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Media and the Economic Crisis

Common Carriers, Broadcasters, and the Fight Over the Internet: Toward a Material Model of Mediation

Sindhu Zagoren

In order to better understand the complexities of the policy issues that surround net neutrality we must turn our attention to processes of mediation itself, and how this is understood by dominant media institutions. To this end, this essay examines how the use of cable television blurred the distinctions between common carriers and broadcasters, challenging both models and redefining television as a medium. Cable changed the spatiality of mediation by creating both more channel space, and the physical location of the means of distribution. These material changes became the basis of an alternative media movement for Public, Educational, and Government access television. Through understanding the relationship between technology and space, we can conceive of a similar strategy to preserve Internet access. This is a call for a reframing of the political economy of media under capitalism – a narrative that focuses on processes of mediation themselves.

Introduction:

The struggle between content providers and distributors has been present since the beginnings of electronic communication. This tension has shaped how we access our media, much more so than deliberation over what sort of content the media distribute. In order to understand contemporary debates over access to media, this paper offers an historical analysis of the emergence of cable television, a previous moment when arguments over access and distribution took place. When media companies began to take an active interest in cable as a means of distributing television content in the late 1960's, they began to divide up media resources to the exclusion of both small-scale media operators and the general public. Activists forty years ago, however, were able to use a material understanding of television distribution – one that focused on a private company's use of public space – to carve out a commonly accessible space with television. We can use such a model today to preserve an open Internet.

Right now there are some very important debates going on around Internet policy in the U.S. As recently as April 2011 there have been initiatives put forward in Congress that would significantly limit the Federal Communications Commission's (FCC's) authority over regulating the Internet and maintaining network neutrality – the policy that prevents providers of Internet service from dictating which sites can be accessed by users. While it is

unlikely that this proposal will pass in the Senate, it shows an alarming political push away from net neutrality and an open Internet. The essence of net neutrality is that it designates Internet service providers as common carriers, meaning that the companies that supply access to the Internet cannot control or dictate what content goes over their networks, nor do they own that content. Common carriers are required to provide equal access to a service—most often a means of transport—and are government regulated to assure that their rates are set since such companies are granted near monopolies on a particular means of distribution. A common carrier owns and controls the pipes so to speak, but not what goes through them.¹

Since the Internet is designated as a common carrier (i.e. it is defined by ownership of conduits, not the content it distributes), we need to create analytical tools that allow us to focus on processes of mediation at least as much as those which focus on media content. “The Media” are often seen as having a negative impact on culture – that there is a privatization of culture through media, and that stereotypes and under representation of certain social groups leads to incorrect knowledge about our world. The more media become privatized and consolidated, fewer voices are heard. The fewer voices heard, the less well our democracy functions. While these arguments often do examine channels of distribution, this is done in order to promote more diverse media content.² I want to argue, however, that it is just as important to focus on the material nature of how media are distributed, as it is to examine what is being distributed. This is a call for a reframing of the political economy of media under capitalism – a different narrative that does not focus on content as the end result of mediation, but rather on processes of mediation themselves – something I refer to as a material model of mediation.

To this end, this essay focuses on a previous moment in the history of mediation – the emergence of cable television. The first section of this essay distinguishes between broadcasters and common carriers, briefly detailing the different types of commodities each of these corporate entities produce. The development of cable as a means to distribute television—the same network of cables that later became the basis for how the Internet enters most homes—blurred this distinction. The second section examines how hobbyists and entrepreneurs, through the use of coaxial cables, began changing how television was distributed, and how this came to be understood as a threat to both broadcasters and common carriers. The use of cable to distribute television greatly increased channel capacity, and also changed the physical location of distribution from the air to underneath city streets. This dual transformation in the spatial orientation of television – both the creation of more channel space, and a shift in transmission from the publicly held commons of the air to the privately owned wires of cable service providers – became the basis of an alternative media movement for PEG (Public, Educational, Government) access television. The PEG access model, I argue, can prove useful in looking at ways to preserve common access to the Internet since it relies on a material understanding of mediation. This sort of understanding focuses on the negotiations around the physical (spatial) distribution of media in order to better explain how access to media is created in the first place. In this way, I historicize the mediating practices of private wires within public space in order to provide a different way of looking at our contem-

porary media landscape.

