AUTHOR QUERY FORM

Journal title: **ANNALS**

Article Number: **339145**

Dear Author/Editor,

Greetings, and thank you for publishing with SAGE. Your article has been copyedited, and we have a few queries for you. Please respond to these queries when you submit your changes to the Production Editor.

Thank you for your time and effort.

Please assist us by clarifying the following queries:

No	Query
1	PLEASE DEFINE PTT.
2	HADAMOVSKY 1935: PLEASE GIVE THE ARTICLE TITLE FOR THIS WORK.

Contextualizing the Broadcast Era: Nation, Commerce, and Constraint

BY
WILLIAM URICCHIO

Programming scarcity that characterized the broadcast era, or what this article refers to as *constraint*, served very different goals. Often intertwined, these goals ranged from the formation of an ideologically coherent national public, to the protection of economic self-interest, to the explicit promotion of products and messages. They were deployed rather differently in the commercial American and state/public European spaces of television. The article explores a number of assumptions regarding the institution and medium of television that have persisted from the broadcast era into our own and that might well, given the very different structures of contemporary television, be repositioned. It outlines the contours of that repositioning, sketching the implications for some of our theoretical and methodological defaults.

Keywords: broadcast era; scarcity; commercial and public service television; United States; Germany; audience metrics

The history of television is a history of change. From vacuum tubes, to transistors, to chips; from broadcast, to narrowcast, to on-demand; from cathode ray tube receivers, to plasma flat screens, to projection; from a programmer's vision, to the viewer's choice, to the inner workings of metadata protocols and "smart agents" . . . we have witnessed an ongoing process of transformation in technology, textual organization, regulatory frameworks, and viewing practices. The pace of change has been as dramatic as it has been uneven. Regulation, infrastructure, national interest, and viewer expectation have all at times stimulated development or suppressed it. Overall, the pace of television's change as a set of technologies and practices is

William Uricchio is a professor and director of comparative media studies at MIT and a professor of comparative media history at Utrecht University in the Netherlands. His research considers the processes by which media technologies and cultural practices take form. His most recent books include Media Cultures *(Universitatsverlag Winter 2006) and* We Europeans? Media, Representations, Identities *(Routledge 2008).*

DOI: 10.1177/0002716209339145

striking when compared to the relative stasis of film, radio, and print—all, to be sure, media with their own developmental dynamics.

I write at a moment of accelerated change, a moment when in many nations, analog broadcasting has officially ended, giving way to digital-only television. The change mandates modifications in the receiving apparatus and offers the promise of not only more but more interactive programming and services. It is a moment accompanied by new display technologies (flat screen, PDAs, high definition), intelligent interfaces (TiVo and other digital video recorder [DVR] systems), and cross-platform production and viewing practices. It is a moment where we can ever more clearly anticipate the end of the thirty-second advertisement, the weakening of once monopolistic broadcasting networks (and their afterlife in cable and satellite distribution) thanks to Internet protocol television (IPTV) and the redefinition of traditional producing and consuming roles through developments such as YouTube. Add to this advances in surveillance video (facial recognition); teleconferencing (virtual presence); large-screen simulcast in our stadiums, concert halls, and streets; and easy access to television from almost any producing national culture (mysoju.com), and once invisible forms of television are adding to the noise. It is a moment of confusion, as much for viewers, who seem to have difficulties distinguishing among these new practices, as for the medium's industries, themselves in a state of flux, seeking to secure their market positions while catching the next big thing.

Rather more remarkable, considering the pervasive nature of these transformations, is the oasis of calm that lingers on in our memories in the form of the respectably solid broadcast era. Today's transformations seem all the more radical given this apparently stable past. In this article, I will challenge the taken-for-grantedness of this stability, showing that it was a carefully constructed condition. This is a relevant point not only because it remains referential but because some of its residues continue on in our fast-changing present as habits that seem difficult to break. Consider the business of audience metrics, for example, which has largely relied upon the same statistical extrapolations that accompanied television's earliest years as a true "mass" medium. Despite the radical fragmentation of television audiences, and despite the potential availability in digital markets of data streams tracing every twitch of the viewer's thumb, the old methods persist. Like the gold standard, intrinsic notions of value seem less important than widespread acceptance of a uniform metric. The academic study of television and its effects, too, remains bound to a number of concepts and paradigms that emerged with the broadcast era. Sometimes, as in the case of the notion of *flow*, the meaning of a particular term has modulated to keep pace with shifting distribution and viewing practices, serving as a barometer of change. In other cases, such as notions of media effects, the basic model has been fine-tuned and its deployment technologically enhanced, but like the audience metrics industry, it has largely weathered the storms of change thanks to the supervening demands of institutional stasis. Here, the notion of reproduction so central to our academic institutions has played an important role, as have the demands of marketers and policy makers for clearly defined notions of agency, impact, and effects (from the efficacy

