In Focus: Digital Scholarship and Pedagogy

edited by Tara McPherson

Introduction: Media Studies and the Digital Humanities

by Tara McPherson

In the spring of 2008, the National Endowment for the Humanities converted its Digital Humanities Initiative to the more permanent Office of Digital Humanities. Along with other leadership organizations like the Mellon Foundation and the American Council of Learned Societies, the NEH actively promotes new digitally enabled forms of research, publication, and pedagogy. Such emerging paradigms respond to ongoing shifts in an increasingly (if unevenly) networked public culture, seeking to adapt for scholarly gains the core technologies and social practices unfolding in online spaces ranging from Wikipedia to YouTube to Second Life.

Of course, what is now called the "digital humanities" is not a new development. Indeed, a small subset of humanities scholars have been actively engaged in working with computer technology for over twenty years. Nonetheless, these "computing humanists" sometimes labored in relative isolation from the questions that animated research in other aspects of their home disciplines, particularly work derived from interpretative frameworks or from poststructuralist theories. Their efforts often concentrated on archiving, digitizing, and preserving the human record, i.e., on large infrastructural projects that could seem more the terrain of libraries than of "scholarship proper." More recently, we have seen an explosion of what I might call the "blogging humanists"—folks very interested in the hopes for participation promised by emerging Web 2.0 technologies. Faced with severe cutbacks at academic presses and dated systems for peer review, this second breed of digital humanists port the words and monographs of humanities scholarship to networked spaces of conversation and dialogue. They envision new modes of connection and peer-to-peer conversation, and text often remains the lingua franca of their scholarly productions.

Through the decades, this humanities computing work has been quietly building momentum; the scholarly fields of media studies, visual studies, and digital studies have exploded, producing valuable insights into the epistemological,

phenomenological, ethical, and cultural dimensions of the visually intense and media-rich worlds we inhabit. Indeed, some of today's most cutting-edge humanities research takes up questions of visual and aural culture and of the emotions. Nonetheless, we have been slow to explore the potential of interactive, immersive, and multimedia expression for our own thinking and scholarship, even as we dabble with such forms in our teaching. With a few exceptions, we remain content to comment *about* technology and media, rather than to participate more actively in constructing knowledge *in and through* our objects of study.

The time is now ripe to join the insights of decades of film and media studies with the new modes of information management, visualization, and dissemination that digital technologies are enabling. Who better to reimagine the relationship of scholarly form to content than those who have devoted their careers to studying narrative structure, representation and meaning, or the aesthetics of visuality? Who better to address the utopian registers of much popular commentary on technology than historians of media and scholars of political economy? In the late 1990s, fueled by the siren call and profit-driven dreams of "distance learning," administrators at many of our universities reduced the role of the humanities scholar to "content provider" for the digitally enhanced university. In this scenario, our lectures and research would populate their information systems. I am here suggesting that we should reject this limited role for the humanities scholar and instead fully engage with the platforms and tools of the digital era. This will require new forms of collaboration and engagement that may push us beyond our scholarly comfort zones. It also means rethinking our allegiance to print as the only (or even the primary) outcome of our scholarly endeavors.

One potentially rich space for action for the media studies professor is in a third variant of the digital humanities, the multimodal scholar. This third type of digital humanist in effect blends many of the desires and goals of the other "early adopters," the computing humanist and blogging humanist. This emergent breed, the multimodal humanist, brings together databases, scholarly tools, networked writing, and peer-to-peer commentary while also leveraging the potential of visual and aural media that so dominate contemporary life. This multimodal scholar complements rather than replaces other types of digital humanists, expanding the scope and reach of the field. She aims to produce work that reconfigures the relationships among author, reader, and technology while investigating the computer simultaneously as a platform, a medium, and a visualization device. She thinks carefully about the relationship of form to content, expression to idea.

The multimodal scholar explores new forms of literacy that include authoring and analyzing visual, aural, dynamic, and interactive media. She also takes her cues from popular culture, imagining what it would be like to immerse yourself in a scholarly argument as you might immerse yourself in a movie or a video game. She investigates what happens when scholarship looks and feels differently, requiring new modes of engagement from the reader/user. She takes seriously such

questions as "How do you 'experience' or 'feel' an argument in a more immersive and sensory-rich space?" "Can scholarship show as well as tell?" "Will representing data differently change the ways we understand, collect, or interpret it?" "What happens to argument in a nonlinear environment?"

This is more radical than simply arguing that we should publish our work online. It is an argument that hands-on engagement with digital forms reorients the scholarly imagination, not because the tools are cool or new (even if they are) or because the audience for our work might be expanded (even if it is), but because scholars come to realize that they understand their arguments and their objects of study differently, even better, when they approach them through multiple modalities and emergent and interconnected forms of literacy. The ability to deploy new experiential, emotional, and even tactile aspects of argument and expression can open up fresh avenues of inquiry and research.

For instance, the multimodal scholar explores the power of the database for organizing and presenting research. It might seem counterintuitive to argue that using a database can free a scholar to reach new insights, but the database can be quite amenable to the interpretative humanities. In the course of writing a traditional scholarly monograph, humanities scholars typically sort and re-sort large volumes of collected evidence or data, from primary archival documents to citations of other scholarship to careful textual analyses. The book requires that we organize this material in subordination to a linear spine, often meaning that certain trajectories or trains of thought get pared off or eliminated. The database opens up new modes of data organization. Our carefully collected evidence can now be animated in new ways, allowing us to present multiple lines of thought in relation to the materials at hand and to invite others to join us in this process in extended collaboration and conversation. Working with databases allows us both to present our arguments differently *and* to understand our materials differently. Thus, the database might itself be understood as an interpretative platform that can support and extend the core methodologies of the interpretative humanities, including film and media studies.

Such a process taps into the very pleasures and affordances of the digital, repurposing them for scholarly gain. Consider the ways you interact with the digital in the most mundane of scenarios. When I book a ticket through Expedia, surf the bounty of shoes at Zappos, or obsessively search for signs of life in the southern California housing market on Zillow, I interact with data in malleable and mutable ways, sorting again and again by price, by neighborhood, by departure date, by color. With each click and sort, I slice through reams of data, offering up new views on large data sets. This multiperspectival quality (as well as the new visualization processes that can render it meaningful) also has possibility for scholarly knowledge production. A deep engagement with databases and algorithms allows humanities scholars to formulate new research questions. When working with the flexible form of the database, scholars reimagine connections between research

and analysis that are not necessarily based on the structure of a linear argument, but may be multiple, associative, digressive, even contradictory. Thus, the role of computation in the humanities is about much more than building robust archives that scholars then write about in traditional ways (as rich as that work can be); it is also about navigating new pathways through scholarly materials that can transform the questions scholarship might ask.

Beyond the database, emerging and existing computing technologies allow us to imagine very different scholarly "outputs" at the surface of the screen—we might create powerful simulations, visualize space and time in compelling ways, or structure data that the user can then play like a video game, richly annotate on the fly, or capture and represent in interesting new ways. Exploring database thinking and creating new genres of argument produce new relationships for scholars: to our objects of study, our methodologies, and our potential collaborators. They also reconfigure our understandings of technology's role in the humanities (and vice versa), and, often, to broader publics in and outside of the academy. The stakes are too high to leave the processes of and possibilities for filtering and visualization solely to Google and Microsoft.

The contributors to this In Focus all map a rapidly shifting mediascape and share a tone of urgency, even while the various conclusions drawn occupy different zones on a continuum of possibility and optimism. All also write from the perspective of having walked the walk of digital scholarship and pedagogy, here drawing out some key lessons from their individual experiences. Kathleen Fitzpatrick takes on the academic sacred cow of peer review to argue for less hidebound modes of accountability. Drawing on her work with MediaCommons and the Institute for the Future of the Book, she urges us to privilege filtering over gatekeeping and to think carefully about what may be motivating our resistance to change. The founders of the online forum *Flow*, Avi Santo and Christopher Lucas, present the results of an online survey investigating the attitudes of media studies scholars toward digital publishing. They consider the potential reach of emerging forms of digital scholarship, asking how we might usefully engage nonacademic communities through online publication.

John Hartley zooms out to a long take on the history of print to ask hard questions about the divisions of knowing from doing in media and film studies. He urges us to rethink a series of seemingly intractable divides and polemically demands a new form of "cultural science." Rather than banning students' access to sites like Wikipedia, Hartley demands we directly engage them. Alexandra Juhasz did just that, teaching an entire course *on and through* YouTube in the fall of 2007, an undertaking that attracted a good deal of mainstream interest. Juhasz's contribution powerfully reminds us both of the constraints of print and, more importantly, of commercial media.

The final two pieces in this section push beyond print to explore the possibilities of the visual and of the database for digital scholarship. Anne Friedberg

reflects upon the differences between the page and the screen, arguing that each has its specificities and its strengths. In describing the "translation" of her book *The Virtual Window* to an interactive platform, she underscores what the digital did and did not allow while pointing toward the importance of collaboration for multimodal scholarship. Finally, Sharon Daniels ties together many of the through-lines of this section in reflecting on her own digital projects. Her work pushes far beyond the monastic model of the humanities scholar as lonely scribe, asking us to consider what our scholarship can *do* in the world. In limning the relations between research and activism, privilege and oppression, theory and art, public and private, Daniels's practice reminds us that neat divides between the "real" and the "virtual" are illusory. She instead models a hybridity that shimmers with the possibility of a more just future.

Each of these authors is engaged in multimedia practices (as am I, in the electronic journal that I edit, *Vectors*). In this early stage of digital scholarship and pedagogy, many of our experiments might seem tentative or difficult, less "complete" than the final "product" of the book. Partially, this is because these undertakings destabilize familiar genres and demand new forms of literacy, skills we are only now learning to grasp and to teach. Partially, this is because hybrid communities of practice are only now beginning to emerge in the scholarly realm. But to fixate on the "current state" of these emergent forms is really to miss the point.

What is most important about these networked experiments in mediated and multimodal expression are the actual acts of making or producing that they enable as well as the new kinds of social behavior and collaboration they engender. In a different realm, this is equally true of a space like YouTube. The videos collected there may often be amateurish or even silly, but the videos themselves are not the most interesting thing about the space. The practices facilitated via YouTube instigate a shift in how consumers understand their relationship to media products and also encourage a networked, public mode of visual expression. We need to provide a platform for similar experimentation for the scholar, creating a valuable place for creativity, critique, and collaboration that exists in dialogue with more commercial forms while also pushing beyond them. Media and film scholars should be working with technologists, presses, policy makers, and librarians to shape the very contours of the technologies we will use to imagine, produce, and disseminate our scholarly work in years to come. Our field has taught us that technologies are not neutral tools, and that they powerfully influence social systems. Thus, it is imperative that we be involved in the design and construction of the emerging networked platforms and practices that will shape the contours not only of our research, but of social meaning and being for decades to come.

Peer-to-Peer Review and the Future of Scholarly Authority

by Kathleen Fitzpatrick

For the last two years, I have worked in collaboration with the Institute for the Future of the Book, my colleague Avi Santo, and a range of prominent scholars in media studies, on the development of MediaCommons, an all-electronic scholarly publishing network. We have planned, we have blogged, we have held meetings, we have tested some small-scale implementations of the technologies the full network will employ, we have published a few test-run articles—and in all of the feedback that we have received, in all of the conversations we have had with scholars both senior and junior, both beginning and established, one question has repeatedly resurfaced: What are you going to do about peer review?

I have suggested elsewhere that peer review threatens to become the axle around which the whole issue of electronic scholarly publishing gets wrapped, like Isadora Duncan's scarf, choking the life out of many innovative systems before they are fully able to establish themselves.[1] This is a flippant response, to be sure; concerns about peer review are understandable, given that peer review is in some sense the *sine qua non* of the academy. We employ it in almost every aspect of the ways that we work, from hiring decisions through tenure and promotion reviews, in both internal and external grant and fellowship competitions, and, of course, in publishing. The work we do as scholars is repeatedly subjected to a series of vetting processes that enable us to indicate that the results of our work have been scrutinized by authorities in the field, and that those results are, therefore, themselves authoritative.

