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## The Future of a Medium Once Known as Television

This article began with an ambition to be a textual mashup, a writerly counterpart to YouTube's aggregation of voices, videos, modes of address, and recycled and repurposed texts. YouTube, after all, stands as an important site of cultural aggregation, whether we consider mashups in the narrow sense (individual videos that make use of disparately sourced sounds and images remixed into a new composite) or the site as a totality, where variously sourced videos, commentaries, tools, tracking devices and logics of hierarchization all combine into a dynamic and seamless whole. A formally recursive article seemed an appropriate way to address and reflect on its textual and metatextual dimensions. And indeed, YouTube contains ample textual material from which to draw, including the Company Blog, Privacy Notice, Terms of Service and of course the rich data generated by YouTube's users in the form of comments. And yet, the more I recombined shards of text, hoping to find a clever way to mashup and repurpose YouTube's words to my analytic ends, the more aware I was of an overarching issue, one that was largely implicit in YouTube's formal organization, that undercut my argument.

YouTube is a creature of the moment. Only four years old as of this writing, it has enjoyed considerable attention, much of it celebratory, emblemizing for some the notion of Web 2.0 and the participatory turn. Its embrace of mashup culture, its openness to textual destabilization and radical recontextualization, and its fundamental reliance on user-generated content all certainly strike a resonant chord. But even more striking is its obsessive pursuit of alchemic chrysopoeia, a binary transmutation of numbers into gold. Google's massive investment in YouTube and its hope of transforming user-generated content into money seems as fraught as the pursuits of the alchemists of old. The

tensions between these two approaches, one deriving from a reconfigured notion of text, property and agency and the other rooted in the old logics of ownership and profit, have for the moment resulted in something that is neither fish nor fowl, at least given the simple conceptual categories that we continue to work with. While YouTube's economic model is indeed predicated on participation, it fails the "2.0 test" since users may only upload—and not download—its videos. Add to this YouTube's EULA, the intrusive logics of its filtering software, its processes for takedowns, its capitalization of user behaviors, and its status as an emblem of Web 2.0 seems more wishful thinking than anything else.

Within four short years, YouTube has found a large participating public, attracted an astounding level of financial investment, and been the subject of mythmaking and hyperbolic celebration. And yet its definitional contours are both contradictory and fast changing. This is attributable in part to its environmental setting. The digital turn has accelerated the challenges to the ontological distinctions among established media, offering both new definitional conceits and new media forms with wide-ranging implications for traditional media. It has informed our understanding of media history, shaping our historical agenda and the questions we put to the past. The digital turn has enhanced our sense of rupture with that past, magnifying our impression of inhabiting a privileged historical moment and our status as witnesses of the new. In the case of YouTube, it has enabled us to look upon a steadily morphing set of technological, social and business practices—some radically innovative and others hopelessly compromised—finding there an emblem of the new.

And so the recursive tale of a radical mashup slowly smothered under too many qualifiers, while the story of YouTube as an experimental practice loomed ever larger. In this article I would like to reflect on YouTube as a set of practices—both corporate and popular—that interrogate our ideas of media and particularly the process of media change. Specifically, I would like to explore YouTube's implications as an experimental laboratory that may have its greatest relevance for the future of the medium currently known as television, and a medium—together with film—that is experiencing its own crisis.

### The Case for Television

"We Won a Peabody! (No Joke)" read the headline on YouTube's April 1, 2009 blog.<sup>1</sup> But even if the date had been different, YouTube might have been genuinely surprised to be included within the domain of the Peabody Award, which has until now focused on terrestrial and cable television and radio. In making its selection, Peabody's award committee noted that YouTube's Speaker's Corner, a "video-sharing Web site [...] where Internet users can upload, view and share clips, is an ever-expanding archive-cum-bulletin board that both embodies and promotes democracy."<sup>2</sup> The worthy cause of promoting democracy, however, neither masks Peabody's struggles with television as a shifting set of technologies and practices (and therefore its own shifting institutional relevance) any more than it does YouTube's relevance for the television medium's future. Peabody may be expanding their remit, moving beyond television and radio in much the same way that Nielsen expanded their audience-metrics service to include the Web, or they may finally be accepting some of YouTube's own rhetorical positioning. Consider the discursive resonance of the "Tube" in YouTube, the trademarked claim to "broadcast yourself," the structuring of content into "channels" and a core business that turns on the distribution of videos.

