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Media Ecosystems: Some Notes Toward a Genealogy of the Term and an Application of it to Journalism Research

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ABSTRACT: The paper begins with a general overview of the increasing prevalence of the phrase “news ecosystem” in the digital era. It then discusses two uses of the term “ecosystem” in the media studies literature, before outlining several examples of research on emerging news ecosystems, each which draws upon a different, if unacknowledged, theoretical tradition.

Introduction

This is not an empirical paper—though in typical American fashion it is ultimately animated by empirical concerns. Rather, it is an attempt to think through two (at least) different meanings of the words “media ecosystem,” and relate those meanings to possible roads forward for journalism research. I call these approaches the “environmental” approach and the “rhizomatic” approach. Each of these approaches has its value, and I myself have contributed research to both areas. But I think that one of them—the environmental—shows signs of becoming the dominant mode of journalistic analysis, at least in the United States, and thus wish to write in favor of the more obscure approach, the rhizomatic.

I should note from the beginning that this conceptual difference between rhizomatic and environmental approaches was not coined by me; indeed, it is a distinction that has been prevalent in certain domains of materialist media theory for over a decade. Rather, my contribution in this paper is to take these two approaches, describe their major areas of concern and disagreement, and apply them to journalism studies. The paper begins with a general overview of the increasing prevalence of the phrase “news ecosystem” in the digital era. It then discusses two uses of the term “ecosystem” in the media studies literature, before outlining two examples of research on emerging news ecosystems, each which draws upon a different, if unacknowledged, theoretical tradition.

Thinking About News Ecosystems: A Brief Genealogical Excursion

Google N-Grams, a software tool that provides a “big data” overview of prevalence of different phrases in Google’s scanned book corpus, begins to track the rise of the phrase “media ecosystem” starting in 2001; from that then the use of the phrase nearly doubles every year until 2008 (the last year for which data is available). 2001 is also the year that the phrase was first used in an academic context-- in an article entitled “Convergence? I Diverge,” Henry Jenkins argues that so-called old media are rarely replaced by new media. “A medium’s content may shift, its audience may change and its social status may rise or fall,” Jenkins writes, “but once a medium establishes itself it continues to be part of the media ecosystem. No one medium is going to “win” the battle for our ears and eyeballs.” (Jenkins, 2001). A communications ecosystem of the specifically journalistic kind was first mentioned in a 2005 paper by Harvard Berkman Center fellow Rebecca MacKinnon, reporting on the proceedings of a Berkman Center conference and specifically referencing the contributions of internet theorists Jay Rosen and Jeff Jarvis to the conference (MacKinnon 2005). Nevertheless, it would take nearly 5 more years for the phrase to first appear in peer-reviewed journals, including this author’s publication in the journal *Political Communication* (Anderson 2010) and a number of additional journal articles that cite a Pew study “How News Happens: A Study of the News Ecosystem in One American City” (Pew 2010). By 2012, Google Scholar listed more than 50 articles and books that referenced news ecosystems.

These examples, however, certainly do not exhaust the use of “ecosystem” in a specifically communication-related context. Indeed, each of them harkens back to an older understanding of ecosystem—Jenkins’ concern with the material properties of “old” technology, Pew’s focus on information diffusion and transformation, and Rosen’s acknowledged debt to the work of “media ecologist” Nell Postman at New York University¹. I now turn to a brief discussion of two main strands or thematic areas in the literature on media ecosystems, what I have called the “environmental” approach and the “rhizomatic approach.”

¹ I actually asked Jay Rosen if he thought his work with Postman made him more sensitive to the media ecosystem concept. He replied that it did somewhat, but that a more important influence was Postman’s idea of the “information / action” ratio in *Amusing Ourselves to Death*

Two Kinds of Media Ecologies

Communications in the Balance: Media Ecosystems and the Lived Environment.

A first strand of scholarship concerned with media ecosystems can be found within the odd communications subfield appropriately known as “media ecology.” It is beyond the scope of this paper to provide anything more than a brief sketch of the media ecology tradition, a research area with its own conferences and journals, and one which once branded NYU media studies department before the school changed its name in 2001 to the less eccentric “Media, Culture, and Communication.” The term media ecology first emerged in the late 1960s and early 1970s, and was arguably part of a larger proliferation of the “ecology” metaphor in a variety mostly interdisciplinary research fields.

