

Moving beyond the artefact:

Lessons from participatory culture

William Uricchio

I can't seem to shake a *déjà vu* feeling when considering the current moment of media change as if, knowing what I do now, I was present during cinema's first decade. How, I often wonder, did that new medium's contemporaries fail to preserve films, key texts, and audience experiences? But when I consider the lax and, with a few notable exceptions, unsystematic efforts that are being made to preserve our latest 'new' medium, it should come as no surprise. In the pages that follow, I will speak as a cultural historian who makes extensive use of archives and has an abiding interest in heritage and access. But I also speak as one whose personal and working life is increasingly bound up in new media and particularly social media. These two positions are hardly incompatible; on the contrary, they seem to me to offer not only real advantages thanks to the computerized archive, but real opportunities for historians to reflect upon the birth and development of the latest 'new' medium. And they bring with them the responsibility of learning from the past and preparing for the future, and urging the thoughtful and systematic archiving of this latest chapter in our cultural history. What follows will therefore of necessity have a polemical edge. The stakes for our culture and our ability to understand are both immediate and profound.

Posing the problem

The 'digital turn' has enabled the transformation of such familiar media as photography, film, recorded sound and the printed word, introducing new platforms, standards and applications. As Hollywood's growing dependence on digital production techniques and DVD sales shows, and the press's routine embrace of computer-based information flow attests, the media industry has quickly accommodated these transformations. There are of course some concerns about putting low-cost professional digital production equipment in the hands of ordinary citizens, but the media industry is quickly learning to turn a profit on the results. The revolution provoked by digital distribution seems more of a problem, and although 'piracy' is the term most often asserted by the industry, its own failure

to develop adequate digital distribution models is a far more serious liability. But these problems largely reside in the domain of business strategy, and while many in the business and political community fret about the implications of digitalization for the bottom line, few have bothered to ask whether digitalization has fundamentally altered the nature of the media with which they are concerned.

The archival world has, by contrast, shown deep concern with what might best be termed ‘media ontology’ and the implications of the differences between, for example, the grain and pixels that constitute a film image. Although digital technologies have demonstrated their advantages for helping with the task of image and sound restoration and preservation, a significant cohort of archivists has argued that a shift in mediality, from analog to digital, fundamentally undercuts their mission. They argue that preserving film is not the same as storing compressed digital data. Yet while profound in its implication, even this shift leaves the basic parameters of the traditional archive largely intact. Whether digital or analog, pixel or grain, the archive remains concerned with the restoration and preservation of cultural artefacts that are still called films, books, audio recordings and photos. True, a fundamental debate regarding media ontology remains unresolved and the indiscriminate use of nomenclature such as ‘film’ and ‘photography’ is problematic, but collections still adhere to the basic selection and cataloguing parameters of the analog past.

Of far greater concern to our culture’s memory institutes should be new categories of digital culture that have been enabled particularly by networked computers – categories that are growing exponentially. Consider the case of e-mail – computerized versions of the physical letter (of course with a fabric of stylistic and formal differences) that generally speaking enjoy no systematic archiving or even technical standard. Future historians of the ‘information age’ will, ironically, face a gap in key evidentiary domains when attempting to make sense of their topic since most business archives are designed to account for paper records, but not electronic. And e-mails are a best-case scenario.... Social media such as blogs (web logs), wikis, massively multiplayer role-playing games, and various on-line social spaces that lack any homologies to traditional archival objects face a far more difficult situation. In the case of social media, there are neither pre-existing archival categories nor memory institutes charged with collection, selection, restoration, preservation and access.

Indeed, there seems to be a very real debate about how to even think about these emerging media forms. They do not adhere to the familiar ‘mass’ distribution of the traditional media (although their reach can be greater than many traditional media), nor are they as atomized as telephone calls and individual correspondence (although they can be uniquely person to person), nor is their textual identity necessarily stable and fixed in the way that we think of photographs or films or books (although they can inhabit a range of positions from dynamic, like games, to stable, like e-books). They fall outside of the familiar limits of our

cultural habits and expectations, and since memory institutions are largely involved in the business of creating and maintaining tradition, it's easy to see why these new forms are so awkward.

