The Uses of Disenchantment in New Media Pedagogy

Teaching for Remediation and Reconfiguration

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Abstract

Leah Lievrouw, professor of Information Studies at UCLA, explores differences between new media and traditional notions of mass media. She asserts the need for a new media pedagogy that recognizes and embraces the ways in which "reconfiguration" and "remediation" make engagement with new media distinct. New media allow for more possibilities of different types of participation and educators need to use these changes as they attempt to connect students' experiences with critical thinking and active participation. Lievrouw historically contextualizes two perspectives of the development of media and information communication technology; the more traditional view of mass media as transmitters of content from few to many, a "pipeline" view (involved in gatekeeping and property) vs. a newer view that evolved in the 1990s with more individual participation and interactivity, a "frontier" vision for social relationships and action. Lievrouw also provides examples of different activities she has her university students undertake in order to build their awareness and skills with new media.

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Leah A. Lievrouw

> Hackers create the possibility of new things entering the world. Not always great things, or even good things, but new things. In art, in science, in philosophy and culture, in any production of knowledge where data can be gathered, where information can be extracted from it, and where in that information new possibilities for the world produced, there are hackers hacking the new out of the old.
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> *McKenzie Wark,* A Hacker Manifesto, *(2004)*

Over the last three decades, the proliferation and hybridization of new media and information technologies have fostered a variety of new genres and forms of people's engagement with media. Media *audiences* and *consumers* are now also media *users* and *participants,* immersed in a complex ecology of divides, diversities, networks, and literacies. This changing social and technological landscape has created unprecedented opportunities for expression and interaction. But it also poses complex problems of social equity and solidarity, privacy and security, political and economic participation, and more. In such a context, the familiar "processes and effects" that motivated traditional mass communication research and scholarship, and the production-consumption dynamics of critical media studies, tell only part of the story.

In previous work, I have proposed that two particular modes of engagement distinguish new media from mass media: the *reconfiguration* of media technologies and systems,

that is, the modification and adaptation of technologies as needed, to suit the users' purposes or interests; and the *remediation* of media content and forms, where existing materials are borrowed, adapted, sampled, or remixed to create new expressions, relationships, and content (Lievrouw, 2006a; 2007). Reconfiguration and remediation are hallmarks of contemporary communication, creative work, and media culture; they allow users to resist the fixity of traditional technologies and institutional systems, and to negotiate, work around, or redraw the boundaries of their communicative practices and of mediation itself, in an ongoing process of co-optation and reinvention.

Nowhere has this sensibility been more fully embraced than among young people in affluent societies like those in the United States and elsewhere around the world, many of whom are sophisticated users of new media technologies, and avid participants in online culture. Google, Facebook, del.ic.ious, SecondLife, and World of Warcraft may matter as much to young Americans, as Viacom, Disney, CNN, Murdoch, and the *New York Times* do to their parents. Instructors in media and communication studies face significant challenges as they attempt to present their students with a critical view of the new media environment, based on classic principles of media literacy and critical judgment, cultural studies, and industrial-era political economy. In the new media context, the sources and circulation of information and knowledge, as well as the standpoints of observers, critics, and participants, are often unstable or contested. Young Internet users are also widely assumed to be apathetic, self-absorbed to the point of solipsism, and politically disengaged. And as if these challenges weren't enough, mainstream media industries have waged relentless legal and public relations campaigns, in both American culture at large and in the classroom, to teach youngsters that creative engagement online is risky and that sharing information is tantamount to theft, piracy, and "trafficking" with dire legal and financial consequences (Gillespie, 2007).

Nonetheless, my students often seem frustrated by those who dismiss their engagement with new media as mere entertainment or consumption—as when they're patronizingly told that they can be "producers as well as consumers" or that "good digital citizens" avoid free downloads or file-sharing. However, recent studies indicate that young Internet users are far from apathetic. They tend to be wary of corporate media products and institutions (Pew Research Center, 2007), although they may not always be able to articulate just why "mainstream media" or "multinational corporations" cannot be trusted. In my experience, students are eager to understand and situate their experiences with new media, not only as audiences or consumers, but as active, skilled, and informed participants in a thoroughly *mediated,* networked culture, who use media and information technologies to express themselves, create relationships, and share meaning.[1]

The greatest pedagogical challenge related to new media, then, may not be students' lack of basic technical skills or literacies.[2] Nor do they need convincing that mainstream media industries wield disproportionate power, serve the interests of dominant political and economic players, or produce endless streams of distraction and junk content. Rather, the challenge for new media pedagogy is to connect students' everyday interactions and experiences with media technologies, to classic questions of equity, privacy, fairness, openness, access, power, and so on—to give students the critical vocabulary and tools to think with and to encourage them toward more active and principled media use and

participation. Put differently, the challenge is to teach for reconfiguration and remediation.

