

## **The Role of Structure in Media Choice**

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July, 2007

**Intended for publication in *Evolving Perspectives on Media Choice: A Theoretical and Empirical Overview* (Hartmann & Vorderer). Do not reproduce without permission of the author.**

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Most theories of media choice rely heavily on the psychological predispositions of individuals to explain their patterns of consumption. This chapter argues that the structural features of the media environment play an important, if less appreciated role in determining choice. I begin by outlining a comprehensive theory of media choice that views agency and structure as mutually constituted, what Giddens (1984) termed the “duality of structure.” I describe how people use the resources offered by the media environment to enact their preferences and, in doing so, shape the very structures within which they operate. This happens with both “linear” media systems and newer “non-linear” modes of delivery. However, because the duality of media structure depends largely upon aggregating agents into audiences, it is best understood at a higher level of analysis than is typical of psychologically grounded theories of choice.

### **Towards a Comprehensive Theory of Media Choice**

Some years ago, Jack Wakshlag and I published an article arguing for a comprehensive theory of television program choice (Webster & Wakshlag, 1983). We observed that existing bodies of theory, specifically uses and gratifications and economic models of choice, didn’t do a very good job of explaining observed patterns of audience behavior, and suggested that theorists needed to be more cognizant of factors that mediated individual preference as a determinant of choice. We proposed a model that integrated viewer needs and program type preferences with a number of other factors including the structure of program options, viewer awareness, and viewer availability. These factors continue to be important determinants of media choice, though the

characteristics of new media are altering their relative importance and the ways in which they operate.

Although I didn't know it at the time, the approach we were advocating was broadly compatible with the "theory of structuration" proposed by Giddens (1984). He argued for a "duality of structure" in which human agency and social structure were mutually constituted. That is, while people were free to act, they did so within structures that, through their very actions, they helped reproduce. In the theoretical vocabulary of Giddens, Jack and I were arguing that most students of media choice had focused on agents while turning a blind eye to the role of structure.

The theoretical balance is still heavily tilted in favor of the individual agent. The literature on media choice typically posits various affective and/or cognitive states as determinative of behavior. Uses and gratifications research maintains its characteristic commitment to need gratification as the genesis of media use (e.g., Finn, 1997; Rubin, 2002; Ruggiero, 2000). Newer work on selective exposure, mood management, flow states, sensitivity theory, or simply "enjoyment" (e.g., Reiss & Wiltz, 2004; Sherry, 2004; Vorderer, Klimmt, & Ritterfeld, 2004; Zillmann, 2000) is similarly committed to psychologically grounded theories of media choice. In fact, many of the contributors to this volume employ such a framework. By arguing for a fuller consideration of structure, I don't mean to minimize the importance of a psychological approach to media choice. It helps us appreciate what motivates individuals to use media and explains the pleasures and utilities of those encounters. But more is required to understand how choices are made in dynamic media environments.

Structuration theory can offer an alternative framework that reconciles the motivations of individual agents with the media structures they employ. It has been adapted to study how information technology is used within organizations (e.g. DeSanctis & Poole, 1994; Orlikowski, 1992; Poole & DeSanctis, 2004), but is not widely used to understand the more general phenomenon of media consumption. I'd like to encourage the latter by applying Giddens' vocabulary to the particulars of media choice. Before I do, let me be clear about the theoretical assumptions I make, most of which will sound familiar to students of Giddens.

**Agents.** In this context, agents are the people who choose media. Their choices are purposeful and can, in principle, occur whenever they wish. However, media consumption is typically embedded in the routines of day-to-day life, and so has a predictable, recursive quality. People know a good deal about the media environments within which they operate, reflect upon how they use those environments, and can, if asked, provide a rational account of their actions. It does not follow, however, that they know everything there is to know about the causes or consequences of their choices. Indeed, they are complicit in many unintended consequences of which they are largely unaware. Conceptualizing agents in this way is consistent with most economic and psychological theories of choice, a topic that I develop below.

**Structures.** People choose media within highly structured social and technological environments. For the most part, governments and/or industries provide the infrastructures people need to enact their media preferences. Those resources include a vast array of media services and materials, and the hardware needed to deliver them. The institutions that provide media have their own motives for doing so and attempt to

manage consumption toward those ends. They do so by catering to what they perceive to be audience preferences, and exploiting the unintended consequences of media use. In the short term, media structures are relatively “hard” constraints on individual action. Over time, those structures are considerably more malleable.

