

The Productive Capacity of Commercial Television: An Approach for Analyzing Media Systems in Society

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About the IAMCR Dallas Smythe Award

Born in Canada in 1907, Professor Dallas Smythe was a founder of the field of political economy of communication and a leading scholar who had significant influence in American and international communication policy. Trained as an economist, Smythe's professional career included appointments at the Department of Agriculture, the Department of Labor and the Federal Communication Commission in the United States and the University of Illinois. His professional work and social engagement eventually caused him problems and during the McCarthy period he found it difficult to get articles published or to get money to fund research. In 1963 he returned to Canada, where he worked at the University of Saskatchewan and later at Simon Fraser University, where he was Professor of Communication from 1976 until his death in 1992.

Dallas Smythe was an active member of IAMCR. He established the Communication Satellites Section, which later became the Communication Policy & Technology Section, and was an active participant in the Political Economy Section.

In recognition of his work, the Dallas Smythe Award was established by IAMCR for “a paper which combines scholarly excellence with a commitment to developing and extending the critical, innovative and engaged spirit that characterised Smythe’s contribution to media/communications analysis.”

The members of the 2017 Smythe award committee were:

- Rodrigo Gómez García (chair), Universidad Autónoma Metropolitana-Cuajimalpa (Mexico)
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“The things we call ‘technology’ are ways of building order in our world...Consciously or not, deliberately or inadvertently, societies choose structures for technologies that influence how people are going to work, communicate, travel, consume, and so forth over a very long time.”

Langdon Winner, “Do Artifacts Have Politics?” (1980)

“The advent of television portends profound changes in our civilization...What kind of world will be born through the mid-wifery of our new and more powerful communication tools?

Dallas Smythe, “Television and its Educational Implications” (1950)

Elihu Katz (2001) has said that all media research investigates “effect”—it seeks “to account for the power of the media” (p. 9472). This essay is motivated by a curiosity about the effects of commercial television on culture, society, and economy in the United States. My primary interest is not the effects of specific messages on individuals’ attitudes, opinions, and behaviors, but rather the effects of a system of commercial television on the social allocation of resources—from investment capital and electromagnetic spectrum, to household expenditures, symbols and meanings, and, most fundamentally, human time, attention, and energy. An exhaustive inventory of these effects is out of reach. Instead, I hope to provide a framework from which to embark. The guiding question is whether a media system is calibrated to help us achieve the world we want. And, if not, what type(s) of world does it enable and encourage?

In a sense, this essay equally concerns the *causes* of commercial television. Before media have effects, they are themselves effects of industrial systems and the technological and institutional arrangements that define those systems at any moment. Historians have demonstrated that a network-dominated, for-profit broadcasting system was an invention, not a naturally occurring phenomenon

(Douglas, 1987; McChesney, 1993; Pickard, 2014; Smythe, 1981; Streeter, 1996). To engineer it into a durable formation, as with other technological systems (Hughes, 1987; John, 2010), involved imagination, sustained commitment, the structuring presence of government policy, and a protracted process whereby the potentials for alternative arrangements were suppressed and the system's capacities were made to conform to prevailing structures and social relations (Winston, 1998). The technical and administrative configurations of US television have followed from and elaborated assumptions, priorities, and power relations that have a broader purchase in consumer capitalism (Jhally, 1990; Meehan, 2005; Schiller, 1999; Smythe, 1981; Williams, 2003).

I propose that *productive capacity* can be developed as a critical lens through which to investigate the political economy of media and culture. At some level, this paper considers how we fathom commercial television—its collective industries, technologies, and cultural forms—as an “agent” of continuity and change (cf. Eisenstein, 1976). Productive capacity, as a heuristic, offers a set of analytic tools and lines of historically-inclined inquiry that help us understand how media systems facilitate and circumscribe the construction of symbolic and material realities. Such realities are constructed not just through the ideological and informational content of the messages that circulate, but equally through the power relations that structure and coordinate symbolic and material flows (Mansell, 2004; Mosco, 2009; Murdock and Golding, 1973; Smythe, 1960).