In his classic book, *The Uses of Enchantment,* the psychologist Bruno Bettelheim argues that the imagery of myths and fairy tales helps the child,

> …enrich his life…stimulate his imagination; help him to develop his intellect and to clarify his emotions; be attuned to his anxieties and aspirations; give full recognition to his difficulties, while at the same time suggesting solutions to the problems which perturb him…simultaneously promoting confidence in himself and in his future.(Bettelheim, 1976, p. 5)

With respect to new media and information technologies however, there has never been a shortage of mythologizing and hype, especially directed at young people. If anything, it can be nearly impossible to disentangle facts from mythology when we talk about the "hundred-dollar laptop," "frictionless economy," "death of distance," "digital divide," "hive mind," "long tail," or "Web 2.0," for example. Often, such buzz words are no more than simplifying tokens that mask complex, socio-technical interconnections and power relationships. They serve more to obscure difficulties and possible solutions and to produce anxieties, than to make these relations and solutions intelligible.

Therefore, to encourage students toward more reflective, critical, and activist engagement with media, it is necessary to sustain the constructive, affirmative energy of the myths, while pointing the way beyond simplistic hype. At the same time, instruction must help reduce the disabling outrage and cynicism generated by ideologically driven critique that assigns simple or fixed roles to certain players and actors in the contemporary media landscape. By introducing a bit of *dis*-enchantment—for example, by drawing historical parallels between H. G. Wells's 1938 vision of an encyclopedic "world brain" and Tim Berners-Lee's vision of the World Wide Web, by demonstrating the concrete reality of Internet infrastructure and surveillance in the form of real-time maps of router traffic, the spread of e-mail viruses, or by having students keep diaries about their media uses—the way can be opened for healthy skepticism, while avoiding cynicism that shuts down engagement and commitment. Students can begin to contextualize the myths and think about new media technologies and culture less as vast, impersonal forces and more as repertoires of practices, tools, and social arrangements that they can engage and play with, intervene in, hack, reconfigure, and remediate—not just consume.

In the remainder of this chapter, I draw on my experiences teaching the social implications of ICTs (information communication technology) and new media, to reflect on a strategy for new media pedagogy that can help make this connection. It involves two main components: the first is historical contextualization that contrasts contending visions of the cultural and economic role of new media that have evolved from the days of the pre-browser Internet in the 1980s to today's Web 2.0. The second aspect is designing exercises that encourage students to assess their own media practices and to think about and critique new media culture, using a critical vocabulary that contrasts new media projects with more traditional mass media programming and content. The ultimate objective is to help students become more adept and informed participants in media culture.

■ Historical Contextualization: A Survey of the Contested New Media Landscape

The first step in creating effective new media pedagogy is setting the stage. Students are often unfamiliar with the social and economic background of the technologies and uses they take for granted in everyday life. Therefore, it is essential to demonstrate the continuity of "new" media culture with technologies, institutions, and social practices over time, as well as pointing out instances of change and discontinuity. To accomplish this, I often frame the development of media and information technologies by contrasting two rival (but in many ways interdependent and even dialectical) views of the proper role of media in society. At the risk of some simplification, these can be called the *pipeline* and *frontier* visions.

Historically, it has been well established that a handful of major firms and cultural institutions have dominated the mass media and information industries in the United States and globally, and they continue to occupy a major role in mainstream culture and politics. These "mainstream media" have tended to view the contemporary media landscape almost entirely in terms of gatekeeping and property—a "pipeline" model based in traditional mass media production and distribution that emphasizes the transmission of content and media products from a few dominant producers to large audiences of consumers.

