Media Specificity and its Discontents: A Televisual Provocation

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I was thinking about this essay during a recent visit to Wolfenbüttel, home of Jaegermeister and the Herzog-August-Bibliothek.[1] The library is remarkable, containing one of the West's most complete collections of sixteenth- and seventeenth-century works (and, for enthusiasts of early media, Athanasius Kircher was commissioned, for a time, as one of its book buyers). Grouped into a dozen themes, the books are arranged on the library shelves strictly according to their physical height. The main reading room, a massive three-storey high gallery, is an obsessive-compulsive's dream: thousands of slightly varying cream-colored parchment bindings, meticulously aligned from large volumes on the bottom to small on the uppermost shelves. The stunning effect of such an organizational strategy might at first seem more appropriate to a fashion shoot; however, the system works, and the key to finding a book is a familiar printed catalogue with the actual organization of the books no more arbitrary than many other systems. And yet, this particular system, predicated on the physical format of the binding, addresses the book's distinctive material form rather than its content or author or title or date of acquisition. The immateriality of text and paratext (thematic grouping aside) gives way to the tangible expanse of parchment and the logic of centimetres.

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And just what might this have to do with media ontology? The Herzog-August-Bibliothek included among its past librarians Leibnitz and Lessing. Gotthold Ephrain Lessing, a prominent Enlightenment figure whose *Laokoon oder über die Grenzen der Mahlerey und Poesie* (*Laocoön*, 1766) offered a much-referenced analysis of aesthetic particularities, spent nearly eleven years on the job (1770-1781). Lessing is regularly invoked in discussions about the specificity of various art forms thanks to his manner of distinguishing between poetry (art with words) and the visual arts (art with physical bodies, including sculpture, painting, and architecture). His book was provoked by what he saw as a conflation of aesthetic devices, with poetry taking its lead from the image. This argument was encapsulated by Horace's phrase "*ut pictura poesis*" ("as painting, so poetry") and taken up by Lessing in the debate over which

[1] I wish to thank the Institute for Advanced Studies at Göttingen University, the Lichtenberg-Kolleg, for its support, which enabled the writing of this article and introduced me to the Herzog-August-Bibliothek.

influenced the other: the depiction of Laocoön's death dance in Virgil's *Aeneid*? Or the sculpture of Laocoön and his sons (now in the Vatican Museums)? Lessing's rejection of a leading medium (the image), and more importantly, of an underlying universal emotional impulse and common aesthetic standard regardless of the specificities of the artistic medium, have enjoyed remarkable staying power.

Lessing's insights into the specificities of aesthetic expression, the fundamental distinctions between time-based art (poetry) and space-based art (sculpture, etc.), laid the basis for many of the assumptions that have gone on to define the modern era, assumptions reiterated most forcefully in the high modernist era by Clement Greenberg shortly before the popular emergence of digital culture.[2] And Greenberg's ideas, in turn, were highly influential to those early generations of cinema studies scholars who fought to gain a place in the academy and who struggled to assert notions of legitimacy-through-specificity for their art. Indeed, one might today look at the digital newcomers in our midst, and find echoes of Lessing's and Greenberg's assertions regarding their distinctive qualities, complete with recommendations for specialized institutional practices (from Ludology in game studies to Katherine Hayles' Media Specific Analysis[3]). This dynamic, certainly in an era of fast-changing media platforms, is understandable: new media forms help to reveal long unseen practices in old media, practices so taken for granted as to be rendered invisible; at the same time, adherents of the latest new media must struggle for legitimacy and institutional recognition.

Lessing's confrontation was not, of course, triggered by "new" media so much as by a new way of conceiving existing media. Nevertheless, the thought of him spending eleven years in Wolfenbüttel on the heels of *Laocoön*'s publication, enforcing an organizational regime based on the physical size of books, lends a practice-based underpinning to his vision. It is difficult to imagine that he did not reflect on the mediality of the book, so central to its physical placement in the library.[4] The organization of the artefacts of knowledge, particularly in such a way that they were not only preserved but easily retrievable, was his central task. Not only did the collection in his charge span incunabula and a wide variety of early approaches to printing, but a number of book attributes that we take for granted today were then very much in formation. For instance, the parchment spines of some of the books in the collection bear lists

