

Media and communication

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Language is commonly singled out as the essence of humanity (Cassirer 1925). Human beings are co-creators, because they give names to the plants and animals. They invent symbols to represent things in their world, which allows them to share the contents of their minds with one another. Thus, as linguistic creatures, humans are also inherently social, because they inhabit a shared symbolic order made possible by their powers of representation and communication. And because of this pervasive character of communication in the development of the human species, media and communication studies have not been contained in an explicit discipline, with its own subject matter. Interdisciplinarity has been essential for understanding it.

As core features of humanity, communication and media clearly predate academic disciplines. They are in this sense non-disciplinary. Yet, they have for centuries been the subject of inquiry by those concerned to understand and improve human correspondence. Since the early twentieth century, such studies of media and communication have proliferated. In the process, they have adopted nearly all of the forms of interdisciplinarity identified in the taxonomy provided by Julie Thompson Klein (this volume). The “bridging” and “restructuring” of knowledge communities to form new interdisciplinary domains of “communication studies” and “media studies” has been a particularly important development in this regard.

This chapter surveys the historical development and present form of multi-, inter-, and transdisciplinary studies of media and communication. It begins with a brief historical sketch of media and communication in order to indicate the kinds of phenomena motivating the studies.

This sketch indicates that the four primary drivers of interdisciplinarity are present in this field. Media and communication (a) are inherently complex, (b) raise questions that are not confined to a single discipline, (c) pose societal problems that transcend the academy, and (d) are tightly linked to new technologies. Indeed, media and communication studies are motivated in large part by the complex questions and social changes brought about by new technologies.

1. A brief historical sketch of media and communication

For millennia, the oral medium was the sole form of communication and techniques such as chanting were crafted for memorizing the essential stories of a people. Though epics could be told, the ephemeral nature of the oral medium established a natural governor on the production of knowledge. The inventions of the alphabet and writing heralded a seismic shift in both human consciousness and social order (Ong 1982). Though writing made systematic inquiry and knowledge production possible, Socrates famously reacted to it with skepticism. Not only does the written transmission of knowledge betray a softness of mind (as one no longer has to rely solely on memory), it exposes one's most serious commitments to attack and degrading treatment while one is not there to defend them.

Subsequent innovations slowly prepared the way toward a contemporary world drowning in technological media and suffused with knowledge about media and communication – knowledge that is itself communicated, conveyed, and shaped by various media. These innovations include the index, punctuation, and other twelfth century developments that lifted the “text” from the page, transforming reading from a communal mumbling to a silent, solitary affair (Illich 1993). Gutenberg's mid-fifteenth century printing press is often cited as the most important watershed in the development of media. Movable type revolutionized European

culture (by standardizing expression), politics (by broadening access to ideas and fostering nationalism), and religion (by making the Bible widely available, thereby upsetting the Church's monopoly).

Electrification brought about the next major wave of change. This was primarily a shift toward broadcast media (waves encoded as transmission signals) as opposed to the mass production and circulation of physical artifacts (*e.g.*, newspaper copies). But it also heralds the birth of film as it progressed beyond the daguerreotype and other early photograph technologies of the mid-nineteenth century. The beginning of this era can be symbolically dated on 24 May 1844, when American inventor Samuel Morse first publically demonstrated his electrical telegraph by sending a message from Washington, D.C. to Baltimore that read: "What hath God wrought." Wireless telegraphy, or radio, soon followed with the 1896 construction of the first radio station on the Isle of Wight, England by Italian inventor Guglielmo Marconi. The broadcasting of images through television first occurred in the early twentieth century, and in the years after World War II television sets became common household items.

At this time, "the media" became an established singular collective term referring to (a) the institutions and organizations in which people work with communication media (the press, cinema, broadcasting, publishing, etc.); (b) the cultural products of those institutions (genres of news, movies, radio and television programs, etc.); and (c) the material forms of media culture (newspapers, books, broadcasting towers, radio sets, films, studios, tapes, discs, etc.).