All media systems have capacities. As commercial industries, they have capacities to produce and monetize goods and services. As components of broader industrial systems, they mediate consumer demand, support ancillary markets (in component parts, specialized services, natural resources), and imply the application of money, materials, and labor toward various goals. And, finally, media systems contribute to the production of lived social realities. This is not meant to assume independent and unilateral effects. Rather, it is suggested that an industrial system of storytelling (Gerbner, 1998) helps to set conditions of possibility, and even “encode” biases toward certain probabilities (Hall, 1980), for the

social construction of reality.¹ Media can command the time and attention of individuals and publics and channel *cultural energy*—the sustained collective will to attend to matters of concern. Consistent across all three levels—media industry, capitalist economy, and social reality—is the fact that media systems produce and are the products of allocative decisions. Robin Mansell (2004) urges studies of “new media” to preserve this guiding orientation of political economy: “If resources are scarce, and if power is unequally distributed in society, then the key issue is how these scarce resources are allocated and controlled, and with what consequences for human action” (Mansell, 2004: 98). The implications are profound not only for consciousness and symbolic environments, but equally for the material environments of objects and social relationships which we build and inhabit.

To begin, then, we approach commercial television in capitalism by assessing its productive capacity 1) as an industry itself, producing audiences, ratings, and programs; 2) as part of a broader industrial system, producing sales for branded goods and services and accelerating the circulation of commodities; and 3) as part of a lived social reality, producing consumers as actors in capitalism and consumption as an institution, or a set of shared ways of thinking and acting in the world (cf. Bauman, 2007; Smythe, 1981). Most essentially, we examine how commercial television is organized around the capacities to *produce consumers* 1) as informational products, or “audiences,” sold to advertisers, 2) as buyers of sponsors’ goods and services, and 3) as individuals and groups whose habits and priorities accommodate, maintain, and reproduce the social relations of production and consumption in capitalism.

In full flower, a productive capacity analysis of television would catalog historical adjustments to television’s institutional arrangements and appraise each configuration comparatively along the dimensions listed in the previous paragraph.² In contrast to periodizations that designate “eras” largely according to viewers’ uses and gratifications, we would parse technical and administrative changes to

1 Armand Mattelart (1991), in criticizing efforts to isolate the “effect” of a specific message on an individual person, notes that “our society is immersed in advertising as the dominant mode of communication” and that this environment “structures choice by establishing a scale of priorities and social preferences in the use which society makes of its collective resources” (p. 214).

2 Examples could include the rise of film recording and syndication markets in the 1950s, the transition to participating sponsorship in the 1960s, the use of satellites for national distribution of cable programming in the 1970s, or the current use of computer servers and internet protocol for delivering programs and advertisements.

provide more detailed historical descriptions and better explanations of continuity and change in media industries. But the limits of a single essay require a schematic approach. To introduce and (begin to) demonstrate the conceptual tools of productive capacity, I offer a suggestive analysis of recent developments related to “advanced advertising.”

Generally, advanced advertising refers to a set of practices and strategies for improving television advertising by exploiting the capacities of digital and interactive technologies. The defining features include precise targeting, pervasive surveillance, e-commerce capabilities, and an overarching reliance on data analytics for predicting and evaluating the success of specific marketing efforts. It is an instructive case study for several reasons. The transformations implied in advanced advertising are part of broader controversies that have re-opened rhetorical, technical, and institutional closures related to television and thus compelled stakeholders to articulate their priorities, ambitions, and strategies. Both incumbents and new entrants have responded by advocating for the legitimacy of their respective visions for future development. But despite an impending sense of crisis, advanced advertising is, arguably, a concentrated expression of the marketing functions for which the television system was designed. The “disruption” surrounding television is not just based on exogenous challenges to the legacy model; disruption is also the recognition by some of an opportunity to reorganize television in ways that improve, or better exploit, its capacity to produce consumers and consumption. Advanced advertising, as a way of imagining the future of television, provides entry points for examining the values embedded in and expressed through commercial TV across its history.