of advertising to the promotion of public discourse). The academic scene has of course responded to the medium's transformation by developing new theories and accreting modes of inquiry, but its traditions—bound, it would seem, to a historically particular configuration of the medium—nevertheless remain remarkably persistent.

I would like briefly to reflect upon this period of stability in the United States and—broadly speaking—Europe. The years between roughly 1950 and 1980, it seems to me, have tended to provide something of a conceptual default to our thinking about television: they have offered stability to an unstable and not always comprehensible medium, they have generated a referent for our notions of medium specificity, they have helped to mask some of the medium's fundamental transformations, and they have continued to shape key assumptions about television's interactions with its audiences, whether on the part of the head-counters or some academics. At its extreme, this period provides a definitional border, beyond which we might well consider certain practices to be beyond television, allowing us to ask whether we are now facing (or have already survived!) the end of television. My contention is that these three decades are but a blip in the larger developmental history of the medium. I readily concede that they are a profoundly important blip, but by slightly repositioning this era and some of its main assumptions about the medium, I hope to show that this constellation of factors and beliefs is as deforming as it was formative, blinding us in some ways to longer-term continuities in the medium's history.

In the spirit of full disclosure, I take television to be a pluriform set of technologies and practices, anticipated and deployed well before the 1950s, and evident in the medium's latest set of transformations. I see the present changes not so much as the end of television as a return to the pluriformity that has long characterized the medium. I will not here rehearse the late-nineteenth-century visions that did so much to establish the medium's technologies and set its horizon of expectations (Uricchio 2008). And I will do little more than reference a segmentation of television's development from 1950 to our present put forward in different ways by Amanda Lotz in her article in this volume, as well as by the likes of John Ellis (2000) and myself (Uricchio 2004), distinguishing among the scarcity of the broadcast era, the relative plenty of the deregulated cable era, and the vast access enabled by the on-demand, Internet-like present. I will return to this periodization by the end of the article, but for the moment I would simply like to underscore television's long-term interpretive flexibility as a way of highlighting the somewhat anomalous status of three decades of stability.

In the pages ahead, I will briefly consider the notion of scarcity so characteristic of the broadcast era, arguing that scarcity was constructed and deployed in the service of the period's larger hegemonic goals. Space does not allow for a close consideration of these operations across television's various institutional and cultural settings, so I will instead consider two extreme cases as a way of bracketing a relevant range of meanings. The mobilization of scarcity, or what I will refer to as *constraint*, served very different goals, from the formation of an ideologically coherent national public, to the protection of economic self-interest, to the

explicit promotion of products and messages. Often these goals found themselves intertwined; moreover, they were deployed rather differently in the commercial American and state/public European spaces of television. Implicit in the understanding of how constraint could serve these goals were a number of assumptions that have persisted into our present and that might well, given the very different structures of contemporary television, be repositioned. I will close by outlining the contours of that repositioning and sketching the implications for some of our theoretical and methodological defaults.

An Era of Constraint

The apparent stability of the decades in question can be characterized in different ways, and I am sympathetic to John Ellis's use of the term *scarcity* to describe the period's programming (Ellis 2000). Whether we consider the oligopoly of the "big three" networks in the U.S. broadcasting scene or the dominance of public service and state broadcasters in much of Europe, it is evident that relatively little of the broadcast spectrum was deployed for programming purposes. *Scarcity* is an apt—and aptly neutral—descriptor for the little that was available, but I will instead use the more loaded term *constraint* to capture both limited programming availability and the notion of intentionality behind it. Constraint—or the manufactured condition of scarcity—I will argue, was carefully and strategically constructed, reflecting neither technological nor economic imperatives. Such an argument is complicated, of course, by the many motives behind television's cautious postwar decades, motives that differed across cultural contexts. But broadly speaking, we can see the constructed nature of scarcity by considering television's homologous relationship with radio, with which it generally shared organizational affiliations (business models, institutional settings, regulatory frameworks). Along with radio, television was shaped by long-standing institutional practices (commercial telegraph and telephone service in the United States, centralized PTT **[AQ 1]**control of the same services in most European contexts) and underlying beliefs regarding the construction of the public (crudely put, the U.S. consumer versus the European citizen). Of course, the particular institutional and professional dynamics that shaped the emergence of television from radio culture (everything from status hierarchies, to the notion of program formats and genres, to the very language used by engineers to describe their practice) also played a crucial role in articulating postwar televisual practice.