It is important to note that the physical layer of the Internet is a series of cables (or in the words of Sen. Ted Stevens, tubes). Although the Internet is often described in ethereal terms (wireless, Wi-Fi, Ethernet), local area networks are increasingly set up wirelessly, and wireless technology is very much part of the Internet, the fundamental physical layer of the Internet is in fact hardware – wires. These physical objects are usually laid under our public streets, and these cables are privately owned. While the Internet is designated as a common carrier, cable television, which is often distributed by the same provider and through the same conduits as the Internet, is not. We need to grasp the implications of the Internet's designation as a common carrier in order to comprehend how and why network neutrality is important.

Common Carrier vs. Broadcaster

There has been a fascinating oscillation between wired and wireless technology. The history of media within the United States lies in the complex relationship between telecommunications media such as the telegraph and telephone, and the content based broadcast media such as radio and television. Television, like radio, was initially conceived of as a “live” medium, and possibly one for two-way communication. Back in the 1920's, the idea was that if sounds could be sent across wires, as with the telephone, then it was not such a far leap in the imagination to send images. The way that television developed beyond these origins was primarily the result of a series of struggles between the monopolistic American Telephone and Telegraph (AT&T) and the kingpins of the radio industry, the National Association of Broadcasters (NAB). These struggles left a gap in television distribution that was eventually filled by the local cable service entrepreneurs who became known as the “mom and pops” of Community Antenna Television (CATV). CATV changed the way television was distributed, and in doing so it altered television's definition as a medium.

Broadcasters, such as the NAB are usually controllers and producers of media content. The content can be seen in three ways: firstly as “shows”, secondly as audiences, and thirdly as airtime itself. Broadcasters create shows to attract and sell audiences to interested advertisers. Revenue for broadcasters is usually generated through advertisers who can send their messages out in tandem with the broadcaster-produced content (shows) that people actually want to see or hear. Airtime as a commodity, however, must be understood in relationship to airspace. Here, airspace is electromagnetic frequency spectrum space over time, which cannot be sold since it is a commonly held asset regulated by the FCC. Once a broadcaster has control over a particular frequency or channel, it is free to rent that space out for limited times to advertisers. Thus, airtime itself is also a sold commodity.

Telecommunication service providers (telecoms), on the other hand, control ownership of conduits (historically this has meant wires), which carry content. This content is usually private – one-to-one communications – although it should be noted that one-to-one communication is no more intrinsic to the nature of wires than broadcast transmissions are to airwaves. Here the use of the conduits, a service, is considered the commodity. These services

redistribute signals not of their own origination, and typically collect fees from subscribers rather than advertisers. Industries that focus on these types of services offer tangible connections between points, and include industries such as the telegraph, the telephone, and the railroad. This is a very different way of conceiving of a media commodity from the broadcasting paradigm. These services are not selling time in the manner of broadcasters; they are selling the ability to move something over space.

Broadcasters cannot sell the conduits they use (airwaves) because they are deemed as belonging to the public. While telecommunications companies own conduits, they are still seen as providing a service that has some benefit to the public interest. Thus, they are designated as “common carriers” and are subject to regulation by the FCC. The FCC regulates broadcasters differently from common carriers, overseeing content, (for example by imposing fines for content dubbed obscene), and frequency allotments (electromagnetic spectrum space). The FCC regulates common carriers, however, by ensuring that they provide equal access to content and do not limit (or charge different rates for) the type of content that is distributed.

As Ralph Lee Smith (1974) notes in his book *Wired Nation*:

Common-carrier status is assigned to enterprises offering services deemed necessary to the public, and whose nature dictates that they be run as monopolies or near monopolies. When a communications system is designated as a common carrier, two things follow. First, it must be accessible, on a non-discriminatory basis and at standard rates, to anyone who wishes to use it. Second, the owner or operator may not interfere with the content of what goes over his system. The telephone system is a common carrier; broadcast and cable TV are not (65).

In fact, cable TV has an ambiguous status somewhere between being a common carrier and a broadcaster. Cable television is not broadcasting because it does not go through the publicly owned airwaves, but rather through privately owned wires. Yet it is not a common carrier because the subscribers do not produce the content that is distributed. The Internet, however, is considered a common carrier, and it is this designation, which as I have stated earlier is the basis for net neutrality. It is important to recognize, however, that this is not based on any intrinsic quality of the medium “Internet.” In fact, these designations (common carrier or broadcaster) are usually arbitrary. From a technological perspective, radio could have been (and in some cases, such as CB radio, still is) a means of two-way communication, and would not be subject to regulation by broadcasting standards. Likewise, the fact that the Internet is designated a common carrier is due to struggles and negotiations over policy, rather than any innate property of the medium.