**Duality of Structure.** Media choices result from the interaction of agents and structures. It is an iterative process that implicates both in perpetuating and/or reshaping the structural features of the environment. This duality of media is heavily dependent upon aggregating individual actions. Institutions, for their part, can only respond to what they “see.” Agents are most visible when they are constituted as markets, publics and/or audiences -- a concept that Ettema and Whitney have referred to as “institutionally effective audiences” (1994, p. 5). Aggregation is the lens through which institutions both understand and attempt to manage consumption. Agents, too, are increasingly dependent on various forms of aggregation, as these often constitute the structures that guide choice-making in non-linear environments.

### **Structures of the Media Environment**

The media environment provides the resources necessary for people to act. It has two basic modes of delivery, each with its own structural features. The first, a linear system has been characteristic of electronic media since the beginning of broadcasting. Radio, and later television, programs were strung together in a temporal sequence determined by the broadcaster. Though this system itself is changing, for reasons I develop below, I believe it will persist well into the future. The second, a non-linear system makes discrete items of content available to individuals as they request them. Non-linear delivery systems, such as video “on-demand,” DVRs, websites, or media

downloaded over the Internet, are much newer phenomena -- at least for electronic media.

The Webster & Wakshlag (1983) model of choice identified three factors that bear on a consideration of structure: the structure of available program options, viewer availability, and curiously enough, viewer awareness. I'll touch on each of these as I discuss modes of delivery.

**Linear Media.** At last count, linear media were responsible for roughly 70% of all the time Americans spent consuming media. That included the use of broadcast, cable, and satellite television, as well as broadcast and satellite radio services (Veronis Shuler Stevenson, 2006). The building blocks of this environment are channels. Over the years, the sheer number of channels in the U.S., Europe, and most of the world has increased dramatically. I've argued that as this happened: 1) the media environment offered people more diverse content; 2) content became correlated with channels; and 3) channels became differentially available (Webster, 1986; Webster & Phalen, 1997). The structural features of this environment have a powerful effect on program choice.

The most obvious constraint on choice is simple channel availability. Despite the growing abundance of linear media, a surprising number of channels are beyond the reach of most households. A recent analysis of television audience behavior in the U.S. indicated that while there are over 300 national networks, only a handful of the major broadcast networks came close to being universally available (Webster, 2005). Nor was there any relationship between the number of households that could receive a channel and the intensity with which the channel was used. HBO, for example, was available in only a third of homes, yet its viewers spent as much time watching it as a major broadcast

network. Failing to subscribe to HBO might indicate a lack of interest, or a lack of money, or some technical impediment. But surely, among the two thirds of the audience who couldn't choose HBO at any point in time, many would occasionally prefer to watch its programming. The same might be said of any cable channel. Excluding broadcast networks, the top 50 cable networks were, on average, unavailable in a third of television households.

Prior (2007) has recently demonstrated that changes in channel availability over time have had a dramatic affect on news consumption. Specifically, as the proliferation of cable channels have made it possible for some viewers to opt out of watching television newscasts, the overall consumption of news has become increasingly polarized. These shifts have occurred without any change in the underlying distribution of audience program type preferences. Media choice, then, can only be understood within the context of what is available to each individual at each moment in time -- a factor not well explained by viewer psychology alone.

Beyond simple channel availability, linear media by their very nature runs many streams of content opposite one another. This has the effect of offering people an endless succession of forced-choice situations. The phenomenon of "multi-tasking" notwithstanding, a person can only consume one item of content at a time. Hence, people may have to choose between two, equally preferred options at one time and be forced to settle for some "least objectionable" program at another time. While it once seemed that VCRs would free people from this dilemma, they proved too cumbersome to have much effect. DVRs will undoubtedly make time-shifting easier, but they introduce other structural biases I'll discuss in the section on non-linear media.

Not only can linear streams of content force choices among equally preferred alternatives, they have the effect of privileging some programs over others. “Audience flow” is a routinely observed feature of audience behavior in which the audience for a program stays tuned to the succeeding program in disproportionate numbers (Webster, 2006). In effect, this structural device “stacks the deck” in favor of the succeeding item of content, by increasing the odds that individuals using the channel will consume the next program the network has scheduled, or the next song the radio station plays.