Scarcity, it is generally argued, reflects the technological realities of limited spectrum availability, driving in turn the need to control and oversee a limited public resource. The scarcity argument has been used to underpin the notion of the public airways; to justify state, public, and commercial broadcasting monopolies; and to defend the highly constrained status of broadcast speech acts, so dramatically at odds with the protections afforded print and ordinary speech in most developed nations.[1] In this last regard, the ironies of increasing constraint on expression with the appearance of each new technology have been well noted

by Ithiel de Sola Pool among others (Pool 1984). As Nicholas Garnham argued several decades ago with regard to public service television (Garnham 1983), "Channels have been limited, whether rightly or wrongly, for social and economic, not technical reasons."[2]

In many national settings, radio entered the world as much a military affair as a grassroots, amateur, two-way medium. The emergence of broadcasting was sometimes related to hardware companies seeking to promote their wares (the United States and United Kingdom) or to a combination of various commercial, public, and state institutions. Yet in most cases, government regulatory agencies quickly attempted to put the genie back into the bottle, constraining pluriform radio practices by claiming technical and national security reasons. Standardization and regulatory bodies with mandates to control technology, frequency, and program content prevailed. In France, for example, from radio's start in 1922 until the outbreak of the Second World War, fourteen commercial and twelve public radio stations were in operation. Bracketing off the war and occupation as exceptional, what did liberation bring? The imposition of a broadcasting monopoly (by 1965, France I, II, and III), which was maintained until 1981, when private and commercial radio was finally permitted to operate. The story is complicated by the success of extraterritorial radio transmissions (so called *radio périphériques*) from the likes of RTL (Luxembourg) and Europa-1 (Saarbruecken), but these, like the pirate stations that penetrated British and Dutch radio monopolies, were not sanctioned (and were sometimes even the subject of military attacks). In Britain, the BBC began its life as the British Broadcasting Company (1922), a private joint venture backed by Marconi, Western Electric, General Electric, Metropolitan-Vickers, and British Thompson-Houston. By 1927, thanks to a Royal Charter, it left private hands to become the British Broadcasting Corporation, which in turn maintained a monopoly over radio until 1967. In the Netherlands, the public radio monopoly lasted until 1989, when foreign broadcasts (already available unofficially on the airways) could be officially carried on cable, and 1992 when domestic commercial broadcasts were permitted. In the United States, which lacked precedents for outright state or public ownership, the telegraph and telephone offered organizational models based both on commercial monopolization and the integration of hardware and service. And although the United States gave rise to a relatively robust and even chaotic commercial radio environment, the Federal Radio Commission (1927) and later Federal Communications Commission (1934) imposed order, effectively strengthening the role of the national networks, the most prominent of which, like NBC-RCA and CBS-Columbia, were tied to manufacturers.

Each setting had its tales of signal interference and broadcaster malfeasance. And in each case, national interest was invoked to stabilize the broadcasting environment, albeit with the difference that in the state and public service zones, what was good for the public was good for the nation; while for the Americans, what was good for business and not harmful to the public was good for the nation. In both cases, the medium was understood to be more than a source of information, a site of engagement with the public sphere, or even entertainment: its

effects, whether on the construction of nation or the marketplace, were held to be certain, if somewhat unspecified. Let us turn to several exemplary moments of constraint in television service as a way of exploring both the motives for limited programming availability and the sources of some of our persistent notions about the medium.