In order to elaborate on these distinctions and how they are contended, I turn to the earlier moment of the emergence of cable television. “Cable television” is itself a broad term with several different meanings (i.e. community antenna television, cable programming,

cable television service). I am less interested in the substance of what cable content has become than in the particular conjuncture where cable became a standard method of television distribution. Two important factors went into this: firstly, the FCC put forward a series of protocols, standards, and frequency allotments, in conjunction with other interested parties. These included television broadcasters most notably represented by the National Association of Broadcasters (NAB), information technology providers such as AT&T, small business operators, and government officials. Secondly, there was the simultaneous development of an alternative movement that saw cable TV as opening a new media resource. This movement was able to claim some of this newly opened channel space for local communities, bringing about Public, Educational, and Government (PEG) Access television, which we still see today predominantly as the bulletin board listings of local events, or airings of local council meetings. The importance of the founding of PEG Access television, I argue, lies not in the content it generates, but in the modes of thinking and theorizing that created its existence in the first place—an understanding of the materiality of mediation.

The Cable Story

After World War II, the FCC put forward a series of orders that expanded broadcast television service in the United States. They moved FM radio services to a different part of the electromagnetic spectrum, lifted a wartime ban on television station construction, and decided that postwar television development must be up to prewar standards (Dominich et al. 1993, 52). Despite these advancements in broadcasting, many rural communities did not have access to good television signals due to geographic obstacles such as mountains or distance from transmission sources. Small-scale businesses, usually hardware or electronics providers, eventually filled this gap. They built towers to receive broadcast signals, and then began running cables from such towers to local homes (Engelman 1990, 21). These local suppliers became known as “mom and pop” cable service providers, and the service they provided was dubbed Community Antenna Television (CATV).

These “mom and pop” providers were not often seen as serious entrepreneurs, and as a result CATV was seen in its early period as a “hobbyist” medium, much like early radio. Like radio, it eventually caught the interest of both broadcasters (the NAB), and telecommunication service providers (AT&T) who saw the “mom and pop” cable infrastructure as a threat to their business models. CATV had the potential to have a severe financial impact on broadcast television by providing new content and allowing for the distribution of channels from other markets into the home. Additionally, they were disrupting AT&T’s monopoly on wired telecommunications networks. By the early 1950’s, AT&T owned both the majority of the phone lines as well as the coaxial cable network television stations used to syndicate their national broadcasting. Hence, CATV encroached upon both broadcasters and telecoms, disrupting the long-struggled-over balance between them.

The main way CATV disrupted broadcast marketing models was by increasing the availability of programming. As stated in the previous section, broadcasters make money by selling either airtime, or audiences generated by shows, and by controlling these resources.

CATV threatened this control by allowing for more channels, clearer channels, and different kinds of channels (such as the eventual emergence of Home Box Office – HBO). It was also cheaper to cablecast than to broadcast. Additionally, because of CATV's far greater channel capacity than airwave transmissions, it opened up the possibility of carrying locally-originated programming, which added to its image as a "hyper-local" medium. CATV also made leaps and bounds in popularity during the 1950's. Between 1952 and 1962 CATV expanded from 70 systems serving about 14,000 customers to 800 systems providing for 850,000 subscribers (National Cable and Telecommunications Association). Cable also began encroaching on urban markets such as New York and San Francisco, since not all viewers in urban areas had equal access to television reception, depending on their specific locations. As cable expanded in both popularity and the geographical areas it covered, it ceased to be seen as an auxiliary service to a pre-existing medium. Instead, it began to alter the nature of what television was (Engelman 1990, 22). CATV changed the way that people accessed television, both receiving it and producing it, thus expanding the resources (airtime and audiences) that the NAB had been invested in keeping scarce. As a result, it came to be seen as a threat to existing broadcast television markets.