YouTube is not alone in thinking about television in terms flexible enough to include the Internet. The major American terrestrial and cable-television networks all have their own online operations, in many cases positioned under the umbrella of their transmedia parent companies. CBS Interactive, Fox Interactive Media, Turner (CNN, TNT, TBS, Cartoon Network) and Viacom Digital (MTV, BET, Paramount), plus industry-backed portals such as Hulu (NBC Universal and News Corp.), offer a spectrum of services from providing scheduling information, to channeling fan activities, to providing various levels of access to television shows, films and music. Other portals such as Joost provide an international assortment of television, film and music, and sites such as Mysoju take a more nation- and genre-specific approach, offering access to unlicensed Japanese, Korean and Taiwanese soaps. Although the interfaces and services provided by these various sites differ widely, two things stand out. First, the online presence of television content has been normalized and is growing steadily; second, virtually all mainstream American television programs have been spoken for by their

parent companies, and at a moment of aggressive intellectual property protection, this leaves very little for outside players such as YouTube and Joost.

And yet, according to comScore Video Metrix, more than two of every three Internet users who watched video used YouTube. During the month of January 2009, 100.9 million viewers watched 6.3 billion videos on YouTube.com (62.6 videos per viewer) for a 43 percent market share. Fox Interactive Media ranked a distant second in terms of videos viewed, with 552 million videos (3.7 percent), followed by Viacom Digital with 288 million (1.9 percent) for the month respectively.<sup>3</sup> Viewed more globally, nearly 77 percent of the total US Internet audience watched online video for an average of six hours in January 2009. And although average online video duration is getting longer—from 3.2 minutes in December to 3.5 minutes in January—Megavideo, a portal whose motto is "Your content, your money. We just charge a little fee for bandwidth and coffee," has an average video duration of 24.9 minutes, which is growing quickly. As of January 2009, Megavideo entered the ranks of the top 10 most-viewed sites with 15 percent growth over the previous month.

These data from the start of 2009 can be interpreted in several ways. On one hand, they point to a mismatch between viewer activity and the sites of traditional television content that is easy to dismiss as a sign that television audiences are doing their viewing the old-fashioned way—on television (or the new-fashioned way, through their DVRs), not on YouTube. And indeed, coincident with these Internet metrics, Nielsen announced "TV Viewing Hits All-time High" (Nielsen's numbers include broadcast, cable, DVR time shifts, mobile and Internet). The average American now watches more than 151 hours of television per month.<sup>4</sup> On the other hand, we can also interpret this and other data as showing steady growth of the Internet market, steady growth of the numbers of videos viewed online, and steady growth in the length of those videos. In this regard, it is also interesting to note that cellphone video use has been growing, particularly in the 12- to 17-year-old market, where usage is nearly double that of any other age cohort (and where short form, "casual" viewing is the norm). YouTube's enormous advantage over the nearest television company Internet site may speak to an interest in elements that the competition is not providing—elements, I will argue, that are central to the future of the television medium.

If the networks are largely monopolizing their own television content, then what kind of television is on YouTube? YouTube of course has licensing deals with CBS, BBC, Universal Music Group, Sony Music Group, Warner Music Group and many others, but its content skews towards music from its American partners, as can be seen from the corporate subdivisions that do the actual partnering. CBS, for example, allows access to promotional television material (interviews, previews, program headers), ephemeral material (logos, advertisements), and some historical shows, news and local affiliate coverage. YouTube has responded to the constraints in the entertainment sector by launching what it calls "short-form content": clips of popular prime-time shows like *Lost*, *Desperate Housewives* and *Grey's Anatomy*, as well as behind-the-scenes footage, celebrity interviews, online-only specials. Considering these constraints, YouTube would not be a destination for the viewer seeking standard television fare or formats. But for the trans-brand or trans-network fan, the synoptic viewer and the growing cohort of young cellphone viewers, it is fast providing an array of alternatives from new textual forms to annotation systems, to community-building strategies; all consistent with its user-driven profile.