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[2] Clement Greenberg, "Towards a Newer Laocoon," in *The Collected Essays and Criticism*, vol. 1 (Chicago: University of Chicago Press, 1986), 23-28; the crux of Greenberg's specificity argument was already in place in his "Modernist Painting," originally given as a radio broadcast in 1961 for the Voice of America's "Forum Lectures" and printed the same year in the *Arts Yearbook 4* (and many times since in other venues).
[3] Katherine Hayles, "Print Is Flat, Code Is Deep: The Importance of Media-Specific Analysis," *Poetics Today* 25, no. 1 (2004): 67-90.
[4] I am by no means a Lessing specialist, so this is sheer speculation.

of their contents, as, in the sixteenth century, "books" were often collections of pamphlets. The practice would be internalized into tables of contents by Lessing's day. Another book practice – the index – only began to appear with regularity during Lessing's lifetime. The book itself was in a state of transition, its practitioners creating new traditions that in many cases exploited the physical affordances of the medium, and in so doing, revealed new aspects of its mediality.[5]

These changing and emergent practices, together with the stubborn insistence of the book's materiality and the creative uses made of it, all serve as reminders of why notions of medium specificity have thrived over the centuries. They are part of the substructure of culture, and may be found in our conceptual categories, our language, our history and our institutional and everyday practices. They have a taken-for-grantedness about them, never more evident than at those moments when a new medium enters the scene and enables us to see the structures and limits of old practices, sometimes even forcing a recalibration of a medium's function and cultural position.

And yet, over the last few decades, notions of medium specificity seem more of a lingering reflex than an argument capable of sustained defence. They reside in our everyday references to things like "film" and "television," even when the "film" is shown on television, or television is in fact BitTorrented programming seen on our computer. We still buy "television receivers" even though the latest generations of flat screen monitors are designed to be agnostic about the signal source, accepting everything from the television and internet cable to memory sticks, DVR and game console connectors. Coming to terms with media – their ontologies, epistemologies, practices – invariably invokes the issue of their identity. Are they materially specific or rooted in ideal-typical dispositifs? Context dependent? Rooted in expressive potential and relations to time and space? Figments of public perception or legal codification? And what is the nature – and implication – of their transformation over time and interactions with one another? The ability to discern among different media seems easy enough, and yet a persistent strand of scholarship has demonstrated the many complications that await those who wish to probe the issue more deeply.[6] I'll be making use of this tradition in the pages ahead,

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[5] And new practices, in turn, created new anxieties about the proper use of the book. The index, for instance, was seen by some as a subversion of the book's linearity, offering ways to circumvent reading an argument from beginning to end and positioning the book as something to be selectively "used" without necessarily being read. My thanks to Bill Bell, most recently of Cardiff University, for directing me to Isaac Disraeli's *Curiosities of Literature*, a compilation of book lore in which this and other practices are explored; its first volume appeared in 1791 and its second series continued to accrete until 1823.

[6] As one might expect of a topic so central to both our experience and our cultural institutions, it has emerged as a site of considerable critical attention. Approaches range from Raymond Williams' argument for a contextually grounded notion of specificity (i.e., "practice" rather than "medium"); to W.J.T. Mitchell's defence of Horace against Greenberg, arguing that painting and poetry both ultimately depend on the word for explanation; to Nöel Carroll's arguments against specificity as a primary evaluative criterion as ultimately conformist and constraining.

approaching some of these questions through a particular medium – television. Television, or perhaps better, the *televisual*,[7] strikes me as offering a particularly clear case through which to explore some of the undulations in media technology and practice. Its deep history, at least back to the last quarter of the nineteenth century, provides a productive vantage point from which to consider the operations of media identity, even though the latest round of identity challenges is largely digital in nature. But first, a short excursus into media and their meanings more generally . . .

II.