But, as authors including Michael Jensen of the National Academies Press have recently argued, the nature of authority is shifting, and shifting dramatically, in the era of the digital network.[2] Scholars in media studies have avidly explored such shifts as they affect media production, distribution, and consumption, focusing on the extent to which, for instance, bloggers have decentralized and even displaced the authority structures surrounding traditional journalism, or the ways that a range of phenomena including mash-ups and fan vids have disrupted the previously assumed hierarchies that existed between media producers and media consumers, or the growing tensions in the relationship between consumers, industries, and industry regulators highlighted by file-sharing services and battles with the RIAA. These changes are at the heart of much of the most exciting and influential work in media studies today, including publications such as Siva Vaidhyanathan's *The Anarchist in the Library*, Henry Jenkins's *Convergence Culture*, and Yochai Benkler's

The Wealth of Networks, projects that have grown out of an understandable interest in the extent to which the means of media production and distribution are undergoing a process of radical democratization in the Web 2.0 era, and a desire to test the limits of that democratization.

To a surprising extent, however, scholars have resisted exploring a similar sense in which *intellectual* authority might likewise be shifting in the contemporary world. One might see such a resistance manifested in the often overblown academic response to Wikipedia, which often indicates a serious misunderstanding about the value of the project. Treating Wikipedia like any other encyclopedia, by consulting only the entries, as John Seely Brown has been heard to say, runs the risk of missing the point entirely, as the real intellectual heart of the project lies in the history and discussion pages, where one can see the controversies inherent in the production of any encyclopedia entry enacted in public, rather than smoothed over into an untroubled conventional wisdom.[3] Centralized projects like Citizendium, which seek to impose traditional, hierarchical modes of authority on a site like Wikipedia,[4] ignore the fact that, first, the wiki is in its very architecture a mode of ongoing peer review, and second, that not only the results of that review, but the records of its process are available for critical scrutiny. Failing to engage fully with the intellectual merits of a project like Wikipedia, or with the ways in which it represents one facet of a far-reaching change in contemporary epistemologies, is a mistake that we academics make at our own peril. As one librarian suggests, "Banning a source like Wikipedia (rather than teaching how to use it wisely) simply tells students that the academic world is divorced from real-world practices."[5] The production of knowledge is, of course, the academy's very reason for being, and if we cling to an outdated system for the establishment and measurement of authority at the very same time that the nature of authority is shifting around us, we run the risk of becoming increasingly irrelevant to the dominant ways of knowing of contemporary culture.

For this reason, what I am absolutely *not* arguing is that we need to ensure that peer-reviewed journals online are considered of equivalent value to peer-reviewed journals in print; in fact, I believe that such an equation is instead part of the problem I am addressing. Imposing traditional methods of peer review on digital publishing might help a transition to digital publishing in the short term, enabling more traditionally minded scholars to see electronic and print scholarship as equivalent in value; but it will hobble us in the long term, as we employ outdated methods in a public space that operates under radically different systems of authorization. Instead, we must find ways to work with, to improve, and to adapt those new systems for scholarly use—but we must also find ways to convince ourselves, our colleagues, and our institutions of the value that is produced by the use of such systems.

Such is the focus of the book-length project I am currently working on: not the technical changes that I would argue are necessary for ensuring that scholarship

survives well into the twenty-first century, but rather the institutional and social changes that must precede such technological change in order for it to take root. In the process of writing the chapter that focuses on peer review, however, I have discovered that there has been surprisingly little scholarly exploration of the history and function of peer review in the humanities, in contrast to the overflow of such studies in many of the social and natural sciences. To some extent, this discrepancy may have to do with methodological differences in these fields; studies of peer review often involve a form of data-gathering and analysis that is not part of the usual humanist skill set. But there may also be a more troubling factor involved in the dearth of work on intellectual authorization in the humanities; critical studies of the epistemological practices of peer review require a form of self-analysis that, as Donald Hall has argued in *The Academic Self*, many of us resist. Our resistance might suggest an underlying anxiety about the outcome of the analysis, a potential concern that the time-honored procedures and standards that guide our work might be shown to be flawed—and thus that the humanities might be even further marginalized within the academy's mission of knowledge-production than they already are. However, as Hall argues, genuinely "owning" our careers and the ways in which we conduct them requires taking the risk of applying our critical skills to an examination of "the textuality of our own profession, its scripts, values, biases, and behavioral norms."[6] In the academy—as goes the joke about defenders of tradition in many realms—too many attitudes may be summed up in a mere eight words: "We have never done it that way before." The apparently intractable nature of the way things have always been done is precisely the kind of signal that, in other institutions, impels us to critical analysis; a refusal to turn such a critical eye on our own seemingly naturalized assumptions may create (or deepen) an atmosphere of intellectual oppression and stultification, as we allow systems in which we do not genuinely have faith to dictate our engagements with the world, and with one another. Opening up the basis of those engagements through a thorough reconsideration of peer review may be precisely what we need in order to allow our work to help shape the ways of knowing of the contemporary world.

Resistance to considering the merits of a mode of publishing freed from the gatekeeping function of peer review often runs something like that expressed—in, I assume, an intentionally hyperbolic fashion—by David Shatz:

> It is hard to say who would have the biggest nightmare were open review implemented: readers who have to trek through enormous amounts of junk before finding articles they find rewarding; serious scholars who have to live with the depressing knowledge that flat earth theories now can be said to enjoy "scholarly support"; or a public that finds the medical literature flooded with voodoo and quackery. Let us not forget, either, that editors and sponsoring universities would lose power and prestige even while their workload as judges would be eliminated.[7]

The vehemence of such resistance reveals something about the nervousness of those who express it, and as in much psychotherapeutic discourse, it is only after

some initial projection and displacement that the real source of that anxiety comes out: the loss of "power and prestige."[8] Not only does peer review as it is currently practiced ostensibly ensure that only the best work makes it into circulation—already a debatable assumption, and one that has been subjected to much critique in other fields—but gatekeeping itself is a source of significant privilege.

It is in this regard that Mario Biagioli, one of the few humanists to take on a thorough critique of assumptions about peer review, compellingly argues for an understanding of the practice as not simply productive of the borders of an academic discipline, but as itself a disciplinary technology in the Foucauldian sense, a mode of defining what is thinkable that is "simultaneously repressive, productive, and constitutive" of academic ways of knowing.[9] He pertinently points out a key distinction between Foucault's disciplinary reference points in medicine and the prison, however, and the discipline of peer review, as only in the academy do we find "that the roles of the disciplined and the discipliner are often reversed during one's career."[10] Peer review thus functions as a self-perpetuating disciplinary system, inculcating the objects of discipline into becoming its subjects. After all, those who manage the current system of peer review are those who have successfully negotiated it, granting an enormous inertia to the status quo.

Of course, there have been a number of experiments with changing the structure of peer review, particularly within the sciences, including the extremely cautious open review trial conducted by *Nature*, which, as I have written elsewhere, seems to have been intentionally set up to fail.[11] Alongside this trial, however, the editors of other journals, such as *Electronic Transactions on Artificial Intelligence* and *Atmospheric Chemistry and Physics*, described their long-standing review processes that take advantage of the interactive technologies of the Web in order to blend open, collegial discussion of submitted papers with more traditional editorial vetting. These innovations have resulted in two-stage processes that serve both the quality-control purposes scholars expect of peer review and the crucial communication among peers that traditional review often elides.[12]

I would argue that it is this communication, and the scholarly growth that can result from it, that must become the focus of Web-native modes of peer review, allowing, as does Wikipedia, not just the results of our research and vetting processes, but the very processes themselves to become an open, accessible part of the published record. Noah Wardrip-Fruin's recent experiment with the community-based peer review of his book manuscript, "Expressive Processing," for instance, suggests the value for authors in making such processes public. Wardrip-Fruin, in his reflections on the review process, noted that "the blog-based review form not only brings in more voices (which may identify more potential issues), and not only provides some 'review of the reviews' (with reviewers weighing in on the issues raised by others), but is also, crucially, a conversation."[13] As a conversation, blog-based review can determine the status of scholarly work not through its successful navigation of a gatekeeping process, but rather through the

networked interactions of its authors and readers, thus replacing the mere existence of the published text as the dominant sign of its authority with the reception and uses of that text.

The key to such new modes of authorization is a shift from traditionally understood peer review to peer-to-peer review. In conventional peer review, the "value" of texts is determined through a process of gatekeeping designed for an economics of scarcity, in which a limited number of pages, or journal issues, or monograph volumes can be published; these constraints require that publishers ensure that resources be reserved for only the very best material. Peer-to-peer review acknowledges that the Internet exists instead within an economics of abundance, in which there is no upper limit on the number or size of texts that may be published. What has become scarce, instead, is time and attention, and what is thus needed is not gatekeeping, but filtering, a community-based process in which groups of scholars determine for themselves the most important texts in their subfield. As Cory Doctorow has said of the digital sphere, it "isn't a tragedy of the commons; this is a commons where the sheep s*** grass—where the more you graze, the more commons you get."[14] The appropriate mode of dealing with such abundance is not fence-building, but rather careful community cultivation.

I do not claim to know exactly what a successful peer-to-peer review process might look like as yet; what seems certain, though, is that the community must precede, and therefore guide, the development of the process. This is our hope at MediaCommons: that a community of scholars within a particular field might come together to determine in an emergent fashion what its values and standards are, and how best to cultivate the field. The catch, of course, will be articulating those values and standards, as well as the processes by which they are determined, well enough that the various credentialing bodies to which we as scholars are subject—tenure and promotion committees perhaps most significantly among them—understand that the absence of conventional peer review's binary model of quality does not imply the absence of quality, but rather the adoption of a more appropriate model of intellectual authorization for the network age, one that will allow scholarly work to interact with the digital public rather than hiding within the walled gardens created by traditional structures of authority.

Notes

1. See Kathleen Fitzpatrick, "MediaCommons: Scholarly Publishing in the Age of the Internet," *MediaCommons*, March 29, 2007, http://mediacommons.futureofthebook.org/scholarlypublishing/.
2. See Michael Jensen, "Authority 3.0: Friend or Foe to Scholars?" *Journal of Scholarly Publishing* 39, no. 1 (October 2007): 297–307. Report of "The New Metrics of Scholarly Authority," *Chronicle of Higher Education* 53, no. 41 (June 15, 2007): B6.
3. Panel presentation, Claremont Graduate University colloquium on Social Entrepreneurship and Design, June 1, 2007.
4. The creators of Citizendium claim that they hope to create "an enormous, free, and *reliable* encyclopedia," which "aims to improve on the Wikipedia model by adding

'gentle expert oversight' and requiring contributors to use their real names." The suggestion, of course, is that uncredentialed contributors require such expert guidance, and expert status is conferred through traditional modes of authorization. See "CZ:About," *Citizendium*, http://en.citizendium.org/wiki/CZ:About (accessed February 16, 2008).

5. Badke, quoted in Mariana Regalado, "Research Authority in the Age of Google: Equilibrium Sought," *Library Philosophy and Practice* (2007), http://www.webpages.uidaho.edu/~mbolin/regalado.htm (accessed October 23, 2008).
6. Donald Hall, *The Academic Self: An Owner's Manual* (Columbus: Ohio State University Press, 2002), xiv.
7. David Shatz, *Peer Review: A Critical Inquiry* (Lanham, MD: Rowman & Littlefield, 2004), 16.
8. Stevan Harnad presents many of the same concerns: "Every editor of a learned journal, commentary journal or not, is in a position to sample what the literature would have looked like if everything had appeared without review. Not only would a vanity press of raw manuscripts be unnavigable, but the brave souls who had nothing better to do than to sift through all that chaff and post their commentaries to guide us would be the last ones to trust for calibrating one's finite reading time" (291). The implication, of course, is that without the power to determine whether a manuscript can be published or not, the prestige will drain out of the reviewing process, leaving scholars with only the opinions expressed by the hoi polloi. Harnad, "Learned Inquiry and the Net: The Role of Peer Review, Peer Commentary, and Copyright," *Learned Publishing* 11, no. 4 (1998): 283–92.
9. Mario Biagioli, "From Book Censorship to Academic Peer Review," *Emergences* 12, no. 1 (2002): 11.
10. Ibid., 12.
11. See Fitzpatrick, "MediaCommons."
12. See the *Nature* peer review Web debate (http://www.nature.com/nature/peerreview/debate), as well as the *Atmospheric Chemistry and Physics* description of its review process (http://www.atmospheric-chemistry-and-physics.net/review/index.html [accessed October 23, 2008]).
13. Noah Wardrip-Fruin, "EP Meta: Chapter Four," *Grand Text Auto*, February 16, 2008, http://grandtextauto.org/2008/02/16/ep-meta-chapter-four/.
14. Quoted in Dylan Tweney, "Q&A: Cory Doctorow," *SFGate*, January 23, 2003, http://www.sfgate.com/cgi-bin/article.cgi?file=/gate/archive/2003/01/23/cdoctorow.DTL.