### Ontological Ambivalence

A look at YouTube's channels recalls Borges' description in his short essay "The Analytical Language of John Wilkins" about the Chinese emperor's encyclopedia.<sup>5</sup> Functions, topics and media forms are jumbled together with "comedy, education, entertainment, film and animation, gaming, music, people and blogs, and sports," vying with one another for attention. Thanks to the just mentioned deals struck with media conglomerates, it serves as a significant cross-media outlet, and a site where content familiar from other media forms is repackaged. YouTube offers a rich set of provocations into larger questions regarding continuity and change in media and specifically interrogates the intermedial mix available in networked computing environments. One could argue that this interrogation process is inadvertent, largely reflecting the uncertainties of a new medium as it struggles to find its own expressive capacities, whether we conceptually frame this uncertainty as remediation or the backward-looking, precedent-bound "horseless carriage" syndrome.

But the confusion evident in today's transmedia industries over where, precisely, a medium begins and ends, seems not unlike that in many media-studies programs. The film-production pipeline, for example, moves between digital and analog, between computer-based and photochemically based, with final release still generally occurring on celluloid, but more often than not with revenue streaming in through DVDs and television exhibition rather than theatrical box office. How then should we think of the film medium—through its technological genealogy? Its participation in legitimizing rituals such as film festivals? The site of its greatest exposure, even if that is television or Internet or the iPhone? Through some circumscribed set of physical parameters or signifying practices—celluloid or a particular length, format or genre? Its discursive claims? Or the conceptual framework that it is afforded by its various publics? The choice is determining, and we know of course that different constituencies may make different selections with different results.

It is this ambiguity, or better, this definitional ambivalence that provides such fertile ground for YouTube. At a moment when the full implications of the digital turn have yet to transform our ways of thinking about moving-image content and our categories of analysis, when the relations between producers and consumers characteristic of the industrial era are slowly being eroded, and when convergent media industries are themselves spreading content across as many platforms as possible, YouTube offers a site of aggregation that exacerbates—and capitalizes upon—that uncertainty.

Along with many of the portals backed by transmedia companies, YouTube continues to rely upon traditional media distinctions as a navigational aid to its users and as a means of appealing to existing communities of interest, while in fact all but flattening the media distinctions in practice. Let's consider the case of film. A best-case scenario appears in the form of the "YouTube Screening Room," where the case for *film* is legitimized by site design—a screen framed by curtains, for instance—holding to a theatrical-style release schedule (two-week runs complete with shorts) and foregrounding where possible the cinematic legacy of its films with evidence that they have played at international film festivals. The "YouTube Screening Room" declares itself to be the "world's largest theater" and part of a new generation of filmmaking and distribution. Other groups, such as aficionados of Super 8mm films

(the Straight 8 team), organize festivals of their favorite films. As they explain it, the “granddaddy of all low-budget formats was popular in the 1960s and 70s for making home movies and is still used in amateur and professional films because of its unique and beautiful characteristics, as well as its extreme affordability.”<sup>6</sup> Despite this historical framing, Super 8’s affinity to YouTube’s project is underscored when grouped together with “analog video, digital video, HD video, Photoshop, computer animation, multimedia formats [...] the list is long enough to keep any enterprising auteur busy for a lifetime.” Nostalgia and aesthetics combine to legitimize YouTube as part of a much longer amateur trajectory. From the echoes of cinema-style theatrical release, to format-specific appeals to the amateur movement, to festivals, the development teams at YouTube work through familiar categories while in fact offering far more than simply the film artifact itself—or in many cases, without even offering the artifact itself! Consider for example YouTube’s promotional blurb for The Sundance Film Festival:

