areas, including cover against personal injury and death. . . .

• Journalists are neutral observers. No member of the media should carry a firearm in the course of their work. . . . (pp. 176-177)

The chapter concludes with an appendix describing a survival training course required by CNN policy for its employees.

The complement to the chapter on risk comes from Mark Brayne, who after 30 years in international journalism has trained as a psychotherapist. He writes about the distress, particularly post-traumatic stress, that people often experience after an encounter where one witnesses death, serious injury, or the threat of death to another. Brayne notes that journalists, especially those in zones of war or natural disaster, can see these routinely. After recounting stories (his own and that of other journalists) of post-traumatic symptoms, he then explains the definition of post-traumatic stress disorder (PTSD), its symptoms, and its usual treatment. Putting PTSD in the context of a normal reaction, he suggests ways that people deal with the feelings—particularly the powerlessness that partially defines the condition—and the dangers they run if they do not deal with those feelings. Outlining what journalists can do on returning from difficult assignments, he offers suggestions for both the reporters themselves and for their employers. Finally, he also suggests how journalists should treat others (sources, witnesses to devastation, etc.) in their reporting, interviewing, photography, and so on in order to minimize the danger of putting them at further psychological risk.

As one would expect from a group of journalists, the chapters are well written, command attention, read well, and inform. Most have the "war story" feel—accounts of in-the-field experience, difficulties faced and overcome, practical experience, advice to the next generation. Most are also literally war stories, since the book's overwhelming approach to international news reporting seems to consist of reporting on wars, humanitarian crises, and conflicts. Only a few chapters address peaceful events or questions of international diplomacy, and all regard "international" as in "other countries," that is, non-English-speaking countries—the perspective of the book is solidly Anglo-American and Canadian. These two facts (the focus on war and on English) disappoint since this book wishes to teach young journalists. Will it help perpetuate an outmoded world view? Will the information gathered and reported by these journalists leave citizens of their countries unprepared to understand the nuances of policy of various governments or the day-to-day concerns of people beyond their own borders? Will that style of reporting, heroic though it is, reinforce the "dangerous world" syndrome? Unintentionally perhaps, the book also paints a picture of a journalism with its historical roots in colonialism.

Owen introduces each chapter with a brief essay about the subject matter and the author. These provide important frames for considering the topic and provide an overview about the direction of international reporting in the contemporary world. At the end of each chapter, he suggests four to six questions for students. Each chapter has its own notes and references; the book has a subject index.

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Postiglione RSM, Marianne and **Thomas P. Sheahen Ph.D.** (Eds.). *Environmental Stewardship in the Judeo-Christian Tradition: Implications for Christian Living in the 21st Century.* St. Louis, MO: ITEST, 2010. Pp. ix, 254. ISBN 1-885583-18-4 (paper) $15.95.

Environmental Stewardship in the Judeo-Christian Tradition: Implications for Christian Living in the 21st Century consists of the proceedings from the October 2009 ITEST (Institute for Theological Encounter with Science and Technology) Conference. The book's preface is a tribute to Dr. Robert Z. Greenly written by Sister Marianne Postiglione, RSM. It is followed by a foreword by both editors to put the Fall 2009 ITEST conference in context.

The book itself is divided into essays by the four conference speakers. As the editors state "we secured two speakers noted for their scholarly research on environmental issues and its practical application in everyday life. We also included the contribution of a highly respected meteorologist, and to complete the 'quadrinity,' we were fortunate to engage a bona fide poet who has written about science as sacred metaphor" (p. vii.).

The first essay, "DDT: A weapon of mass survival," is written by Dr. Paul Driessen, JD, a senior fellow with the Committee for a Constructive Tomorrow and Center for the Defense of Free Enterprise, nonprofit public policy institutes that focus on energy, the environment, economic development, and international affairs. The essay focuses on malaria—"Africa's biggest killer of young children" (p. 2). Driessen

argues "malaria ought to be the easiest of the Big Three Third World killers to control. AIDS and TB are a lot more complex and harder to address" (p. 4). His argument is that the insecticide DDT should not be banned. Driessen provides more than eight ways that individuals can contribute to help achieve ultimate success of stopping malaria (p. 17).