The decision to focus on the production of consumers and consumption is not impartial. Commodity audiences and consumption-related habits of thought and action are only part of what the television industry produces. Existing theory and research justifies a focus on the production of commodity audiences as the motive force of the industry (see below); but a productive capacity approach can be applied similarly to other imaginable outputs. If we consider, for example, the environmental hazards and human misery involved in the mining, assembly, and disposal of electronics (Maxwell and

Miller, 2012), it is easy to pivot toward the “destructive capacity” of commercial television, or the capacity to produce negative outcomes. Likewise, video entertainment can and does contribute to the production of many subjectivities and realities, not only those we might call “consumerist,” and any of these potentialities can be investigated with a productive capacity approach, which can be adjusted to suit different media systems in different contexts. By examining the influence of historically-constructed institutional arrangements on the shape of symbolic and material environments, we can see how the sociotechnical configurations we call “media” nurture or deprive certain ways of thinking, acting, and ordering our world. I hope the following analysis will convince the reader that, in the context of US television, the production of consumers and consumption is a relevant starting point.

Productive Capacity: Institutions and Infrastructures

Productive capacity refers to the potential output of an economic or industrial unit based on its configuration and the resources available to it. This is a relatively simple and typically quantitative concept. My use is idiosyncratic, but, hopefully, intuitive and evocative. With minimal imagination, productive capacity can be translated from economics to more social and cultural levels of analysis, and beyond. For example, it is used in biology to describe the extent to which the conditions in an ecosystem provide for (or stifle) the flourishing of diverse and abundant organisms. The point is to evaluate what a given configuration *can* or *cannot* produce. For my purpose, capacity is an “index of potential” (Comor, 1994), and it does not simply demarcate the upper limit of productivity. This concept of productive capacity implies biases or limitations regarding what is to be produced, how, and for whom; it orients scholarly focus toward constraints, pressures, priorities, and the conservative influence of institutions and infrastructures. Productive capacity is not just a measure of maximal output, but also the imposition of parameters around production.

Television is both an outcome of and an instrument in the exercise of cultural energy that makes certain social arrangements—like consumer capitalism—more or less durable in time and space.

Examining the productive capacity of media systems helps us understand the production of culture more generally. It confronts Harold Innis's (1951) provocation: "Why do we attend to the things to which we attend?"—a probe that implies the scarcity and importance of human attention. Additionally, we should acknowledge that "attend" also connotes *coordinated action*—a collective commitment of resources toward a matter of concern. Dallas Smythe (1981) begins *Dependency Road* by recognizing (like Innis) the profound importance of authoritative decisions regarding the allocation of human time, attention, and energy: "Individuals daily live by giving *priorities* to their problems. Whether implicitly or explicitly they use their time and resources to attend to their problems according to some ordering of these priorities. It is when they act as part of *institutions* that the agenda-setting function becomes a collective rather than an individual process" (p. 1). Television has directed attention and mobilized cultural energy, both as a result of its particular configurations and in the process of building and maintaining it. A focus on institutions helps us reorient a concern with "effects" to the level of media systems in society.

Institutional Arrangements

An institutional arrangement is, essentially, a combination of technical and administrative infrastructures, shaped by policy frameworks and market structures, that defines a media system in a given time or place. In short, it is a set of relatively stable components, conventions, and conditions through which a media system operates. An institutional arrangement involves contradictions and conflicts, yet it is a configuration that is stabilized through coordination around sets of norms, routines, and standards which provide reliable and enduring rules and resources for patterned action (Gandy, 1993a; Giddens, 1984).³

³ Others have used terms like "regime" to denote similar ideas (e.g., Williams and Delli Carpini, 2011). I prefer "institutional arrangement" because institutions involve relatively stable and enduring conventions, both concrete and abstract, that bind actors and order thought and action across space and time. The term arrangement, too, usefully implies planning, negotiation, and compromise among actors across different levels of organization and control, and it suggests a configuration of interrelated elements that requires constant maintenance. This terminology, I would argue, invites an easier exchange with the literatures of institutional theory, organizational sociology, and science and technology studies—all of which deserve to be taken seriously by political economists of communication.

Advertiser-supported media are organized largely around the *technical infrastructure* for harvesting evidence of audience attention and the *administrative infrastructure* for packaging and selling that data as discrete products that stand in for the anticipated consumption behaviors of actual viewers. Technical infrastructure refers to the hardware and software components supporting the operation of a media system. Administrative infrastructure describes bureaucratic norms and habits that facilitate routine business operations. Administrative infrastructure is like a paradigm in that it frames priorities, procedures, and workflows; and these prescriptions for thought and action are given concrete expression through organizational structures.