The Sundance Film Festival recently launched a YouTube channel that allows all of you movie enthusiasts to get a glimpse of what took place during the 25th anniversary year of the influential festival. For those of you interested in the filmmakers behind the films, there’s the “Meet the Artists” playlist, featuring interviews with filmmakers from around the world and clips of the films that brought them to Sundance. If you’re looking for coverage on the ground—from premieres to parties and more—you can check out the Live@Sundance segments. And to hear what some of the film industry’s leading thinkers had to say about the state of the business today...<sup>7</sup>

Although in most cases we are only given access to “clips of the films that brought them to Sundance,” the trappings of the festival constitute the main event and are covered in their full glory. Just as in the example of its “short-form” approach to mainstream television, YouTube has seized the periphery, providing access to the scene even more consistently than to the films (or television shows) themselves.

The game channels operate in similar fashion. Games, by definition interactive, are watchable rather than playable in the YouTube context. The various channels provide walkthroughs, commentaries, trailers, previews, sneak peeks, cheats, highlights and event coverage across the various gaming platforms. These elements are the topic of much

commentary, effectively reinforcing the community-building strategies that seem to lurk behind the event coverage “peripheral” to television shows and films. The music channels by contrast are able to deliver both music and videos, providing something like MTV-on-demand with a few bonuses. The curatorial act is embodied in algorithmic correlations of user interest patterns as well as in community recommendations, both serving to address taste formations in quite a different way than mere alignment with a VJ’s profile. And the act of commodification, of transforming listening and viewing pleasure into a purchase, is prompted by on-screen reminders to “click here” if we want to pay for and own the music. Unlike television and games, where the core artifacts are largely absent and peripheral activities are provided in abundance, in the case of music, playback is permitted and a broader array of affordances addresses both the scene (interviews, reviews, behind-the-scenes peeks and so on) as well as the industry’s interests in the pinpoint targeting of potential customers and sales.

### But Is It Television?

At a moment when, in the wake of Janet Jackson’s 2004 “wardrobe malfunction,” live television broadcasts have been ended in the United States, when most viewers perceive television as something coming through a cable rather than the ether, and when increasing numbers of people are using DVRs and DVDs to pursue their own viewing habits, the medium’s definition is in a state of contestation. Much as was the case with the discussion of film, definition turns on the parameters that we privilege as essential and distinguishing. Television, more than film—which has enjoyed a relatively stable century—has been through a series of definitional crises over its long history. Indeed, how we even date the medium and where we chose to locate its start reveals much about how we have chosen to define it.<sup>8</sup> But there is no escaping the slippery slope on which we tread today.

One of the oldest elements in television’s definition was its potential for liveness. It defined television conceptually in the 19th century, distinguished it from film for much of the 20th, and although it has largely been supplanted by video in order to enhance the medium’s economic efficiencies, liveness (even in the era of the seven-second delay)

nevertheless remains a much touted capacity. Even slightly delayed, televised sports events, breaking news and special events attest to the medium's conceptual distinction from film, which was, for the duration of its photochemical history, emphatically not live.

YouTube, like film, misses the capacity for televisual liveness. This is not to say that it doesn't at times seek to simulate it. For example, as I write this, YouTube has been auditioning interested musicians for the YouTube Symphony Orchestra by having them submit video introductions and performances of a new piece written by Chinese composer Tan Dun. The videos were posted and voted upon over the period of a week, and the winners invited to travel to New York to play at Carnegie Hall under the direction of Michael Tilson Thomas, complete with a mashup video of the submissions as a backdrop. The selection process played out with a few days of "real" time, and the recursive mashup did its best to keep the time frame tight. While a useful experiment in using YouTube to create a real-life event, televisual liveness was almost never an issue.<sup>9</sup> In fact, if one searches on YouTube for live television, one is prompted with subcategories such as "bloopers, mistakes, accidents, gone wrong, and fights"—indications that liveness is understood by YouTube's minions as an excess of signification that cannot be cleaned up, edited away or reshot.