The second essay, "Environmental Stewardship in Judeo-Christian Tradition: Biblical Foundations and Historical Developments," comes from Dr. E. Calvin Beisner, a national spokesman for the Cornwall Alliance for the Stewardship of Creation—a coalition of theologians, pastors, scientists, economists, and lay leaders committed to bringing the Biblical world view, theology, and ethics to address simultaneously the challenges of environmental stewardship and economic development for the very poor (p. 21). Beisner provides Scripture and wisdom from church history and tradition to address environmental stewardship. He argues that the topic has become a main topic with recent generations. In addition, he addresses matters on which Christians agree and matters on which "there ought to be widespread agreement among orthodox Christians" (p. 37). He concludes his essay with seven tentative theses for further study.

The third essay, "Climate Change Revisited," is written by Professor Benjamin F. Abell, a professor of meteorology in the department of Earth and Atmospheric Sciences at Saint Louis University. His article is organized around (a) a historical perspective of climate change, (b) natural causes of climate change, (c) the human factor, (d) normal temperatures, and (e) a cooling hole in the agricultural area over Iowa.

The fourth essay, titled "The Role of the Judeo-Christian Poet in Environmental Stewardship," is written by Dr. Elizabeth Michael Boyle, OP, a recently retired Professor of English at Caldwell College, Caldwell, New Jersey. She encourages participants to believe that "as people of faith who reverence nature as one of God's sacred scriptures, Judeo-Christian poets have something unique and essential to offer to the evolutionary process, a contribution relevant to environmental stewardship" (p. 61). The essay articulates commonalities between poets and scientists. She concludes by providing eight beatitudes of environmental stewardship.

The remainder of the book presents transcriptions from the six session discussions—a chapter for each. Finally, the book concludes with an index, list of conference participants, and appendices. Appendix

A is an addendum of additional comments on Judaism and ecology. Appendix B is a reprint article titled "Kyoto and Population Control" written in 1998 by Fr. Robert Brungs, S.J. Appendix C is a reprint article titled "Theologians Visit the Environment" written in 1997 by John E. Kinney, Ph.D. Appendix D is a tribute from various individuals to Sr. Marianne Postiglione, RSM, for her 23 years of service to ITEST. She was honored during the Fall 2009 ITEST conference.

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Steiner, Linda and **Clifford Christians** (Eds.). *Key Concepts in Critical Cultural Studies*. Urbana, Chicago, and Springfield: The University of Illinois Press, 2010. Pp. xvi, 269. ISBN 978-0-252-03506-7 (cloth) $75.00; 978-0-252-07695-4 (paper) $30.00.

Many readers of this journal will remember Raymond William's important *Keywords: A Vocabulary of Culture and Society* (1976) as a defining text of the British cultural studies movement. A distinctively different American cultural studies grew up as well, finding one home at the University of Illinois at Urbana-Champaign. For many of the students at that program, James Carey served as mentor, provocateur, teacher, friend, and more. Conversation was Jim Carey's preferred medium. Appropriately this volume of essays by former students and colleagues bears the hallmarks of conversations—evidence of ongoing thinking, comfortable agreement and disagreement, occasional flashes of passion, academic opinion (that is, the kind with evidence), open-endedness. Such a book cannot be finished, since it depends on engagement with the reader.

As a tribute to both Carey and Williams, the editors have chosen the model of key ideas, not a vocabulary, as in William's case, but larger concepts of the type that Carey wrestled with in his lectures and writings. Each contributor—and the list provides a who's who of the Illinois program faculty and graduates (Stuart Allan, Jack Bratich, Clifford Christians, Norman Denzin, Mark Fackler, Robert Fortner, Lawrence Grossberg, Joli Jensen, Steve Jones, John Nerone, Lana Rakow, Quentin J. Schultze, Linda Steiner, Angharad N. Valdivia, Catherine Warren, Frederick Wasser, and Barbie Zelizer)—offers an essay on a concept that helped to define American critical

cultural studies. The topics include history, education, space, religion, community, culture, popular culture, oral culture, identity, professionalism, politics, ethics, the public, technology, and globalization. The editors comment on their use of the term, "keywords":

> First, we use the term to refer to significant concepts, not to refer to search terms used for targeting and retrieving relevant information in a database. Second, our concern here lies more with the relationships among literatures rather than with the historical origins and evolution of individual dictionary entries. (p. x)

The essays add another thematic element as well: Each author frames the topic under consideration not only in the critical cultural studies tradition but also in the writings of Jim Carey.

Carey's work in journalism, history, and communication kept the public and the role of the public firmly in its sights. His was a political writing, not in the sense of partisanship, but in the sense of popular participation in government, of the knowledge that good citizens require in order to fulfill their roles, and of the importance of journalism in preparing people for citizenship. And so, many of the essays in this volume continue that dedication to the political—this is engaged scholarship. Where it becomes partisan (as it does from time to time), the goal seems not to exclude but to rouse to a response.