Audience flow also demonstrates the duality of structure in action. It is doubtful that individuals set out to create this phenomenon, or that they are aware of it when they do. It is a feature of audience behavior that is visible only through aggregation. Television programmers, who constantly monitor audience ratings, are well aware that the “lead-in” program offers an opportunity to entice viewers with material they might not otherwise choose. Of course, it makes sense to offer them something that they will find appealing. So individual preferences, insofar as the media can respond to them, are instantiated in the structured arrangement of programming. People are always free to do something other than follow along, but many do not. For a variety of reasons, they choose what is laid before them. If this juxtaposition of content works in the channel’s favor, it will recur. If it does not, the schedule will change. Hence, individuals express their preferences within the structures available to them and, in doing so, both reproduce and alter that very system. In the short term, the structure of program options constrains and directs, in the long term, its very design depends on the actions of agents.

Indeed, the uncoordinated activity of individuals is responsible for many unintended consequences that institutions see and, in turn, use to structure the

environment. The most salient of these, from media's point of view, are patterns of audience availability. Since media use is intertwined with the rhythms of day-to-day life, it tends to produce habitual, and therefore predictable, patterns of consumption (Rosenstein & Grant, 1997; Webster & Phalen, 1997). When people commute to work, many listen to radio. When they return home, many turn on the television. Of course, media industries know in a general sort of way what kinds of people are likely to be available at certain times, and do their best to factor that into their programming. In fact, "drive time" and "prime time" are occasions for particularly intense, well-financed competitions since the prizes are especially large.

With rare exceptions, though, people's patterns of availability are determined by things other than the scheduling practices of the media. Not all those who might be interested in a particular show, or song, or news broadcast, are available when it airs. Rather, choice proceeds in two stages. People first decide to use a medium, which typically reflects the structure of daily routines. Second, they consider specific content options and, within those bounds, exercise their preferences. In a linear media environment, behavior is infused with factors that are essentially random with respect to the psychological determinants of choice -- most notably audience availability. In a non-linear environment, things change.

**Non-Linear Media.** The strictures of linear media are giving way to non-linear delivery systems. Increasingly, specific items of content can be retrieved directly from "libraries" in accordance with a person's preferences. Although it's tempting to think of this as a world devoid of structure, it is not. The influence of its architecture may be less

apparent to users, but it is still driven by institutional self-interests. Even the producers of “consumer-generated media” often have an interest in managing consumption.

The sheer volume of media materials from which to choose is growing at an extraordinary rate. Precise estimates are hard to come by, but Lyman and Varian (2003) have reported that the total amount of new information produced each year grew by 30% from 1999 to 2002. In 2002 alone, over 100 million hours of new broadcast programming was produced worldwide. At this writing, Technorati tracks some 70 million blogs worldwide. More and more, media of all types are digitally created and stored on hard drives. More and more, it accumulates in a form that is accessible over broadband distribution systems.

In such a world, media are not in short supply. Rather, what constrains media consumption are money and time. Subscribing to cable, satellite, DVR or Internet service providers, renting or buying DVDs and videogames, and downloading music or movies all cost money. The average American will spend close to \$800 a year on media content, not to mention expenditures on consumer electronics (Veronis, 2006). Obviously, each individual’s willingness and/or ability to bear these expenses varies widely across the population. Everyone, though, has only 24 hours in a day.

The Nobel laureate Herbert Simon famously observed “...a wealth of information creates a poverty of attention, and a need to allocate that attention efficiently among the overabundance of information sources that might consume it.” (1971, p. 40). Some 35 years later, the problem is considerably more acute. An inescapable requirement of non-linear media consumption is navigating that ever-expanding universe in order to find

what you want when you want it. There are two basic mechanisms for doing so: search and recommendation.

Search is an exercise in finding what you're looking for. It's certainly not unique to non-linear media. People have used printed guides to find television programs for a long time. More recently, digital cable and satellite systems have begun offering electronic guides that allow viewers to scroll through hundreds of channel options. These, however, can be unwieldy and are typically occasions for people to limit their searches to idiosyncratic "channel repertoires" (Neuendorf, Atkin, & Jeffres, 2001; Yuan & Webster, 2006). Search engines are a more powerful way to sort through large inventories of content. They report a list in response to a search term. Although search algorithms vary, results are usually sorted as a function of an item's popularity. Google, for example, sorts websites possessing the requisite search terms by the number and importance of their inbound links (Battelle, 2005). The user, of course, must wade through the list to determine the relevance of each item. For search terms that generate several pages of results, it's doubtful most are even considered.