However, these firms and institutions have been challenged, particularly since the 1990s, as growing numbers of people have turned to new media technologies for information and entertainment, to maintain and extend their networks of social relationships and interpersonal contacts, to generate and share their own self-produced content, and to resist, critique, and respond to mainstream culture and politics. These users, especially those with the skills to manipulate and play with the technology itself, tend to see new media culture more as an arena for cultivating reputation, credibility, reciprocity, trust, and voice—a "frontier" for sociality and action.

In contemporary media culture, these two visions are played out in a contested terrain where relatively concentrated, mainstream "centers" of traditional media industries and governance, organized around the pipeline model, contend with increasingly diffuse, interactive, and participatory "edges" where the frontier idea has more currency. Center and edges, pipeline and frontier—all engage in an ongoing cycle of capture, co-optation, subversion, and repurposing of information resources, content, and technological systems.

The story of these competing visions begins with the rise of networked telecommunications and computing, from the research-driven ARPANET and NSFNET in the 1960s and 1970s, to the privatized, commercialized Internet in the 1980s and 1990s (Abbate, 1999; Ceruzzi, 1998). In the early stages, the Internet was regarded as an arcane tool for experts and academics, best suited to interpersonal messaging and database manipulation, and not much of a threat to the cultural dominance of established broadcasting, cable, news, and entertainment media.[3] Before the era of browser technologies and the World Wide Web, a succession of collaborative environments for small groups,

including news groups, bulletin boards, group decision support and computer conferencing systems, listservs, multi-user dungeons (MUDs), and MOOs (MUDs, Object-Oriented) emerged and flourished among skilled users with workplace or campus Internet access. E-mail, the original "killer application" of computer-mediated communication from the inception of the ARPANET, migrated into the workplace and eventually into routine personal and leisure communication settings.

However, the introduction of the World Wide Web, browsers, and inexpensive client-server network architectures in the early 1990s inaugurated a new stage in the development and spread of the Internet. Many observers confidently predicted that the Web would finally deliver on the communitarian visions of "information utilities," "wired cities," and "virtual communities," promulgated from the 1960s onward by pragmatic policy experts and utopian technophiles alike (Dutton, Blumler, & Kraemer, 1987; Greenberger, 1964, 1985; Light, 2003; Turner, 2006). Technology enthusiasts like Howard Rheingold, for example, deemed the decentralized, packet-switched architecture of the Internet to be inherently democratic and predicted that it would open a new frontier for empowerment and participation that would give marginalized communities and groups a greater role and visibility in the wider culture than had ever been possible via mass media (Rheingold, 1993). Electronic Frontier Foundation founder John Perry Barlow famously declared that "information wants to be free" and denounced government controls on encrypted personal communications as "jackboots on the Infobahn" (Barlow, 1994a, 1994b).

Certainly, the frontier vision owed a great deal to the communitarian (if intensely technocratic) "hacker ethic" that evolved among elite computer programmers and engineers in the 1960s and 1970s (Nissenbaum, 2004). Many of these bright, motivated young technologists and graduate students, deeply influenced by counterculture values and politics, were also recruited by the Department of Defense's Advanced Research Projects Agency to design and build the original ARPANET and other defense-related computing projects. The free software movement launched by Richard Stallman and his colleagues at MIT, for example, was the philosophical and ethical inspiration for today's free/libre/open source software (FLOSS) model of technological innovation and development (Moore, 2001; Raymond, 2001). The dramatic, "counterintuitive" success of the FLOSS approach, founded on broad-based information sharing instead of secrecy and restrictive patenting, has recently given rise to similar efforts across other high-technology and manufacturing industries (*Economist,* 2005a, 2005b, 2006). The hacker ethic continues to be expressed in campaigns by programmer-activists against the pervasive expansion of intellectual property rights and restrictive digital rights management (DRM) technologies, government controls on encryption, and law enforcement agencies' surveillance of individuals' private communications, particularly in the post-9/11 era (Eschenfelder & Desai, 2004; Ludlow, 2001; Wark, 2004).