Flow constitutes another key concept in television, first articulated by Raymond Williams in 1974 and reiterated ever since by the medium's theorists.<sup>10</sup> As with liveness, it can certainly be circumvented through the use of videotape, DVRs and video-on-demand, but by and large it remains present as a potential. Television adheres to the same notions of flow that characterized the earliest days of broadcasting: a temporally sequenced stream of program units constantly issues forth from the programmer, and audiences may dip in and out as they choose. YouTube, like film in the time-based domain—but also like libraries—lacks flow in this sense, offering instead a set of equivalently accessible alternatives at any given moment. Underlying this distinction is a key conceptual difference between television as heterochronic and YouTube as heterotopic. The term heterochronia traditionally refers to certain medical pathologies characterized by irregular or intermittent times (the pulse), or erratic developmental sequence (organ growth). This notion of displacements in time or the vitiating of sequence was picked up by Foucault as something of a temporal extension of his notion of *heterotopia*. The latter term

denotes for Foucault sites with a multiplicity of meanings, defined by uncertainty, paradox, incongruity and ambivalence; sites best exemplified by long-term accumulation projects such as libraries and museums; sites for which he suggested a temporal corollary: *heterochronia*.<sup>11</sup> An evocative term as much for its weak definitional status as for its promise, heterochronia is a term I would like to define between its diagnostic roots (the vitiating of sequence, displacements in time) and Foucault's institutional setting. Like museums and libraries, television is a space of accumulated artifacts that are endlessly recombinatory.<sup>12</sup> Unlike them, however, and this is a crucial distinction from Foucault's meaning, television's recombinatory process plays out as flow, as a structured linear sequence over *time*. YouTube's place in this is somewhat ambivalent.

Like the difference between collage and montage, a similar principle (the compositing of differently sourced artifacts) works to a very different effect along a durational axis. Collage, in which visual elements from various provenances and with different histories are uprooted and combined in a new composition, is certainly a radical recombinatory act. The resulting whole is greater than the sum of its parts, and many collages exploit the dissonance of source, materiality and referenced temporality to great effect. But montage, the *durational* assemblage of divergent materials, relies upon sequence and ever-changing context for its effect. While it is certainly the case that users of YouTube experience their texts over time, often viewing multiple videos and therefore generating sequential context for individual videos, there is a significant shift in agency (producer-controlled flow as distinct from user-generated flow), and a shift from flow as default to flow as a condition that requires active selection. In this, YouTube looks very much like the DVR-mediated television experience.

Another recurrent element in the definition of television regards its ability to aggregate dispersed publics. Although this vision can be traced back to the medium's postwar institutionalization and reflects its inheritance from broadcast radio, it has roots in the late 19th century. In its earliest manifestations, television was imagined as a point-to-point, person-to-person medium akin to the telephone, but bolstered by a number of public functions such as news and entertainment.<sup>13</sup> In a certain sense, we have come full circle: from the broadcast era where large publics were the norm, through a period of deregulation at which point cable, satellite and VCR helped audiences to sliver into ever smaller

niches. While not yet individualized (our webcams have shouldered that burden), we inhabit a moment where the steady erosion of the mass viewing public has created anxiety in political terms regarding the future of television as a collective mode of address.

YouTube and the emergent practices referred to as IPTV, Internet-protocol television, might be seen as the final straw, fragmenting the cable era's slivers into atomic particles and pushing our expectations and definitional conceits regarding television to the breaking point. YouTube, however, has launched a number of initiatives that seek to restore notions of collectivity. The comments feature enables users to respond to videos and interact with one another by exchanging reactions and links. Videos can be easily shared and recommended to friends, constructing objects of common interest. Interest groups and sub-channels draw together communities of participation and shared enthusiasms. YouTube's collaborative annotation system enables users to invite people to create speech bubbles, notes and spotlights on their videos, providing a site of interaction and collaboration. And as in the case of the YouTube Symphony Orchestra and the New York-based collective Improve Everywhere's videos such as "No Pants Subway Ride" and "Frozen Grand Central Station," YouTube even serves as a catalyst for gatherings and community activity in the physical world.