The mid-twentieth century arrival of the digital computer and later development of the Internet are widely credited for enabling the latest wave of change in media and communication. The shift here is from broadcast to network communication – arguably implying a shift from state control and masses to democratization and individuality. Digitality (the conversion of input

data into discrete abstract symbols such as numbers) is a distinguishing characteristic of “new media” (Lister *et al.* 2003). Other distinguishing features include interactivity (active involvement and many-to-many communication as opposed to the passive consumption of the one-to-many broadcast media), hypertext (texts that link to other texts), dispersal (the decentralization of the production and distribution of media), and virtuality (in a strong sense as immersion or in a weaker sense as the cyberspace where participants in online communication feel themselves to be, including virtual worlds such as Second Life).

New media have also developed a further stage, often signified by the term “Web 2.0,” which is characterized by enhanced social networking affordances and user generated content delivery systems such as Facebook, Blogger, and Twitter. The latest revolution may be precipitated by the increase of mobile media such as cellular phones and iPods. Near-future developments may include the rise of wearable (and perhaps implantable) multi-media technologies that serve as cameras, phones, entertainment systems, and even meta-information devices for accessing and displaying information about anything encountered in one’s environment. And artifacts – from products at a store to home appliances – may soon be connected in a communication network or an “Internet of things” (*e.g.*, a refrigerator linked to a car capable of updating the driver on his milk supply before driving home from work). Another potentially revolutionary change is germinating with regard to user interfaces and the shift away from keypads toward natural gestures and perhaps even toward direct brain-computer interfaces. Children born on the crest of this accelerating wave of change, as “digital natives,” are thrown into a world so pervaded by media that it is now known as “the information age” (Castells 1996).

Scholarly reflection on these developments is motivated by the increasingly profound implications of media in contemporary society. For example, media are making good on the

popular image of a “global village,” by intertwining the cultural, political, and economic fates of more and more people. Life via the Internet poses questions about personal identity, as people come to develop their sense of self in cyberspace, sometimes through the use of ‘avatars’ or digital representations of people . The pervasive matrix of information and communication technologies now aids cognition to such an extent that it could be seen as an extension of the human mind beyond the confines of the skull. Other questions pertain to the quality of online communities, relationships, and education. Websites such as Wikipedia and WebMD muddy the categories of “expert” and “lay,” while cultures suffused with screens and images confront questions about the meaning and relative value of reality and virtuality. Media of all sorts continue to be implicated in the fate of democracies around the world, entangled in thorny issues about censorship and legal jurisdictions. The ‘old’ media suffer under the influence of new technology, posing questions about the future of journalism and the academy. For these and other reasons, media and communication studies have grown into a thriving and bewildering constellation of academic study.

2. Studies of media and communication: an overview

Media and communication studies have drawn conceptual distinctions, formed methodologies and theories, hewn specialized discourses, coalesced communities of experts, created journals, awarded degrees, and become housed in institutions. They have at times developed within existing academic disciplines. At other times they have created their own disciplinary trappings or remained more nebulous in terms of disciplinary identity. And all of this is currently taking place in a context where new media are challenging many of these

traditional academic endeavors by changing the way knowledge is produced, disseminated, and consumed.

Attempts at understanding, evaluating, and improving communication have roots in the study of rhetoric, the art of oratory and persuasion, in ancient Greece and Rome. They branch upward through the medieval university and its *trivium* of logic, grammar, and rhetoric – the arts of thinking, inventing and combining symbols to express thought, and communicating from one mind to another. The modern research university with its emphases on specialization and knowledge production has scattered and multiplied academic inquiry. The profusion of academic studies has also been fueled by the increasing diversity and importance of media in modern society. The resulting cornucopia of titles, programs, methods, and theories mirrors the jumbled labyrinth of the contemporary media technologies and cultures under consideration.