Engaging Academic and Nonacademic Communities through Online Scholarly Work

by Avi Santo and Christopher Lucas

The decline of public intellectual culture has become a commonplace concern among academics, and many of us in the field of cinema and media studies,

although members of a young discipline, share these concerns over the nature of our contribution to society. Whether we see our field as populated by pawns and players in the left-right culture wars or anodyne purveyors of social uplift, craft skills, and critical faculties, the interface of the academy with the wider concerns of the public is a preoccupation for many scholars. As evidenced by a rising tide of editorials and essays in forums such as the *Chronicle of Higher Education*, digital technologies—particularly the Internet and related social networking tools— have exacerbated these concerns about praxis.[1] With the rise of DIY culture, user-generated content, and ubiquitous online video, an explosion of oral, textual, and visual cultural production has presented scholars with both a threat to established hierarchies of declamation and authority and an opportunity to engage their students and the wider public in new ways. Our goal here is to provide a snapshot of media studies in relation to the current possibilities for digital scholarship by posing these questions: How are media studies academics responding to the new media ecologies? What are they doing with these tools? What might be done? Does this new cultural formation call for new commitments and ways of thinking about scholarship, particularly if these technologies hold at once the promise of praxis and a threat to the traditions of scholarly engagement with the public?

In March 2008, we distributed an informal survey via the Cultural Studies listserv and the *MediaCommons* e-mail list that asked participants to report their attitudes and practices around online scholarly work (writing, media, or other forms of online production) as a means of engaging nonacademic communities. Because there is an unavoidable degree of self-selection that accompanies Web-based surveys, as well as bias implicit in appealing to current readers of *MediaCommons* and listserv subscribers, the findings we offer here are in no way indicative of the entire field of cinema and media studies, and the analysis should be viewed as preliminary at best. Our respondents should be seen as already comfortable, if not advanced, users of digital technologies. Nonetheless, without making strong claims for the validity of these findings for all media scholars, we believe the responses reveal interesting trends and concerns worthy of comment.[2]

Attitudes and Scholarly Practices Online. Our respondents overwhelmingly agreed that online scholarly work presented media scholars with new opportunities to engage nonacademic communities (96 percent of respondents either agreed or somewhat agreed with this statement). Still, the survey revealed tremendous gaps between the types and amounts of online work our respondents produce and the types of work they believed had the greatest potential to engage nonacademic communities. Moreover, the responses revealed somewhat conflicted attitudes about the groups academics see as their primary constituents and the role of online work in reaching those constituencies (Table 1).

As Table 1 shows, respondents reported a very high estimation of the potential for certain digital modes of communication to engage nonacademic communities. We found it notable, though, that in contrast to this rather high perception of

Table 1. Respondents reporting "a lot" or "some" potential for types of online scholarly work in engaging nonacademic communities.

Type of scholarly work	Percentage (%)
Blogging	94
Writing popular criticism for online magazines	93
Creating artistic/fictional works	86
Producing podcasts	84
Commenting on other people's blogs	82
Commenting on online newspaper and magazine articles	83
Moderating fan or other online forums	81
Creating mash-ups and vids	79
Contributing to wikis	74
Participating in listserv discussions	72

potential, the number of scholars currently engaged in these types of work was for the most part quite small. Participation in these types of work ranged from 7 percent in moderating fan forums and producing podcasts, to 73 percent in listserv participation, but it was clear that respondents are much more likely to produce words in their online work (listservs, blogging) and much less likely to produce artistic or audiovisual media (podcasts, mash-ups, fictional works). Notably, these are the types of work considered most likely to engage nonacademic communities (Table 2).

Lack of time was the most commonly cited constraint on scholars' engagement with nonacademic communities through their work (59 percent), followed by institutional factors (tenure requirements, departmental service; 17 percent). Only six respondents (9 percent) reported satisfaction with their current engagement with communities beyond the academy. The general lack of participation in forms of work with perceived high engagement with nonacademic communities suggests ambivalence among our respondents toward abandoning familiar work practices for online work. This ambivalence is highlighted by the amount of time survey participants currently spend doing online work (Table 3).

Whether we see this ambivalence as a product of personal preference, lack of time, or institutional demands, it underscores the primacy of traditional academic practice in structuring online work. Overall, respondents see engaging nonacademic communities as secondary to engaging with other academics and students (Table 4). When asked to list the communities they felt they were *currently* engaging through their online work, as opposed to communities they *would like to be* engaging, academics and students remained the top choices in both

Table 2. Scholars currently participating in selected types of scholarly work.

Type of scholarly work	Percentage (%)
Blogging	46
Writing popular criticism for online magazines	18
Creating artistic/fictional works	15
Producing podcasts	7
Commenting on other people's blogs	30
Commenting on online newspaper and magazine articles	23
Moderating fan or other online forums	7
Creating mash-ups and vids	9
Contributing to wikis	22
Participating in listserv discussions	73

instances. Moreover, there was a wide margin (not visible on this table) between these top two communities and the nonacademic communities listed.

Policy makers and media industry creatives gained the greatest ground of all nonacademic communities our respondents would like to engage, picking up 40 percent and 35 percent, respectively, over their perceived current level of engagement. By far, respondents saw policy makers as least engaged by current scholarly work and clearly desire more engagement in that venue. Activist and advocacy groups were also ranked highly, making the top four on 70 percent of survey responses. The responses also suggested that these scholars are somewhat less interested in engaging fan and critic communities than other nonacademic communities, although fan and critical communities are seen as interesting and important constituencies.

While creating original media and fictional works was identified by 85 percent of respondents as having either a lot or some potential to engage nonacademics, given that the desired communities scholars want to reach are primarily other academics, students, advocacy groups, or policy makers, it is understandable that producing artistic or creative works holds little appeal to our respondents. There was, by and large, a mixed response to the prospect of producing original media or fictional works. For instance, 48 percent of respondents indicated that they would be somewhat or very uncomfortable producing a scholarly mash-up or vid (19 percent reported being very comfortable with this prospect). Similarly, 50 percent of respondents said they would be either somewhat or very uncomfortable engaging in creative online writing as a scholarly endeavor (25 percent reported very comfortable).

Table 3. Frequency of participation in online scholarly work

Frequency of participation	Percentage (%)
Once a month or less	73
Weekly	9
Several times a week	12
Daily	2
More than once a day	3

Being evaluated on these nontraditional practices produced mixed results as well, with 44 percent indicating that they would feel somewhat or very uncomfortable being evaluated on the scholarly merit of their mash-up creations (21 percent of respondents said they would feel very comfortable). Though a surprising 27 percent of respondents were very comfortable having their creative fiction evaluated for scholarly merit, an equal percentage felt very uncomfortable with the proposition. Although 73 percent of our respondents indicated they were either very or somewhat comfortable being evaluated by nonacademics, these above findings also suggest a preference for being evaluated based on tried-and-true scholarly practices.

Current and Future Endeavors. Traditional scholarly practices continue to influence the perceived value and potential of emerging forms of online scholarship, even as scholarly and academic blogs, wikis, podcasts, and other online initiatives are emerging that will reshape those practices. Current experiments in online scholarship such as *MediaCommons'* curated video commentaries (http://mediacommons .futureofthebook.org/videos), *Vectors'* merge of technology, design, and scholarship (http://www.vectorsjournal.org/), and Alex Juhasz's YouTube-centered course (http://www.youtube.com/user/MediaPraxisme) are demonstrating that new media modes can change how academics engage both one another and the public at large. Forty-six percent of respondents to our survey indicated that they write blogs, while 49 percent maintained their own Web page. Twenty-two percent reported they had contributed to wikis, and 7 percent reported they had taken part in podcasts.[3]

These endeavors are resulting in an exciting shift in scholarly work practice, from an emphasis on polished demonstrations of academic virtuosity to a foregrounding of scholarly process and collaboration. Fully 68 percent of our respondents ranked "making public scholarly processes of critical thinking/writing" as one of their top four scholarly goals for online work. (It is revealing, though, that 50 percent of respondents reported being either somewhat or very uncomfortable writing a live draft of their work online, while 40 percent were resistant to publishing

Table 4. Ranking of communities currently engaged by online scholarly work and communities scholars most desired to engage through said work

Communities	Ranking	Ranking
	Currently engaging	Would like to engage
Students	1	2
Academics	2	1
Fans	3	8
Critics	4	6
Activists/Advocacy Groups	5	3
Media Industry Creatives	6	4
Media Industry Executives	7	7
Policy Makers	8	5

early drafts.) The idealization of a solitary writing practice may discourage media scholars from engaging with online communities, which often find credibility in transparency and the willingness to foreground one's ongoing and cumulative process of discovery. When scholars write in "real time," however—developing, drafting, and revising their ideas in public forums—they illuminate the shadowy process of critical thinking, encouraging readers not only to digest finished works, but also to learn from and evaluate the mechanisms of their creation.

Efforts at making public the processes of critical thinking and writing are still rare, but several scholars have made significant moves in this direction. Various academics, including Henry Jenkins (http://www.henryjenkins.org/), David Bordwell and Kristin Thompson (http://www.davidbordwell.net/blog/), Tim Anderson (http://commanderson.blogspot.com/), Kathleen Fitzpatrick (http://www .plannedobsolescence.net/), and Chuck Tryon (http://chutry.wordherders.net/ wp/) use blogs to publicly and informally think through their initial responses to current and ongoing media events, situating themselves as both scholars and concerned citizens/fans/consumers.[4] Other efforts actively foreground the scholarly writing process, including Siva Vaidhyanathan's "The Googlization of Everything" (http://www.googlizationofeverything.com/), described as a book in progress in which reader feedback, insights, and dialogue are encouraged throughout the manuscript writing process. The writing itself is not live, although chunks of text are regularly uploaded with the expressed intent of working through issues as a community. Along these lines, Noah Wardrip-Fruin's "Expressive Processing," hosted on Grand-Text Auto (http://grandtextauto.org/2008/01/22/expressive -processing-an-experiment-in-blog-based-peer-review/), encourages blog-based

open peer review of his forthcoming manuscript. This is a significant step toward opening up traditionally bounded processes of evaluation and reflection.

In order to engage nonacademic communities, online scholarship must also find its way onto nonacademic sites of debate and discourse. Todd Gitlin and Cynthia Fuchs write for popular webzines like TPMCafe.com and PopMatters .com. Robert McChesney's *Media Matters* podcast, which originates as a WILL-AM (University of Illinois) call-in radio program, is distributed by NPR (http://www .npr.org/rss/podcast/podcast_detail.php?siteId=5183226). In these examples, we see academics bridging old and new media in interesting ways, but online scholarship offers a way for scholars to move even farther from hierarchical, "vertical" communication strategies to dialogic, "horizontal" ones in their quest to reach nomadic and nondiscrete online communities. Significantly, 65 percent of our survey respondents reported that they comment on others' blogs, while nearly 45 percent also participate in fan community and other online forum discussions. Seventy-nine percent of respondents ranked participating in collective knowledge communities as one of the top four goals of online scholarly work. All of this hints at a greater openness toward spreading scholarly discourse across a wide array of digital spaces, generating a more dispersed and decentered digital identity through contributing to multiple Web sites—both academic and nonacademic—as well as actively situating designated scholarly spaces within larger networked conversations. Fifty-seven percent of our respondents ranked building strategic alliances between the academy and other communities as one of the top four goals of online scholarly work, and 94 percent indicated that they were either very or somewhat comfortable networking their work within a larger body of online scholarship.