While it is uncontroversial to assert that television produces commodity audiences, most media research still does not follow through on the implication of Smythe's (1977) intervention and Eileen Meehan's (1984) critique. Prior to analyzing the industrial production, distribution, and private reception of news and entertainment, we need to conceptualize the television business as a networked infrastructure for coordinating flows of information and commerce. The convergence of television, telecommunications, and computing manifests not only, or most importantly, in the new ways individuals access video content on their various devices, but rather in the thoroughgoing computerization of the marketing and media buying businesses which form the financial bedrock of a commercial television system. For several decades, stakeholders have recognized in this convergence the potential to enhance control, efficiency, and predictability in the production of consumers and consumption (Andrejevic, 2004; Barney, 2000; Elmer, 2004; Gandy, 1993a; Schiller, 1999). Their maneuverings reveal much about the values and objectives around which commercial television has been designed.

Advanced Advertising: Imagining Optimum Capacity

The television industry is chasing a dream. It dreams of pairing the reach and persuasive power of television advertising with the precision and accountability of direct marketing. By uniting the capacities to collect, analyze, and act upon the data resources enabled by digital media environments with the big

budgets of national brand advertisers, many people working in television, advertising, and marketing technology industries hope to reorganize the television business in ways that depart from elements of its historic structure but also approach the purest expression of its longstanding industrial logic. The television business is being remodeled to target individual viewers based on data-mined insights and predictions about their behaviors and to attribute subsequent purchasing activities to specific persuasive messages. Advertisers hope to determine return on investment, while programmers and video service providers aim to exploit the capacities of information systems to manage and maximize yield from advertising inventory. Brokering the exchanges between these parties is a growing sector of intermediaries licensing consumer data, trading-desk software, and other analytics and optimization services that promise to help companies make better decisions and improve performance in a competitive environment. Collectively these stakeholders imagine the dawn of a sociotechnical arrangement that leverages digital information and communication technologies to monetize more effectively individuals' interactions with video entertainment.

On one hand, this “advanced advertising” marks a shift away from the mass-marketing and image-branding model in which television advertisers broadcast undifferentiated messages to heterogeneous populations. On the other hand, it represents perhaps the purest expression to date of an essential goal that has defined the business of broadcasting for almost a century: using media technologies to convert listeners and viewers into consumers of sponsors' goods and services. In 1957, a TV station executive told *Broadcasting* magazine, “any activity which occupies the American people six and seven hours a day cannot be by-passed by advertisers interested in *selling the American people*” (emphasis added). The executive's peculiar syntax exposes the essence of the television business in US capitalism—manufacturing consumers. The phrase also betrays the two dimensions of this process: selling products *to* the American people, and selling the American people *as products* to advertisers.

The proposition that advertiser-supported television has been organized around the industrial production of commodity audiences finds support across neoclassical (Owen and Wildman, 1992),

institutional (Bermejo, 2009; Meehan, 1984; Napoli, 2003, 2011; Smythe, 1951), and Marxian (Smythe, 1977, 1981; Jhally and Livant, 1986) economics. It is, at least implicitly, a starting point for analyses of the television industry (Barnouw, 1990; Curtin and Shuttac, 2009; Gray, 2008; Lotz, 2014). And various efforts to theorize mass communication and media systems have situated the production of commodity audiences as a central feature of commercial media in the US (Andrejevic, 2004; Gerbner, 1998; Meehan, 2005; Mosco, 2009; Streeter, 1996). Fernando Bermejo (2009) describes this as “audience manufacture,” a term that is both succinct and sufficiently general to accommodate the range of participants and practices enrolled in an industrial process of using communications media, auditing technologies, statistical analysis, and routinized exchange relations to turn the abstract and unownable resource of human attention into “commodity audiences” (see also Meehan, 1993). While ways of theorizing the commodification of internet users have been vigorously debated (e.g., Arvidsson and Colleoni, 2012; Fuchs, 2010; Lee, 2011; Nixon, 2014), research continues to confirm that a preeminent transaction in commercial media is the sale of audiences (or their data) to advertisers (Artz, 2008; Crain, 2016; Napoli, 2011; Turow, 2011).