Recommendation systems alert you to things you weren't necessarily looking for. There are many types of recommendation systems beyond simple word-of-mouth. Advertising and promotional announcements are familiar, if transparently self-serving, forms of recommendation. The outbound links on websites constitute recommendations and form the architecture of the "blogosphere" (Benkler, 2006). Social networking software, with which people indicate their preferences by rating, bookmarking, or tagging media content, is becoming commonplace. The most powerful systems use "collaborative filtering" software to sort through databases of media rentals or product purchases to

“guess” what you might like. In effect, they match each individual’s profile to other consumers who’ve made similar purchases. It’s plausible, for example, that you’d like other books that were purchased by readers with comparable profiles. Amazon.com is well known for using this technique, and those of us who visit its website to buy books are often tempted by new titles brought to our attention.

Search and recommendation systems share some important similarities. Both are essentially exercises in becoming aware of media content. To learn of a thing’s existence does not guarantee it will be chosen, but it establishes the boundaries within which choices will be made. It is unlikely that a person would choose something of which they were unaware. The most elaborate, and seemingly “objective,” systems are built by aggregating people’s preferences as demonstrated in their behaviors and/or declarations. Hence, recommendations may carry an additional dose of social influence (e.g., Salganik, Dodds, & Watts, 2006). Media institutions can manipulate these increasingly important dimensions of awareness by manufacturing a structured set of options that guide media choice. Agents are always free to choose what they like, but they often enact their preferences by using such content-finding systems. And, in another demonstration of duality of structure, their actions reproduce and reconstitute the very structures that shape subsequent consumption.

In a world where time is limited, search and recommendation systems have another consequence. Initiating searches, weighing the results, following links, or considering recommendations all involve time and effort. In the parlance of economists, they impose “search costs.” It’s certainly possible for a person to specifically search for and queue every song she wants to hear as she commutes to and from work, but it’s

quicker and often just as satisfactory to listen to a radio station or satellite network. Further, many people value the judgments of human editors and programmers to bring timely or unexpected items to their attention. I suspect these attributes will sustain linear media into the future. How people will allocate their time across linear and non-linear modes of delivery is an open question. There is likely to be considerable variation across the population, as well as variation within individuals over time. But no matter the nature of media environments, all will structure choice.

### **Expanding the Playing Field**

It seems to me that if we hope to understand media choices, we need to expand the theoretical playing field. To date, our efforts have been too “user-centric.” Making individuals the center of attention is hardly surprising. Giddens himself noted that, for much of the academy, “The human agent is treated as the prime focus of social analysis. That is to say, the main concern of the social sciences is held to be the purposeful, reasoning actor” (1987, p. 59). Unfortunately, too much escapes our notice if we try to understand media choice exclusively in terms of the psychological predispositions of agents. In my view, there are two related problems with this approach.

First, focusing on individuals can blind us to the role of structure. At best, this theoretical formulation provides only half the explanatory power we need. Indeed, if one takes Giddens seriously, agency itself cannot be fully understood in isolation because structure is the “very medium...of human agency” (1987; p. 220). Second, since institutions typically respond to media consumers in the aggregate, using individuals as the unit of analysis fails to adequately illuminate their impact on the duality of structure.

Let me briefly revisit the concept of agency, then make a case for understanding media choice at a higher level of analysis.

The economic models of choice that Wakshlag and I (1983) used as a point of departure made a number of simplifying assumptions about the nature of program choice that, in effect, constructed an archetypal agent. Among them was the explicit assertion that individuals had distinct, pre-existing program type preferences, and the implicit assumption that viewers were perfectly aware of their viewing options all times. Those assumptions, coupled with the “free good” nature of advertiser-supported television, lead to a direct, cause and effect relationship between viewer affect and media choice (see for example, Owen, Beebe, & Manning, 1974). Such reasoning, which is not unique to rational-choice economics, is problematic for a number of reasons. I’ve noted how patterns of availability and imperfect awareness complicate this relationship in modern media environments. The assumption that people’s preferences exist *a priori*, fully formed and ready to drive choices, is also troublesome (e.g., Gandy, 1992). It seems more likely that a person’s preferences, or expectations of need gratification, are continuously conditioned by the media environment. A person is unlikely to prefer media forms with which they have no experience. And media institutions are unlikely to offer programming for which there is no demonstrated market. In the current environment, both are capable of adapting rather quickly. But it is a dynamic process with influence flowing in both directions. I doubt that even the most self-reflexive people are fully aware of how their preferences and subsequent actions are cultivated by and determinative of the structures that surround them.