It is possible, however, to discern two main streams of academic study of media and communication, one social scientific and one humanistic. The first stream dates back to World War I, fueled by the problem of war propaganda and by radio technology that linked nations into mass media markets for the first time. Scholars in sociology, psychology, journalism, and political science began researching such developments, using the methodologies of their disciplines. Charles Horton Cooley, Walter Lippmann, and John Dewey were influential, because they all gave communication a central role in the attempt to understand social relations. In terms of Klein's taxonomy, this stream has adopted several identities. Especially in its early stages, it was predominately a multidisciplinary juxtaposition where the disciplines retained their original identity. Yet it has increasingly featured versions of composite, methodological, and theoretical interdisciplinarity where integration occurs around a common problem and via conceptual frameworks, organizational principles, and methods.

The second stream is comprised of contributions from philosophers, historians, cultural anthropologists, cultural theorists, and scholars of art, literature, and film. Its origins are diverse and thus more difficult to pinpoint, although critical theory and post-structuralism are two major sources of much contemporary humanistic study of communication and media. More concretely, in 1947, Wilbur Schramm, the “father of communication studies,” founded the Institute for Communications Research at the University of Illinois at Urbana-Champaign. Holding a PhD in Literature, he argued that communication theory will emerge out of language and linguistics, and established appointments in these areas. This stream can be roughly distinguished from the social science stream by its tendency toward critical interdisciplinarity and transdisciplinarity. Broad interdisciplinarity between these streams – let alone with the natural sciences or engineering – remains rare.

Insofar as they remain elements of existing disciplines, studies of media and communication do not acquire their own disciplinary identity. Students use established methods and theories and receive traditional degrees in philosophy, sociology, economics etc., although with a dissertation topic focused on media and communication. This situation characterized communications studies at Columbia University. Through the Bureau of Applied Social Research at Columbia, Paul F. Lazarsfeld and others produced work that was highly influential in shaping the field. Yet while this work began in 1944, Columbia did not create a degree-granting graduate program in communications until the 1990s. Prior to then, communication studies fell under the umbrella of sociology.

In a dialectic familiar to students of interdisciplinarity (see Krohn, this volume), many forays into interdisciplinary media studies have been driven back into disciplinarity. Or as Klein notes, today’s inter-discipline is tomorrow’s discipline. This is caused by the “need for

manageable objects and presentable results” within a reference community. Indeed, it is caused by the academy’s need for reference communities to define the nature and judge the quality of scholarship and to perpetuate themselves by initiating students and obtaining financial and institutional support. Furthermore, the diversity of communication and media phenomena is also partly responsible for the fracturing of inquiry. The appearance of new media and new social landscapes calls for and creates ample opportunities to fashion the new theories, concepts, and methods that become the intellectual lifeblood of institutionalized disciplinary communities (McQuail 2003).

These epistemological and institutional requirements have caused the current abundance of university degree-awarding programs operating under a variety of titles and housing scholars publishing in a growing array of specialized journals. A sampling of the dozens of journals supporting this field of inquiry includes *Journal of Communication*; *Communication Theory*; *Human Communication Research*; *Critical Studies in Media Communication*; *Media, Culture & Society* and *Feminist Media Studies*. Of course, the boundaries of this field are shifting and porous, and could be drawn more widely to include such journals as *Ethics and Information Technology* and *Journalism Studies*.

A sampling of some common university programs are grouped under such terms as “communications,” “communication studies,” “rhetorical studies,” “communication science,” “media studies,” “mass communication,” and “media ecology.” Many of these programs self-identify as multi- or interdisciplinary because they juxtapose or integrate traditional disciplines. Some programs claim to be transdisciplinary, because they frame research questions and practices around real-world problems and coalesce around conceptual frameworks that transcend disciplinary worldviews. Yet, they are also disciplines in their own respect, because they sustain

and perpetuate specialized communities of discourse (via majors and advanced degrees) around a shared set of problems, theories, methods, and/or concepts. As one way to indicate the disciplinization of this field, when Schramm established the first PhD in Communications in 1947 at the University of Illinois at Urbana-Champaign, all faculty members held their PhD's in the established disciplines. Today faculty members of most of these degree-granting programs are recipients of doctorates from communication programs.