Officially coined by NYU Professor Neil Postman in 1968 (Postman 2000), but drawing on theories of Marshall McLuhan proposed at least a decade earlier (Levinson 2000) media ecology argued that human beings sit at the center of a media “ecosystem” or “media environment,” and that this ecosystem dramatically affects their perception, their cognition, and thus their behavior. Types of media within this ecosystem can be seen as different *species*—they interact, they balance each other and, if the ecosystem is healthy, they harmonize. These species are largely the subset of more general, more expansive species of media: “hot media,” “cold media,” etc., but also media forms less dependent on McLuhan’s idiosyncratic understanding of the history of technology. These media species, again like species in the real world, also occasionally go extinct, or evolve into something more advanced or appropriate for the current environment. Finally, I would argue that this ecosystem operates on the distinctly *human* species that sits at its center in a manner that is primarily symbolic; oddly enough, however, this largely symbolic medium also possesses its’ own technological agency. A regular criticism of McLuhan and Postman, of course, is that they are determinists of the worse sort (Williams 1974). In short, it is useful to think of this notion of media ecology as much like the larger study of ecology that emerged in science around the same time.

Materialist Media Ecologies

In 2005 Matthew Fuller published “Media Ecologies,” a book that not only took dead aim at the tradition of media ecology as coined by Postman but also pulled together a variety of threads lying at the borderland between fields such as media archaeology, design, computer science, and actor-network theory to construct an alternative understanding of the idea (Fuller 2005). The object of study in Fuller’s book is what he sees as a deeply *dehumanized* media system, one in which the human subject does not sit at the center of a communications environment but is rather one node in a shifting series of symbolic and material media networks. Within these overlapping networks, the outcome is not eventual cybernetic balance but rather dynamic, rhizomatic expansion². As in the McLuhan-Postman tradition there are deeply material aspects to these networks, but Fuller sees these material aspects as neither part of a structuring environment or a series of large-scale historical epochs. Instead:

The book asks: what are the different kinds of [material] qualities in media systems with their various and particular or shared rhythms, codes, politics, capacities, predispositions and drives, and how can these be said to mix, to interrelate and to produce patterns, dangers and potentials? Crucial to such an approach is an understanding that an attention to materiality is most fruitful where it is often deemed irrelevant, in the immaterial domains of electronic media. (Fuller 2005)

² It might be helpful to define the term “rhizome” here. Deleuze and Guattari (1980): “Let us summarize the principal characteristics of a rhizome: unlike trees or their roots, the rhizome connects any point to any other point, and its traits are not necessarily linked to traits of the same nature; it brings into play very different regimes of signs, and even nonsign states. The rhizome is reducible neither to the One nor the multiple. It is not the One that becomes Two or even directly three, four, five, etc. It is not a multiple derived from the One, or to which One is added ($n + 1$). It is composed not of units but of dimensions, or rather directions in motion.” (pg. 21)

In other words: much as McLuhan argued, all media is material, even—particularly-- digital media. But by *material* this rhizomatic strand of media ecology actually means “something that exercises power over other parts of the network,” and *not* technological determinism in the sense of a structuring environment that envelops the human subject. The theoretical inspiration here is obviously less American or Canadian and more European, drawing on the work of Guattari, DeLuze, DeLanda, and Latour.

Media Ecologies and the Study of Digital Journalism

Going beyond the traditional newsroom ethnography in order to study the networks, organizations, social groupings, and institutions that populate the larger “news ecosystem” is obviously the first step in coming to terms with the shifting technological, cultural, and economic structures of digital-age journalism. I want to push this insight further, however, and to do so I want to draw on the distinction between the environmental and rhizomatic understandings of ecosystem that I outlined above. Both of these perspectives can be used to study digital journalism in useful and productive ways, but I would also contend that they ultimately represent different paths forward in the study of news, and ultimately embrace different normative concerns. How might we study journalism if we were to use a more environmental approach? How would the use of a rhizomatic approach shift the focus of our research?

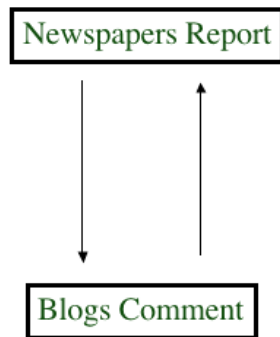
Building Healthy Media Ecosystems, Activating Networks

The vast majority of digital media studies that go beyond the newsroom have embraced an environmental understanding of journalism and news production. Amongst these I would cite the the Knight Commission report on the “new information needs of communities,” (Knight Commission 2009) and the various forms of ecosystem mapping produced by the New America Foundation (for example, Morgan et. al. 2010), the Chicago Community Trust, and a variety of organizations operating under the broader Knight Foundation umbrella. Each of these studies can be said to operate along the following lines. They each provide a taxonomy of media and journalistic institutions within a particular geographic or subject area, institutions that include but are not limited to traditional news organizations. They study the information these institutions produce, and conclude with an analysis of how these production outputs (including the oft-valORIZED “original reporting”) contribute to a “holistically healthy” citizen.