The word "medium" has many meanings in English, most going back to classical Latin.[8] But by an odd chance, at least according to the *Oxford English Dictionary*, two "new" meanings first appeared around 1851: medium as a channel for mass communications ("the photographic medium") and medium as a link or bridge between the living and the "spirit world" ("the medium organized a séance"). One transmits information from point "a" to point "b," and the other "makes present" that which is impossibly distant. The two meanings have occasionally gotten tangled, and in sometimes interesting ways. Scholars such as Jeffrey Sconce have discussed how "material" media (photography, telegraphy, telephony, etc.) enabled the project of communicating with spirits;[9] conversely, early anthropological literature is rife with anecdotes about some indigenous peoples fearing that photography could steal their souls. Yet, lest we think we are immune from such naïve conflation, an immersive urge has often accompanied and shaped our media use from the very start. Whether Barker's 1787 patent for the panorama, the stereograph, IMAX or our latest 3D and augmented reality systems, all seem to straddle both definitions, telling us about a place and making that place impossibly present (or as present as possible).[10] The interesting thing is how quickly we adapt to these new media forms, first finding them convincing on both fronts and then, when the magic wears off (or a

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See Raymond Williams, *Marxism and Literature* (Oxford: Oxford University Press), 1977; William J.T. Mitchell, "Ut Pictura Theoria: Abstract Painting and Literature," *Critical Inquiry* 15, no. 2 (1989): 348-71; and Noël Carroll, "The Specificity of Media in the Arts," *Journal of Aesthetic Education* 19 (1985): 5-20.

[7] I use the term "televisuality" broadly in order to address the medium's ontological and epistemological undulations in the period between 1877 and the present, in contrast to John Thornton Caldwell's more specific use of the term in his *Televisuality: Style, Crisis, and Authority in American Television* (New Brunswick NJ: Rutgers University Press, 1995).

[8] The term originates from the classical Latin *medium* meaning middle, centre, midst, intermediate course, intermediary . . . It would be interesting to track the historical emergence of the "channel for mass communications" meaning of medium across other languages, and to note their patterns of clustered associations.

[9] Jeffrey Sconce, *Haunted Media: Electronic Presence from Telegraphy to Television* (Durham: Duke University Press, 2007).

[10] For a web-essay on immersion and other media features, see the MIT Open Documentary Lab's and IDFA DocLab's *Moments of Innovation*: http://momentsofinnovation.mit.edu

new and improved technology is available), they slip over to merely communicate, without the ability to make present.

Medium in the sense of "channel for mass communications" is the topic at hand, and there is ample literature that defines it abstractly, as a theoretical and ideal-typical entity; in functionalist terms, variously as a window, mirror, filter, gatekeeper, signpost, forum, disseminator and interlocutor;[11] and as grounded in practice as a technological, institutional, or behavioural constellation. These approaches all yield productive insights, and yet are often mutually incompatible, and when pressed, seem challenged by the stubborn irregularities and resistances of everyday media practice. Two-part definitions, of the kind put forward by Raymond Williams and evident in the title of his *Television: Technology and Cultural Form*[12] simultaneously offer greater specificity and flexibility. Here, the definition emerges from the interaction between a technological order and cultural behaviours, both of which can be in flux. The technological brings with it affordances that are selectively activated in particular ways by particular cultural actors. Some of these are institutions, and others individuals, but together they constitute instantiations of the media. Lisa Gitelman offers a more refined reflection on the definition, and considers the interactions between technological platforms and the social protocols that inscribe them, noting how important it is, particularly when dealing with changing media, to be culturally specific ("the telephone in 1890s rural America" rather than "the telephone").[13] This strikes me as a useful approach, particularly at a moment when taken-for-granted stabilities begin to dissolve. Recorded sound, on LPs, various tape formats, optical CDs, compressed MP3s and other proprietary formats . . . played, broadcast and streamed, simultaneously enjoys relative stability at least with many of its social protocols, while undergoing dramatic and accelerating technological transformation. The same "medium"? Gitelman's reminder to be historically specific offers a useful injunction.[14]

We might complicate this call for historical specificity by also considering the issue of *speaking position* and its proximity to the media process. The closer one is to a medium, in the sense of being involved in the production process or being a specialist or connoisseur of some kind, the more amplified distinctions appear that, to outsiders, seem insignificant. Film, for example, "from the outside" seems relatively stable as a medium, rooted in the long-term

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[11] See, for example, Denis McQuail, *Mass Communication Theory* (London: Sage, 2010 [1983]).
[12] Raymond Williams, *Television: Technology and Cultural Form* (London: Fontana, 1974).
[13] Lisa Gitelman, *Always Already New: Media, History and the Data of Culture* (Cambridge: MIT Press, 2006), 1-22.
[14] Jonathan Sterne's *MP3: The Meaning of a Format* (Durham, Duke, 2012), for example, offers a deep reading of a particular instantiation of an audio recording medium.