The challenges to those concerned with preserving cultural heritage are enormous. Not only must we move beyond familiar objects and homologies in our choice of what to save, we must also attend to the larger cultural shift towards participation and collaboration. Blogs and wikis are not only highly dynamic as texts; they are examples of networked and collaborative cultural production. They depart from the strictures (and legal definitions) of authorship familiar from the book or film, and are instead accretive, multiply voiced, collective, and ongoing. Although we have some historical precedents for this type of authorship (examples ranging from the Old and New Testaments to quilts come to mind), they have tended either to acquire an institutionally imposed stability (the Bible) or been repositioned from media text to artistic artefact (quilts).¹ Yet, this collaborative dynamism is a core defining aspect of today's new social media. Without familiar criteria such as authorship or the text as an authoritative and fixed entity, or the many institutions that help us to construct hierarchies of importance, how will we know what to save? What evaluative criteria should we deploy? And even if we could answer these questions, what would be an appropriate point to 'freeze' and hold these dynamic artefacts in the archive? Where do we draw the line between the cultural and the social, between the artefact and the means of its production? And even if we accept the social and acknowledge that patterns of interaction are as important as the text, how do we go about documenting them in meaningful ways? The answers are not clear, but there might at least be productive new ways of posing the questions.

The stakes of facing such questions go beyond the need to document a significant change in how our cultures represent themselves and their experiences and how they circulate those representations. These are, of course, vital issues particularly at moments of transition, where new constituencies are empowered to represent and circulate, or where people develop new technological affordances and new ways of using them. Such broad concepts as *knowledge* and the *public* are redefined and empowered at such moments. And while of great interest to cultural historians such as myself, these concepts also help to define the fabric of our daily lives.

Consider our changing relationship to the news. Once vetted and produced by trained journalists and centralized institutions with carefully cultivated ideological profiles and professional reputations, news has slipped onto the Internet where it is often neither vetted nor contextualized and where it circulates at the speed of light. When there were well-established filters and a clear line of responsibility, one could agree or disagree, but the status of the information was known. Having 'seen it on the Internet' does little to pin down critical parameters or accurate sources of information. Yet, perhaps even more than rumor, such information

can take on a life of its own, confusing public discourse. As we now know about so-called misinformation campaigns, digitally altered photographs, and reworked press releases, even the highest levels of some national governments have made use of the new media to manipulate the record and with it public perception and knowledge. The policy implications both for day-to-day politics and for the historical record couldn't be more profound. Here, too, is an area where systematic archiving of social media – dynamic texts as well as circulation patterns – could greatly assist the functioning of our political lives by allowing us to go back to the record and check instances of manipulation.²

Such an intervention, it needs to be said, can only serve the present to the extent that the public is educated in the critical assessment and use of these new media. Our cultural knowledge and assumptions are grounded in the traditional centralized media. The press and book publishers, film and music companies, broadcasting authorities, and the rest have long exercised a near paternalistic control over media production and circulation. More importantly, at least in the West, interpretive systems grounded in 2,000+ years of biblical exegesis, legal precedent working out the meanings of terms, and dictionaries and lexicons pinning down the precise functioning of language have all worked hand in glove with centralized media systems to circumscribe meanings and enforce responsibility. Audio and visual culture challenged the precision of the word, but even here rather strict protocols developed in order to minimize charges of libel and maximize impressions of consistency and professionalism. But the digital turn and the steady emergence of bottom-up and collaborative media require new ways of encountering texts and new skill sets on the part of media users. This new literacy can no longer take the news at face value, but rather must consider it as partial, as a construction, and as data that must be critically assessed and combined with other sources in order to yield some sense of the truth. But I digress....