The Public and the Nation: Lessons from the Third Reich

The March 1935 launch of Germany's daily television service, predicated upon a notion of one *Fuehrer*, one *Volk*, and one sender, would in some ways (leaving out the Fuehrer bit) hyperbolize the shape of things to come in many postwar-era television markets. As such, it offers a clear—if particularly dystopian—site to locate period broadcasting logics and their relation to the nation. Indeed, many other nations would deploy similar tactics but with far more utopian ends in mind. Rooted in the precedent of state monopolies in the postal, telegraph, and radio sectors, television emerged as a concern of Germany's Post Ministry. Its post-1933 appearance gave rise to an important complication: the newly formed Propaganda Ministry asserted control over program content (for radio and the private sector press and film industries as well) and content-sector hiring practices, leaving the Post Ministry with the task of coordinating hardware manufacturers and controlling broadcasting infrastructure and technological standards. This complication gave rise to considerable theorization about the role and effects of broadcasting, in addition to some distinctive practices. Television, like radio before it, was imagined as an instrument in the service of the nation. The Nazi German example is, of course, extreme—as the conflation of *Volk* and nation, or blood and earth (*Blut und Boden*) in the period's vernacular, might suggest. But the basic structure of state (PTT)–operated infrastructure, user license fee financing, and private sector hardware development, all in the interest of the nation, was hardly exceptional. More important, the German case offers an extreme instance of the logics that were to define most instantiations of postwar European television (Uricchio 1992).

German broadcast operations were started as much out of a desire to claim technological primacy (they specifically sought to jump the gun on the British) as because of a firmly embedded set of beliefs in the effects potential of the new medium. These latter beliefs were held by Propaganda Ministry specialists with backgrounds in radio and press "persuasion" and were grounded in social science theory that had circulated since the early 1900s (evident, for example, in the first German Ph.D. on the topic of film in 1913[3]). But the notion of effects was by no means limited to the functional interests of the ministry or the advertising industry. One need only consider the work of Rudolf Arnheim, who wrote a remarkable essay on television just as daily broadcasting was about to begin in his native Germany (Arnheim 1935).[4] Looking ahead and making a number of—what seem

in retrospect—salient predictions regarding the medium, Arnheim addressed such issues as the medium's superficiality (argued through its ontology, not programming), audience credulity ("seeing is believing"), sensory overload (hyperstimulation), and the threat of social fragmentation (in the sense of television-induced isolation in a mass society), concerns that would all find resonance in the decades of critical thinking and theorization that would accompany the postwar classical notion of television. He feared that the simulated sense of collectivity made possible when viewers connected to events by way of their televisions would ultimately efface embodied collectivity, in the same way that representations of the world would supersede the real thing in importance and impact.

Television, however, was generally too ephemeral a media presence in the prewar years to command its own research profile, and in Germany at any rate, extraordinarily high levels of social control seem to have dampened public critiques of politically supported initiatives. It is nevertheless clear that a cluster of perceived—or desired—television effects motivated Germany's significant investment in the development of the medium and, stated positively, offered something of an inverse confirmation of Arnheim's perceptions. Eugen Hadamovsky, in his launch of the new service, spoke of television's sacred duty to "plant the Fuehrer's image indelibly in every German's heart" (Hadamovsky 1935), and while selling Hitler was not quite the same as selling cars or toothpaste, the Propaganda Ministry's understanding of the medium on the Wilhemstrasse lined up well with the advertising industry's ideas on Madison Avenue. One can find ample corroborating discourse, both in Germany and the United States, both by professionals (propagandists and advertisers) and academics (both in Germany's *Publizistik* institutes and the U.S.-based Frankfurt School and the Rockefeller-sponsored Radio Project). But German thinking about broadcasting's effects had a far more radical dimension, one, moreover, responsible for a clearly motivated strategy of constraint. Rather than simply relying on radio and television for persuasive images and texts—as they had in the cases of the press and film, theorists in the ministry understood broadcasting as something closer to a neural network, electronically connecting the dispersed population into a coherent *Volkskoerper*. The Reich's campaign to put a radio in every German house, like its plans for national television, sought to forge experiential unity, to extend simultaneous participation in important events to the entire nation, and to set the rhythms of daily life.