3. History of mass communications research

Wireless broadcasting achieved technical excellence during World War I and swept rapidly through society as peace returned and military need subsided. The war symbolized the late-modern breakdown of traditional society and the emergence of not just mass media, but “mass society,” including the mass production of transportation, goods, and education. Formal studies of mass media originated in the same post-war period as a central part of attempts to understand the massification of society. Many such attempts shared the idea that the masses, as formed by the disintegration of traditional society, were in need of mechanisms of incorporation to ensure social integration.

The history of mass media research could be told through a variety of narratives, including (a) disputes about goals, (b) incremental progress, (c) revolutionary change, and (d) disagreements about methods. This section briefly glosses each narrative. The take home message is that these disputes, advances, changes, and disagreements create the various fault lines in the intellectual sub-surface underlying the contemporary panoply of departments and programs. That is, much of the institutional diversity in terms of (inter)disciplinary identities stems from the different positions staked within these narratives.

First, a basic divide in media and communication studies exists between the goals of serving mass media and critiquing it – or between what Klein identifies as instrumental and critical interdisciplinarity. Understanding media could be considered an independent goal, but often understanding is sought as a means to improved service or criticism. Of course, these goals are often reconciled as both service and critique can lead to reform. Radio advertising, one of the original loci of mass media research, illustrates this overly simplistic but instructive dichotomy. In the 1920s, radio became a promoter's dream. Pepsodent sponsored Amos and Andy, one of the first radio comedy serials, and its sales increased 70 percent the first year. A host of today's prominent products achieved their recognition initially from the newly formed networks: Bayer, Goodrich, Wheaties, Pepsi-Cola, Bulova, Texaco, and more. In fact, early radio history could be written around combinations of program and brand name: Lucky Strike Orchestra, Eveready Hour, Voice of Firestone, Ipana Troubadours, A & P Gypsies, and Sieberling Singers.

In order to secure more such advertising success, official market research received abundant commercial funding. Such instrumental interdisciplinary research has allowed media messages to be delivered with more substantial impact. This is attributable to increased understanding of the significance of audience demographics (the age, gender, etc. of those tuned into a given media outlet) for optimizing exposure to advertising and other content. It is also a result of the stipulation of differences among the media – especially their varying technological affordances. This is a clear example of research serving media. Yet commercial radio also became a site of critical interdisciplinarity. For example, Theodor Adorno and Max Horkheimer coined the term “culture industry,” arguing that popular culture is akin to the factory production of standardized goods. Like political propaganda, this culture industry manipulates the masses

into docility and passive consumption of easy pleasures. It creates the false needs satisfied by capitalism and threatens the true needs of freedom, creativity, and flourishing.

Second, the history of broadcast media research could be told in terms of linear progress. In several cases, media and communication studies have advanced knowledge by progressing in the manner commonly thought typical of science – theories or models are put forward, tested, and either tentatively accepted or rejected. For example, in the 1940s many researchers drew from the pioneering work of Harold Lasswell on propaganda to develop the hypodermic needle or magic bullet model of communication (Lasswell and Casey 1946). This model (a variant of the then predominant stimulus-response model) holds that mass media have a direct, uniform, and immediate impact on their audience. The mass hysteria caused by the 1938 broadcast of *The War of the Worlds* was cited as evidence for this model. But Lazarsfeld and others would go on to use this incident and other empirical evidence to challenge the model. Their studies demonstrated that broadcast media typically have selective and diverse impacts on people, depending on their beliefs and on contextual factors. Building from such studies, they offered the two-step flow model, with its greater emphasis on human agency, as an alternative.