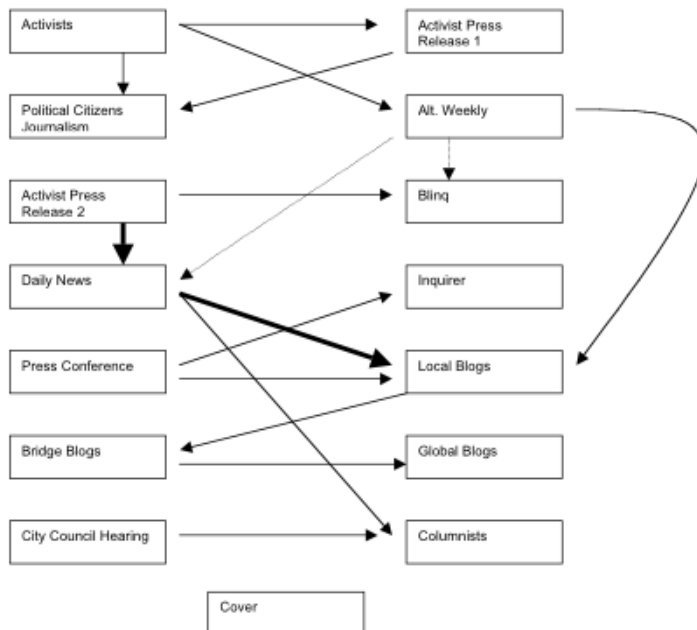
There are far fewer studies that can be said to explicitly draw upon the second strand of ecological research, although I would point to my 2010 study of the “Francisville Four” as the kind of research that falls within this second tradition (Anderson 2010), as well as towards the Project for Excellence in Journalism study of Baltimore referenced earlier (Pew 2010). The Francisville Four study of how news moved across the length and breadth of the Philadelphia media ecosystem focused less on the “nutritional value” of various forms of news and information than to uncovering how fragments of linguistic and material facts diffused across the news network in the city. It paid particular attention to how these *fragmented facts* activated (or failed to activate) particular parts of the news network within and beyond the city. Amongst these fragmentary facts were not simply news stories (original or not) and blog posts, but things like particular documents, interviews, links, algorithms, web metric software, and so on.

In essence, we might summarize these two competing approaches by means of the following two charts outlining the relationship between “blogging” and “journalism.” In the first, there are two forms of journalistic writing, both of them influence each other, and each ultimately contributes to “citizen health” in different ways—like Zinc and Vitamin D. In the second, “blogging” and “reporting” are *folded into* a larger, semio-material network.

The Environmental Approach



The Ecological / Rhizomatic Approach



Normative Implications and Background Assumptions

At its worst, this paper has been an exercise in linguistic hairsplitting and theoretical rumination. But I hope not. Rather, I hope it has helped identify the different ways we might embrace the post-newsroom concept in our study of journalism, and has made clear some of what is at stake depending on the methods we choose and the questions we ask to study the new digital world. I think both perspectives are useful, and both mark a step forward from the newsroom centric notion of journalism studies. I myself have produced both kinds of research. But I *also* think there are reasons why a form of ecosystem research which draws more heavily on McLuhan and Postman's notions of a cybernetic environment has become common in post-newsroom studies and more rhizomatic approaches have been less common. In particular, I think there are understandings of the "healthy citizen" at work here, perspectives which bias researchers toward

a particular form of media research.

The ultimate understanding of the news consumer in the more environmental approaches to news ecosystems is of an organism at the center of a webbed environment of overlapping influences—but a citizen who is sick due to a lack of proper nutritional sustenance. The decline of journalism has reduced the amount of healthy information in the world, so the argument goes; much like the lack of Vitamin D can contribute to osteoporosis and rickets, the lack of good news content can make us all a little ill. These illnesses ultimately feed back into the larger polity, building a healthy democracy – or, more likely, a sick one.

The more rhizomatic approach to media ecosystems does not deny that we may have a polity ridden with unhealthy voters and media consumers; rather, it simply declines to make the citizen news consumer the center of its analysis. Instead, it focuses on the news network itself—the way that information, technologies, factual fragments, institutions, reportorial techniques, and many other “news objects” refract across the larger networks of which human beings form only a small part. There is much for researchers to explore in the dynamic media ecosystem that is unfolding before our eyes. It would be a shame if we were to reduce our own research role to simply that of nutritionists, ignoring the larger networks currently enmeshing the human and non-human alike.

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