Telecommunication service providers, most notably common carriers such as AT&T, were also concerned. In 1956, AT&T entered into an anti-trust consent decree with the U.S. Justice Department wherein it agreed to function only as a common carrier – it relinquished its interests in content, but maintained a near monopoly on conduits. Until the arrival of CATV, the phone company owned the only wires that went into people's houses (Smith 1974, 64), and they were granted easements to do so. Initially small-scale cable companies were granted no such easements, and although *Frontier Broadcasting v. Collier* (1958) declared CATV not to fall under common carrier jurisdiction, it was still seen as a threat to telecoms. Coaxial cable had a much greater capacity to carry information into the home than did phone lines.³ Even at the onset of cable television, it was noted that these wires could provide the infrastructure for an alternative to the existing means of delivering phone service, and potentially at almost no cost. Initially the phone companies believed that coaxial cables would, like telephone cables, have to go through the air, and since the phone companies owned the poles, they could conceivably charge a user fee to cable service providers for hanging their wires. But when plans began to be laid to build cables underground in urban environments, this strategy began to unravel and sent the phone company into potential crisis (Smith 1974, 66).

Cable allowed for television to be distributed in new ways, and this fundamentally changed the nature of what we now think of as television content. However, cable also changed how video signals entered the home and blurred the line between public and private: both the way public information entered the private sphere of the home, and the way private companies developed infrastructure in public space. What was considered new about CATV was not really technological, since AT&T had been sending television signals through coaxial cables between television stations for many years before the emergence of the "mom and pops." Rather what the "mom and pops" represented was a new entrance into the home. With the onset of cables offering television services entering the home, they be-

came more present and noticeable. This new way of moving television signals reframed how public information would come into private arenas, and also became the site of debate around how the public space of the town or city would be used to lay cables from private companies.

Because of the threat CATV posed to both broadcasters and telecommunication service providers, both industries petitioned the FCC to stop the expansion of cable services into the major U.S. markets. According to the National Cable and Telecommunications Association (2010), in the early 1960's the FCC "Responding to broadcast industry concerns, ... expanded its jurisdiction and placed restrictions on the ability of cable systems to import distant television signals. As a result of these restrictions, there was a "freeze" effect on the development of cable systems in major markets, lasting into the early '70s."

This "freeze" was part of an attack against the "mom and pops," during which time both broadcasters and telecoms invested towards the development of their own versions of cable television service. Cable services would no longer be run by small-scale entrepreneurs running cables from local towers, and would therefore no longer have the local ties, or cause to provide the local programming that had been common with the "mom and pops." Rather, companies with the capital to do so began efforts to run cables under city streets. Thus, cable companies and municipalities negotiated arrangements with each other known as franchise agreements, defining how cable service would be provided in a given community (Olson 2000).

During this freeze, however, many media activists were exploring the potential that media and technology had for the production of social change.⁴ These efforts took into account how technological innovations were changing social-spatial arrangements: the increased channel space (capacity) of coaxial cable, and the placement of such cable in the publicly owned space of city and town streets. Media advocates wanted to maintain CATV's potential to show "hyper-local" content. With the additional channel space coaxial cable provided, this became a real possibility for the first time in television history. These activists also exploited cable's ambiguous status as neither explicitly a broadcaster, nor a common carrier. Cable companies were going to use conduits placed within public space to run a private business – something which heretofore would have made such a company a common carrier, requiring it to allow equal access for the transmission of content. But since cable companies did not have this designation, PEG access advocates argued that cable services needed to provide some other means to assure that local areas would be able to produce and distribute their own content.

In 1970, a franchise agreement with the New York City government was signed that allowed two cable companies, Sterling Information Services and the Teleprompter Corporation, the right to provide cable to the 80,000 subscribers in Manhattan (Olson 1990, 6). Because of the efforts of media activists, this franchise agreement included provisions for four channels that had not existed before: two for government use, and two for use by the general public. These station models became the basis for PEG access television. In 1972, the FCC's third report and order lifted the freeze on the development of cable television into the top 100 markets in the US. Additionally, this report and order stipulated that in each of these

markets, cable systems would have to provide three access channels: one for the use of the general public (P), one for use by educational institutions (E), and one for governmental access (G). The number of channels allotted to a given community was dependent upon the size of the municipality, but stipulations were made for at least one access channel within a community where cable service was to be provided.

Conclusion

Access television in the United States was conceived in the late 1960's as a way of requiring cable providers to give something back to the communities that were the bases of their markets. The cable providers, although offering a service, were also using the public right-of-way in order to lay down the physical infrastructure of their distribution – i.e. they were using public space in order to lay down cable. Since cable companies would be using public right-of-ways to lay down the infrastructure for their businesses (i.e. rearticulating the relationship between private space and public space), activist organizations were able to make an intervention through franchise agreements, into the institutionalization of the relationship between media service providers laying down the cable, and the municipalities in which they were operating. With cable's expansion into the streets, city space became media space. Thus, the ways in which the public would have access to this space came into question.