Third, the history of mass media research could also be told as one of major conceptual rifts that resemble what Thomas Kuhn (1962) called “paradigm shifts” rather than step-wise linear progress. The most important paradigm shift occurred in the 1960s and 1970s as a transition from content to form. Prior to this time, studies tended to conceptualize media as tools for the transmission of content, with an emphasis on the nature of the content or message. For example, the earliest studies of political communication conceived of media as a vehicle for either education or propaganda. Concerns were raised by the pervasiveness of propaganda in totalitarian governments and its success in undermining critical thinking by the public. In 1937,

an interdisciplinary group of US scholars founded the Institute for Propaganda Analysis with the goals of studying illegitimate manipulation, fostering critical thought, and contributing to intelligent engagement with mass media. In place of propaganda, early Marxist critiques conceptualized mass media as a vehicle for the transmission and reproduction of ideology, hegemony, or class domination. Whether propaganda or ideology, the emphasis was on the content of the messages rather than the structure of the medium.

By contrast, the French Marxist Louis Althusser initiated a “paradigm earthquake,” by arguing that ideology should be understood as the structure or form of mass media, not just its content (Holmes 2005). For Althusser, ideology is not just found in the ever-shifting content of the messages absorbed by “given” or pre-existing individuals. Rather, “ideology-in-general” constitutes individuals as subjects – it is the very condition by which an individual comes to have a representation of self and world. This subjectivity is created by the communication process itself. Thus, the kind of selfhood that emerges and the world it takes as reality depend on the structure or form of the communication.

The profound implication is that media do not deliver a representation (either neutral or distorted) of reality. Rather, they create reality. This “revolution,” in Kuhn’s terms, resonated widely. It can be seen, for example, in the thesis put forward both by the cultural critic Jean Baudrillard (1997) and the Heideggerian philosopher Albert Borgmann (1999) that simulacra have come to precede, determine, and crowd out the real. It is also apparent in the work of Marxist theorist Guy Debord (1977) and others advancing various spectacle or ritualistic theories of mass media. Debord argued that mass media create a certain field of visibility by concentrating the attention of the many on a particular event or representation. When this image

is repeated, in time it begins to take on a life of its own – it becomes a spectacle – and that to which it refers becomes secondary and may even disappear from view.

This paradigm shift toward form or structure was also advanced, and even foreshadowed, by the two main “medium theorists,” Marshall McLuhan (1962) and Harold Innis (1964). McLuhan differed from spectacle and ideology views by rejecting their homogenous picture of media and culture in favor of an account of the distinct specificities of different media corresponding to different modes of perception. Yet he shared their emphasis on form rather than content: “the medium is the message.” Innis similarly analyzed how power gathers around different media structures, which has influenced later work on new media.

Finally, the story of broadcast media could be told in terms of debates about methods. For example, Lazarsfeld and others (1944) transferred empirical and inductive methods from the study of radio advertizing to the analysis of the 1940 presidential election. Their work suffered somewhat because they assumed that promoting candidates and selling soap were methodological equivalents. And although Lazarsfeld utilized sample surveys innovatively, his inductivism could not ultimately specify causal relations. It proved impossible to move beyond the correlation of two factors to demonstrate a causal relationship – an issue that has long haunted research on the impacts of media on society, from pornography to violence in computer games and movies. As one report on obscenity and pornography noted: “The research evidence is of the kind in which science follows in the wake of common sense” (Barnes 1971: xiii).

Carl Hovland, a psychologist working at Yale in the 1950s, produced some of communications’ most suggestive studies (Hovland *et al.* 1953). These included the first report of the “sleeper effect” – when a highly persuasive message paired with a discounting cue causes the individual to be more persuaded (rather than less) over time. Leon Festinger also adopted the

experimental method, but with less emphasis on exact precision and verification of causal relations. Specifically, his “dissonance theory” described communication effects in terms of desirable psychological states. Experiments statistically measure attitudes before and after some persuasive message under the basic presumption that humans need equilibrium, and beliefs change only to alleviate inconsistency.