A number of the essays provide a strong historical grounding. Grossberg ("Culture") situates both the British cultural studies tradition and the American one through an exploration of different definitions of culture, noting "cultural studies emerges at the point of contradiction between these understandings of culture." At this critical point, he notes five dimensions of culture: "(1) a distinctive way of life and the organization or structure of that social life; (2) the meanings, values, and ideas embodied in that way of life or how the way of life expresses itself; (3) the distinctive shapes of the meanings, values, and ideas described in (2); (4) the ways (1), (2), and perhaps (3) are experienced or understood; and implicitly (5) the forms of expression and representation articulating those meanings, values, and ideas" (p. 75). Culture, as Carey and others have noted, is a construct and a construct that hides as much as it reveals. Jensen's essay on "Popular Culture" complements the more general view. For her, the key to understanding is "asking the right question" (p. 88) in order to properly study popular culture. "Critics from Adorno to C. Wright Mills

to Gitlin believe that critical scholarship should alert us to [the] process of mystification, so that we, the public, can recognize and free ourselves from the ideologies that trap us" (p. 93).

Allan ("Professionalism") also takes the historical approach in examining the development of journalism and journalism education. That background helps to situate the contemporary rise of the "citizen journalist" or amateur journalist. Another helpful historical perspective comes from Jones in his essay on technology. All too often discussions of technology look at the wrong things, missing the cultural situatedness and roles of technology. Putting Carey back into conversation with Innis and McLuhan—two of Carey's initial spurs to study culture and technology—Jones recovers a cultural approach to technology.

Two particularly helpful chapters comes from Christians and Rakow. As one would expect from a scholar who has devoted a career to ethics in communication, Christians offers a lucid overview of ethics, deftly sketching three major approaches: formalist media ethics, narrative ethics, and critical dialogic ethics. He supports the latter, since it arises from within the problematic of media and develops through dialogue. Rakow considers identity and the politics of identity in the face of opposition from those who would reject identity-based politics. Her summary of the major theoretical positions and historical accounts provide a clear and compelling case that identity matters, particularly in the context of American politics. Historically, answers to the question of identity have ranged from social place to occupation to intellectual action. More recently critical cultural scholars have seen identity in the meaning that people ascribe to action to the reversal of the question, "Who are you?" with the counter-question, "Who wants to know?"

These brief glimpses at a few of the essays suggest the richness of this book. It will well serve as an introduction of this particular brand of American cultural studies as well as an introduction to the thought of James Carey, though the latter emerges indirectly.

Each chapter has its own notes; the book features a common reference list and an index.

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Reference

Williams, R. (1976). *Keywords: A vocabulary of culture and society*. New York: Oxford University Press.

Uzelac, Aleksandra and **Biserka Cjetičanin** (Eds.). *Digital Culture: The Changing Dynamics*. Zagreb: Institute for International Relations, 2008. (Culturelink Joint Publications Series No. 12; order from Culturelink, www.culturelink.org). Pp. 202. ISBN 978-953-6096-46-6 (paper) €30.

A truism, yes, but the digital world has changed everything. The essays in this collection focus on how those changes affect the world of culture, both cultural institutions such as museums and other sponsored entities and more generally cultural diversity. Organized by the Culturelink network, the discussion examines "possible shifts in the integration of new technologies and digital culture in the processes of affirming cultural diversity and intercultural communication by presenting different case studies and trend analyses—examining the changes brought about by the new context of the interactive and participatory Internet and the responses of the cultural sector to them, and analyzing how cultural policies deal with digital culture" (p. 1). The essays provide a varied look at the cultural sector from a largely European perspective. Those who study the digital world will find the issues raised familiar, though the approach to them differs from what appears in other, often U.S.-dominated discourse. Those not as well versed in digital studies will find the topics of interest but may miss some of the points of contrast.

After an introductory essay by Aleksandra Uzelac, the editors have organized the volume in three parts: The new social ecology of the digital culture; Conceptualizing policies for digital culture; and Cultural practices in the digital territory. Despite the titles, each of the parts moves back and forth between policy and practice but in different measures, justifying the editors' decision about placement.