By the mid-1990s, meanwhile, the mainstream media industries had begun to worry about the "frontier" of the Internet and the World Wide Web as a potential rival for the time, attention, and disposable income of mass media entertainment audiences. They viewed the theoretically limitless reproduction and circulation of digital materials as a clear threat to their traditional control over the production and distribution of media

programs and products. Recasting themselves as "content industries," to emphasize their roles as cultural producers, they insisted that the Web was significant mainly as a marketing and distribution channel, in line with their existing, primarily one-way, model of production and distribution. Firms entered into mergers that would allow them to enlarge and lock in market share. In partnerships with computing firms, they bundled their content with other types of "software" and hardware platforms. They formed alliances with telecommunications operators, cable companies, and Internet service providers (e.g., AOL-Time Warner and AT&T-Comcast), to centralize and extend control over the new media infrastructure, particularly the "final mile" of cable or telephone wire into the home.

Although a glut of bandwidth had been built in the United States in the 1990s in anticipation of a surge in demand for paid online entertainment, by the end of the century most of these new networks remained dark: major media firms were reluctant to distribute their products online without ironclad copy protections and revenue guarantees. Broadband services to the home (i.e., cable modem and digital subscriber line [DSL] services) were built "asymmetrically," that is, with much more downstream capacity from the network to subscribers, than upstream from subscribers to the network, reflecting a view of subscribers primarily as consumers, rather than producers, of media.[4] The dot-com collapse at the end of the 1990s provoked further rounds of buy-outs and increased ownership concentration across the media, telecoms, and computing industries.

Media and entertainment industries also lobbied the Congress, Justice Department, Federal Communications Commission (FCC), and other relevant agencies to reshape the regulatory environment to their advantage. Limits on concentrated media ownership were substantially reduced under the 1996 Telecommunications Act and the FCC's repeal of its Financial Interest in Syndication ("Fin-Syn") rules.[5] The U.S. radio frequency spectrum, formerly considered a scarce natural resource and thus a public good, was redefined as an over-abundant commodity, and significant portions of the airwaves were put up for auction or given to private firms outright.

The traditional media and entertainment industries also enthusiastically appropriated the "intellectual property" metaphor from the invention and patenting culture of scientific research and high technology, and adopted a new and expansive view of copyright as an instrument for safeguarding and expanding their established revenue sources—a move that launched what one critic called an "intellectual property epidemic" (Litman, 1994). Historically, entertainment and media firms had placed little value on their older productions: studios, networks, music labels, and publishers were more likely to dump or destroy old films, sound recording masters, and videotaped television shows, or to let unpopular books go out of print and fall out of copyright, than to store and preserve either the works themselves, or the rights to them.[6] However, with the spread of digital technologies, the industries now saw their backlists and catalogs as potential troves of low-cost content that could be recycled, "versioned," and resold to new audiences. Extended copyright protection was one way to insure that firms would retain rights to older works, long after they would otherwise have moved into the public domain.

The 1998 Digital Millennium Copyright Act (DMCA) and the 1999 Bono Copyright Term Extension Act thus marked the beginning of a new era in American intellectual

property law, extending copyright restrictions to more types of materials and rights than ever before, for unprecedented periods of time, as a hedge against the growing dominance of digital technology. Despite the fact that information technologies with significant non-infringing uses (such as VCRs) had long been legal, new "anti-circumvention" provisions of the DMCA prohibited the production or use of any new technology that *could* be used to infringe copyrights, whether the technology was in fact used that way or not. Armed with new legal doctrines and protections, in the early 2000s industry groups (notably the Recording Industry Association of America [RIAA] and Motion Picture Association of America [MPAA]) launched waves of lawsuits against student Internet users and college campuses, charging that American institutions of higher learning (where high-speed Internet access was already routine) had become willing accomplices in students' illegal downloading and file sharing.

After the attacks of 9/11, the moral panic over copyright infringement in the United States became increasingly conflated with the Bush administration's drives to expand the surveillance of citizens and foreigners in the "global war on terror." Indeed, one observer predicted that the events of September 11 would be seen in retrospect as "the iceberg [that sank] the Internet" (Meikle, 2002, p. 173). New laws abandoned the traditional regulatory principles that had underpinned telephony, postal mail, and publishing. Internet service providers (ISPs) now considered both their systems, and the content they carried, as their private property and subject to company monitoring and control.[7] In early 2007, Attorney General Alberto Gonzalez praised the proposed Intellectual Property Protection Act of 2007, which would have criminalized "attempted" infringement (previously, only actual infringement could be prosecuted), increased the punishment for use of pirated software to life imprisonment, and required the Department of Homeland Security to notify the RIAA whenever it detected the unauthorized transfer of recorded performances in the course of its surveillance sweeps of the Internet (McCullagh, 2007).