As an alternative to laboratories, Norbert Wiener (1948) and Ross Ashby (1963) developed cybernetics as a formalist, mathematically-based approach to the study of communication. Cybernetics is an instance of what Klein calls generalizing interdisciplinarity, because it applies a single theoretical perspective to a wide range of disciplines. This influenced Claude Shannon and Warren Weaver’s “Mathematical Theory of Communication” (1949), which laid out the basic elements of communication as an information source, a transmitter, a channel or medium, a receiver, and a destination. It also developed the concept of a bit as a unit of information. This laid the foundations for information theory, becoming the basis for digital communications technology and the birth of networked or new media.

4. Networked communications research

The explosive growth of the Internet and network (as opposed to broadcast) communication in the 1990s has generated scholarship on a second or new media age (Hassan and Thomas 2006). Many of its foundational tropes – social disintegration, the virtual replacing the real, individuality, disembodiment, realignment of political power and economic order – were foreshadowed by science fiction works such as *Neuromancer* (Gibson 1986) and *Snow Crash* (Stephenson 1992) and portrayed in films such as *The Matrix* (1999). Here too both social science and humanities streams are discernable, though with considerable overlap. Another set of

distinctions are helpful for indicating some important topographic contours, including (a) the relationship between old and new media; (b) utopias and dystopias; (c) computer-mediated communication; and (d) cyberculture.

First, early scholarship on new media placed strong emphasis on its distinguishing features. The old media architecture is one of central media producers transmitting content to an undifferentiated mass. The individual looks to the central media source to acquire cultural identity, not “sideways” at others in the crowd. By contrast, the new media architecture breaks down the walls separating individuals. They look at one another for a sense of self and belonging. This is why Mark Poster (1995) sets “interactivity” at the core of new media. Placing such stress on the revolutionary differences of new media fostered a widely held thesis that the new would quickly displace the old (Manovich 2002). The contraction or demise of newspaper publishers has lent some support to this thesis.

Yet newspapers have also adopted online publishing, featuring new forms of articles and advertisements. This kind of development has led some to argue that the picture is far more complex. David Holmes (2005), for example, questioned the historical distinction between the first and second media ages. He argued that the way in which individuals connect with the different media forms is interdependent – network communication becomes meaningful because of broadcast and broadcast becomes meaningful in the context of network. Jay Bolter and Richard Grusin (1999) similarly coined the term “remediation” to argue that newer forms of media have always refashioned older forms. A simple example of this is the way in which YouTube videos often remix popular television shows. The hit US comedy television show “The Colbert Report” even responded to such creations, prompting yet more online videos. Some describe such phenomena as the “convergence” of media functions and industries (Van Dijk

1999). The lesson seems to be that new media offer different possibilities for connectedness and creativity, but some of these engage and reshape old media rather than simply eclipse them.

Second, the view that digital, interactive media marked a revolution in communication was often wed to a utopian ideal. One expression of this ideal was the 1994 manifesto entitled “Cyberspace and the American Dream: A Magna Carta for the Knowledge Age” (Dyson *et al.* 1994). Langdon Winner (1997) extracted its core tenants as deterministic but positive technological change, radical individualism, free-market capitalism, and a rebirth of the public sphere and participatory democracy. Overcoming the passivity and homogeneity of the broadcast architecture means emancipation, enfranchisement, and creativity – indeed, individuals are free to experiment with identity in radically new ways (Turkle 1995). No longer does the mass media industry determine cultural or individual consciousness. Furthermore, an interactive media renews community by strengthening the bonds connecting people to their world.