In the first part, Rob van Kranenburg sketches out a possible future of online living and the ubiquity of information and data collection. Wisely, he asks people to consider the long-term consequences of the Internet's propensity for data collection (not only in websites but also through RFID [radio frequency identification], as found in smart cards, clothing inventory, books, cell phone location devices, and so on). Often people defend the practice of such data collection with reasoning like, "if one is not doing anything wrong, one need not fear what information some database may hold." Van Kranenburg counters that argument simply:

No, you should worry about who will deem what *is* wrong in three, four, five years from now, as from the moment of going live all movement will, irrespective of man, machine, or animal, be logged, stored, and data mined. The data mining algorithms are not open source, transparency is limited, and there is no talking back feature. Who knows, you may even get in trouble for reading this publication. (p. 30)

Digital information does not disappear.

Two essays in the first part provide more background on how people use online resources and how they can use them, particularly with the more recent interactive features made possible by Web 2.0. Helena Popović and Hajrudin Hromadžič track the shift of media users, as the Internet enables them to become co-creators, especially in the cultural realm. Tomislav Medak examines more closely how cultural production changes, with free culture and the rights of creators coming into conflict. The next two essays directly examine the most contentious of the difficulties presented by digital culture: piracy and copyright. Jaka Primorac and Krešimir Jurlin provide a case study of access, piracy, and copyright in Southeastern Europe, with very helpful metrics on digital access, household expenditures on cultural products, and piracy rates. Finally, Joost Smiers offers a thoughtful and thought-provoking analysis of copyright. As a thought experiment, he suggests trying to predict what would happen were nations to abolish copyright. "Abandoning copyright would remove one major support from the dominance of our current cultural industries, but this does not necessarily mean that their dominance would end" (p. 93) because they would still control production and distribution. However, abolishing copyright would level the playing field for new entrants. It would also allow artists to explore new venues and new kinds of expression. Rather than focusing on potential losses with the end of copyright, Smiers offers a look at the potential gains.

Part II of the book considers national policies in support of culture and digital culture. Case studies and the examination of policy documents examine Croatia, Slovenia, and, more generally, the countries within the European Union. One difficulty revealed at the policy level concerns a certain lack of specificity as to whose interests such policies protect and promote. Though state policies indicate the protection of minorities, many of these minorities do not have access to the digital world. High culture, the cultural expression of a different kind of minority, receives the

greater policy promotion. In an empirical review of policy statements, Ann Žuela Bušnja and Daniela Angelina Jelinčić note, "the new context of cultural organizations is faced with old cultural policy systems. Thus, as research results further in this text show, cultural portals and networks often have similar or even the same organizational set-up and governing structure as the conventional arts organizations and cultural institutions" (p. 130).

Part III presents a complement to the policy presentations by offering case studies of cultural practices. Jane Finnis offers a particularly compelling view, based on her work with museums. After reviewing what users actually do, she looks at how one institution took advantage of that knowledge to establish itself as a digital culture source readily available to users. One compelling tag line sums up much of the paper, "set our data free" (p. 163). Another helpful review—for U.S. readers most of all—comes from Cuba, where much of the digital cultural promotion lies hidden behind the U.S. embargo.

Digital Culture: The Changing Dynamics gives a different look at the growing digital world by viewing that world through the lens of traditional cultural carriers. Depending on one's interests, the reader will benefit most from picking and choosing essays. Unfortunately, the book has no index, but the chapter titles do a good job in signaling content. Each essay has reference notes and bibliography.

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Woodward, Ian. *Understanding Material Culture*. Los Angeles, London, New Delhi, and Singapore: Sage Publications, 2007. Pp. vii, 191. ISBN 978-0-7619-4225-2 (cloth) $120.00; 978-0-7619-4226-9 (paper) $46.95.

Objects—clothes, furniture, accessories, tools, toys, and much more—surround us, interact with us, and, according to Gibson (1979), create affordances to allow us to develop a culture in one way rather than another. For all that power and influence, we don't often think much about the objects that surround us. In some ways, this runs in parallel to how we think (or don't think) about communication. Both form a kind of taken-for-granted surrounding. Woodward provides a very readable and very thorough introduction to ways of studying objects. In

tracing this history, he also cautions the reader with a warning that equally well applies to communication (and, though he does not claim this, one could regard communication products as among the objects surrounding us). We usually begin by studying the object (or media product) on its own, as a kind of stand-alone independent entity. But there's more to it:

> It is not just a matter of individuals pondering what objects might mean, but individuals reading objects in relation to other individuals within complex intergroup networks patterned by social status and role, and space-time contexts. For the analyst then, the object can be rendered all-powerful, perfectly understandable, and historically crucial in the course of any literary reflection. However, once the voice of the user is introduced, clarity and certainty give way to multiple interpretations, practices, and manipulations. (pp. 4-5)

Woodward's goals include introducing the voice of the user, something that applies not only to the study of objects but to the study of any communication.