To provide one example of this potential, we performed a Google search of the term "Jason Mittell," a Middlebury College associate professor of film and media culture and active online scholar. A sampling of the first one hundred results from this search reveals that Mittell not only maintains an active blog (http://justtv .wordpress.com/) and Web site (https://seguecommunity.middlebury.edu/index .php?&action=site&site=jmittell), but also contributes posts to *MediaCommons*, *Flow* (http://flowtv.org), the Gender and Fan Studies debates on Henry Jenkins's blog, and the *Convergence Culture Consortium* (http://www.convergenceculture .org/weblog/). He comments on other academic blogs (http://commanderson .blogspot.com/2007/02/quick-thoughts-on-wikipedia-debates.html; http://www .plannedobsolescence.net/notes-from-flow-academic-publishing-for-the-digital -age/), responds to nonacademic critiques of his work (http://waxbanks.typepad .com/blog/2007/03/nikki_and_paolo.html), and participates in fan discussions of TV criticism (http://blog.battlestarwiki.org/2007/05/04/sarah-totons-paper-online/). Mittell shares course syllabi (http://whatsnewmedia.org/courseshare/jason-mittells -media-technology-cultural-change/), maintains user profiles on several social networking sites (Flickr, Facebook, Livejournal) and contributes various lists to both Amazon.com and Librarything.com. Mittell's own blog contains a "blogroll" of other media studies–focused Web sites worth visiting, as well as an ever-changing

list of recent bookmarks, top clicks, and interesting posts from other blogs. Not every scholar will want to devote this much of his or her work to online activities, but we offer it here as an example of how scholars might extend their presence across the digital terrain to engage both academics and nonacademics.

At its best, we feel that online scholarship strives for provocative stewardship, leading its readers to participate in conversation and knowledge-formation processes. Although much current online scholarship replicates classroom models in which comments and questions come only after the lesson is over, there is space for a reimagining of online scholarship as a practice that accepts what Lev Manovich describes as the "random access" experience of reading in a hypertext environment.[5] Far from rendering expertise moot, scholarly skills can be put to work differently online, as moderating and steering, using short observations and synthesis to direct attention. Rather than destinations for knowledge, a more suitable metaphor for online scholarship might be the rest stop, offering online readers direction, intellectual nourishment, and byte-sized souvenirs, repurposed for their own means (even though, as Jenkins suggests, this requires loosening the reins on our intended meanings).

Generating such spaces requires a significant rethinking of what styles—both rhetorical and formal—online scholarship should assume. Short-form articles and curatorial comments such as those found on *Flow* and *MediaCommons* suggest alternative modes of expression designed to pique curiosity and encourage bridge-building with nonacademic communities (though both sites continue primarily to engage other academics). Rhetorically, these sites aim to be conversational, while also recognizing that argumentation in digital spaces has a spatial quality, building up over time and contextualized by the territory of the online environment. At its best, online scholarship focuses on inviting the reader to join in the process of constructing knowledge over weeks and years.

Reimagining online scholarship in this way must recognize the way Web design constrains engagement. Blogs and webzines often privilege the classroom model of declamation followed by (often moderated) comments.[6] Tools such as Comment Press (http://www.futureofthebook.org/commentpress/) allow commentary to appear alongside posts (similar to the comment function in word processing packages) and allow readers to include links and connections, a more egalitarian model that places scholars virtually alongside their readers. Such designs also permit multiple conversations to emerge—at the paragraph, sentence, or even word level—within posts, leading to more immediate, precise, and relevant commentary. Kathleen Fitzpatrick has written extensively on the potential for Comment Press to promote new forms of interaction (http://mediacommons.futureofthebook .org/commentpress/).

Finally, where academics in other countries have often worked alongside industry professionals to craft and critique cultural policy, U.S. media scholars have usually been forced onto the sidelines. With the help of digital tools, online scholarship is fruitfully making the leap from primarily critiquing media production and

consumption to modeling alternative modes of such practice. While 71 percent of our respondents ranked "offering an alternative voice to the corporate and political mainstream" as a top-four goal of online scholarly work, 63 percent also identified "demonstrating alternative production and consumption models" as an essential aspect of online engagement. Some online work is strategically interventionist. Free Press (http://www.freepress.net/), a media reform organization created by Robert McChesney along with nonacademics John Nichols and Josh Silver, relies on the Internet for a great deal of its mobilizing. Patricia Aufderheide and her colleagues at the Center for Social Media (http://www.centerforsocialmedia.org/) have focused on clarifying fair use and legal issues that constrain independent media makers while, significantly, using online video, classroom tools, and prolific online publication to support those efforts. Other projects using online tools include Paper Tiger TV's video blog (http://www.papertigertv.blogspot.com), Free Speech TV's online archives (http://www.freespeech.com), explorations in virtual learning communities such as Second Life (http://homepages.uc.edu/secondlife/), and the Organization for Transformative Works (http://transformativeworks.org/about/), which is creating an online archive of fan-generated creative work coexisting alongside scholarly discussions.

Beyond this vital work of providing tools and archives, though, praxis scholarship demands that scholars begin experimenting with the creation of alternative media forms, content, regulations, and communities themselves. Patricia G. Lange's AntroVlog project (http://anthrovlog.wordpress.com/) both studies and uses YouTube and other online media as part of a MacArthur-funded Digital Youth study. Media literacy as a pedagogical goal has traditionally focused on writing as the vessel for criticism. New generations of scholars are better prepared to demonstrate to industry, society, and their students that media criticism is not limited to textual description, but also found in the invention of new approaches to visual and auditory production. Put more bluntly, digital literacy requires the cultivation of both critical reading and critical writing skills. In an era of myriad DIY authoring options, modeling cultural production is not only a possibility, but a necessity for the media scholar. Much as the college radio station once stood as a space that offered both job training and alternative production models, perhaps media studies 2.0 can model new ways of imagining the digital mediascape that inspire and educate would-be producers and consumers alike.

In a recent talk given to the *Chronicle of Higher Education* (and later summarized on his blog), Henry Jenkins speculated that the era when public intellectuals like Marshall McLuhan, Noam Chomsky, Cornel West, bell hooks, and Michael Eric Dyson could successfully navigate one-way mass media flows to influence public opinion was over. In place of that, scholars seeking to reach beyond the academy must be willing, Jenkins suggested, "to be appropriated by various publics, becoming a resource for their various discussions." Digital technologies can facilitate such engagements between academics and nonacademic communities, but they also require new tactics, as we have started to describe here. In coming

years, scholars will be forced to take risks, even to abdicate their comfortable, familiar roles as purveyors of authoritative knowledge, if they want to reach toward other knowledge communities, to join them as members with shared interests, passions, and expertise.

Notes

1. Emerging digital tools and new scholarly practice receive regular coverage in the *Chronicle of Higher Education*'s Information Technology section. For some longer discussions of trends and implications, see Edward J. Maloney, "What Web 2.0 Can Teach Us about Learning," *Chronicle of Higher Education*, January 5, 2007; Henry Jenkins, "From YouTube to YouNiveristy," *Chronicle of Higher Education*, February 16, 2007, http://chronicle.com/weekly/v53/i24/24b00901.htm; Michael Jensen, "The New Metrics of Scholarly Authority," *Chronicle of Higher Education*, June 15, 2007, http://chronicle.com/weekly/v53/i41/41b00601.htm; David Green, "How Digital Technology Is Changing the Liberal Arts," *Chronicle of Higher Education*, January 18, 2008, http://chronicle.com/weekly/v54/i19/19a01802.htm; Henry Jenkins, "Public Intellectuals in the New Media Landscape," *Chronicle of Higher Education*, April 4, 2008, http://chronicle.com/weekly/v53/i24/24b00901.htm.
2. The survey was published online using Survey Monkey. *MediaCommons* and CultStud-L have approximately 2,500 subscribers between them. This analysis is based on 105 responses collected after the survey had been published for one week.
3. Survey responses suggest that academics read a wide and very diverse array of online material. *Flow*, *MediaCommons*, *Confessions of an Aca-Fan*, *Film/Art Blog*, and *Convergence Culture Consortium* were most often mentioned by our respondents as academic sites engaging nonacademic communities.
4. There are dozens of media scholars producing worthwhile blogs and Web sites. This list is not exhaustive but does introduce a few of the more active and long-lived blogs engaged with media scholarship.
5. Lev Manovich. *The Language of New Media* (Cambridge, MA: MIT Press, 2001), 78.
6. The twin problems of spam and trolling require considerable effort to manage and must be acknowledged as a barrier for many aspiring online writers, although emerging comment verification tools and collective authoring offer some answers to this dilemma.

Digital Scholarship and Pedagogy, the Next Step: Cultural Science

by John Hartley

"How well he's read, to reason against reading!"

(*Love's Labour's Lost*, I.i.94)

There are two aspects to the problem of digital scholarship and pedagogy. One has to do with scholarship, the other with pedagogy. In scholarship, the association of

knowledge with its printed form remains dominant. In pedagogy, the desire to abandon print for "new" media is urgent, at least in some parts of the academy. Film and media studies are thus at the intersection of opposing forces pulling the field "back" to print and "forward" to digital media. These tensions may be especially painful in a field whose own object of study is an analogue form of communication, neither print nor digital. Although print has been overtaken in the popular marketplace by audiovisual forms, this was never achieved in the domain of scholarship. Even when it is digitally distributed, the output of research is still a "paper." Meanwhile, in the realm of teaching, production- and practice-based pedagogy has become firmly established. Nevertheless, a disjunction remains between high-end scholarship in research universities and vocational training in teaching institutions. Neither is well equipped to deal with the digital challenge.

Knowing and Doing. Common sense suggests that knowing and doing are intricately linked. But doing has been separated from knowing in formal education. Harking back to a medieval distinction between action and contemplation, some professional practitioners assert that practical "doing" is in opposition to academic "knowing"; so the best (indeed, the only) qualification for teaching in universities is that of having worked in the industry. Among the media-related disciplines, journalism education is especially wedded to this idea. Those who have not worked as an employee in the newsroom culture of industrial-era media organizations are not always welcome in J-schools. It seems the students are too busy *doing* journalism to spare a thought (as it were) for *studying* its historical development, social impact, and cultural form, or for considering critical theories about journalism.

Is this the future of pedagogy and scholarship for cinema and media studies? Are they destined, like journalism, to favor doing *over* knowing—craft skills over conceptual models, practice over research, contact with industry personnel over contact with scholarship, and the fetishization of the current industrial form over the study of a given medium's historical development, social problems, or untried potential? The trouble is, the further the field has pushed toward practical pedagogy, the further it seems to have retreated from scholarship. Would a move toward more active scholarly engagement with the digital and audiovisual media, that is, knowing *through* doing, hasten or prevent such a future?

Obviously, some media and film production programs are already committed to the practical path, but these remain exceptions. In general, the two fields remain founded in social problems (media) and textual forms (cinema). Typically, practice-based teaching is an adjunct to traditional forms of pedagogy, curriculum, and assessment. Unlike journalism education, cinema and media studies are not generally vocationally oriented in an instrumental way. Not many film or media companies are organized along the lines of large-scale corporations with standardized entry-level recruitment. Nor do media courses face a coherent professional body along the lines of the law, medicine, engineering—or, indeed,

journalism, which does have professional ambitions (but is reluctant to concede entry certification to universities).

What faces the media graduate is not a stable industry or profession with a career structure, but a globalizing market with chaotic needs. This market is characterized by rapid change, high failure rates, high rates of casual and freelance labor, winner-take-all innovation, team-based and project-based companies that dissolve and re-form around opportunities, and the certainty that everything they know, from enabling technologies to production processes, will be obsolete all too soon. Faced with such a prospect, where the technologies they may use are not yet invented, the name for their job is not yet known, and the global enterprise in which they might do it is not yet formed, what—and how—does the newly minted media graduate need to know?

Abstraction of Knowledge. The tradition of modern scholarship—now some centuries old—has tended to favor the abstraction of knowledge from action in order to develop explicit rather than tacit knowledge. From the Renaissance onwards, knowledge (in books, libraries, and journals, that is, "objective" knowledge in Popper's sense) was radically separated from knowing subjects. This unleashed the growth of knowledge that we call modernity. During that lengthy period, there have been many instances of such abstraction across the whole field of the economy, society, and culture. In the Industrial Revolution, for instance, "workers by brain" were abstracted from "workers by hand," white collar from blue, art from artisans, design from fabrication, knowing from doing. Without abstraction and specialization, there could have been no exponential economic growth, no modernity.

The *medium* through which abstracted knowledge was collected and communicated was, of course, print. Print was invented to serve the interests of religious and business activists in a still-feudal middle Europe. Its ability not only to abstract knowledge from the knowing subject but also to "broadcast" it around the globe made it the first mass medium, and emancipated it from the control of its inventors. It was at this point that it became an enabling social technology for the growth of knowledge in general. The unintended consequences of socially ubiquitous print literacy could emerge and grow. They were spectacular, including the development of all three of the most important realist textual systems of modernity—science, journalism, and the novel.