A persistent desire to verify the effects of advertising on sales, going back to experimental “pantry audits” in the 1920s and 1940s (Beniger, 1986: 387; Meehan, 2005: 41), through ongoing initiatives to hone “single source” ratings that couple measures of viewing and shopping, reveals the logic behind the trade in audiences. For advertisers, the purpose of television is to produce consumers and consumption. This statement implies several meanings. First, advertisers use television to make markets for their products; they are producing consumers in the sense of generating demand (Beniger, 1986; Galbraith, 1969). In Marxian terms, advertising accelerates the circulation of commodities, hastening the realization of value and reducing costs incurred from storing inventory and immobilizing capital that could be profitably invested (Harvey, 1990; Manzerolle, 2010; McGuigan and Murdock, 2015). An RCA executive stated this ambition with some urgency in 1944: “We believe that television is the only tool that can increase consumer purchasing of all products to a point that is sufficient to produce a satisfactory

national income...Television has the power to create in the minds of the people a greater desire for merchandise than they have for their hoarded cash” (quoted in Boddy, 1990: 45). In 1955, one year after television penetration of US households surpassed 50 percent, management theorist Peter Drucker (1955/2007) asserted the necessity for businesses to accommodate technological changes and harness the power of these new tools for marketing: “Management can no longer be satisfied with the market as it exists, it can no longer see in selling an attempt to find a purchaser for whatever it is that the business produces. It must create customers and markets by conscious and systematic work. Above all, it must focus continuously on creating mass purchasing power and mass purchasing habits” (p. 321). Four decades later, Oscar Gandy (1993b: 86-87) observed not only the continued efforts of marketers to “*produce sales,*” but also the increasing pressure to rationalize the process by leveraging information technologies.

Advertisers aim to produce consumption not only in terms of increasing sales volume, but also by producing a *mode of consumption*—sets of habits, expectations, social practices, and cultural meanings that define consumption in a given time and place (Ewen, 1976; Marx, 1973; Murdock, 2013; Strasser, 1989; Williams, 1980). Thus, advertising is meant to produce consumers disposed to particular styles of consumption which imply certain allocations of time, attention, and energy, as well as competencies and inclinations for using marketplace technologies, whether consumer credit or e-commerce sites. Advertising also supports forms of entertainment and media use that accommodate or encourage the habits and priorities comprising an historical mode of consumption (Spigel, 1991; Streeter, 1996). Dallas Smythe (1981) conveys the overall point: “the organization and policies of Consciousness Industry were quite rationally developed to rationalize the mass production of consumer goods in the period, 1880s to 1950s. This was when the various mass media institutions were ‘invented’ by the monopoly-capitalist system to serve its purposes by mass producing people in audiences who would market such mass-produced goods to themselves.” These people, he continues, “have been converted over time to lifestyles, consumption habits, and values which are central to Consciousness Industry” (p. 221).

But despite marketers' best efforts to "produce sales," television networks and stations have found this a difficult promise to guarantee, not least because viewers might demur (Hall, 1980).⁴ The problem of attributing sales to specific promotional campaigns has haunted marketers at least since turn-of-the-twentieth-century magnates like John Wanamaker and Lord Leverhulme worried that portions of their advertising outlays generated no measurable profit (Turow, 2006: 21). In a 1949 letter published in *The Billboard*, a radio station executive articulates this dilemma: "the measuring of radio audience size is a perpetual perpetration of an inadequacy, since the true value of radio is its success in scoring impact on listeners' minds...The success of a program can be known only by its effect upon its hearers, whether its purpose is to entertain, to sell merchandise, or both." Absent reliable evidence of causation between advertising and sales, business routines in commercial media industries have been institutionalized around a compromise, or "inadequacy": instead of buying sales, advertisers have settled for buying evidence of attention—measurable residue of behavior at a monitored media touchpoint. Audience measurement firms construct from the "raw material" of observed viewer behavior a packaged product—a rationalized and relatively coherent representation of an audience of consumers presumed to be attending to television (Meehan, 1984, 1993; Napoli, 2003).

By implementing technical configurations for generating records of media use, and by establishing routine and taken-for-granted business practices that define and accommodate these data, media organizations, advertisers, and ratings firms collectively give tangible expression to an abstraction that otherwise could not be owned and exchanged. The commodity audience provides an exemplar for elaborating the productive capacity of television, because productivity is through-and-through a function of the institutional arrangements that bring the product into existence (Bermejo, 2009).