durability of perforated 35mm strips of celluloid and challenged only in the last few decades by the coming of digital effects, editing processes, sound, DVDs and streaming. Yet those closer to the process have debated earlier challenges to the medium's identity posed by the coming of sound, and the implications that this had for the medium's aesthetic character, mode of expression, institutional status and patterns of dissemination. Variability in film stock (with different light-response characteristics), colour systems, frame rates and formats, might be all benignly inscribed as acceptable variations within the medium, or seized upon as a basis for aesthetic distinctions, subdivisions within a medium's genealogy, and perhaps even media differentiation. But drawing distinctions in media identity at this level is an experts' game, largely invisible at the level of everyday operations; yet, they remain a powerful reminder of the importance of perspective, speaking position and proximity to the medium.

Of course, recorded sound, the printed word, telephony, photography and so on, all experienced a radical acceleration of change in both technology and practice (production, distribution, exhibition and reception) with the coming of the so-called digital era.[15] Change has also manifest itself in a dramatic and unparalleled concentration of media industries, a development that has worked in tandem with certain digital affordances and can be seen in increased cross-media creation and the streaming (rather than physical acquisition) of content. This moment of pervasive transformation provokes new reflections and insights into the dynamics of media identity and change. And it is in this setting that television's developmental history arguably has added value. Television, more than any other contemporary mass medium, has undergone dramatic transformations both in its technological regimes and in its cultural deployment, its protocols, not only well-before the "digital era" . . . but from its start in the late nineteenth century. This makes the medium and its history particularly useful sites for precedent and for thinking about media change and identity – or so I will argue in the next section.

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III.

The German word for television is *Fernseher*, and therein lays a tale. Until some point in the late nineteenth century, *Fernseher* referred to what in contemporary German is called a *Teleskop* or in English, telescope, the Germanic term slowly giving way to the Greco-Latin in the early twentieth century. *Fern-seher*, like *tele-scope* or *tele-vision* for that matter, means far-seer, with *sehen* having the same double sense as *vision*: both a verb (the act of seeing) and a

[15] The notion of the digital has a long mechanical history, stretching back to music boxes and player pianos, certain binary semaphore systems, monotype setters, and so on, offering another example of a system whose historical undulations we tend to overlook when invoking its most recent instantiations.

noun (the thing seen). In this sense, the terms television and telescope have much in common, though that commonness is visible thanks to the term *Fernseher*'s undulation in reference. The telescope allows us to see at a distance, and like the *camera obscura* before it, presumes a condition of liveness, of enabling one to watch things as they unfold in real time, and to watch them while out of sight thanks to masking or distance. Bringing the far near; seeing without being seen . . . these are the cultural meanings historically bound up in the term that would go on to refer to the system that delivers the news and *Mad Men* to the living room.

Of course the constellation of attributes that we recognize as something like "television" took shape under very different names, often revealing their conceptual debt to antecedent media technologies.[16] Terms like *telephonoscope*, used in England by George du Maurier as a caption for his illustration in *Punch's Almanack for 1879* and in France by Albert Robida in his 1883 *Le Vingtième Siècle*, referred to what both authors imagined as "live," person-to-person interactive television/telephone systems. Paul Nipkow patented the *Elektronisches Teleskop* in January 1884, providing the mechanical backbone that would enable John Logie Baird's *Televisor* to function (and establishing German claims to the invention of the medium), joining imagined inventions such as *telectroscope* and *electric camera obscura* in giving form to concept. These early notions of the medium emerged as part of the excitement over Bell's 1876 telephone, a condition already well-prepared for thanks to the mid-nineteenth-century image telegraph and the successful deployment of the trans-Atlantic cable. The telephone made tangible the notion of connecting to a distant place in real time, a condition not entirely free of anxieties.[17] The spread of public electrification beginning in the early 1880s, too, seems to have provided a tonic for the imagination. More discursive than experienced, its quality of "liveness" and association with a new era gave it enormous powers of evocation. But larger conditions such as the strains of maintaining colonial empires, particularly in personal terms, also seem to have played a part. A remarkable number of late-nineteenth-century images of the *telephonoscope* and *telectroscope* (including Du Maurier's and Robida's) depict families separated by continents, but joined in intimate conversation thanks to a new technology that promised seeing and talking at a distance.