The university library had evolved from the monastic scriptorium, but with print, it, too, could be "abstracted" from its institutional origins in the church. As a result, science was emancipated from both religiosity and the authority of ecclesiastical hierarchies (although this took time). Similarly, spare capacity on printing presses and the growth of a secular reading public allowed for the development of the newspaper, in which "dispatches" and "intelligences" about current affairs were "abstracted" from the secret dealings of courtiers and merchants and broadcast to the (reading) public at large. Meanwhile, the development of vernacular

printed prose and of middle-class leisure enabled the rise of the novel—the form in which psychological individualism (pioneered in the Shakespearean theater) was generically elaborated and socially propagated, recruiting writers as well as readers (especially women) from previously unrecorded origins. In all of these contexts, print was an agent of generative change, not a neutral tool; it carried the modernizing force of realism—science, journalism, imaginative individualism—to that most "abstracted" entity of modernity, the reading public. Print was vital to the emergence of secular industrial society; it was the very agent of knowledge. Small wonder, then, that those trained in modern scholarship are children of print and remain wedded to a model of intellectual emancipation based on print.

Re-embodied Knowledge. It has been important to dwell on the modernizing *value* seen in print, because from that perspective, it would be alarming to see the pendulum beginning to swing the other way—to favor doing over knowing, embodied knowledge over abstraction, and corporeal (oral, audiovisual, and conversational) modes of expression over the disembodied, monologic enunciation and visual spatialization of print. Creating knowledge through practice may seem commonsensical, but it reeks of the very forces of ignorance that the print-based realists thought they had defeated: the "mysteries" of arcane (i.e., secret) artisanship (e.g., freemasonry) and magical knowledge (superstition) based on the supposed powers of spiritually empowered individuals (from alchemists, astrologers, and faith-healers to "mind-body-spirit" New Agers). Relying on experientially achieved and intuitively deployed practical know-how can easily seem to be restoring what it took so long to expel from the domain of knowledge—namely, subjectivity.

Those who specialize in the study of cinema and the media know that the re-embodiment of knowledge has been going on for more than a century; indeed, this is exactly what cinema itself made possible. Even so, systematic knowledge *about* cinema has remained tied to books, journals, and print-based reviews; objective knowledge produced *by* cinema—from ethnographic film to analysis of emergent realities using fictional as well as documentary forms—has had an uphill struggle even to be cited in scientific discourse, never mind counting as scientific knowledge. During the century-long history of cinema, very little success has been achieved in changing the *institutional form* of the knowledge gained from it and in it.

Not only has cinema (much less television) failed to "qualify" as knowledge in its own terms against the monopolistic claims of first-mover print, it has been actively rejected by scientists, whose hostility to popular media, including cinema, television, and music, bespeaks a continuing semiotic asceticism that loves print abstraction and finds the irruption of the visible body and other voices (voices of the other) into the truth-seeking process as troubling as did the Protestant iconoclasts in the Reformation. So the twentieth century—the entire period of broadcasting—was characterized by a standoff between the print-based (scholarly) and audiovisual (practical) media, rather than a convergence on their point of intersection, which is realism.

The Era of Representation, Semiotic and Political. Furthermore, the broadcast era was the heyday or culmination of *representation*, which is itself the semiotic and political form taken by abstraction. In the movies, and then in celebrity culture more generally, human traits and forms of identity were *represented* on screen, through look, dialogue, action, costume, and the company kept by characters (not to mention the stars who played them). The indeterminacy of the socially mobile self was also represented, through plot, narrative, and character development. Semiotic representation consisted in taking both identity and the mutability of modern experience and universalizing them on screen: the star stood for everyone, the story for reality.

Semiotic representation, however, requires a highly asymmetric relationship between the human attributes represented on screen and the myriad selves sitting in the dark. In this unequal exchange, the experts who produced media realism prospered while their customers were left with what the psychoanalysts like to call a "lack" in self-realization. Luckily for capitalism, the mass audience obsessively returned to the screen to fulfill that lack vicariously, for instance, by gazing intently at Lauren Bacall, fifty feet high and cool as a cucumber, while she taught their (alter) ego how to whistle. A standard "critical" response to this asymmetric relation is to dismiss it as a fraud: viewers were somehow deceived or duped, overpowered by the representation itself, which in any case did not stand for their reality.

Meanwhile, the same audience, now reconfigured as private citizens, faced the same Faustian bargain in politics, where they ceded to their elected representatives the power of political action, governmental decision-making, and administrative process, in exchange for . . . what? Again, a standard critical account looked for a lack, this time in power; the return on the popular political investment in representative democracy, which they saw as negative, using the logic that Monty Python sent up in *Life of Brian*: "What have the Romans ever done for us?" To which the answer is *obviously* nothing, except . . . "Reg [John Cleese]: All right, but apart from the sanitation, the medicine, education, wine, public order, irrigation, roads, a freshwater system, and public health, what have the Romans ever done for us?" Point taken, but clearly the system of representation was flawed, its extreme asymmetry seeming to separate both political and semiotic representatives from the mass audience of citizen consumers, who were left hanging around on the amphitheater steps with little to do but moan seditiously.

Semiotic representation in cinema and television looked suspect to those, like scientists, journalists, and writers, who were active in the *production* of print-literate knowledge, for among the capabilities ceded by the media audience to audiovisual professionals was the ability to *write*. Audiences could only "read" images and stories. They could not produce and publish them in the broadcast media (another "lack" filled in by representation). Therefore, the "reading public" for broadcast media appeared not as coequal subjects of knowledge who might write as well as read, but as passive consumers, the end point of a chain of causation that had

those fifty-foot stars and *their* producers as "cause" and the punters as "effect." This notion of a value-chain (rather than a dialogue) transformed audiences from "subject" of knowledge and sovereignty to "object" of manipulation and mystification. Not surprisingly, therefore, scientists and intellectuals—adepts of print media—remained skeptical of "read-only" popular media. Knowledge forged in *that* crucible was hardly to be trusted, and is still routinely dismissed as demagogic or delinquent.

Walking with Dinosaurs. But while it is easy to see how literate specialists, habituated to publishing their own thought as well as reading the thought of others, might feel shortchanged by the asymmetric deals offered in representative cinema and democracy alike, the same cannot be said for the popular audience. For them, the contemporary media have offered a technological route to semiotic and intellectual emancipation that traditional arts denied to them. There was even some mobility between popular classes and popular media: the meritocratic principle recruited talented workers to creative and professional occupations; any Betty Joan Perske could aspire to become a star. Modern representation (both semiotic and political) offered something real to those who had no stake in traditional forms of artistic and intellectual expression or public participation. Movies and media seemed more transparent, less subject to artistic or ideological shaping, and therefore closer to ordinary life (despite the asymmetry between fans and their representatives on-screen).

The "mechanical arts" held the promise of greater objectivity and truthfulness than sermonizing professionals. Mass media could not exist without scientific invention, industrialized production, and modern marketing. Science was recruited to the cause of art. The popular audience was primed for the idea that truth might be revealed by technological means. No matter how far-fetched the story line, from Chaplin onwards, the diegetic screen-world was real: human-scale but technologically enabled, populated by "ordinary" characters who were engaged in self-realizing narratives and participating in imaginative responses to the rapid changes of the times. Science itself became a staple of both realism and fantasy (e.g., *Metropolis*, *2001: A Space Odyssey*, wildlife documentaries, the dinosaur industry, and all those mad-scientist horror movies). For good or ill, the representation of the human condition migrated decisively from art to science, even as knowledge itself was re-embodied and audiovisualized.

From Representation to Productivity. Like printing, the Internet was invented for instrumental purposes (security, scholarship), but it has rapidly escaped such intentions and is evolving new "affordances" unlooked for a mere decade ago. The most important change is that the structural asymmetry between producers and consumers, experts and amateurs, writers and readers, has begun to rebalance. In principle (if not yet in practice), *everyone* can publish as well as "read" mass media. Users play an important role in making the networks, providing the

services, improving the products, forming the communities, and producing the knowledge that characterize digital media. We are entering an era of user *productivity*, not expert *representation*. It is now possible to think of consumers as agents, sometimes enterprises, and to see in consumer-created content and user-led innovation not further exploitation by the expert representatives, but rather "consumer entrepreneurship" (once a contradiction in terms).

Once again, as was the case for print in early modern Europe, a means of communication has become an agent as well as a carrier of change, extending the capabilities of the publisher across social and geographical boundaries, and producing unintended consequences that have hardly begun to be exploited. The attention-grabbing aspects of digital media have been those related to private self-expression (albeit conducted in public), social network markets, entertainment media, and celebrity culture. Already it is evident that all three of print's unplanned progeny—science, journalism, and realist imagination—have also begun to colonize the Web, using it for the "higher" functions of objective description, argumentation, and research. Now, however, instead of abstracted individual authorship using spatialized monologue, users can exploit the social-network functionality of iterative and interactive digital media to create new knowledge using such innovations as the wisdom of crowds and computational power.

There is, of course, plenty of resistance to such changes. One thing that stands in the way, ironically, is print, or rather a print mentality that, because of the suspicion of embodied audiovisual media by modernists, persists in characterizing "new" media as somehow demotic and unworthy, even untruthful. This is especially prevalent in schools, many of which still ban students' access to Google (especially Google Images), Wikipedia, social networking sites, YouTube, and so on, preferring to insist on the control culture of the expert paradigm rather than facilitating the open innovation networks of digital media. Given that this is indeed what students need to know (and to be able to do) in order to navigate the evolving digital mediasphere, the world of print-based scholarly modernism falls further out of step with the times, and scholarship threatens to become just as irrelevant as professional practitioners like to say it is.

There is, therefore, a clear choice to be made if those who wish to pursue the serious study of communications media wish to avoid the standoff that persists between print and its latter-day competitors. We must follow science, journalism, and realism across from the arts to the sciences, and from print to digital media. We are entering a period in which the tensions between print-based scholarship (cinema) and practice-based training (media) can and should be superseded. Such a move would also challenge the current disciplinary distinctions between humanities (cinema) and social sciences (media) on the one hand, and the math-based sciences (particularly evolutionary theory, game theory, and complexity/network studies) on the other hand. Indeed, so far has change proceeded, in both digital media and in the history of science, that film, media, and journalism scholars must face the question of how and what they know, and consider afresh whether their

scholarly and pedagogic armamentarium needs a makeover. Instead of retreating (further) into hyperliterate philosophical speculation (cinema) or postliterate vocational guidance (media), it may be time to consider a digitally literate and unifying alternative, which I am calling cultural science. (See http://cultural -science.org/.)

Learning the Five Lessons of YouTube: After Trying to Teach There, I Don't Believe the Hype

by Alexandra Juhasz

Author's note: The following article is best read online (http://www.cmstudies.org), where its many links, here represented in bold, efficiently illustrate my argument with telling videos found on—and frequently lost or taken off of—YouTube. The clumsiness of this typographic sign of what is missing, rather than the efficiency and richness of the live media link, points to another lesson in media education, scholarly publication, and academic writing raised primarily by the form, but not the content, of this offering. In the first two paragraphs, I gesture at what is lost without the links, but the ungainliness of this effort proves not worth the word count.

"DIY" is new media's latest buzz-word:[1] "prosumers" mashing up the Simpsons, Jessica or Bart; YouTubers uploading streams of lonely video. **Bollocks**![2] Let us pay mind to the buzz-cocks. **DIY**[3] is nothing new. While Web 2.0 may radically expand access and distribution of media to its erstwhile viewers, DIY was once *punk* (cut to "a peek into the lives of Islington Squatter punks of 1983, who spare-change and charge 2 quid a photograph!"),[4] and it meant much more than **friendly citizen-practitioner** (we see the "do-it-yourself hovercraft" video of Miles Community College physics class).[5] Wikipedia explains, "Common punk views include the DIY ethic, rejection of conformity, direct action for political change, and not selling out to mainstream interests for personal gain." Punk was **Rotten** and **Vicious** (if you were online, hello Johnny and Sid!). **Sincere**, or even **Cynical**, contributions to the corporate machine do not a DIY ethics make (the digital reader might choose to view the marketing campaigns for the contemporary artists Rohff, singing his song "Sincere," and Bill Maher, in "Be More Cynical Part 1," sponsored by Hostile Records, Capitol/EMI, and Comedy Central, respectively).