In perhaps the clearest expression of these beliefs in the importance of defining the nation through one broadcast network, the Post Ministry—long at odds with its cultural adversary, the upstart Propaganda Ministry—prepared secret plans in 1943 for postvictory European television. The plan called for the construction of a single, live television network, linking greater Germany with occupied territories. Programming, normally the domain of the Propaganda Ministry, would be circumvented because the network would be dedicated to news, historically the domain of the Post (thanks to the deep history of wire news services). This so-called Nazi news network, the Post argued, would do away with the need for the Propaganda Ministry since it would define the nation, its rhythms, and its spirit. The notion of persuasion, trickery, and spin, seen as the domain of the

Propaganda Ministry, would be rendered trivial in comparison to the broadcast-enabled articulation of *Volk*, nation, and reality that the news network promised. While to my knowledge, no postwar nation adopted such rhetoric or was even aware of these secret postvictory German plans, one is tempted in hindsight to read, for example, France's turn from a prewar pluriform commercial-state broadcast model to a postwar state-only monopoly in terms that were equally concerned with the construction of nation and the control of national vision, although framed in utopian terms. And the relatively late date at which deregulation occurred, and commercial broadcasting was introduced into neighboring countries' long-held domains of pure state or public broadcasting, might be seen through the same lens. In the German case, we can see that constraint was explicitly linked to a particular and monolithic vision of nation and media effect—the forging of nation through connectivity and shared experience. Postwar Europe seems to have largely shared the same assumptions regarding the hegemonic effects of a constrained broadcasting regime.

To be clear, despite my use of the German example for its clarity, I do not wish to argue that television in the service of the nation is somehow inherently fascist. The paternalist vision of British broadcasting under the BBC, or the pluriform assumptions behind the Dutch public broadcasting monopoly, for example, suggest very different deployments. Whether used for utopian or dystopian purposes, the question we must ask is why television is treated so differently from the printed word. Have these arguments been grounded in technology? Economics? Representational capacities? Perceived effects particular to television? Nation-building at a unique historical juncture? The radio examples provided earlier suggest that ideologies of control, while diverse, have ultimately been a determiner in setting the regulatory configurations of broadcast media.

A Television Freeze and a Cold War

Let us turn to the United States to consider a different constraint scenario. Despite a highly diversified publishing industry and radio markets (admittedly, with syndicates and a strong network presence), despite a court-mandated breakup of film studio monopolies (the Paramount decrees, which took full effect in the late 1940s), television managed to enter the scene as an oligopoly, albeit fronted by an apparently diverse pattern of station ownership. America's distinctive alignment of hardware and software producers, of television manufacturers and broadcasters, together with the inroads made by the radio networks, helps to explain the curious shape of the television broadcasting environment in a landscape characterized by ritualistic celebrations of its freedoms of speech and press and its limitless opportunities for entrepreneurs. Of course there were mom-and-pop affiliates, complications in spectrum access, sometimes uneasy network-affiliate relations, and transmedia wannabes with promising peripheral applications (cinema television, pay television, subscription television) (Hilmes 1990). These developments have been well charted by scholars such as William Boddy (1990)

and offer extremely interesting traces of resistance and negotiation with the dominant industrial practices of the period. But an overriding cultural issue also emerged just as the television freeze began in 1948, and that was full-blown in 1952 when the freeze ended . . . and it was even colder.

The cold war did many things, but one of its lesser-considered results was an acceleration of industrial concentration, particularly in sectors that had experienced the antitrust actions of a more populist government in the 1930s and whose practices were altered by war (Jezer 1982). Military "cost-plus" contracts, limited competition, and massive scale production all combined quietly to reshape many sectors, the electronics industry central among them. And a postwar redoubling of international expansion further stimulated these sectors, increasing their economic significance and political power. At the same time that key industries were concentrating, a burst of nationwide labor activity and record-breaking participation in strikes took place during 1946 and 1947, as workers sought to make up for the long-term wage losses incurred during the Depression and bracketed off during the war years. The fear of communist subversion was quickly used to stifle any criticism of industry, whether "red" calls for higher wages or "Marxist-inspired" critiques of monopolization and unrestrained industrial growth.

An extreme level of concentration was actively encouraged in the case of postwar television because it was consistent with period industrial trends and with a wartime mentality, particularly for a government deeply concerned with information control and paranoid of Communist infiltration of its message system. And it was consistent with the wishes of political powerhouses such as RCA and Columbia, with diverse interests on the hardware and software side and an ability to have things their own way. Concentration was in the economic interests of the hardware and broadcasting industry, of course, but it was also in the government's interest not to unleash television and potentially face the problems of an unruly airway as it did with radio. And as suggested, the more paranoid contingent within the government had an even more compelling set of reasons to have a television industry that was easy to oversee.