To date, established media and entertainment firms have stridently opposed any distribution scheme or technology that might threaten their gate keeping, rent-extracting role in the creation and movement of information and interpersonal communications. This stance has dovetailed neatly with the security and surveillance interests of government and law enforcement in the post-9/11 era.

Yet the frontier vision persists. Myriad community groups, cultural and political activists, artists, and others have adopted new media technologies to respond to, reflect, critique, parody, rejoin, avoid, or subvert mainstream media and culture. Ranging from volunteer indymedia news services that report on underrepresented issues and communities, to culture jamming projects that hack and ridicule images and ideas from popular culture and politics, to "folksonomies" that challenge and reorganize established institutional authority and knowledge (Lievrouw, 2006a; 2007), these projects combine the progressive hacker philosophy of early Internet proponents and visionaries, with the longer tradition of underground, alternative, and radical art and media (Atton, 2002, 2004; Bailey, Cammaerts, & Carpentier, 2007; Downing et al., 2001).

A more quotidian, but perhaps more significant, development has been the emergence of so-called "Web 2.0," as more people have turned to new media for everyday interpersonal interaction and information sharing, as well as the consumption of mass-produced

content. Few of today's undergraduates even remember a time before browsers and the Web. Despite the "zero tolerance" stance of the entertainment industries and their government allies, downloads and file-sharing have become the dominant mode of engagement with media for most young Americans. Millions of Internet users routinely write blogs (see indexes and statistics at Technorati), organize and classify online materials using tagging and bookmarking sites (del.icio.us, flickr, Twitter, Pandora), interact via social networking sites (Facebook, MySpace, LinkedIn), upload home movies and more ambitious media projects on video sharing sites (YouTube), contribute to collaborative, peer-reviewed information resources (Wikipedia), and participate in "massively multiplayer" games and virtual worlds (World of Warcraft, SecondLife). Nonetheless, mainstream media interests have reacted stubbornly to this shift in engagement with a mixture of derision (print journalists ridicule bloggers), co-optation (celebrating "user-generated content," *Time* magazine's 2006 "Person of the Year" cover featured the word "YOU" above a screen-shaped reflective panel), and outright capture (Rupert Murdoch's purchase of MySpace and Microsoft's stake in Facebook).

The territory of digital media culture remains contested.

■ Exercises for Participation in Digital Culture

Historical contextualization gives students some basic tools for framing and interpreting the development of media and information technologies and for forming their own views about those technologies' cultural and social significance. But the nature of contemporary digital technologies and culture suggests that effective learning *about* digital culture requires meaningful and direct participation *in* it. Therefore, once the social and cultural context of digital media has been provided, the second aspect of new media pedagogy challenges students to assess and develop their own practices and skills. The following exercises and activities range from simple research tasks to more complex team projects involving web authoring skills. Students gather and analyze information about key concepts and issues; make judgments, evaluate information, critique cases, and justify their views and conclusions; and demonstrate their knowledge and judgment in the design, production, and presentation of projects that they share with peers in class and online.

Surveillance and Privacy: "The Data Cloud"

The inspiration for this assignment is the concept of the *data cloud,* characterized by media and cultural critic Bruce Sterling as "the kind of demographic haze that surrounds the author" (Sterling, 2005). For a minimum of forty-eight hours (e.g., over a weekend), students are instructed to keep a detailed diary of all the transaction data that they generate and are captured by digital technologies as they go about their everyday activities. For example, students note every time they're in the presence of a video surveillance camera, use a credit or debit card, make a telephone call, TiVO a television program, get

directions using a GPS device, send e-mail or download files online, pass a scanner at a turnpike toll booth, have purchases recorded at a store's point-of-sale scanner, swipe a card to enter a building, and so on.

At the end of the diary period, each student compiles the information into a short summary and writes up a discussion of the results. Students are asked to reflect on the significance of what they've found; for example, what does their data cloud say about them, and to whom? What are the advantages and disadvantages of data capture for them personally? Who has access to the captured information, and why might those with access be interested? How might extensive data capture affect students' speech and political rights? How might students better control the data trails they leave, if it is possible at all?