Web 2.0: social media

In a world where people increasingly manage, direct and redefine when and where they experience media, how they share it, and what it means to produce and consume, we need to think about cultural processes in dramatically new ways. The shifts from analog to digital, from centralized to dispersed, from mass media to social media, from information transmission to collective intelligence, from old statistical extrapolations to new data feeds, all point to media use that is social by design, not social by default. The descriptors used by Tim O'Reilly and others for Web 2.0 are revealing: 'an architecture of participation,' 'harnessing collective intelligence,' 'exchanging,' 'pooling,' and 'collaboration'. Whether we look to social media communities such as Technorati (<http://technorati.com>) or social networking sites such as Friendster (www.friendster.com) and MySpace (www.myspace.com) or media fashion communities such as Digg (<http://digg.com>).

com), we see new logics that have to be understood if we are to make use of them. I'd like to borrow a term from the worlds of biology, neurology, and computer science that speaks to these new conditions: *high connectivity*. High connectivity in these various domains refers to dynamic networks, high magnitudes of contact among many nodes, and both interactive and iterative behavior.

Before looking a bit more closely at what these developments portend for culture and, in consequence, our memory institutions, first a few words about the technologies that have been drawn upon. The World Wide Web was largely made possible thanks to the introduction of web browser Mosaic and the Pentium chip a little over ten years ago (ca 1995). Making far more effective use of networked computers, these developments were also aided by significant increases in cable carrying capacity (broadband), compression algorithms, and cheap memory. These developments have continued, and two parameters in particular have a bearing on the archive: memory and transmission speed. Memory capacity is growing ever vaster and cheaper, as a look at the retail electronics sector will demonstrate. As production capacities grow, so too does our ability to hold the massive amounts of data that are being produced. Transmission speeds have also improved significantly: just a week before this UNESCO gathering, Japan's Kansai Electric demonstrated a transmission rate of one tarabit per second, or the equivalent of a two-hour film in 0.5 second. Together, massive increases in memory and the new transmission speeds combine with a near geometrical progression of wired households in some national contexts to suggest that the developments we've seen since the introduction of Mosaic nearly a decade ago are but the tip of the iceberg. We have a sense of what is looming in the distance, but its magnitude is not yet visible or even imaginable. Yet we also know that these changes are touching most parts of our lives, from banking and buying train tickets, to entertainment and leisure, to driving and working. But the most interesting developments – and the developments that we need to think about archiving – remain submerged and out of sight.

As suggested at the outset, the implications of the digital turn for media production have gotten most of the press coverage. Armed with a modestly priced computer and video camera, a skilled teen can produce films or music that achieve industry technical standards. And while this is a big advance on the 8mm or 16mm home movies of two or more decades ago, the real advantage of digital culture has been in transforming 'home' movies into 'world' movies. New logics of distribution have enabled grassroots producers to sidestep the control long exercised by media corporations and governments, and reach a global audience. The rapid circulation of digital texts has also stimulated the growth of cultural hunters and gatherers who cut and mix, collect and reassemble, borrow and repurpose, and who do so as collectives. These practices are not so distant from those evident in pre-industrial and agrarian cultures (or said another way, in the era of pre-commodified culture) – again, consider the work of quilters, folk sing-

ers and storytellers that might be characterized in precisely the same terms. And just as notions of ownership were blurred in folk cultures, so they are unclear with many of today's new media practitioners. The contemporary blurring of intellectual property can be attributed in part to the new logics of digital culture, and in part to the increasingly draconian control over our cultural heritage asserted by corporate copyright and trademark holders. As intellectual property protection steadily expands at the behest of corporate interests, the public is increasingly deprived of anything other than paid access to their own popular culture. And as corporate profits invariably decline in traditional sectors such as music and film, the pressure to expand control over intellectual property only grows, even though the decline correlates to the increasing market share of cell phones, computer games, and exponentially increasing involvement with social media.³

The challenges posed to the old order by the collaborative logics of Web 2.0 can be seen in many sectors. Collaborative news networks such as Slashdot ('News for Nerds, Stuff that Matters', www.slashdot.org) and Kuro5hin ('Technology and Culture from the Trenches', www.kuro5hin.org) have blurred the distinctions among editors, readers and writers, with their participants fulfilling all roles. They draw on correspondents and commentaries from around the world, complicating, contradicting, and compositing various bits of information so that the reader must actively consider multiple points of view and sources before making a determination about the news. In a similar way, open source software initiatives such as Linux draw upon a community of collaborators, and by keeping the source code open, they direct their energies towards improving functionality rather than building encryption systems. Moreover, with ample networked input and development, they have the advantage that their software mutates and improves more quickly than proprietary models. Add low costs into the mix, and it is little wonder that Linux is steadily winning terrain from centralized companies such as Microsoft.