Television broadcasting's first formal decades in the United States can thus be read as an amalgam of profit maximization (greed) and message control (paranoia), twin forces leveraging exceptional institutional coherence and control and stimulating political support, if not political collaboration. The result was more than twenty years of constraint, during which time the biggest technological ripple was the conversion to color. Business models, network-affiliate relations, audience rating systems, program format and supply chain, scheduling logics, and even, to some extent, our own disciplinary paradigms as academics, were refined and entrenched during this happy time. As a closed system, the operation ran smoothly, with each player knowing its part, each element working synergistically in support of the others. The reign of the "big three" broadcasters, a handful of major advertising agencies, an agreed-upon metric for audience measurement, and a circumscribed body of media theory all combined to reinforce one another and confirm the "rightness" of the configuration. In this closed system, the period's models of mass communication and their

effects seemed to operate like a well-oiled machine, each piece fitting precisely with another to drive the whole.

Contextualizing Constraint

The projects of constraint in these two very different cases emblematize certain features that remain basic to our understanding of the medium, despite the very distinct environmental conditions of the present. Constraint was dominant in the German (and European) case, providing the electronic nervous system for the nation—its publics and events—with the unspoken utopian or dystopian hope that all hearts would beat as one. In the American case, constraint was deployed for a hegemonic project that was as much about promoting the economic interests of an industrial class as it was maintaining strict message control. The latter motive, of course, harkened back to the long-standing theories that argued that mass media exposures could sell Hitler or the latest Ford, except that in this case, brand communism was denied advertising space and overwhelmed by the imperative to consume. These heuristic readings are obviously oversimplifications yet help to underscore notions of televisual effect that lurk like defaults in current popular and institutional understandings of the medium. My point is that they, like some of our theories and even our definitions of the medium, are historically specific—and contingent—notions, bound to particular configurations of the television medium and enabled by the particular logics of program scarcity as well as concomitant factors such as television's interface, the form of signal distribution, the nature of the audience, and the understanding of agency.

At least in the U.S. context, the period's television receivers, with their manual dials and fine-tuning requirements, and the dominance of VHF instead of UHF, reinforced the reign of the network programmer and the notion of *flow* put forward by Raymond Williams during his first encounter with the American system. The timing of Williams's trip in the early 1970s enabled him to experience the end of an era (Uricchio 2004). Within a few years, many of the underlying structures of American television changed thanks to satellite and cable deregulation, rapidly growing household penetration of second and third television sets, and the VCR—all symbolized by the remote control device. These conditions combined to allow viewers to take greater control of the medium, whether by taking advantage of expanded program choice; viewing different programs at the same time within a single household setting; or manipulating televisual time and text through zapping, recording, and fast-forwarding. Video collections, enhanced use of television for film viewings, and even creative reworkings of broadcast texts all attested to new uses of television, new consumption practices, and feelings of enhanced agency and even liberation on the part of viewers (Uricchio 2004; Kompare 2005; Lotz 2007).

These developments broke the grip of the big three broadcasters, greatly increasing channel access; they enabled time shifting, enhanced the back-end

incentive for independent producers, and provided twenty-four-hour news/sports/local coverage. As if these threats to the software front were not enough, the quick penetration of the VCR and new television receiver technologies also attested to Asia's attack on the American hardware front. Low-cost electronics, portability, and ubiquity would be the emblems of a new hardware regime; this time, it would not be controlled by the usual U.S. manufacturers. Low-cost production and cheaper means of distribution, in turn, compounded competition on the already traumatized program side. In short, the mid-1970s saw the beginning of the end of America's old hardware and software oligopoly and the rapid increase in new programming sources and the adaptation of new television technologies. This was *not*, to be sure, a technologically determined moment (although the embrace of technological change had dramatic economic effects and political implications in the hardware sector). Europe largely underwent a related set of technological adaptations without, as argued above, undergoing any significant modification of broadcasting organization until a much later date.