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[16] The word "television" is usually credited to Constantin Perskyi, who used the French *télévision* in a paper delivered at the 1900 International World Fair in Paris.

[17] For example, David W. Griffith's *The Lonely Villa* (1909) uses parallel editing to articulate the tensions of disarticulated physical and acoustic presence, as an office-bound husband listens to the advances of two intruders as they make their into his home and threaten his family. The telegraph generated similar tensions, though obviously without the added power of the grain of the voice.

The names of these fantasy technologies and their variants reveal an intermedial imagination at work, appropriating aspects of one medium or another, remixing and transforming them (the telephone and the telescope) and charging them with electricity (the electroscope and electronic camera obscura). As scholars such as Carolyn Marvin and David Nye have shown, the understanding and deployment of things like electricity and the telephone emerged from a different set of assumptions than ours, and enjoyed an interpretive flexibility that we have largely lost with the passing of electric clothing and cures, "telephone girls" and wake-up services, etc.[18] In this period when the telephone and electricity's platforms and protocols were very much in formation, almost anything was thinkable as engineers, marketers and hobbyists explored the limits of the possible – a condition that challenges our understanding of what, precisely, was meant by these hybridized invocations. Just as confusing are the frequent attributions of these imaginary devices to the period's most famous inventors (Bell, Edison) – alluring references, to be sure, but best understood as indications of expectation and envisioned impact. The point is that the intermedial logics of imagining and giving form to a new medium are clear; what precisely was meant by the "telephon-" in "telephonoscope" – given the period's flexible understanding of the term – is, however, a far more complicated question.

If a single text can be said to capture the breadth of late-nineteenth-century ideas of "seeing-at-a-distance," it is certainly Robida's *Le Vingtième siècle*.[19] In a chapter-length discourse on the televisual wonders of the next century, Robida gives verbal and visual form to a medium that can be used for point-to-point long-distance conversation; that can deliver entertainment from the opera hall to one's bedroom . . . or to viewers in Africa; that can bring global news to the home or to the street through large screen installations; and that can be used, inadvertently or not, for purposes of voyeurism. Through it all, the glass oval screen of the telephonoscope offers not only a window on the distant world but a conduit or connector between the viewer and world viewed. Robida's envisioned medium promised to "annihilate time and space," as Rudolf Arnheim would describe it over fifty years later in his 1935 essay on television.[20] It promised audiovisual access to distant places, and like the telephone at its conceptual base, in real time. The cultural uses and social protocols described by Robida are

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[18] Carolyn Marvin, *When Old Technologies Were New: Thinking About Electric Communication in the Nineteenth Century* (New York: Oxford University Press, 1988); David Nye, *Electrifying America: Social Meanings of a New Technology, 1880-1940* (Cambridge: MIT Press, 1992).
[19] Albert Robida, *Le Vingtième siècle* (Paris: G. Decaux, 1883).
[20] Rudolf Arnheim, "A Forecast of Television" (1935), in *Film as Art* (Berkeley: University of California Press, 1957), 188-98.

remarkably diverse, encompassing what in today's terms might be understood as Skype, surveillance video, large screen public display, and domestic news and entertainment. Yet within this diversity was unity, as a particular configuration of time and space and a specific notion of mediation (the glass display surface) leant conceptual coherence to the telephonoscope despite embracing very different protocols.

IV.

I've written elsewhere about the stabilization of television as a technology and practice that took place after the Second World War.[21] There is good reason to think that the post-war desire for economic recovery (profit maximization) and ideological stability (message control) resulted in regulatory regimes that essentially "froze" particular configurations of the medium and imposed them as national orders. William Boddy's discussion of RCA's role in establishing America's 525-line black-and-white system,[22] or France's retreat from a pre-war mix of commercial and state broadcasting services to a post-war state-only system, or the active perpetuation of the spectrum "scarcity" narrative (and the UHF/ultra high frequency – VHF/very high frequency debate), all point to the same basic endeavour: to stabilize the technological platform, limit the number of senders, and maximize the coherence (and market share) of the available public.[23] These decisions in the immediate post-war years produced a televisual practice that lasted until the coming of video cassette recorders, satellite and widespread cable services, and with them, deregulation, in the early 1980s.[24] And although today only remembered as a firsthand experience by "people of a certain age," this thirty plus-year period in television's history has for many persisted as a benchmark against which new technological ensembles and affordances are measured, and found to be television or not. It is a frequent site of television makers' nostalgia.