1 "No Pants Subway Ride" - January 2009

Liveness, flow and aggregated publics, while long-term concerns and even definitional components of television, have also modulated in response to social needs and available technologies. Over the past 130 years, television has been imagined and deployed as a set of practices that make use of a shifting technological base, including the telephone, radio, film and, most recently, the networked computer. Each of these *dispositifs* brought certain affordances to light, and each inflected these concepts in distinctive ways. YouTube emblemizes a set of inflections and modulations that address the role of the most recent transformation of television's *dispositif*—the shift to networked computer technologies. Its notion of liveness is one of simulation and "on demand"; its embrace of flow is selective and user-generated; and its sense of community and connection is networked and drawn together through recommendation, annotation and prompts.

### YouTube as Next-generation Television?

From what we have already seen, YouTube's focus on the "periphery" of what has long been held as the center of attention—the television show or the film—positions it to play a key role in helping to construct meaning, communities of interest, and the frameworks of evaluation so important to the cultural experience. Especially as our creative economies shift to more user-generated content, destabilizing the long monopoly of media industries as the exclusive producers of texts and authorized conduits of interpretation, YouTube seems to have adroitly taken on the broader space where social meaning and cultural value take form. This choice may well have been inadvertent, since the film and television industries have been reluctant to let go of their products, leaving YouTube hollow where it might otherwise have been filled with traditional texts. The established industries have instead chosen to develop their own online portals. But those portals resemble a robust DVR more than anything else, with archives of program episodes surrounded by strategic appropriations from YouTube. The latter, by contrast, has emerged as a dynamic experimental forum built around shared information—some of it promotional, some of it synoptic texts, some of it fan commentaries, parodies and mashups.

To be clear, I do not want to suggest that the text, and particularly the professionally produced media text, is dead. The content industry will certainly continue to survive and change, just as questions about culture and ownership will continue to be asked. Nor do I want to stuff YouTube with all of its radical potential into an old media category. The point is rather that the industrial era of television, with us since the early 1950s, is fast changing under pressure from the disaggregation of content from media platforms characteristic of today's cross-media industries, and as a response to bottom-up appropriations of the affordances of networked computers and various mobile devices. This doesn't pose a threat to the concept of "seeing at a distance" that has long characterized television so much as to the institutional logics that have held it in a vice grip over the past few decades. If anything, the television industry has stuffed itself into an unnecessarily small conceptual space, and YouTube is providing a set of radical alternatives. YouTube has successfully (again, if inadvertently) sidestepped the industrial-era artifacts of the 30- and 60-minute program formats; it offers relatively transparent usage metrics; it provides a mix of voices including corporate, governmental, NGO and public; and it seems particularly persistent about targeting community engagements. In each case, YouTube is making use of network affordances, unlike its industrial counterparts who are using the network as little more than a data dump and alternate channel.

Initiatives such as YouTube Senator/Representative of the Week, offering officials an opportunity to weigh in on "important issues facing Congress right now," are designed to elicit debate and participation. So too "one of the coolest, unintended outcomes of the site's existence," YouTube EDU provides "campus tours, news about cutting-edge research, and lectures by professors and world-renowned thought leaders [...] from some of the world's most prestigious universities, including IIT/IISc, MIT, Stanford, UC Berkeley, UCLA, and Yale."<sup>14</sup> New alliances and natural affiliations are given voice with user channels such as Survival Of The Fastest, an initiative from the London Business School, The Daily Telegraph and Google, designed to showcase "insights and inspirational ideas from some of the best business brains in the UK." The *Today in History* series invites exploration of the archive, contested notions of public memory, and debates over the meaning of the past. In these sectors and many more like them, YouTube can be seen experimenting with existing social processes (education, politics,

the construction of history), institutions and visions, offering new outlets, enhancing its own centrality as an all-purpose portal, and learning as it does so.

### Epilogue: "YouTube on Your TV"

Regarding the future of television, let's step back and take a long view of the medium: one stretching back to the interactive, point-to-point television envisioned in the late 19th century (like the telephone); one reconfigured as a ubiquitous domestic appliance (like radio); one functioning as an event-driven, visually rich spectacle (like cinema); and today, one taking advantage of the affordances of networked computers. Framed within this perspective, YouTube's limits as an exemplar of mashup culture and Web 2.0 may be precisely its strengths as a transitional model to next generation television.