Digital Divides, Access, and Equity: The Household Media Budget

In this exercise students are instructed to prepare a "media budget" that accounts for how much the people in their households (they and their roommates or families) spend for information and communication products, services, and technologies in an average month. Expenses might include magazine and newspaper subscriptions; costs for cable television, Internet service providers, or satellite radio services; fixed-line and mobile telephone services and equipment; and spending on books, movies, games, and other entertainment programs and products. The costs of equipment and supplies should also be included (e.g., telephones, wireless routers, computers and laptops, printer paper and cartridges, and so on). Students are also allowed to include educational expenses like tuition, fees, and books.

As in the data cloud assignment, students tally their expenses, summarize and explain them in a short paper, and discuss the results with other students in class (to ensure confidentiality, students only share actual figures with the instructor). They are asked to note the most and least expensive categories in their budgets, and whether any aspect of the budget surprises them; students often find that they over- or under-estimate their actual spending on different types of goods or services. At a more general level, they are asked to think about which social groups are most or least likely to use or afford the products, services, technologies or activities they may take for granted; how cost might affect access to information and communication services for middle- or lower-income households; and what sorts of social or economic policy might help promote equitable access for different social groups.

Making Judgments about Information: "Reliable Sources"

I have used two different types of exercises to encourage students to think critically about the credibility, reliability, and authority of information retrievable from various sources. In one exercise, the class is divided into two groups, and students in both groups

are given the same simple research task (e.g., finding and reporting national data on the number of households with Internet access, by demographic group; or describing and applying Marshall McLuhan's "Laws of the Media" to familiar new media technologies). The only difference between the groups is that one is restricted to using *only online sources* to complete the task, while the other is restricted to using *only non-Internet sources* (although small exceptions are allowed, such as using a library's electronic catalog on site). The students write reports that include the answer to the question as well as a detailed account of the procedures they followed to complete the task. Then the class meets as a whole to compare and discuss their experiences and the quality of the results. Students debate which methods are "easier," and which are more complete or reliable; which sources were easy to locate and retrieve, or more difficult; how they decided on the quality of the sources they found; and the skills needed to find and evaluate the information they needed to perform the task.

In an alternative exercise designed to demonstrate issues of information reliability and authority, students (either individually or in small teams of two or three) are assigned a political, cultural, or activist online website or project (that is, one that takes a particular perspective or represents an interest in an issue) as a case study (e.g., artists' projects, blogs, alternative news organizations, political parties, etc.). The students "dissect" and critique their respective cases, and present critiques for class discussion and feedback, using a simple taxonomy of characteristics of online activism (scale, interventionism, subcultural literacy, irony, perishability, collaborativeness, and separatist or heterotopic qualities; Lievrouw, 2006a). In their critiques, students must assess the sources, aims, and sponsors of the case they're assigned, the design of the site or project, including page layouts and links, the architecture of relationships among pages and links, and the graphic "look and feel" of the site or project. If possible, they should also gather information about the site's web traffic, frequency of updating, Google ranking, "tag clouds," or other indicators of audience interest and response. Students must be ready to discuss and justify their views about the effectiveness or success of the case study site/project, whether it should be considered credible or reliable, and what alternative or additional sources of information about the project or topic should be consulted.

"Be the Media": Remediation and Reconfiguration

In the most advanced exercise, small teams of students design and post simple websites for their peers that introduce a topic, issue, debate, or controversy related to new media technologies or digital culture. Examples have included copyright law and downloading; information warfare; online diasporic communities; Internet censorship and decency laws; online plagiarism; gender differences in Internet use; and the effect of the Internet on political campaigning and social movements, among other topics.

Teams must summarize all relevant aspects of their issue clearly and accessibly and design an attractive and informative site. They must locate, provide links to, and contextualize relevant and authoritative source materials, and represent different points of view or opinions about the topic. As in the reliable sources exercise, teams must justify or

provide rationales for the materials they choose for their sites. The design, structure, and usability of the website are evaluated by other class members, as well as the content and presentation. Because not all students have extensive web authoring skills, students are encouraged to form teams that include strong writers, researchers, issue activists or topic experts, students with media production skills such as audio, still images, or video, as well as programmers or web authors. In past projects, students have responded to this assignment in very creative ways. Teams have contributed (or successfully revised) whole Wikipedia entries, created and posted links to PowerPoint-type instructional programs, slide shows, and short-form videos within their websites, built "spoof" sites that reproduce the design of familiar university pages to criticize institutional policies, set up collaborative wiki workspaces, and created tagging projects that link information to particular geographic locations using Google Earth.