Decentralized, networked, collaborative, accretive, ephemeral and dynamic... these developments and others like them bear a closer resemblance to oral cultures than to the more stable regimes of print (writing and the printing press) and the trace (photography, film, recorded sound). Time-bound and contingent, they are at odds with the durability of the printed word and photographed image. Spread from person to person, with the always present possibility of manipulation and mutability, they differ in the main from the relative stability and uniformity of the traditional fixed media.⁴ And like oral cultures, they seem to evade the preservation frameworks that we have put in place in our institutions of memory, built as they are around tangible media. And yet, despite these conditions, these collaborative efforts also enjoy embodiment as digital text, image and sound, and as such differ from oral culture. They can be apprehended, but the question is, at what point? What constitutes a sufficient 'capture' in a dynamic and fast-evolving distributed network where any of the nodes is capable of change.

If we take an instance of social media such as Wikipedia, we can see the benefits of collaboration and mutability. A reader-edited and written encyclopedia, its entries change over time to reflect new developments, complications in and regional inflections of meaning, and the lively debates among its contributors. Its entries evolve, and as such are responsive to the latest undulations of scholarship. Yet, for all of the Wikipedia's value as a documentary history of changing cultural conceptions and definitions, it confronts the archivist with a problem: what point is the right point to fix and hold for posterity? Social networks such as Friendster and Flickr will offer future researchers invaluable information about the construction and functioning of our society. Not only are they as textually dynamic as Wikipedia, but the fabric of thematic tags (the elements that permit associations on the basis of location, interest, or background) and the patterns of links (as users form elaborate networks) are themselves valuable data. Indeed, the textual data only acquires meaning thanks to these other parameters. Again, what is the archivist to do? It's as if we expected librarians not only to keep books but to track their circulation as well. Yet with social media, circulation is a crucial and defining measure of meaning and import. A third complicating parameter is introduced by on-line games, for example MMORPGs (massively multiplayer on-line role-playing games) in which the texts are extraordinarily dynamic, the social networks are crucial to the substance of the game, and the interactions of players with one another are actually constitutive of the gaming experience. Pity the archivist! Yet these games occupy a significant amount of cultural space, have social implications, and provide voice to their users on a variety of topics. The game *America's Army* (www.americasarmy.com) not only offers an interesting text against which to read US involvement in Iraq, but it includes remarkable debates among its users over issues that range from the political to the tactical and offer informed readings from voices that researchers rarely have access to.⁵ In some cultural settings, South Korea for example, the penetration of virtual worlds is enormous and growing (South Korea Telecom's Cyworld includes nearly half of the population). Is this something that we can afford to ignore, fixating instead on the extension of traditional 19th- and 20th-century cultural forms in our digital and networked present?

Signs of success

Social media differ fundamentally from the media around which our archival policies have been constructed. Their rootedness in community and collaborative interactions and their responsiveness to an ever-shifting present give them an unique quality as *Zeitdokumenten*, finely grained embodiments of culture. Of all the differences from traditional media discussed above, perhaps the two most difficult ones for memory institutes are 1) that these media are dynamic and always in progress rather than having a final, completed state; and 2) that these media are

networked, and that the web of connections bears heavily on the meaning of any one site. These two parameters are not only unfamiliar, but somewhat daunting in terms of their potential storage requirements. Fortunately, as mentioned at the outset, memory is getting cheaper by the day, and transmission speeds are improving significantly. But just as importantly, the very distributed logic that enables social media and peer-to-peer (P2P) applications holds a potential solution to the storage problem. Consider music file exchanges such as Napster or Grokster and the like. They managed something well beyond the physical (let alone financial) capacities of the traditional music industry by digitalizing a vast amount of music, storing it, and distributing it on demand to millions of users. They did this by networking millions of personal computers in homes across the world, distributing the tasks of digitalization, storage and access in such a way that the cost was negligible and the labor involved was freely given. Millions of modestly sized memory chips and processors, when properly linked, emerge as a formidable and robust computing force far beyond the potentials of any one centralized system. This network, the basis after all of social media, could also potentially be put to use as a decentralized memory institute, complete with the redundancies, checks, and quality controls currently evident in many existing applications. And the best part is that there are working examples of this principle!