On January 15, 2009, YouTube's company blog announced a beta version of YouTube for Television: "a dynamic, lean-back, 10-foot television viewing experience through a streamlined interface that enables you to discover, watch and share YouTube videos on any TV screen with just a few quick clicks of your remote control. [...] Optional auto-play capability enables users to view related videos sequentially, emulating a traditional television experience. The TV website is available internationally across 22 geographies and in over 12 languages." The beta version relies on Sony PS3 and Nintendo Wii game consoles, but YouTube has thrown down the gauntlet, and announced that it plans to expand its platform interfaces. Emulation as a strategy may yet come full circle.

Endnotes

- 1 Unless otherwise noted, all quotes are from the YouTube Company Blog for the date noted.
- 2 See the Peabody Award website – [www.peabody.uga.edu/news/event.php?id=59](http://www.peabody.uga.edu/news/event.php?id=59) [last checked 15 April 2009].
- 3 *MarketingVOX*, "YouTube Tops 100M Viewers, Fuels 15% Online Video Jump," 6 March 2009 – [www.marketingvox.com](http://www.marketingvox.com).
- 4 For a discussion, see Nielsen-Online, *Television, Internet and Mobile Usage in the US: A2/M2 Three Screen Report* (3rd quarter, 2008); as well as Alana Semuels, "Television Viewing at All-Time High," *Los Angeles Times*, 4 February 2009.
- 5 Jorge Luis Borges, *The Analytical Language of John Wilkins* (Austin: University of Texas Press, 1993). Borges refers to a Chinese emperor's encyclopedia in which animals are divided into: (a) those that belong to the emperor, (b) embalmed ones, (c) those that are trained, (d) sucking pigs, (e) mermaids, (f) fabulous ones, (g) stray dogs, (h) included in the present classification, (i) those that tremble as if they were mad, (j) innumerable ones, (k) those drawn with a very fine camelhair brush, (l) others, (m) those that have just broken a flower vase, (n) those that resemble flies from a distance. See also the preface to Michel Foucault, *The Order of Things, An Archaeology of the Human Sciences* (New York: Vintage Books, 1970).
- 6 See [www.youtube.com/blog](http://www.youtube.com/blog), 20 February 2009.
- 7 Ibid.
- 8 William Uricchio, "Contextualizing the broadcast era: nation, commerce and constraint," in *Annals of the American Academy of Political and Social Science* (forthcoming in 2009).
- 9 An important exception in this regard is the YouTube Live Channel – [youtube.com/live](http://youtube.com/live). Despite the discursive claim, the channel only simulated liveness in order to promote YouTube (and YouTube celebrities). All clips originated with "YouTube's first ever live streamed event—November 22, 2008."
- 10 Raymond Williams, *Television: Technology and Cultural Form* (London: Fontana, 1974); see also William Uricchio, "Television's next generation: technology / interface culture / flow," in *Television After TV: Essays on a Medium in Transition*, eds. Lynn Spigel & Jan Olsson (Durham, NC: Duke University Press, 2004), pp. 232–261.

- 11 See Foucault 1970, and Foucault's article "Different Spaces," in Michel Foucault, *Essential Works of Foucault 1954–1984* (London: Penguin, 1998), pp. 175–189.
- 12 "Museums and libraries are heterotopias in which time never ceases to pile up and perch on its own summit, whereas in the seventeenth century, and up to the end of the seventeenth century still, museums were the expression of an individual choice. By contrast, the idea of accumulating every-thing, the idea of constituting a sort of general archive, the desire to contain all times, all ages, all forms, all tastes in one place, the idea of constituting a place of all times that is itself outside time and protected from its erosion, the project of thus organizing a kind of perpetual and indefinite accumulation of time in a place that will not move—well, in fact, all of this belongs to our modernity." Foucault 1998, p. 182.
- 13 See for example Albert Robida, *La vingtième Siècle* (1883) and his vision of the telephonoscope as a means of transmitting public news and entertainment.
- 14 See [www.youtube.com/blog](http://www.youtube.com/blog), 27 March 2009.