I am a professor of media studies whose work has focused upon the activist media of nonconformists. In the fall of 2007, I decided to look more closely at YouTube. The **banal** videos I regularly saw there did not align with the **ethics**

underpinning the revolutionary discourses I study, nor those **heralding** the new powers of online social networking. So, I taught a **course**, "**Learning from YouTube**," about and also *on* the site: all class **sessions** and **course work** were posted as **videos** or comments and were open to the public. One press release later, and we actually became the **media relay** we were attempting to **understand**. Immediately networked, to be largely **mocked** through the predictable anti-intellectual stance used at least annually to report on events like the meetings of the Modern Language Association (a scholarly paper on melancholy? and Keanu Reeves!), my students and I will have the last **laugh**. We learned a great deal about how this site **limits** the truly revolutionary potential of the technology. These are our five lessons of YouTube.[6]

Lesson #1. YouTube is not *democratic*. Its architecture supports the *popular*. Critical and original expression is easily lost to or censored by its busy users, who not only make YouTube's content, but sift and rate it, all the while generating its business. The word "**democratic**" (free and equal participation), like "DIY," is often repeated in celebration of the new possibilities enabled by Web 2.0 technology. Certainly, more **people** than ever can get to and use tools that allow for the easy production, distribution, and networking of media. Cindy enjoys this new freedom. She shoots and uploads her daughter Sissy's trip to **American Girl**. However, once there, Sissy's poorly shot and unedited adventure in consumerism languishes unseen, except by Gramps and maybe a few hundred pals, never to equal the movement, attention, or possibilities afforded to the hottest ripped clips of *American Idol*. That which we already **know** and already **like** enjoys the special treatment offered to the "**most viewed**": videos that are easily found, and always **visible**, whether you search for them or not. Hey, the **most viewed** deserve such **attention**! These special videos, well, they look like **television**, featuring the **faces**, **formats**, and **feelings** we are already familiar with, or at least aspiring to them.

As is true in high school, **popularity** gauges something. It lets the **talented**, if unoriginal and **uncritical**, rise to the top (think high-kicking blond babes of the pom-pom squad). Interchangeable and indistinguishable, **entertaining** but not threatening, popular YouTube videos speak to a middle-of-the-road sensibility in and about the forms of **mainstream culture** and **media**, pushing underliers into the weird cliques and **hidden halls** of high school—what I call **NicheTube**— where a video immediately falls off the radar, underserved and **unobserved** by YouTube's systems of ranking. Yes, it is great to be doing your own **weird thing** for your **wacky friends**, but anyone else who might be interested is sure never to join in, given YouTube's size and poor search systems.

While we can all **personally attest** to whether popularity (or its reverse) worked for us in high school, I will suggest the obvious: it is not the best or most "democratic" way to run our culture's most visited archive of moving images. As we learned through my students' research project on race on YouTube, the most

popular videos about **black** people reflect and reinforce the standard views of our society (about black hypersexuality, low intelligence, and gonzo violence), while only on NicheTube can you find videos that support black **self-love** or analysis. Meanwhile, the most wacky (or ideological) outliers are quickly flagged, flamed, tamed, and **absented** from YouTube's pages (my students' video, mentioned above, "Blacks on YouTube Final," has been flagged for "inappropriate content," which I deem to be their analysis and not the black booty they feature, which itself is featured all over YouTube). The more controversial your ideas or methods, the quicker your **demise**. Free and easy to get on, the mob-rule system by which you get pulled off YouTube is user-initiated but corporate-ruled. Democracies maintain protections for minority positions, and ours has **labor** laws, too, that compensate workers for hours logged.

Lesson #2. YouTube functions best as a postmodern television set facilitating the isolated, aimless viewing practices of individuals while expertly delivering eyeballs to advertisers. YouTube's corporate ownership limits the form and content of its videos, further curtailing the democratic promises touted for Web 2.0. YouTube is an at-home or mobile, viewer-controlled delivery system of delectable media morsels. It is really good for **wasting time**. On our private postmodern TV of **distraction**, discrete bites of cinema are controlled by the discrete eye of each viewer, linked intuitively or through systems of popularity into an endless chain of immediate but forgettable gratification that can only be satisfied by another video. The best YouTube **entertainment** integrates and condenses three methods developed in earlier media—**humor**, **spectacle**, and **self-referentiality**—to create a **new video form** organized by plenitude, convenience, and speed. (But maybe this is not so new: TV ad, anyone?)

The signature YouTube video is easy to get, in both senses of the word: simple to understand—an idea reduced to an icon or gag—while also effortless to get to: one click! A visual or aural sensation (car crash, big booty, celebrity's maw, signature beat, extreme talent) or an already recognizable bite of media serves as the best videos' iconic center. Understandable in a heartbeat, knowable without thinking, this is media already encrusted with social meaning or feeling (leave Britney Spears alone!). YouTube videos are often about YouTube videos, which are most often about popular culture. They steal, **parody**, mash, and **rework** recognizable forms, hence maintaining standard styles and tastes, and making nothing new at all. And so, humor enters through **parody**, the play on an already recognizable form, or else slapstick, a category of spectacle.

What then of the videos of millions of **regular people** speaking about their daily lives, and to each other, in talking-head close-ups (the vlog)? While in many ways a statement against corporate media, **humor** (self-mocking, ironic), **spectacle** (of authenticity, pathos, or individuality), and **self-referentiality** (to the vernacular of YouTube) still combine in this signature YouTube form to create their unique entertainment value.

Lesson #3. YouTube reifies distinctions between professional (or corporate) culture and that of amateurs (or citizens) even as it celebrates its signature form, the vlog, and the flattening of expertise. There are **two** dominant **forms** of video on YouTube: the vlog, characterized by its poor quality and vox populi, and the corporate video, easily identifiable because it is all the vlog is not: high-quality production values referring to corporate culture. "Bad" videos are made by regular people, using low-end technology, paying little attention to form or aesthetics while attending to the daily life, feelings, and thoughts of the individual. Bad form marks the hand of an amateur and the space of the mundane while propelling a video's movement around the Internet, for this is also the mark of its veracity and authenticity. These videos are unedited, word- or spectacle-reliant, and accrue value through the suffering, talent, or humor of the individual. "Corporate" videos look good—like mainstream media—because they are made by professionals, are stolen from television, or are recut movies. They express ideas about the products of mainstream culture, in the music-driven, quickly edited, glossy, slogan-like vernacular of music videos, commercials, and comix. They consolidate ideas into icons; meaning is lost to **feeling**. Vlogs depend upon the intimate communication of the spoken word. Corporate videos are driven by strong images, sounds, and sentiments.

YouTube could be a radical development in media because the video production of real people holds half of the medium's vernacular. However, by reifying the distinctions between the amateur and the professional, the personal and the social, in both form and content, YouTube currently maintains (not democratizes) operating distinctions about who seriously owns culture. YouTube is already thought of as a **joke**, a place for jokes, a place for regular people whose roles and interests must also be a joke. A people's forum, but not a revolution, YouTube video manifests the deep hold of corporate culture on our psyches, reestablishing that we are most at home as consumers (even when we are producers).

Lesson #4. In the name of opening channels of communication, YouTube forecloses community. The world's largest archive of moving images is, and will stay, a mess. A searching eye creates the greatest revenue. YouTube draws users by fueling a desire for self-expression and **community**. While many come to the site to be seen and heard by others, or to make **friends**, they are much better served by places like the real world or **MySpace**. For, the very tools and structures for community-building that are hallmarks of Web 2.0— those that link, gather, **index**, **search**, and allow participation, commenting, and networking—are studiously **refused** on the site, even as YouTube remains its poster-child. Why can't you comment in real time? Why are there no bulletin boards? Why does the site make it impossible for you to post other things next to your videos? YouTube does not **answer**, so people go elsewhere for these (rudimentary) functions, dragging their favorite YouTube videos behind them to more hospitable climes (with YouTube's permission: goodbye and good riddance, we do not

need your photos or friends here!). YouTube is a place to upload, store (and move off) videos. The very paucity of secondary functions underlines its primary purpose: moving its users' eyeballs aimlessly and without direction, scheme, or map, across its unparalleled archive of moving images and associated **advertisements**.

Why *is* YouTube such a mess? Google owns it, and they categorize and find things for a living. Meanwhile on YouTube, videos are hard to find, easy to misname, and quick to lose. While its millions of users would be well served by a good archivist or two, in its calculated failings YouTube signals that it is not a place to hunker down or hang out with others, not a place within which to seriously research or study, not a place for anything but wasting time on your own. Even the most moving of videos needs to be connected to something (other than another short video)—people, community, ideas, other videos to which it has a coherent link—if it is to create what community does best: action over distraction, knowledge instead of free-floating ideas, connection over the quick link.

Lesson 5. YouTube may be DIY, but it just ain't punk. That is, unless you hack it. Unlike the punks of yore, in "Learning from YouTube" we burrowed within the corporate system, respecting its rules and limitations, all the while repurposing its aims, and using its vernacular to engage in its analysis. We learned that it is **hard to learn** from YouTube. Its architecture and ownership undermine fundamentals of academic inquiry and higher **education: depth of dialogue**, capability to find and link data, ability to sustain intimate and committed community, and structures of order and discipline. However, I hope that the great many class videos I have used to illustrate this article establish that on its pages, we learned to model new forms of academic exchange based upon the concise **summary** of complex ideas expressed through **words**, **sounds**, and **images** and open to the public.

Obviously, neither YouTube nor Google **cared**. There is ample room for NicheTube critiques in its unruly pages. Yet, while **corporations** dominate YouTube, and their directives organize decisions about its structure, applications, forms, and provenance, everyday DIY users do have a voice within its pages, as well as other pages, like those here, and we need to make our demands for a radical public technological culture **clear**. Just because corporations control nearly everything in our society doesn't mean that they should, or that they are the best suited to choose all that we need from new technology. It is true: punk is long dead, it is the era of Web 2.0, and so I prefer to rethink the lessons of "Learning from YouTube" as a series of successful hacks at one site that allowed us to better understand it, speak what we learned on its terrain, and in its own **terms**.

Notes

1. USC's Institute for Multimedia Literacy recently held the conference 24/7: A DIY Media Summit: http://iml.usc.edu/diy/stream.
2. Here you'd see John Lydon speaking about the Sex Pistols' "Never Mind the Bollocks" album, from a 1998 UK television interview.

3. Here you could see BlankTV's YouTube Channel, "the Net's largest, d.i.y., free, uncensored punk, ska, hardcore and indie music video site, featuring 3,000 kickass music videos and live clips spanning the past twenty-five years of punk, hardcore, ska, oi, psychobilly, indie and underground music." http://www.youtube.com/user/BlankTV.

4. "1983 Islington Squatter Punk Documentary," http://www.youtube.com/watch?v =c0IZdP3x66Y.

5. "Stan Taylor and his physics class at Miles Community College built a hovercraft powered by an average electric leafblower—watch it in action!" http://www.youtube.com/watch?v=xQmHqb42qDQ.

6. This paragraph holds fifteen links to diverse YouTube videos, including corporate forays into DIY; the Learning from YouTube class page (http://www.youtube.com/user/ mediapraxisme); my "highly viewed" intro to the course; scenes from the media frenzy that surrounded the class; and the students' varied responses: humorous, analytical, and reactionary. For the remainder of this article, if you were online, the bold links would be to the many videos made by myself and my students as part of the course work for the class. Elsewhere, I have attempted to organize this voluminous production, otherwise as overwhelming in quantity and quality as is YouTube, by creating six "tours" found on the class page that cover themes of some relevance to media scholars: education, entertainment, popularity, vernacular, user/owner, community/archive.

On Digital Scholarship

by Anne Friedberg

Instead of writing criticism, I make a film, but the critical dimension is subsumed.

Jean-Luc Godard, *Cahiers du Cinéma*, no. 93, 1961

Writing and Reading in the Digital: The Page and the Screen. Why not start by acknowledging the elephantine paradigm shift in the room? We are in the midst of a profound change in our scholarly environment. The contours of this change are large and indistinct: as print and media archives are digitized; as we acquire online access to those archives and databases; as search tools allow us to compile materials from a wide range of sources; as new software for annotation and note-taking aids writing and research; as we learn to capture and digitize work that we wish to study; as digitized material is fluidly cited and repurposed; as we increasingly deploy the link instead of the cite; as social networks, wikis, and other modes of writing and distributing collaborative work evolve; as electronic publication speeds the process from page to print; as books are digitally distributed; as we upload to YouTube, make podcasts, remix, hyperlink, and embed prior work—*we are now able to write with the very images and sounds that we have been analyzing*. But even if we have the technical ability to quote and cite and embed moving images/texts/archival documents, will every media scholar want to follow the Godardian imperative and "write" with images and sounds?