I have discussed the ways that this juncture in media history—the beginnings of CATV and cable television—blurred the distinctions between common carriers and broadcasters, challenging both models and redefining television as a medium. We can see similar debates happening today with regards to the Internet and network neutrality. It is not that dubbing something a common carrier or not necessarily makes it more accessible, but this sort of structuring determines how a medium is accessed. If we do not pay attention to how this is playing out, and why and to what ends, then we risk losing a very important asset to freedom of speech in the United States – an open Internet where not only are we ostensibly free to put anything we want onto it, but also able to access that content free of a tiered system which would charge different rates based on content. In the U.S. this balance between content and conduit has played out over and over again. When this happened at the birth of CATV, a group of activists was able to understand this and apply new models based on the material nature of mediation – paying attention to the physical nature of infrastructure in space – in order to preserve some of the “space” which was opened up by emergent uses of technology.

We often interpret our understanding of media and media history through what have become the dominant models of how media work. This, more often than not, is based on corporate and capitalist models. Moments of crisis and possibility with media innovations get written out of these histories, but these are the moments where there is potential for truly different media structures. Therefore, an analysis of an historical conjuncture—in this case the formation of PEG access and how it articulates to technological and industry changes—can be useful. This is especially important now as the public debates issues of Internet ac-

cess. Because of the way the Internet is currently structured, theorists of new media are able to talk about new media networks as being productive of different kinds of labor and social relations, as well as multiple identities and subjectivities. Yet all of this is up for grabs, so to speak. The Internet is not some naturally occurring phenomenon that must by its essence function in the way that it does. Telecommunication companies are pushing to control, privatize, re-territorialize, and enclose the common spaces of the Internet.

There is something we can learn through understanding the relationship between technology and space, which was articulated by media activists forty years ago. With the arrival of the emergent infrastructure of television cables, activists were able to construct a way to maintain a potential media commons. This media “green space” still exists today, although it is constantly under threat from private corporate interests. Increasingly, this “green space” relies upon the physical layer of the Internet as its infrastructure. There has been very little work done, however, to use this television model toward preserving the commons of the Internet. This is in part due to the fact that the Internet is often seen as being intrinsically productive of certain types of relationships due to its traits of interactivity and networkability. It is also due to the disarticulation of the Internet from the physical infrastructure of the technologies that support it.

If we can, however, reexamine this technological infrastructure, as activists were able to do forty years ago, we might be able to preserve some of the common space that has emerged with “new” media. Such common spaces emerge and then go through a process of enclosure. Examining how this process has been interrupted before can help us reconceive the present conjuncture. Envisioning these technologies in a particular way once enabled the development of non-capitalist media space within a capitalist structure. Further exploring how this articulation was formulated, as well as undermined, can offer new ways of understanding how telecommunication industries are foreclosing diverse content via the architecture of their physical technologies.

Notes

1. The term “common carrier” was initially introduced with the evolution of the railroad system in order to prevent discrimination against both people and commodities using the railroad. The United States government at the time sought to prevent a vertically integrated rail system that could hinder the free flow of goods. There is a long history in media studies in general and in North America in particular, of linking transportation to communication. Historically, for example, the FCC was an offshoot of the Interstate Commerce Commission, whose chief responsibility was regulating railroads. This is in part due to the fact the development of the telegraph and the railroad were so intricately linked. An excellent analysis of this connection can be found in James Carey’s (1988) “Technology and Ideology: The Case of the Telegraph.”
2. For examples of work that looks critically at distribution in order to sustain diverse content see Robert McChesney’s *Rich Media Poor Democracy* (1999) and *Our Media, Not*

- Theirs* co-written with John Nichols (2002). The reverse argument – that media have a positive effect on culture – is also present within media studies. Scholars such as Marshall McLuhan and Mark Poster, have stressed the democratic potential that media have.
3. This is still the most common form of cable that provides Internet service, although there has been an increase in other systems of providing the Internet such as fiber optic cable.
 4. There is an extremely rich history of the media activist activities that led to PEG Access in the United States during the 1960's, which I do not have the space to cover here. Additionally the birth of American Access television is deeply influenced by community and civic oriented media projects in Canada. For a description of this history see Ralph Engelman's "The Origins of Public Access Cable Television: 1966-1972," or Bill Olson's "The History of Public Access."

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