As is often the case with emerging technologies, there are dystopian visions contrasting with the utopian ones. A primary motif here is the impoverishment that results when virtual and mediated experiences displace real and direct experiences. Hubert Dreyfus (2001), for example, argued that distance learning is a poor substitute for classroom education and more generally that lives increasingly spent online lack the defining commitments that sustain meaning and community. Cass Sunstein (2001) deflated claims about cyber-democracies, by arguing that cyberspace is far more a private than a public space. It allows those online to see, hear, and read only what they like. This egocentrism is not only narcissistic, but weakens the exchange of ideas necessary for democracies. Nicholas Carr (2008) argued that the Internet diminishes cognitive capacities by fostering a staccato style of reading and thinking. The interpretive ability to make imaginative mental connections and relate new information to one’s biography remains largely

disengaged online. Other dystopian themes center on increased risks of identity-theft, cyber-stalking, an acceleration of the pace of life, and the threats to privacy posed by surveillance and data mining.

A third important story about new media is the growth of social scientific and psychological studies of computer-mediated communication (CMC) (Thurlow *et al.* 2004, Joinson 2003). CMC research examines the social and psychological dimensions of communication through two or more networked computers in formats ranging from e-mail to instant messaging to social networking sites and virtual worlds. Examples include research on identity construction online and behavioral changes under conditions of anonymity. Researchers often compare CMC to face-to-face relating. The umbrella term of CMC has created new communities of academic discourse via such outlets as *The Journal of Computer-Mediated Communication* and *Cyberpsychology*. The CMC literature can be mapped onto the utopia-dystopia landscape, especially regarding disputes about whether online communication is better or worse than offline forms. But by in large it strives for value neutrality and empiricism. Furthermore, this literature tends to adopt a narrower focus on individual interactions rather than the overall contexts by which those interactions form a meaningful whole.

Fourth, and by contrast, “cyberculture” has become a term of art in the humanities to draw attention to the ways in which media are shaping entire value systems, basic concepts, and patterns of life (see Davidson, this volume). Culture, communication, and media are tightly interlinked (Langer 1977, Carey 1988). Cultures are interconnections of symbolic forms, those fundamental units of meaning are expressed in words, gestures, and graphics. Realities called cultures are inherited and built from symbols that shape action, identity, thoughts and sentiment. Communication, therefore, is the creative process of building and reaffirming cultures through

symbolic action. Although not identical to what they symbolize, symbols participate in their meaning and power; they share the significance of that to which they point.

The concept of cyberculture intrinsically links such humanistic theories of culture with technical concepts from computer science, robotics, artificial intelligence, and genetics. It has thus become the site of both interdisciplinary collaboration – including wide interdisciplinarity across the humanities, engineering, and sciences – and turf wars as various traditions and disciplines seek to make claims to a superior understanding of the unprecedented mixture of artifacts and ideas that characterize our times. Cyberculture, far more than CMC, maps onto the utopia-dystopia dialectic, because it conjures forth fundamental reflection on culture, technology, and nature – including how these basic categories are blurring through such phenomena as androids, cyborgs, and virtual ski slopes. By blurring these categories, cyberculture theorists tend to adopt a nonlinear sense of causality – things do not determine ideas nor do ideas determine things, but they are co-constitutive.

This means that the traditional humanist views of agency as solely the preserve of human beings and the human agent as separable from culture and technology are called into question. Thus, semiotics (the study of signs, symbols, and the construction of meaning) is an important wellspring for cyberculture studies, but it is often modified such that non-humans become actors rather than just signs. Furthermore, semiotics traditionally maintains a narrow definition of culture as the products of the arts and language. Though this definition long dominated communication studies, cyberculture expands it by including the physical, technological media as intrinsic to culture. Culture is not just the content conveyed by media, but the structures and forms of media technologies and the other artifacts in which they are embedded and systems with which they are networked.