The promise of digital television systems is that they can monitor all interactions with viewers. A related affordance that is crucial to the narrative of advanced advertising is the ability to verify the effects of advertisements on consumption activities. This goal is pursued on two fronts: 1) through strategic

⁴ Even Smythe (1981: 268-269) acknowledged that his theory did not adequately capture the ability and will of people to resist commodification.

partnerships and data exchange relations between, on one hand, advertising agencies, programmers, video service providers, and ratings firms, and on the other hand, the merchants, credit card and payment processing companies, and data brokers who collect records of retail transactions; and 2) by equipping these media platforms with the capability to execute transactions. The architects of these systems are “producing” consumers by constructing data-based profiles of behavior and by literally surrounding viewers with a marketplace, building consumptive capacity into the media environment. How people will respond to this is by no means certain; but the *intent* is to configure consumers for the world of interactive, television-mediated commerce. For adherents to this view, advanced advertising enhances the capacity to produce consumers because it can target persons thought to be in the market for a product, it can tailor messages to exploit the predispositions (or vulnerabilities) attributed to these persons through data-based profiling, and it can facilitate an immediate purchase, capitalizing on a buying-impulse triggered by a persuasive message.

Considerable effort has been exerted to build digital television platforms that commodify all user interactions and make almost any item appearing on the screen available for purchase. But, as Vincent Mosco (2009: 136) points out, “The sheer ability to expand the commodification process does not guarantee its success...Technical, management, marketing, and consumer demand problems can often get in the way.” Assessing impediments to the “dream” of advanced advertising illustrates the utility of a productive capacity approach and the explanatory power of the concepts of technical and administrative infrastructures. As elements of advanced advertising became technically feasible, the cost of engineering these capabilities across regional cable systems seemed prohibitive, especially considering the history of failed interactive television ventures and the substantial debt loads burdening cable operators following leveraged acquisitions. While firms like Comcast ballooned in size by swallowing competitors, their national footprints were patchworks of non-interoperable systems, meaning that advanced advertising campaigns would need to be configured for each different system in order to reach national scale. Capital expenditures in facilities that were still being amortized over expected lifespans presented another

conservative influence against large-scale change, since operators were reluctant to replace expensive and still functional equipment. If an operator *was* willing to invest in upgrading hardware and software, administrative infrastructures revealed their power. Standardized routines for advertising and media buying among the national brands that sustain the television business dictate volume and reach as the measures of success. A tailored campaign to reach a sliver of the subscribers of a single cable system presents a financial calculus incommensurable with conventional wisdom and routine. Organizational silos, proprietary technical architectures, and incompatible data management procedures across marketplace participants further denied the promise that digital convergence and data-driven decision making would revolutionize television.

In short, the industry struggled to balance the technical capacity to target and monitor individual viewers with the administrative capacity to manage this data and execute efficient transactions at a profitable scale. Gradually, these administrative and technical infrastructures are being aligned through extensive effort and industrial coordination, motivated in no small part by perceived threats (and opportunities) in the TV business. But the friction involved in translating the *recognized potential* of advanced advertising into *operative capacity* illustrates that media industries are driven not by autonomous technology, but by a complex political economy. Furthermore, these systems have not taken shape in response to consumer demand, as is often argued; instead, they have been designed to configure and channel consumer demand.

Marketized Media: Encoding Symbolic and Material Reality

In her landmark study of the printing press, Elizabeth Eisenstein (1976: 24) offers an insight that should direct our focus toward television if we are to understand the history of the present: “When ideas are detached from the media used to transmit them, they are also cut off from the historical circumstances that shape them, and it becomes difficult to perceive the changing context within which they must be viewed.”

According to George Gerbner (1998: 177), “Television is the source of the most broadly-shared images

and messages in history...[T]elevision has become the primary common source of socialization and everyday information (mostly in the form of entertainment) of otherwise heterogeneous populations.” Television has not been a neutral conduit for information. Its programs, Gerbner argues, “reflect the structure of power that produces them and function to preserve and enhance that structure of power” (p. 176). In perhaps the earliest systematic analysis of television programming in the largest US markets, Smythe (1954: 148) observed, “The most basic and subtle dimension of television’s ‘reality’ is the commercial context in which it is presented.”