One of America's founding fathers, Thomas Jefferson, summarized the principle upon which a new distributed archive would operate:

let us save what remains: not by vaults and locks which fence them from the public eye and use in consigning them to the waste of time, but by such a multiplication of copies, as shall place them beyond the reach of accident (1791, n.p).

Jefferson was speaking of ways to assure the preservation of America's founding documents, but a clearer and more succinct summary of the differences between the traditional and the new archive is difficult to imagine. In this spirit, LOCKSS ('Lots of Copies Keep Stuff Safe', www.lockss.org) offers a splendid working example. In their own words, 'LOCKSS is open source software that provides librarians with an easy and inexpensive way to collect, store, preserve, and provide access to their own, local copy of authorized content they purchase. Running on standard desktop hardware and requiring almost no technical administration, LOCKSS converts a personal computer into a digital preservation appliance, creating low-cost, persistent, accessible copies of e-journal content as it is published. Since pages in these appliances are never flushed, the local community's access to that content is safeguarded. Accuracy and completeness of LOCKSS appliances is assured through a robust and secure, peer-to-peer polling and reputation system.'

Just as LOCKSS is exemplary of a solution that makes use of distributed computing, other examples have tackled the problem of capturing the dynamic and

extensive character of the web. Nearly synonymously with the appearance of the World Wide Web, Brewster Kahle initiated his remarkable Internet archive known as the Wayback Machine (www.archive.org). With over 50 billion web pages archived since its inception in 1996, the archive is composed of 'snapshots' of websites taken at regular intervals, allowing the interested researcher to go back in time and track changes. The previously mentioned 'discrepancy' in the White House Press Secretary's rewriting of a press release or attempts to rewrite the CVs of Enron officials after their company's collapse came to light thanks to this archive. But for the cultural historian, having access to the first decade of the World Wide Web's existence and with it the ability to track the emergence of social protocols, home page formats, early games, etc. is an invaluable resource. And the best part is that Mr. Kahle managed to capture the dynamic character of the web with a modest infrastructure and limited budget. With a mirror site in Alexandria, Egypt, the archive's discursive claim is loud, clear and, I think, not at all overstated. With a more fulsome budget, the archive could expand its operations and the frequency of its 'snapshots', but for the moment, its beauty is that it works efficiently and outside the entanglements of national governments and funding agencies. For once in our media history, someone has managed to both think ahead and act accordingly.

LOCKSS and the Wayback Machine offer two splendid examples of what is possible, one growing out of the efforts of progressive librarians and the other from an insightful and resourceful individual. Together, they have solved several of the problems unique to the digital domain. The issue of mapping links and social-networking patterns has been taken on in the aggregate (social-network mapping and analysis is a developed field, and can take on the face-to-face as easily as the digitally networked). The difficulty here turns on issues of privacy and the potentials for misuse, just as the problems potentially facing Internet archives turn on issues of intellectual property. Social problems rather than conceptual or technological difficulties seem to be the order of the day, which is where an organization like UNESCO can be of great help.

Conclusions

Digital media have blurred relations between the once clearly demarcated realms of producers and consumers. As these digital technologies have become networked and entered a state of high connectivity, a process that is roughly a decade old, we have seen the fast emergence of new social media forms. Social media have enabled new forms of collaboration, and they provide what Pierre Lévy describes as a collective intelligence. In so doing, they have rapidly intensified the erosion of traditional and highly centralized organizations through a process of redefinition. Collaborative news networks compete with established journalism, in the process redefining the news from an institutional assertion of facticity to

an act of critical engagement and a struggle for meaning. Music file exchanges such as KaZaa compete with the established recording industry, in the process transforming music from a commodity to be bought and sold into communities of taste built upon distributed sharing. And open source software developers compete with the Microsofts of the world, in the process redefining software from a commodity to a collaborative language and community tool.