A revealing site of inquiry, then, might focus on how agents use and shape media structures over time. The duality of structure certainly depends on this mechanism. To understand the machinery, though, we need to conceptualize choices at a higher level of analysis. That's because the institutions that are integral to the process typically see and respond to media consumers as audiences or markets. And agents themselves are evermore dependent upon intelligence about what others are doing to guide their own choice-making. Audience dynamics, revealed through aggregation, fuel the process.

Audiences, however, are different analytical entities than individual actors. While they are necessarily built upon collections of the latter, different patterns of behavior and alternate explanatory frameworks become apparent at this level of analysis (e.g., Salganik, et al. 2006; Watts, 2003). We've seen how broadcasters exploit audience flow to manage consumption (Webster, 2006). Audience fragmentation and polarization are other forms of institutionally salient behavior that only come into view in the aggregate (Webster, 2005; Webster & Phalen, 1997). More recently, analysts have noted the "long tails" that characterize all manner of cultural consumption. These ubiquitous patterns describe everything from the rates at which people download songs from iTunes, to theatrical attendance, to the linking architecture of the Web (Anderson, 2006; Benkler, 2006; DeVany, 2004). All are important manifestations of choice that are amenable to explanation with reference to structural variables, but not particularly tractable when forced into the theoretical framework of psychological predispositions.

Focusing on a macro-level duality of structure has additional benefits. First, aggregated behaviors are often stable and susceptible to modeling. Some have been formulated as rules of thumb or even "laws," such as the 80/20 rule, the duplication of

viewing law, and the law of double jeopardy (e.g., Anderson, 2006; Goodhardt, Ehrenberg & Collins, 1987; McPhee, 1963). In fact, Web usage is so law-like that physicists routinely model its architecture (e.g., Barabasi, 2001; Huberman, 2001; Watts, 2003). Second, knowing the behavior of audiences, which are readily conceptualized as publics, speaks not only to business interests but to larger social issues. Many commentators, for instance, have worried about the polarizing potential of new media (e.g. Katz, 1996; Sunstein, 2001; Turow, 1997). These social concerns can be cast in much sharper relief by understanding large-scale trends in consumption (e.g., Couldry, Livingston & Markham, 2007; Prior, 2007; Webster, 2005).

Noting that we live in an “entertainment age,” Bryant (2004; p. 392) argued that legitimizing and advancing entertainment theory was one of the most important challenges facing communication research. To do that, he recommended using “hedonistic psychology.” If understanding the patterns of media choice that I’ve just described is on the agenda of entertainment theory, we will need to know more than people’s hedonistic impulses. The media structures that enable and/or constrain choice must be reflected in any fully formed theory. While such calls are hardly new (e.g. Elliot, 1974; Weibull, 1985), structure remains conspicuously absent from the literature on media choice. As the media environment grows in size and complexity, this will be an increasingly serious omission. I’d like to conclude with a few thoughts about why we seem to have such difficulty expanding the playing field.

First, for some, granting structural factors a role in program choice has seemed tantamount to a declaration of audience passivity (e.g., Adams, 1997; Rugerio, 2000). This view conceives of structures as acting upon hapless media consumers, thus denying

them any meaningful notion of agency. Our discipline, on the contrary, has been more inclined to celebrate the active media user. Unfortunately, if we see structures as separate and unbending, activity can only play out in the arena of individual action. This is a needlessly limiting conceptualization of agency. People, both as consumers and creators of media, are undoubtedly more active today than they have ever been. But the media structures they use are not neutral or fixed. They both shape and are shaped by the choices agents make. If we want to foreground activity, we should recognize it in its most potent form. It is the agency of audiences, not individuals, that brings institutions to heel.

This leads to a second problem: scaling down structural factors to the level of an agent. Balancing micro/macro tensions is nothing new to social scientists (e.g., Alexander, et al., 1987; Salganik, et. al., 2006). In fact, reconciling those tensions is an important purpose of structuration theory. But acknowledging that doesn't make it any easier to design studies that accommodate both perspectives. In most micro-level research designs I've seen, the complications of structure are assumed away. Pivotal factors like awareness and availability are ignored or taken as given. Likewise, the structured arrangement of media offerings, if it is considered at all, is simplified and static. The grander scale of structural determination across time and space is difficult to capture in short-term laboratory experiments or cross-sectional surveys that depend entirely upon self-reports from purposeful, reasoning agents. I'm not willing to concede that the micro-level orientation of agency and macro-level influence of structure are incommensurable, but moving between levels is a challenge. It's only by meeting that challenge, that we will fully understand the nature of media choice.

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