Rather than attempt to describe the elephant of digital media scholarship (its consequences—legal, political, social, economic, and disciplinary—unfold as new wrinkles in its ever-expanding skin), in this piece I will briefly address one thin slice of digital scholarship's thick potential: the translation of writing and reading to digital format, the material specificities of the paper-based book, and the potentials and liabilities of its translation to digital form.

Just as the codex was an improvement over the papyrus scroll, (it could be opened to a flat page, it could be opened anywhere in the text, its pages could be written on *recto* and *verso*, it was more compact, it could travel), and just as the printed book was an improvement over the codex (it could be mechanically copied and mass-reproduced), the digitally mediated "page" offers yet another paradigm shift in the processes of writing and reading. The digital page yields a new axis of depth—a page that layers to other pages, can be seen next to other pages, and can include moving images, still images, sounds.

But the digital page must be read on the computer screen. (Amazon's book-size Kindle has pages that "turn"; it is held more like a book than a computer screen, but its pages are—as of now—no model for multimedia scholarship. The text appears in only one font, in black and white, and largely unillustrated.) The computer screen is both a "page" and a "window," at once opaque and transparent; it commands a new posture for the practice of writing and reading—one that requires looking into the computer page as if through the frame of a window. And that window is simultaneously a scroll, a codex, a mechanically copied and mass-reproduced text.

For scholars who write about visual, audio, and multimedia, writing in the digital has some obvious advantages. When we are teaching or giving talks, we are able to take performative advantage of a range of illustrative examples—we can show slides, video clips, Web pages, or use the digitally enabled formats of Keynote or PowerPoint presentations. But when we turn to writing up our lectures, to writing essays and books, our critical, theoretical, and historical analyses must rest on ekphrasis, on a descriptive approximation of our object of study. Whether our methodology is historical, theoretical, critical, or merely analytic, we still must rely on the eloquence of language (for better and for worse) to perform our close analysis and ground our arguments.

In the first flush of digital scholarship—let's call it Writing in the Digital 1.0— media scholars began to take advantage of the illustrative potentials of the digital format. Conventional print books would add a digital concordance as a packaged CD or provide links to an online digital compendium in order to provide more images and sounds; primary texts and documents served as companions to the print document. In these cases, the digital material was largely illustrative and functioned as a supplement. At the same time, as DVD reissues of films and television series began to add analytic essays, production documents, and archival materials, scholars began to purpose-build, as "extra features," various annotational texts. In these cases, the moving image material was primary, yet supplemented with writing

or with other visual and sound material. This early phase of Writing in the Digital would include the capturing of digitized clips, capitalizing on the ease of JPGs and picture formats for downloading and sending images.

But in the present—let us call it Writing in the Digital 2.0—we rely on new tools of access and creation for new forms of scholarship: composing with moving images, with sounds, with hyperlinks, and with online connectivity. Scholarship that is "born digital," its digital form not a supplement or a translation but part and parcel from inception, echoes the challenges that drove filmmakers to take up the *caméra-stylo*, or (in the case of later Godard) the *vidéo-stylo*.

The Virtual Window Interactive: The Book and the Screen. *The Virtual Window Interactive* (http://thevirtualwindow.net/) is a Web-based translation/extension/conversion of ideas and arguments from my book, *The Virtual Window: From Alberti to Microsoft* (Cambridge, MA: MIT Press, 2006). *The Virtual Window*, the book, was conceived and written in the midst of the hyperspeed of technological change. It is a book about windows and screens and frames and the metaphors that shape our everyday access to the world around us. It is about architectural space and virtual space and our movements through both; the materiality and immateriality of these spaces; our mobility and immobility as users of the screen interface. Over the years that I was writing it, I yearned to write it in an environment that would allow me to link its concepts with its form.

But I was writing about the screen on a screen; I was writing a book about architectural windows, their virtual substitutes, and the fractured multiplicity of the multiple "windowed" screen. I was writing while looking into a screen fractured into many such windows—overlapping and simultaneous applications, some hermetically sealed, some wired to the outside. Perhaps it was the topic, or perhaps it was my addled multitasked brain; it was difficult to write it or think it along the linear coordinates of Cartesian space. I found myself working on all of its chapters at once, adding sections to one part as I subtracted sections from another, flipping back and forth between them, multitasking my way through, layering in argument and exposition. Of course, my writing process was facilitated—or perhaps determined—by word-processing software that encouraged holding each chapter open in overlapped windows, with easy "copy" and "paste" movements made without regard to linear logic. Along the way, as I was building a logic to the book's chapters, I was deeply aware of its matrix of concepts and arguments, a fugal weave to a matrix of related topics—the window, the frame, the screen; mobility, immobility; time, space. The earliest drafts had bold typed words with asterisks to indicate ****hyperlink.**** If I were to retain these links for an eventual reader, I knew that I would need to translate it to an environment that would allow me to link its concepts in an axiometric fashion. In the end, the book that I wrote is both linear and nonlinear: it is loosely chronological, yet its argument is refractive and accretive.

As a book writer, I was stuck in that ekphrastic mode of having to describe images—still and moving—in language and with only limited illustration. In this

way, there were some specific aspects of the book that could not be resolved *in* the book and that seemed destined to find another form. The premise of the digital addendum was to construct a kind of postpartum document designed to take it back to its inception—to capture the matrix of things lost in the activity of book writing and book production. In this way, if the digital edition were just a "companion," it would include all of the moving image clips that the book describes, add more still images than I was able to include for illustration, and build hyperlinks between chapters along words or topics. But I also wanted to do something different from that mode of accessory-to-print. I wanted to try to translate the ideas in the book to a completely different medium—a screen form of "writing" that is more interactive and Socratic than a book can be.

The Virtual Window Interactive was a truly collaborative project. Its concepts and conceits were enabled by the brilliant designer/programmer Erik Loyer and the generous and smart Steve Anderson. Because *The Virtual Window Interactive* was conceptualized in terms of its relation to the complex matrix of ideas in a completed book, it was not "born digital." It took its companionate role as the book's digital other and perhaps, for those who will never read the book, its *only* life. And now, with both book and screen versions, the specificities of book and print media are more apparent than ever. The book is a material object with the heft and beauty of print and paper, attributes of the codex in its most seductive form. The Web site—without materiality, sited at its own domain address—much more adeptly accesses the book's conceptual matrix. Reader-users are directly addressed by the screen interface, by the (visual and virtual) "window" of the computer screen rather than by the text-based language of description and illustration on the book's page. *The Virtual Window Interactive* opens to a black computer screen, enacting the space of a dark room where the user must open an aperture, is able to choose from a timeline of content to fill the opening, can measure and compare the content of its frame. The "viewing space" has floating keywords that link to the concepts and additional "in-depth" pieces of text that elaborate a few of the book's arguments. But *The Virtual Window Interactive* also suggests that the digital format is not at its best in building a complex argument; it works by accretion, by juxtaposition, by comparative assemblage. It is rhizomatic.

Of course, the creative and conceptual design skills necessary for Writing in the Digital may naturally select those who will venture to become adept scholar-practitioners—the learning curve with multimedia authoring tools like Macromedia Director and Flash, Adobe Illustrator is steep. A handful of practice-based Ph.D. programs have begun to train the next generation of scholar-practitioners, who will forge new modalities for media research and writing as they learn to combine the critical and theoretical methodologies of media studies with design and digital production skills. (USC's new practice-based interdivisional Media Arts and Practice [iMAP] Ph.D. was launched and admitted its first cohort in fall 2007.) And as more user-friendly open-source multimedia authoring software like Sophie (and its earlier version, TK3) are developed, these tools have the potential

to change our discipline's standard protocols for writing about media. And here, whether our methodology is historical, theoretical, or critical, we can still benefit from writing in the language of images and sounds. *Instead of writing criticism, I learn multimedia authoring . . .*

Hybrid Practices

by Sharon Daniel

As a digital media artist, my work is located at the nexus of historically distinct practices and modes of knowledge production: art and activism, theory and practice. Underlying all of my research is a commitment to participatory culture. In my scholarship, I trace a thread through social theory that ties the potential for self-representation to social change. In my creative practice, I take hold of this thread. I think of the Internet as a public space and see my work online as "public art," but I want to expand the definition of who constitutes the "public" in this context and create a more inclusive public sphere—both in the digital domain *and* in the physical domain. To this end, I establish ongoing project collaborations with non-profit organizations that empower participants from marginalized groups to represent their own experiences in information space.

In this passage from "The Author as Producer," Walter Benjamin precisely describes what I see as my artistic vision and my position as a practitioner.

> What matters, therefore, is the exemplary character of production, which is able first to induce other producers to produce, and second to put an improved apparatus at their disposal. And this apparatus is better the more consumers it is able to turn into producers—that is, readers or spectators into collaborators.[1]

I see myself as a context-provider stretching the concept of artistic creation from making content to making context. Context provision comprises both Benjamin's "exemplary character of production" and his "apparatus." A context-provider does not speak for others, but "induces" others to speak for themselves by providing both the means, or tools, and the context where they can speak and be heard.

What connects all my recent projects is a desire to effect social change—first, by providing technologically disenfranchised communities with the means or tools and access to information spaces, and second, by facilitating collective self-representation across socioeconomic, cultural, and linguistic barriers. For example, for a number of years, I have worked in various ways with the HIV Education and Prevention Program of Alameda County (HEPPAC) in an effort to engage injection drug users in a process of self-representation. The first phase of this

collaboration involved training the organization's staff and clients to use disposable cameras and author Web sites populated with their own images. During the second phase of my work with HEPPAC, I have recorded many hours of conversation with a number of injection drug users who use the needle exchange and other services provided by HEPPAC. These recordings provide much of the media for a forthcoming new media documentary work on addiction titled *Blood Sugar*, a companion piece to *Public Secrets*.

Public Secrets emerged from my work with the nonprofit human rights organization Justice Now and with twenty women incarcerated at the Central California Women's Facility (CCWF) in Chowchilla, California, the largest female correctional facility in the United States. My collaborations with HEPPAC and Justice Now are motivated by our collective desire to create a context in which the voices of marginalized and disenfranchised persons, their stories and their perspectives, can be heard in the public domain. Our objectives are:

1. To expose the social and political implications of the "war on drugs," including the disproportionate incarceration and subsequent political disenfranchisement of impoverished people of color.
2. To empower the participants to represent themselves in the media and, thus, to participate in and shape the public discourse around the social conditions and material circumstances they face on a daily basis.

For both injection drug users living outside the norms of society in the shadow of the criminal justice system and women trapped inside the prison system, our recorded conversations are acts of juridical and political testimony. By giving evidence—by acting as witnesses to their own experience and making their statements public—they become the source of their own resubjectification and stake out a claim to dignity. This claim to dignity and subjectivity enables the participants to challenge the alienating effect of poverty, the inequitable principles of distributive justice, and the dehumanizing mechanisms of the prison industrial complex.

Public Secrets

> I'm saying that people do commit wrong—I know that. I know that, but the majority of the women that are in here, it was survival, just survival, you know survival. For whatever reason they had to survive like that they just survived like that. They haven't done anything horrific—they haven't been on TV or anything like that. They're just nobodies that have committed a nobody's crime and ended up in a nobody's prison. OK, it's stupid—they had a "rock" in their hand so they're doing 25 to life. Come on, you know, I mean it doesn't deter them from smoking rock 'cause people are still out there doing it. So what is the point of taking a mother, a woman, somebody's child and putting them away because they had a nickel rock? When you really look at it and you go to everybody's cases three percent of the people here should really be helped—not so much as locked up but helped—because there is definitely something wrong. They need professional help.[2]

The injustices of the criminal justice system and the prison industrial complex are public secrets that the public chooses to keep safe from itself, like "don't ask, don't tell." *Public Secrets* (http://www.vectorsjournal.org/index.php?page =7&projectId=57) provides an interactive interface to an audio archive of over five hundred statements made by current and former prisoners that unmask the secret injustices of the war on drugs, the criminal justice system, and the prison industrial complex. Visitors to the site navigate a multivocal narrative that links individual testimony and public evidence, social theory and personal statements, in an effort to engage the public in a critical dialogue about crime and punishment and challenge the assumption that imprisonment provides a solution to social problems. The public perception of justice—the figure of its appearance—relies on the public not acknowledging that which is generally known. When faced with massive sociological phenomena such as racism, poverty, addiction, and abuse, it is easy to slip into denial. This is the ideological work that the prison does. It allows us to avoid the ethical by relying on the juridical.