Informed insiders might (correctly) complain that this narrative neglects the coming of colour and stereo sound; the battle over national standards in countries outside the United

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[21] William Uricchio, "Contextualizing the Broadcast Era: Nation, Commerce and Constraint," *Annals of the American Academy of Political and Social Science* 625, no. 1 (2009): 60-73.
[22] William Boddy, *Fifties Television: The Industry and its Critics* (Urbana: University of Illinois Press, 1992).
[23] These constraints selectively drew on precedents from radio broadcasting, and were "enforced" both by the simple logics of system-wide interoperability as well as licensing requirements, factors also familiar from radio. On the American radio experience, see Susan Douglas, *Inventing American Broadcasting: 1899-1922* (Baltimore: Johns Hopkins University Press, 1989).
[24] For a look at these post-war paradigms see Lynn Spigel, *Make Room for TV: Television and the Family Ideal in Postwar America* (Chicago: University of Chicago Press, 1992); and for an overview of changes in technological platform and social protocols, see William Uricchio, "Television's Next Generation: Technology/Interface Culture/Flow," in Lynn Spigel and Jan Olsson (eds.) *Television After TV: Essays on a Medium in Transition* (Durham: Duke University Press, 2004), 163-82.

States; the shift in programming balance between live and recorded programs; the increased use of tape and decreased reliance on the kinescope; and changes in the organization and financing of productions. All of these had implications for program form and viewer experience, though I'm not aware of arguments to the effect that any one of these elements challenged television's identity as a medium. Far more interesting, however, is the context from which this "frozen" moment of television emerged. We've seen the highly pluriform vision of the telectroscope that Albert Robida and his nineteenth-century contemporaries offered, embracing a wide range of functions and protocols as the medium took conceptual form. The thinking about and practice of the televisual in the years between the publication of Robida's book and television's stabilization in most developed nations helps to put the stasis of those thirty years into perspective and offers a perspective from which to assess today's many digital affordances that have, for some, marked the death of television.[25]

Robida's portrayal of the telephonoscope encompassed many different application scenarios, each with its own protocols, setting the tone for television's subsequent development. For example, nearly a decade of television (*Fernsehen*) operations in Germany between 1935 and 1944 witnessed the medium's use for point-to-point communication (a television-telephone service connecting the nation's major cities), telepresence (remote guidance systems for rockets, bombs and torpedoes), aerial reconnaissance (working 2000-line high definition prototypes), home and theatrical news and entertainment, and for a short time, large-screen outdoor broadcasts. All fit under the rubric of *Fernsehen*, though consistent with German language conventions, modifiers were sometimes deployed (television service for wounded soldiers was called *Lazarette-Fernsehen*; the 40-seat halls where one could publicly view television were called *Fernseh-Stuben* (television-rooms); and the sites where one could make television-telephone calls were called *Fern-Seh-Sprech-Stellen* (television-stations)).

If the usage protocols were relatively wide-ranging, the varieties of technological platforms were their match. Two quite different technological approaches to image production characterized the medium's first few years in Berlin, the primary site of pre-war German television.[26] One, the Fernseh AG system, harkened back to Paul Nipkow's 1884 patent and

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[25] See Elihu Katz and Paddy Scannell (eds.), *The End of Television?: Its Impact on the World (So Far)* (New York: Sage, 2009); originally published as a special number of *Annals of the American Academy of Political and Social Science* 625, no. 1 (2009). For a detailed look at television's interpretive flexibility during the radio-era, see Philip Sewell, *Television in the Age of Radio: Modernity, Imagination, and the Making of a Medium* (New Brunswick NJ: Rutgers University Press, 2014).