The implications of the slide from constraint to plenty to virtually unlimited programming choices are difficult to assess. It is certainly clear that television as an agent of social cohesion encouraged in the era of constraint has given way to television as an accessory, one of many media sources available across widely divergent lifestyles. A lost opportunity? Perhaps, but, as I have tried to argue in this article, only if we normalize the particular configuration forced upon the medium under historically specific circumstances, a configuration at odds not only with every other medium but with television's deep history as well. Viewed from this perspective, television's latest transformation seems consistent with contemporary notions of the individual as "bundled subjectivities," the dominance of taste niches over nation, and proclamations regarding the participatory fruits of cyberculture.

Looking back with historical hindsight, we can underscore the highly contingent nature of television as a technology and array of practices and, in the process, relativize our definitional conceits and reframe some of our theoretical assumptions. The following chart roughly notes some of the changes that have taken place in the U.S. television landscape, illustrating this notion of contingency (in Europe, these technologies and practices aligned in a somewhat different manner). The dates are particularly rough, and these columns need to be understood as accretive—that is, some of the attributes of the broadcast era and remote control era persist into the following eras. In some cases, this persistence is optional—although our TiVos can effectively program an evening's worth of television, we can still abandon ourselves to the vision of a particular channel's programmer. And in other cases, it is stubborn—although audience formations and increasingly the technologies for measuring their activities have shifted dramatically, both undercutting the old metrics regime, we remain affixed to broadcast-era metrics, like the gold standard, for the stability they provide rather than any intrinsic value (or truth).

1950-1975: Dial Television	1975-1999: Remote Control	1999+: From TiVo to YouTube
Transmission	Cable/satellite/VCR	DVR/VOD/IPTV/ . . .
Broadcasting	Narrowcasting	Slivercasting
National	Transnational	Global (including user-produced)
Dial interface	Remote control device	TiVo and its clones
“Real time”	Time shifting	On-demand
Scarcity of content	Plenty of content	Unlimited content
Programmer-dominated	Viewer-controlled	Metadata/filters
Mass audiences	Segmented audiences	Niche audiences
Stable metric regime	Metrics under siege	Complete data sets

We can perhaps add to these period-specific conditions a series of changes in the scientific approaches that have been deployed to understand television and its audiences. For example, the steady shift in interest from media effects on audiences to the uses that audiences make of media maps well onto the shift from the era of programming scarcity and mass audiences to the era of plenty of content and segmented audiences. But as in the domain of audience metrics where the older, mass logics have persisted despite a fundamental change in the nature of the audience, many tenets of the old paradigm remain in place. This persistence might simply be a residual default in our thinking about the medium; or it might be driven by the logics of commercial television, in which advertising is sold because of its implied effects; or it might reflect our eagerness to find simple causes to explain life’s complications. Regardless, we can identify a growing tension between certain television concepts and practices that emerged with one configuration of the medium and the very different environment and demands made by a different configuration.

This relativistic or contingent approach to defining the medium is obviously at odds with a more essentialist approach, and essentialists might argue that it leads us down a slippery slope to a point where we will be unable to distinguish between television and our computers. I take this point and embrace it, since my notions of the medium depend neither on the particular screen nor the cable or the network of which television is a part. Previously, I have argued that we must take a long view of the medium, looking at its articulation as a set of clearly defined longings and possibilities that go back to the late nineteenth century. Albert Robida’s sharply articulated visions of the *telephonoscope* as a site of news, home entertainment, surveillance, person-to-person communication, and public information—published in 1883, the year before Paul Nipkow filed his crucial television-related patent—established a conceptual framework to which television has remained faithful. Robida and his nineteenth-century contemporaries teased out a vision that was deployed in Germany in the 1930s and 1940s (person-to-person, domestic, public and telepresence models of television) and has been with us since, although we have tended to make fundamental and implicit institutional distinctions between the television worthy of attention and the many televisions (surveillance, teleconferencing, etc.) that fall outside our interest.

Nevertheless, precisely this wide range of historical televisual practices permits us to contextualize and thus relativize the latest transformations of the medium—and with them, the short twenty to thirty years of stability in the broadcast era that have emerged as our conceptual default definition for the medium.