■ Reflecting on New Media Pedagogy: The Uses of Disenchantment

To close this discussion, I want to make two general points about the pedagogical strategy that has been sketched out here.

First, historical framing and critique is a necessary element in any effective new media pedagogy. As long as mainstream media and information industries, and their regulatory allies, continue to resist any challenge to their traditional business models (and thus, political and economic power)—that is, so long as they continue to view media culture primarily in terms of industrial-era assumptions about mass media production and consumption—media critique and media literacy will continue to be essential foundations for teaching about new media. The historical, institutional perspective that applies to established industries like publishing, broadcasting, cable, and fixed and mobile telecommunications, applies as well to newer players, ranging from search engines and metadata, surveillance and cryptography, operating systems, and games, to Internet backbone operators and service providers, local wireless systems, and standards processes for Internet infrastructure.

For example, the Internet's origins in U.S. military research and development are often suggested as the underlying explanation of American dominance of new media networks. However, fewer critical scholars have attempted to explain why Americans' access to broadband systems is slower and more expensive than that enjoyed in almost any other developed society or analyzed the institutional and market conditions supporting an American mobile telephone system that is generally incompatible with, and technologically inferior to, such systems elsewhere. Classical political economy of mass media helps students understand how some kinds of messages come to dominate popular culture or political discourse while others are neglected or silenced. But political economy of new media/digital culture can help students understand why mobile telephones, rather than laptops, currently hold the most promise for bridging digital divides between the devel-

oped and developing world, or the "reputation economies" that underlie open-source technology and cultural production (Castronova, 2003; Terranova, 2000).

Moreover, historical contextualization helps to show how media law and policy have evolved over time, in parallel with technological developments. Traditional communication research and scholarship have placed speech rights, decency/censorship, and press freedoms at the center of media policy research, for example, by considering how concentrated ownership or regulatory capture by industry interests affects these rights and obligations. However, as the overview above suggests, intellectual property law, once scarcely mentioned in most texts or courses on the media law and policy, today drives debates about media access, and equity, creativity, public opinion formation, and social and political participation. Speech and press freedoms are just as critical in the new media context—indeed, they may face unprecedented challenges.

However, history and critique alone are not enough. A second point is that new media pedagogy must connect historical context and the actual practices, experiences, and tangible, material qualities and affordances that distinguish digital media and information technologies from mass media. This nexus has been suggested in a recent essay by the prominent film scholar and critic Thomas Elsaesser, who offers an intriguing way of thinking about the difference between the experience of mass media, and new media, that parallels the strategy presented here.

As noted above, Bruno Bettelheim wrote eloquently in the 1970s about "the uses of enchantment," the power of narrative and myth (in the form of fairy tales) to help children make sense of complex feelings, relationships, and events in their lives. In his essay "Cinephilia or the Uses of Disenchantment," Elsaesser (2005) makes a similar point about "cinephilia," literally the love of cinema, and the mythologizing power of Hollywood narrative film that helped fuel early, auteur-focused cinema studies in Europe and the United States. However, he argues that by the 1980s this original cinephilia had become a source of ambivalence and even embarrassment among film scholars, who (in their elaborations of "screen theory") associated it with regressive male fantasy and voyeuristic, scopophilic fandom. This ambivalence about "Hollywood as the good/bad object" led to *dis*enchantment and a new critical distance among scholars that "helped renew the legitimating enterprise at the heart of auteurism, converting 'negative' or disavowed cinephilia into one of the founding moments of Anglo-American academic film studies" (p. 32).