[26] The broadcast area was occasionally expanded, for example during the Olympics or early NSDAP congresses; and during the occupation, television service extended to Paris, where the Eiffel Tower served as the transmission mast (*Fernsehsender Paris*).

relied upon a mechanical disk for image dissection; moreover, particularly in outdoor situations, it used film as an intermediary. Coverage of the 1936 Olympics, for instance, took place from specially equipped outside broadcast vans with roof-mounted motion picture cameras. The exposed film dropped into the van, where it was processed, scanned and projected as a television signal within approximately 50 seconds of exposure. The other system, Telefunken's all-electric system, produced an immediate signal and was closely related to the post-war technologies that would dominate the pre-digital era. Differences abounded. Particularly in outside settings, the Fernseh AG system produced results that were visually better; yet from an engineering perspective, most agreed that the Telefunken system was vastly superior, even if still in development. From the period's nationalist point of view, the Fernseh AG system could claim a "pure-German" heritage, whereas Telefunken was dependent on Radio Corporation of America (RCA) patents. And from the perspective of the expectation of the medium's "liveness" from 1879 onwards – not to mention from the angle of media specificity – the interfilm system with its fifty-second delay would seem to be problematic, though in fact the previous two issues completely overshadowed this point.[27]

Television broadcasting, when it began in Berlin in March of 1935, was the culmination of years of work in the German Post Ministry, which was responsible for broadcasting infrastructure. It drew on radio engineers for the medium's development and deployment, used Berlin's Funkturm, a radio transmission tower, to send its signals, and was conceptually inscribed within the idea of radio in ways ranging from notions of programming to assumptions regarding modes of reception. Germany's *Volksempfänger*, an inexpensive, limited-band radio intended to help connect the nation by putting a radio in every German household, was to be complemented with the *Volksfernsehempfänger*. And theorists such as Rudolf Arnheim, author of *Film als Kunst* and *Hörfunk als Kunst*, in his 1935 "A Forecast of Television" described the medium as the completion of radio.

The Post Ministry, historically responsible for post, telephone and telegraph, in addition to its charge to support broadcast infrastructure, had no problems with a pluralistic vision of the medium. It sponsored the national television-telephone service that relied upon a telephone infrastructure and dispositive, and it also backed the Fernseh AG (interfilm) – Telefunken (all

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[27] One of the few comments that I've found came after the national standard coalesced around the all-electric Telefunken system. An employee of the Propaganda Ministry lamented the inability to edit live broadcasts, saying that "quick as a wink" unwanted material could slip into the ether and thus public view. See Monika Elsner, Thomas Müller and Peter Spangenberg, "Der lange Weg eines schnellen Mediums: Zur Frühgeschichte des deutschen Fernsehens," in William Uricchio (ed.) *Die Anfänge des Deutschen Fernsehens; Kritische Annäherungen an die Entwicklung bis 1945* (Tübingen: Niemeyer Verlag, 1991), 153-207.

electric TV) showdown at the Olympics. The Propaganda Ministry, for its part, sought to establish a cinema-style encounter with television because it felt that messages were most effective when received in collective settings, where individuals within a group were likely to acquiesce, taking the silence of others in the room as tacit approval. Viewing propaganda alone at home, it was feared, might encourage people to talk back or turn off the program. The Propaganda Ministry found an unlikely ally in the form of the socialist wing of the NSDAP (National Socialist Democratic Workers Party – the Nazis), who felt television should be free until it was affordable enough for everyone to purchase a set – in other words, television for all rather than an amusement for the wealthy. Together, they backed Berlin's *Fernsehstuben* – some twenty-five to thirty television salons where forty people could watch television together in one room.

The German situation was complicated by pitched battles between different constituencies, each with ministerial and corporate backers, over the appropriate form and setting for television. But it was also complicated for the public, most of whom saw only the traces of the medium in the form of daily program listings in the newspaper. Here too, between 1935 and 1944, the listings migrated throughout the newspaper, at various times being located next to the radio listings, the film listings, and the cabaret and music hall listings. Proximity, in this context, might also be read as a sign of affiliation with one medium or another. Germany's early television history benefits from the accessibility of its records, corporate as well as governmental, as well as from the significant contention among its various participants. But the net result is strong evidence of a conceptual struggle regarding its identity as a technology, its capacities as a medium and its potentials as a practice – a struggle played out through already well-established media protocols, media metaphors and media constituencies.

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V.