The expansion of the prison system is possible because it is a public secret. As the number of prisons increases, so does the level of secrecy about what goes on inside them. After a series of news stories and lawsuits documenting egregious mistreatment of prisoners in 1993, the California Department of Corrections imposed a media ban on all of its facilities. This ongoing ban prohibits journalists from face-to-face interviews, eliminates prisoners' right to confidential correspondence with media representatives, and bars the use of cameras, recording devices, and writing instruments in interviews with media representatives. Women incarcerated in California are allowed visits only from family members and legal representatives. Inmates are not allowed access to computers, cameras, tape recorders, or media equipment of any kind. Such restrictions preserve the public secret. Given the ban on conversations with the media, I would not have had access to the women who have contributed to *Public Secrets* without the support of *Justice Now*. I visit the prison as a "legal advocate," and as such I am allowed to record my conversations with the women and, under the cover of the recorded deposition, solicit their stories, ideas, and opinions.

The visits to the prison require adherence to Kafkaesque regulations and acceptance of invasive search and surveillance procedures. I am registered for each visit in advance and searched on entry. I am allowed to bring in only a clear plastic baggie with a clear ink pen, my driver's license, a blank legal pad, and my minidisc recorder. The recorder has to be approved weeks in advance (the serial number is registered and checked) and the device is inspected on entry and exit. Only factory-sealed discs are permitted in.

After our interviews, the women are subject to strip search and visual body cavity searches that may be performed by male guards.

> I refused to be strip searched with men in the room. I have a 602 in Sacramento because I was strip searched and, in a room with—she tried to strip search me that way. I—I refused. At that time it was three men in there. And I insisted that you ask the

men to leave—it's behind a little bitty curtain, but so what? They—they may not be able to see, but they could still hear you tell me bend over, cough—bend over, spread and cough. And they can hear me coughing. And that, um, alone for me was humiliating, and I refused to strip with them in there. So after about five minutes of debating, she went on and asked them to leave and had a female staff come. But I felt like I shouldn't have had to do that.[3]

An atrocity is an act that is shockingly cruel and inhumane. Feminist legal scholar Catherine MacKinnon has analyzed the cultural pattern by which we are able to deny, ignore, and assimilate the atrocities that occur locally and globally on a daily basis: "Before atrocities are recognized as such, they are authoritatively regarded as either too extraordinary to be believable or too ordinary to be atrocious. . . . If it's happening, it's not so bad, and if it's really bad, it isn't happening." Thus, MacKinnon considers how denial and resignation normalize the atrocious and render its victims less than human. This is the way the public thinks about the prison. In the United States, the human, systemic, economic, and political abuses of the prison are atrocities that are both too violating and too ordinary to be accepted.

The women who have participated in *Public Secrets* are highly politicized and are seriously committed to this endeavor. They are quite literally historians and theorists who speak out in an effort of collective resistance. I collaborate with them first as a witness and then as a "context provider." It is my responsibility to create a context in which their voices can be heard across social, cultural, and economic boundaries. My conversations with these women over a period of five years led to the development of *Public Secrets*, which in turn brings their voices into dialogue with other legal, political, and social theorists such as Giorgio Agamben, Michael Taussig, Walter Benjamin, Fredric Jameson, Catherine MacKinnon, and Angela Davis. While this is a dialogue that I have constructed between interlocutors whose perspectives originate from very diverse social locations, for me, all of their voices emerge out of a shared ethos and converge in critical resistance.

The linking of these voices originated in an essay, "The Public Secret: Information and Social Knowledge," which I wrote for a special issue of the online journal *Intelligent Agent*. This essay also provided a point of departure for the design of the meta-level data structure that organizes the content of the online project *Public Secrets*. In all of this work, I see the public secret as an aporia, an irresolvable internal contradiction between power and knowledge, between information and denial, and between the masks of politics and the goals of an open society (one in which the state is expected to act for the people as guarantor of human and civil rights). Building on this concept, we created three main branches within *Public Secrets*, each structured as an aporia; inside/outside, bare-life/human-life, and public secret/utopia. Each aporia frames multiple themes and threads elaborated in clusters of narrative, theory, and evidence. Together, they explore the space of the prison—physical, economic, political, and ideological—and how the space of the prison acts back on the space outside to disrupt and, in effect, undermine the very forms of legality, security, and freedom that the prison system purportedly protects.

Technically, *Public Secrets* is a Web site with a "Flash" interface that provides access to a MySQL database. The interface employs an adapted version of a "treemap" algorithm. *Public Secrets* was originally published in the *Vectors Journal of Culture and Technology in a Dynamic Vernacular*. As a *Vectors* Fellow, I had the opportunity to collaborate with *Vectors'* artistic director, designer/programmer Erik Loyer. During the conceptual design phase of the project, Erik and I explored the idea of using treemap visualizations. Treemaps display rows of data as groups of rectangles that can be arranged, sized, and colored to graphically reveal underlying data patterns. This visualization technique allows end users to easily recognize complicated data relationships that are otherwise not obvious. To generate a treemap, one provides the algorithm with the dimensions of a rectangle and a list of items to be laid out within it, along with a value for each item. When given this information, the algorithm is able to create a rectangle for each item, the area of which is proportional to the item's value. In addition, the algorithm calculates the position and dimensions of each item so that all items taken together exactly fill the larger, enclosing rectangle. As Erik put it, "If I've got a box and a bunch of things to put in it, the treemap algorithm makes all those things fit in the box perfectly, while preserving their relative size relationships."

We used treemapping in *Public Secrets* more as a metaphor than as a visualization; in other words, the proportional relationships between our rectangles are randomly generated or, in some cases, fixed. They do not quantitatively represent patterns or relations of scale within the database, but instead allow us to graphically organize topically structured data that is dynamically pulled into each screen or view. Therefore, each new screen or view is unique as a visitor navigates through the site. Erik also developed a typographic riff on the treemap, in the form of an algorithm that dynamically arranges type (fragments of quotes selected to represent each of the audio files or texts) to fit the dimensions of a rectangle as closely as possible while retaining visual interest and beauty. Much of the power of *Public Secrets* is in this device—the dynamic generation of arrays of quotations from all of our authors (incarcerated women and social theorists alike) that are nonhierarchically generated and displayed, with each screen or view constituting a kind of emergent and transient, multivocal, hybrid narrative/theory text.

While many of the authors who are selected as *Vectors* Fellows are humanist scholars who are, in their *Vectors* projects, exploring new modes of scholarly production and means of address through the use of information technology, I am primarily a digital media artist. I have written as a way of theoretically contextualizing my own work. My essays have engaged questions concerning how art can respond to and act on our most troubling social problems, how access to information technology and the opportunity for self-representation might assist those without rights in the physical public domain, and what constitutes the "ethical position" of the context provider. *Public Secrets* represents a unique integration of theoretical and artistic production for me—one that will be further extended in *Blood Sugar*.

In my writing and my creative practice, I refuse to stand outside the context I provide. As a context provider, I am more immigrant than ethnographer, crossing over from the objective to the subjective, from the theoretical to the anecdotal, from authority (artist/ethnographer) to unauthorized alien. As an academic I was once reluctant to include my own story when theorizing my work. But my position is not neutral; in theory or in practice, that would be an impossible place. So I have crossed over into what theorists such as Jane Gallop and Michael Taussig call "the anecdotal," where theorizing and storytelling, together, constitute an intervention and a refusal to accept reality as it is. By employing a polyphony of voices, including my own, in order to challenge audiences to rethink the paradoxes of social exclusion that attend the lives of those who suffer from poverty, racism, and addiction, my work fulfills the role that new media documentary practices—practices of context provision—must play: empowering speech, changing perceptions, asking tough questions, and making radical demands. To understand my projects as works of art (or scholarship), one must move from questions of aesthetics (what is beauty?) or ontology (what is art?) to questions of pragmatism. In other words: what can art do?[4]

Notes

1. Walter Benjamin, "The Artist as Producer," in *Reflections*, ed. Peter Demetz, trans. Edmund Jephcott (New York: Harcourt Brace Jovanovich, 1978).
2. Zundre Johnson, interview by author at CCWF, July 8, 2005.
3. Kelly Turner, interview by author at CCWF, July 8, 2005.
4. Paraphrase from quote by Jennifer Allen, "What? A-Portable," in *Biennale Di Venezia 2001*, catalog copy provided courtesy of Biennale Di Venezia: "To understand the work one must move from ontology, (what is art?) to pragmatism (what can art do?). Herein lies a possible revival of avant-garde politics—no longer historically 'ahead,' nor operating through shock and estrangement, but rather producing works that make things possible right now."

Contributors

Sharon Daniel is professor of Film and Digital Media and chair of the Digital Arts and New Media MFA program at the University of California, Santa Cruz, where she teaches classes in digital media theory and practice. Her research involves collaborations with local and online communities that exploit information and communications technologies as new sites for "public art." Her work has been widely exhibited in the United States and abroad.

Kathleen Fitzpatrick is associate professor of English and Media Studies at Pomona College in Claremont, California. She is a founding creator of MediaCommons and an active participant in the digital humanities. Her book, *The Anxiety of Obsolescence: The American Novel in the Age of Television*, was released in 2006 by Vanderbilt University Press.

Anne Friedberg is chair of the Critical Studies Division in the School of Cinematic Arts at the University of Southern California. Friedberg is the author of *Window Shopping: Cinema and the Postmodern* and coeditor of *Close Up 1927–1933: Cinema and Modernism*. In conjunction with her new book, *The Virtual Window: From Alberti to Microsoft*, she has launched an interactive extension, The Virtual Window Interactive.

John Hartley is Australian Research Council Federation Fellow and Research Director of the ARC Centre of Excellence for Creative Industries and Innovation, at Queensland University of Technology, Australia. He is the author of numerous books—including *Story Circle: Digital Storytelling around the World*, *Television Truths*, *Creative Industries*, *A Short History of Cultural Studies*, *The Indigenous Public Sphere* (with Alan McKee), *Uses of Television and Popular Reality*—and editor of the *International Journal of Cultural Studies*.

Alexandra Juhasz, professor of Media Studies, Pitzer College, teaches video production and media theory. Her books include *AIDS TV*, *Women of Vision*, and *F Is for Phony*. She produced the feature film *The Watermelon Woman* and nearly twenty educational documentaries on feminist issues ranging from teenage sexuality and AIDS to the Iraq war. She has "published" *MEDIA PRAXIS: A Radical Website Integrating Production, Theory and Politics* at http://www.mediapraxis.org. She blogs about YouTube at http://www.aljean .wordpress.com.

Christopher Lucas is a Ph.D. Candidate in the Department of Radio-TV-Film at the University of Texas at Austin. In 2002 and 2003, he was an organizer of *Transparencies: Technology, Culture, Communication*, a graduate student conference in Austin. In 2004, he co-created FlowTV.org with Avi Santo, serving as coordinating editor until 2006.

Tara McPherson is associate professor of Critical and Gender Studies at USC. She is the founding editor of the multimedia journal *Vectors*, author of *Reconstructing Dixie: Race, Gender and Nostalgia in the Imagined South*, and editor of *Hop on Pop* (with Henry Jenkins and Jane Shattuc) and *Digital Youth, Innovation and the Unexpected*. Her work has been funded by the Annenberg, Rockefeller, Ford, and MacArthur foundations.

Avi Santo is an assistant professor in the Department of Communications at Old Dominion University. He is the co-creator of MediaCommons with Kathleen Fitzpatrick and the co-creator of FlowTV.org with Christopher Lucas. His research focuses on transmedia licensing, merchandising, and brand management practices prior to—and as a precursor of—conglomeration. He has published articles in *The Canadian Journal of Film Studies*, *Continuum*, *Framework*, and *The International Journal of Cultural Studies*.