Understanding Material Culture wrestles with ideas of culture and ideas about objects. "Culture" here has to do with how people live and create meaning. "The fundamental conviction of material culture studies is that objects do matter for culture and society, and that social analysis should take account of objects in theorizing culture and how it works" (p. 28). Woodward, of course, is not the first to do this, so he situates the study of objects in a multidisciplinary world, a world of sociology, anthropology, philosophy, consumer studies, semiotics, and economics. "The main thrust of this work," he writes, is "to examine, compare, and evaluate the major ways of approaching objects within social and cultural theory, and within various domains of everyday practice" (p. 171). After introducing the topic and putting it in the context of several case studies drawn from his own field work, Woodward sketches the main assumptions of the work: it is interdisciplinary and cross-disciplinary; objects matter; objects have social interactions, that is, people do things with objects, including invest them with meaning.

Major theoretical approaches have looked at the object with suspicion, at the object as part of a symbolic code, at the object as representing the cultural universe, at the object with aesthetic judgment, at the object as a tool for identity, and at the object

as part of a social performance or narrative. He considers each of these in turn.

The critical or suspicious view of the object characterizes various Marxist and critical theory approaches but also that of liberal economics. For Marx, objects or commodities represented the alienation of labor and the capitalist deception of the working class. Later Marxist scholars, like Lukács or the Frankfurt School (Horkheimer, Adorno, Marcuse, and Fromm) refined the critique but all saw objects as fundamentally false, a part of the false consciousness that betrayed individuals. Liberal economists and members of social movements base their suspicions of the object on its role in consumption, particularly the consumption that distorts the economy or destroys the environment.

A second major approach to the object comes from structuralism and semiotics; this regards the object as part of a symbolic code. This view extends the work of de Saussure's semiotics and invites an examination of the object as part of a larger sign system of meanings. Since, like language, people remain unaware of the workings of the code, this study requires the insights of an expert interpreter. In terms of cultural objects, Claude Lévi-Strauss became one of the first to attempt a semiotic analysis of culture (with non-western cultures) followed by Roland Barthes (with European culture). Both accept this basic assumption: "material objects do not exist just to serve straightforward, utilitarian purposes. In fact, the more important, symbolic role of objects is to allow humans to construct and assign meanings within their cultural universe" (p. 67).

In the third major approach, objects represent cultural categories. Drawing on the anthropological work of Emile Durkheim, Marcel Mauss, and Mary Douglas among others, Woodward notes that "goods are resources for thinking, demarcating, and classifying" and that "all material possessions carry social meaning" and make the categories of a culture visible (p. 95). This cultural view stresses the meaningfulness of objects, which take on meaning through classification and categories (pp. 107-108). These first three general approaches to the object provide a theoretical model for later study.

The last major part of the book examines the object in action: as the basis for aesthetic judgement, as a source of identity, and as a social performance. Again, Woodward acts the part of a guide to the key thinkers who inform the study of material culture. He begins the consideration of aesthetics with Immanuel Kant and goes on to the change posed to the universalized Kantian aesthetics by the work of Pierre Bourdieu. Finally he turns to the practical investigation of fashion by Georg Simmel.

But more than just evoking aesthetic judgments, the object also helps people understand and express their identity. This approach to objects characterizes the psychological or psychoanalytic schools. Because objects can establish social meaning, they can function as helps to people's self-understanding. Taking up D. W. Winnicott's idea of a transition object, Woodward shows how people appropriate objects and transfer meaning to and from the self and the object. Finally, drawing again on his own fieldwork, he shows how people use objects to construct a narrative of their lives, their social place, and their own identity.

Each of the chapters of *Understanding Material Culture* combines an examination of key theories with examples, either from the original studies or from Woodward's work. Each chapter begins with a summary overview and ends with suggestions for further reading. Finally, in a much too brief section (pp. 166-167) Woodward offers some very helpful reflections on methodological dilemmas.

While this book may seem to address only the concerns of sociologists, anthropologists, or those specifically investigating material objects, it holds important lessons for communication students as well. As noted above, communication artifacts do take on identity as material objects—CDs, DVDs, various communication technologies like mobile telephones or even computers—even the immaterial aspects of communication—narratives, programs, performances of music, and so on—also play social and individual roles not unlike those Woodward describes for material objects. One could fruitfully apply the theories Woodward introduces (and some have done so with a few of them) to the attempts in communication to understand culture.

The book has a bibliography and index.

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Gibson, J. J. (1979). *The ecological approach to perception.* London: Houghton Mifflin.