Elsaesser goes on to suggest that the result, "cinephilia take two," required the critic to be less of a fan and more of a

> …flâneur, prospector, [or] explorer…[it is a] post-auteur, post-theory cinephilia that has embraced the new technologies, that flourishes on the internet and finds its jouissance in an often undisguised and unapologetic fetishism of the technical prowess of the digital video disc, its sound and its image and the tactile sensations now associated with both. Three features stand out… re-mastering, re-purposing, and re-framing. (p. 36)

If cinephilia take one was a way to stabilize and even enshrine films as fixed cultural objects, Elsaesser says, cinephilia take two is more ambivalent, comfortable with new digital forms that have produced a

> …non-linear, non-directional 'too much/all at once' state of permanent tension, not so much about missing the unique moment, but almost its opposite, namely about how to cope with a flow that knows no privileged points of capture at all…[a] regime of repetition, of the re-take, of the iterative, the compulsively serial, the fetishistic, the fragmented and the fractal. (p. 39)

I am certainly no film critic, and so have quoted Elsaesser's own words at length to suggest simply that the standpoint he so vividly identifies as cinephilia take two applies just as well to engagement with digital culture at large as it does to the new digital cinema of DVDs and downloads more narrowly.

Young Internet users today take the "fragmented and fractal" character of online interaction, entertainment, and learning in stride. In contemporary digital culture, what educators must do is help inform and contextualize the "re-mastering, re-purposing, and re-framing" skills that students need to become capable and effective participants in all aspects of everyday mediation. By articulating historical and institutional context, technological tools and affordances, and actual practices together, new media pedagogy can be designed that teaches for reconfiguration and remediation as well as production and consumption.

Notes

1. The idea of "mediation" as a concept bridging the traditional subfields of interpersonal and mass communication research is a perspective dating back at least as far as Katz and Lazarsfeld's *Personal Influence* (2005 [1955]). It gained momentum with the rise of new digital media and information technologies in the 1980s and 90s; see, e.g., Anderson & Meyer, 1988; Reardon & Rogers, 1988; and edited collections by Gumpert & Cathcart, 1986; Hawkins, Wiemann & Pingree, 1988; and Ruben & Lievrouw, 1990. More recent observers have begun to elaborate theories of mediation based on ethnographic studies of new media use (e.g., Licoppe & Smoreda, 2006; Silverstone, 2005). I examine this intellectual thread in communication study in another work currently in progress (Lievrouw, in preparation).
2. Obviously, basic levels of technological literacy and communicative competence are essential prerequisites for effective social, economic, cultural, and political participation in developed societies today. My point here is not that basic skills are unnecessary or that societies can or should neglect equitable access to technology and skills for their citizens. Instead, my aim is to consider the situation of students for whom the Internet and related technologies have become "banal," part of the fabric of everyday life, work and leisure (Lievrouw, 2004)—and what it takes to develop critical media pedagogy for them.
3. Among the minor exceptions was the introduction of videotex information services in the U.S., which prompted a flurry of marketing experiments by newspapers and broadcasters with interests in delivering wired news services to the home in the late 1970s and early 1980s. Though critics later charged that some trials were designed to fail, consumers' lack of enthusiasm for the new services reassured American news organizations that they had little to fear from new media technologies (see Boczkowski, 2004; Lievrouw, 2006b; Mosco, 1982).
4. In a recent report, the Organization for Economic Cooperation and Development found that the U.S. still lags most of Europe, Korea, Japan, and other nations in terms of broadband penetration, speed, and cost (OECD, 2007).
5. At the end of 2007 the FCC adopted new rules that removed virtually all remaining barriers to cross-ownership of newspapers and broadcast media in the same markets (Labaton, 2007).
6. Changing industry attitudes toward their older productions have created important problems in copyright law. One example is the problem of "orphan works," some of them classics of cinema

or recorded music, for which the rights holders cannot be located for permissions to restore and preserve decaying materials; and the publishing industry's efforts to block projects, such as those being undertaken by Google and the Internet Archive, that digitize and make available online out-of-print books whose copyrights have expired and thus have gone into the public domain (Lee, 2007).

7. Since September 11, 2001 this stance has turned out to be a particularly useful tool for the Bush administration, which has required telecommunications operators and ISPs to open their customer records—including call records and e-mail—on demand to law enforcement agencies investigating suspected terrorist activities. Firms have often been reluctant to do so, fearing lawsuits from customers whose privacy might be violated. However, in two recent legal cases, Bush administration lawyers have argued in federal appeals court that such company records are now "state secrets" and "totally classified." Thus, they say, not only would hearing the cases harm national security; the plaintiffs also have no standing to sue the telephone companies and ISPs because they are prohibited from accessing their own communications records (Liptak, 2007, p. A13).

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