The change and dynamism that so characterizes the present state of the medium is not new. Television, in contrast to its relatively stable sister media, has from the start demonstrated an unusually opportunistic potential with regard to technological platforms. Born with the telephone in the last quarter of the nineteenth century, developed through cinema-style exhibition (theatrical television in the 1930s through 1970s and now evident in the very different developments of home theater and outdoor billboard-type displays), and broadcast to domestic settings in an emulation of radio, television is in the process of another transformation, this time to a computer-based model. These various technological entanglements are by no means determining and, indeed, have been driven by applications that preceded their existence. But they do offer particular affordances, and lend themselves to particular engagements. And as I have suggested above, while they can be shackled to very different hegemonic projects, their particular historical configurations nevertheless bring with them sets of coherent and contingent practices and meanings.

The present in which I write this is very much in transition and, as such, contains residual structures going back to the 1950s as well as new practices antithetical to them. In the United States, the big three networks persist, even though suffering from sliding market share and vastly outnumbered by cable outlets. The old advertising-driven and syndicated broadcast logics exist alongside emerging and emphatically cross-platform and participatory program forms such as *Lost*. And the ongoing struggle between telephone and cable television companies for control of home Internet delivery speaks to the computer's increasing importance as a televisual platform, one, moreover, with global access and a near infinity of programs. The present is very much a period of contradiction, and while the contours of the future are becoming more visible, established media industries are also doing their best to use any means possible (from regulation, to litigation, to outright acquisition) to reposition the new in terms of the old. The end of television? Or simply the latest turn in a long history of assimilated technologies in search of ways to deliver a particular set of experiences? The answer turns on our frame of reference and the strategies we wish to deploy, either to select a particular twenty- to thirty-year period as the embodiment of the medium, or to define a looser set of anticipations and practices as coherent and embrace television as a medium in near constant transition.

Notes

1. Depending on the national setting, scarcity also reflected such factors as the state of the electronics industry, leisure practices, attitudes toward image-based media, and entertainment infrastructures.

2. Garnham's and my own positions notwithstanding, strong arguments can be made for regulating the broadcast spectrum given their shared use by radio (including emergency, air, military, and marine bands),

wireless telephones, and even cordless microphones. But that early television, like radio, was deployed by cable in many markets, and that most nations preferred limited VHF bands over the more extensive UHF bands that they also controlled, suggest the constructed nature of the argument for constraint.

3. Emile Altenloh's *Zur Soziologie des Kino: Die Kino-Unternehmung und die sozialen Schichten ihrer Besucher*, in large part a study of children's responses to film, was published in 1913. Altenloh was a student of Alfred Weber.

4. Rudolf Arnheim was a perceptual psychologist with a strong interest in media; after moving from Germany to Italy (where the television essay was written) and then the United States, he was appointed professor at Harvard and later Michigan.

References

Arnheim, Rudolf. 1935. Ein Blick in die Ferne. *Intercine* (Rome) 2:71-82.

Boddy, William. 1990. *Fifties television*. Urbana: University of Illinois Press.

Ellis, John. 2000. *Seeing things. Television in the age of uncertainty*. London: I. B. Tauris.

Garnham, Nicholas. 1983. Public service versus the market. *Screen* 1:11.

Hadamovsky, Eugen. 1935. *Mitteilungen der Reichs-Rundfunk-Gesellschaft* 460:1. **[AQ 2]**

Hilmes, Michele. 1990. *Hollywood and broadcasting: From radio to cable*. Urbana: University of Illinois Press.

Jezer, Marty. 1982. *The dark ages: Life in the United States, 1945-1960*. Boston: South End Press.

Kompare, Derek. 2005. Acquisitive repetition: home video and the television heritage. In *Rerun nation: How repeats invented American television*, 197-219. New York: Routledge.

Lotz, Amanda. 2007. *The television will be revolutionized*. New York: New York University Press.

Pool, Ithiel de Sola. 1984. *Technologies of freedom*. New York: Belknap.

William Uricchio. 1992. Television as history: Representations of German television broadcasting, 1935-1944. In *Framing the past: The historiography of German cinema and television*, ed. Bruce Murray and Christopher Wickham, 167-96. Carbondale: Southern Illinois University Press.

———. 2004. Television's next generation: Technology / interface culture / flow. In *Television after TV: Essays on a medium in transition*, ed. Lynn Spigel and Jan Olsson, 232-61. Durham, NC: Duke University Press.

———. 2008. Television's first seventy-five years: The interpretive flexibility of a medium in transition. In *The Oxford handbook of film and media studies*, ed. Robert Kolker, 286-305. Oxford: Oxford University Press.