5. Conclusion

As the diversity of narratives and concepts in these histories would suggest, there is substantial disagreement and turmoil in the current study of media and communication. For example, the standard textbook on approaches to mass communication study (Severin and Tankard 2000) added critical theory and cultural studies in its fifth edition to its overview. But only, the authors note, because “they have become popular with scholars. Nevertheless, we remain committed to the scientific approach, with its emphasis on observation, evidence, logic and hypothesis testing” (xv). Most research funding still supports studies which measure observable behavior, finding in such results the statistical precision desired by private and public benefactors.

The current aim of the more scientific approach is to develop more elaborate and finely tuned procedures, more complex multivariate scales, faster computer banks, and longer range experiments, trusting that greater development of method will eliminate previous weaknesses, confusions, and uncertainties. Severin and Tankard (2000) summarize this scientific trajectory in terms of the incremental progress narrative:

Communication researchers have not yet come up with a unified theory that will explain the effects of mass communication. Instead, we have a number of theories, each attempting to explain some particular aspect of mass communication. As communication research advances, perhaps we shall see several of these mini-theories combined into one overall theory of mass communication effects. Or, perhaps some of these theories will not survive the test of empirical research and will be winnowed out, while others survive (286).

The scientific trajectory in communication studies is currently bolstered by the surge of new forms of physical, computer, and biological sciences as well as new technical capacities. Indeed, this trend is toward communication studies as a form of “big science.” Indeed, media and communication studies find themselves in the current transdisciplinary trend line toward the unification of knowledge. Some see this unification in terms of the cognitive and natural sciences swallowing social scientific and humanistic approaches. Communication and media studies, then, would become “scientific,” implying the importation of natural scientific methods for the study of social and cultural phenomena:

Scientific advances, particularly in neurobiology, genetics, and neuropsychology, are encouraging researchers to consider re-theorizing “cultural” problems to take the new knowledge generated by science into consideration. Added to this, the achievement of the technical capacity to process large and complex data fields, a feature of the computerized knowledge environment, now suggests that alternative methods and approaches for the study of cultural phenomena may be possible. In other words, some research that we previously believed could only be solved by cultural approaches may be recast as questions for science and scientific inquiry (Nightingale 2003: 361).

Yet this trajectory is not likely to yield that magical universal theory or homogenize the current diversity in the topography of media and communications studies. Rather, this infusion of natural, cognitive, computer, and physical sciences will most probably map onto existing landscapes and create ever more niches. This trend has occurred before – for example, in the fact that sociobiology became just another approach to human social life rather than a grand consilience marking the demise of approaches rooted in the humanities or social sciences. Indeed,

this seems inevitable given that the mechanistic tropes central to the natural sciences are incapable of accounting for the spontaneities of the human lifeworld.

Joseph Klapper (1965), a proponent of scientific rigor in communication studies, regretted that after years at the “inexhaustible fount of variables,” systematic description and prediction “becomes the more distant as it is the more vigorously pursued” (316). The Enlightenment dream of mirroring nature would mean that at some point we could close the book of knowledge, having adequately transcribed reality. But the pursuit of knowledge is “inexhaustible” – especially in an information society where everyone is a publisher. The only governors on its growth are external and relatively contingent – the availability of funding and the interests of citizens, politicians, provosts, and CEOs.

Thus, there are contrary reactions to the growing confusion about the nature of communication and media studies. Some desire multidisciplinary juxtapositions to address narrowly defined academic questions. Others want interdisciplinary integrations to unify knowledge. And still others seek a transdisciplinary transcendence of academic disciplines in order to either serve or critique society. The danger of the transdisciplinary path is that in seeking to become relevant, media and communication studies will lose the disciplinary trappings that ensure academic viability. Yet as the academy continues to evolve under the influence of new media, it may be that transdisciplinary structures of knowledge production become more stable than the traditional disciplinary forms. In many respects, the future of media and communication research depends on how the phenomena under study will impact those very studies.

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