So, too, the world of the archive. The traditional archive has served as a social agent active in the reproduction of culture. By serving as a repository of what key institutions deem valuable, archives preserve cultural values and sustain hierarchies of social and cultural power. Given the very real limits of space and resources, difficult decisions have been made regarding whose letters to keep, which newspapers to store, and which sort of artefactual ephemera to hold. Not surprisingly, these decisions reflect an institutional sense of importance and relevance, which in turn largely maps onto the vision of the dominant classes. Little wonder that researchers seeking traces of immigrant life in the US at the turn of the century, or marginal political and social movements of the present, have such difficulty in finding relevant archival sources. But new archival practices that attempt to account for social media forms such as blogs, wikis, chat spaces, games, etc., enabled through distributed logic, enhanced storage capacity and accelerated transmission speeds, can redefine the archive from social agent to social practice. By embracing bottom-up dynamics, they will better reflect a wide range of social values, not just the ruling elite. By addressing cultural production that takes place outside of confines of corporate media, they will assume a much wider range of social granularity. And by taking advantage of the new affordances of digitally networked culture, they will encourage widespread participation.

Archives reflect the environments in which they are situated, and new environments require new policies. As I have attempted to argue, networked digital technologies and 'participatory culture' offer new challenges to both cultural producers and archives, generating new producers and users, new content and collaborators. But they also offer solutions that might be used to rethink the capacities and logics of the archive (storage, distribution, dynamic capture). The examples of the Wayback Machine and LOCKSS show what is possible and provide provocations to more traditional archives to consider these new possibilities. Challenges, of course, remain. We need to think carefully about issues of privacy (for the archiving of network maps) and intellectual property (long overdue for an overhaul in the age of cut and paste). We must make careful distinctions in the weights of various cultural artefacts between say, diplomatic documents and Coke bottle collections, and develop different strategies for safeguarding and making both available. But above all, we must build upon the pioneering efforts of the few visionaries who have ventured into this new world, archiving the fast development of this dynamic cultural sector, and guarding against their selective and strategic

use/misuse by those in positions of power, and making information accessible to all in accordance with the cultural logic of the age.

Notes

1. In fact, most of our cultural texts are profoundly intertextual, relying upon layer upon layer of precedent, commentary and reference. Particularly since the Romantic Era, we have tended to suppress this unruly aspect of authorship, a practice today enforced by the strictures of intellectual property. The digital turn has forced the question upon us, and as we think through the implications for new media forms, we might reconsider the questions put forward by the likes of Michel Foucault and Roland Barthes and reflect upon what we have long forgotten about the reign of authorship.
2. But one example involves President Bush's 2003 'mission accomplished' declaration in regard to Iraq on the USS Abraham Lincoln. If we set aside for a moment the staging of the press conference (the background contained a banner reading 'mission accomplished' and photographers were forbidden to take any shots that would show that the ship was in fact not at sea, but instead docked in San Diego harbor), the White House took an additional step to control information that amounted to rewriting history. The office of the Press Secretary initially issued a statement on its website on May, 1 2003, entitled 'President Bush announces combat operations in Iraq have ended'. Later, after it was clear that combat had not ended, the headline was modified to read 'Major Operations'. The press release, a matter of record, was reworked to accord with White House spin, but backdated to May 1, and attempts were made to prohibit access to the earlier and now telltale version. Thanks to regular archiving of the website, the White House was found out, and future historians will understand that the criticism generated by the first version was based on real events, not the fantasies and misinterpretations alleged by the White House after its revision of the historical record.
3. The market success of Japanese manga and anime in the US (where manga outsells domestic comic books by a factor of four to one) is due in large part to the work of fans who imported, translated and circulated these cultural products without copyright clearance. They effectively created a commercial market, tested it, and their translations in many cases remain superior to commercial alternatives. The industry understands the value of these 'pirates', and both sides have worked out a harmonious co-existence.
4. Although in truth, written texts such as Shakespeare's plays have undergone hundreds of small (and sometimes major) transformations, and films routinely change as they pass through the hands of censors and countless projectionists. Nevertheless, they are relatively stable compared to the dynamic state of wikis, blogs, and other social media.
5. For an extensive discussion of *America's Army*, see the chapter by David Nieborg in this book.

References

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