Much ink has been spilled on television's continued transformation – from tubes to transistors to chips; from cathode ray displays to plasma to projection; from broadcast to cable to Internet-streaming; from dial-up to remote-control to algorithmic recommendation; from mass audiences to niche audiences to individuals. And yet somehow, through it all, the medium seems to remain . . . ordinary, unremarkable, even "taken-for-granted." Television offers a striking case where both the technological platform and its deployment protocols have shifted radically and more or less continually since the late nineteenth century. We've seen the project of the televisual ally itself with platforms such as the telephone, radio, film, and networked computer; and we've seen its protocols include person-to-person communication, entertainment

and news, surveillance, telepresence and so on (not to mention legal and regulatory rule sets). This certainly sets it apart from its far more stable media siblings, which have by and large enjoyed consistency as both platforms and protocols until the digital era.

The admittedly exceptional case of television from the late nineteenth century to the dawn of the digital era (. . . and after) helps to put the challenges posed by digital technologies to traditional media ontology in perspective. If there is a fundamental challenge, it is neither a new one nor an exclusively digitally-enabled one, at least as far as quotidian definitions go. Yes, specialists whose work turns on the materiality of a particular medium or the experiences of its participants must indeed cast about for definitional specificities, and as Lisa Gitelman suggests, they will do best by being quite specific about the time, place and particular configuration of the medium they are studying. But for the culture at large, television's history demonstrates considerable conceptual elasticity. Publics and media industries seem more concerned with the space between expectation and performance than with the niceties of stable technological regimes or social protocols. Attention seems directed to an ever-shifting horizon of expectations, with day-to-day entanglements with the medium's materiality reduced to the simple question of how well they serve this overarching interest. This particular account of the medium's relative stability in the face of fundamental undulations turns broadly on popular reception – medium identity as a cultural perception constructed from a polyphony of voices. And the approaches taken in social construction of technology (SCOT) and actor network theory (ANT) would offer useful (and usefully different) accounts of the processes that bridge social perception and media form and function.

A historian might be inclined to have a slightly different take, namely, that any given present looks back on the past in a highly selective manner, picking and choosing relevant precedents and, in the process, constructing continuities or ruptures. In the case of television, I have argued that the constellation of attributes that we today recognize as something like "television" took shape under very different names (*telectroscope, telephonoscope*), often revealing their conceptual debt to antecedent media technologies. And indeed, the televisual also developed through divergent industrial practices like radio or telephony that tended to pull the nascent medium into their conceptual orbits; it also took conceptual form through theorists like Arnheim and the functionaries in Germany's post and propaganda ministries, who tended to see the medium as a form of radio, telephone or film. The historian might embrace these, as I have, as evidence of a long and complex endeavour to articulate the televisual. They might see this development, as I have, as revealing evidence of intermedial tensions in medium's construction. Or they might challenge fundamentally the relevance of these linkages, finding

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them quite irrelevant to the project of television that would eventually emerge like Venus from the waters after the Second World War. As the practice called television continues to change, we can be sure that future historians will look back on the past and find there many different patterns, endowing some with the status of lineage. And as new media emerge, one can expect some of these same building blocks to be redeployed to construct new lineages. Is Skype a computer artefact that harkens back to Du Maurier's and Robida's interactive communication scenarios, rendering them nineteenth-century antecedents of the computer? Or might Skype be better understood as but the latest instance of the televisual imagination? As historians track the computer's own identity complex back to its precedents, one can be sure that major components of what is now the story of television will be repurposed and redeployed.

"Medium", as noted earlier, is a loaded term, bound up in the vagaries of connecting the living . . . and sometimes the dead. But coming to grips with a medium's identity – particularly an unstable medium or a medium that exists at the intersection of multiple media forms like television and the computer – also poses a daunting challenge. Stephen Heath put it well when he wrote in 1990 on the eve of yet another change in the medium: "One of the main difficulties in approaching television is the increasing inadequacy of existing terms and standards of analysis, themselves precisely bound up with a specific regime of representation, a certain coherence of object and understanding in a complex of political-social-individual meaning."[28] The problem of discursive self-referentiality, of entrapment within a particular definitional domain or media instantiation through our very terms of engagement, strikes me as a core problem in discussing media identity. The problem might perhaps be more productively framed as less one of ontology than of epistemology, of how we know or can know, in what Fredric Jameson called in another context "the prison house of language."[29]

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[28] Stephen Heath, "Representing Television," in Patricia Mellencamp (ed.) *The Logics of Television* (Bloomington: Indiana University Press, 1990), 268.
[29] Fredric Jameson, *The Prison-House of Language: A Critical Account of Structuralism and Russian Formalism* (Princeton: Princeton University Press, 1974).