Thomas Streeter (1996: 304) points out that “The ‘consumer’ is not simply a person, but a very particular way of understanding a person. Advertisers address their audience strictly as *consumers*, and only consumers.” As others have acknowledged, the television industry imagines its audience to be people with the capacity to consume the goods, services, and lifestyles presented in programs and advertisements (Meehan, 1993; Spigel, 1991). For Gerbner (1998: 177), “Television is a centralized system of story-telling. Its drama, commercials, news, and other programs bring a relatively coherent system of images and messages into every home.” Through implicit lessons about norms and values, this industrial system of storytelling instructs viewers about how society works and what people should do. Gerbner and his colleagues marshaled support for the argument that television “cultivates” people in accordance with ideas and expectations that are aligned to the structures of power that produce, reinforce, and profit from unequal distributions of social resources. With the top 100 US advertisers paying for two-thirds of all network television, at the time of his writing, Gerbner concluded that the “cultural environment in which we live becomes the byproduct of marketing” (p. 176). What Gerbner did not fully appreciate, and what a productive capacity analysis of media systems emphasizes, is the *materiality* of our communications environment.

We have seen that “audiences” are products of sociotechnical systems. Consumers, though not so neatly, are also shaped by sociotechnical systems, and different institutional arrangements produce different consumers in different contexts. This is not meant as a functionalist assertion that the television

industry produces the consumer it (or capitalism) needs, though clearly this is a primary goal; but rather the television industry produces an environment that shapes consumers in various ways. As Trevor Pinch (2008) explains, users of a technology are “configured” or “scripted” to successfully interact, in repeatable and predictable manners, with the technology. “Highly institutionalized processes,” he writes, “are ones where humans repeatedly act in the same way, and that is exactly what technologies do to their users” (p. 474). In this spirit, we can put a different gloss on Stuart Hall’s (1980) concept of “encoding”: it is not only the messages that are encoded with dominant meanings; the technical system is “encoded” (or programmed) to facilitate certain uses and preclude others (Shaw, 2017). The encoding of the media environment’s hardware and software sets conditions of possibility that follow, at least in part, from the organizational goals of producing evidence of attention and both encouraging and, as much as possible, verifying purchase behaviors. Digital systems are encoded to collect granular information about users, to engage users as potential consumers, to facilitate instant electronic transactions, and to cybernetically adapt, or “re-encode,” the media environment to match the assessments and predictions generated by big data analytics.

For marketers, the ambition is clear: Produce “always-on” consumers surrounded by commercial messages and the marketplace mechanisms needed to consummate a purchase immediately. On one hand, advertisements and entertainment address viewers as consumers and aim to produce consumer subjectivity; on the other hand, the built environment produces the conditions and capacities to give this subjectivity material expression in consumption behaviors. It is not enough to produce a desire to buy; to produce consumption, prospective consumers must have at hand the facilities to execute a purchase. Just as messages are “encoded” with meanings that could cultivate a willingness to consume, the media environment is “encoded” with capacity, or potential, to facilitate transactions. To what extent people oblige the television industry, however, is far from certain.

Conclusion

The development of television as a technology, a business, and a cultural form is being driven by ongoing efforts to maximize the production of commodity audiences both in total volume, by rendering ever more viewing behaviors measurable, and in relative value, by collecting granular information about individuals, connecting that information with records and predictive models of consumption behavior, and building the ability to distribute messages precisely to known individuals. Further, television systems increasingly connect to electronic marketplaces through which viewers can interact with advertisers and even make immediate purchases. The enthusiasm for targeting purchase-capable consumers demonstrates that *the productive capacity of television has always been linked to the consumptive capacities of viewers*. With new technologies and marketing practices, advertisers and media organizations are trying to situate that relationship explicitly at the heart of the television business. Stakeholders in the television industry are trying to build and stabilize technical and administrative infrastructures with greater capacity to 1) harvest saleable information about viewers and their consumption habits, 2) translate the demand generated by persuasive messaging into immediate purchases, and 3) socialize, or configure, consumers within an always-on digital marketplace that is encoded, both in its symbolic and material elements, to encourage commodity consumption.

A merit of the term productive capacity is that it preserves room for considering the redeeming potentials of television—to contribute to social understanding, political knowledge, creative expression, personal and collective identity, and exposure to diverse opinions, ideas, and ways of life. But productive capacity also compels an honesty about the biases of a media system—how its historically-situated industrial logics, political pressures, economic imperatives, organizational cultures, and technological affordances direct its operation toward certain outcomes. It allows us to imagine and evaluate the capacity of television to enrich our lives through public affairs and cultural programming grounded in the real experiences and priorities of citizens that cut across class, race, and gender; but it also illustrates how institutional arrangements discourage such outcomes, reminding us that television exists first and foremost as a capitalist industry and an instrument for political, economic, and social control. Productive

capacity is a diagnostic of possibility and performance, of forward-looking projection and historical accounting. It allows us to measure our goals and expectations against the actual state of affairs and to begin to bring vision and lived reality into alignment.

As the forgoing has shown, this approach integrates perspectives from some of most luminous theorist in our field—Dallas Smythe, Harold Innis, Stuart Hall, and George Gerbner. Together, these thinkers provide a holistic framework for understanding communications in capitalism and analyzing the capacities of media systems to shape our material and symbolic realities. The theme of capacity courses through their works and other key concepts in the social sciences and humanities. Innis, for whom capacity figured prominently in his studies of economic and communication history (see Parker, 1985), went so far as to define “culture” as being “concerned with the capacity of the individual to appraise problems in terms of space and time and with enabling him to take the proper steps at the right time” (Innis, 1951: 85). For Innis, modern “inventions in commercialism,” including advertiser-supported print and broadcast media, as well as the very design of urban space, rendered Western culture incapable of attending to matters of time.⁵ Inaction around the global climate crisis provides the starkest possible example of a consumerist culture’s systematic avoidance of time-based problems.

Perhaps the most useful aspect of using a productive capacity approach is to illustrate the constructedness of media systems and to offer inroads for realignment to better suit normative goals. “Capacity” acknowledges unrealized potential, and this approach appraises human-built arrangements according to the opportunities they realize, disappoint, or render effectively impossible. Based on these diagnoses we can confront the ways in which media systems in their current *design* and *execution* lack the capacities to produce many desired outcomes, and instead have abundant capacity for (and bias toward) producing negative externalities as a result of the manufacture of consumers. The very purpose of

⁵ In an essay about economic historians’ neglect of the press, Innis pursues a broad and interconnected assessment of media effects (and causes), of the sort I am suggesting with a productive capacity approach:

The large newspaper securing newsprint under more advantageous circumstances and able to attract large advertisers provides a powerful stimulus to the production and sale of commodities with the most rapid turnover. Certain types of marketing organization such as the department store and certain types of urban communities, planned to give quickest access for the largest possible numbers to the marketing centre, are given direct encouragement. Urban architecture tends to be built around the store window. (2003: 85)

maintaining coordinated systems for the national conveyance of public information—that an informed citizenry is crucial to democratic governance (John, 2010; Pickard, 2014)—is betrayed by the institutional arrangements that have defined commercial television throughout its history in the United States.

Productive capacity is, in a sense, another way of framing “conditions of possibility,” but it does so in a way that invites detailed analysis of a political economy, and so it sets up a framework for investigating how messages, before they can produce effects, *are themselves effects*. A productive capacity approach recognizes the encoding of messages, as well as the “encoding” of technologies and media environments, and it situates “media effects” on the broader field of social history. It is a heuristic for understanding and investigating how media are, as historian Thomas Hughes (1987) says of technological systems, “socially constructed and society shaping” (p. 51). As a heuristic, it is necessarily imprecise; but hopefully it is generative of collaborative and cross-disciplinary research that can encourage a more holistic and integrative approach to thinking about media effects. What I have endeavored here is to set up a framework for understanding how the institutional arrangements defining television in the United States orient cultural energy toward the production of consumers and consumption. This orientation encodes messages and the material environment in ways that set conditions of possibility for the social realities we build and inhabit. To build a world around values of justice, equality, and sustainability will require a committed effort to thoroughly recalibrate the capacities of our media systems.

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