The Promise and Threat of Digital Options in an Archival Age

LILLY KOLTUN

This reflection examines the impact of digital mediations – either the digitization of records or the creation of new information in digital form – on the meanings which archival records are supposed to embody or evoke. The question asked is whether there are any truly fundamental changes in those meanings, and hence by implication in the accompanying archival actions performed upon those records, such as selecting, preserving, and permitting public use, all of which are based upon the assumption that we understand the meanings of the records.

I would like to pose the question in two steps: first, by asking is communication through digitization not just a case of another medium further shrinking the global village? In what ways are there continuities in its effects with those of other media that once themselves reigned as the newest communications alchemy, transforming messages into media? Then, I would like to ask how, nevertheless, digital data might truly be creating a fundamentally new way of thinking, of generating meaning, so that the medium might also demand wholly new interpreters, as well as a fundamental shift in the relationship between the digital archival record and the various actions imposed upon it by the archival community. Exploration of these questions offers no fixed answers; the worth of this paper is in undermining any fixity for universal guidance.

As a start, it must be admitted that most archives are in thrall to what postmodernists have called the Enlightenment Project: almost all demonstrate an unthinking commitment to, and search for, a coherent, systematic, typological knowledge about the world or about a society, a knowledge whose selected parts should combine to tell a whole story. This story is revered as the deity of Truth, so naturalized and externalized as to seem a god we all serve, not a voice in our heads that we make up. At one time, that truth was indistinguishable from history. Now, it has been fragmented and re-incarnated as the story of government processes and citizen interaction; of reliable and authentic "evidence"; of business transactions.[1] But scratch any of these new stories

and, no matter the intent of the theorists, in practice, the archivist's secret adherence to the old god peers out. The greatest pursuit is still the heritage of knowledge about our past: Where have we been, and how did we define ourselves? What institutions did we found, in written law and unspoken custom? How did we think and act? What did we regard as our rights and obligations? What did we achieve, build, destroy? How are we different from other societies, other makers, builders, destroyers? If archivists did not seek ultimately to address these questions of history, how else could we endow our efforts with what we fondly believe to be "permanent" value, even as we claim that it is the records which have the permanent value?

So the real question I am posing is: does digitization threaten that Enlightenment Project in any way? Does this technology threaten to change "how archives mean," how they relate to that concept of truth as definable, in whole and in parts, for the ages? Does the Internet's free association of chat with exegesis, of the self exposed on websites with the self hidden behind assumed names, of home-made ideologies with daily changing mass products, services and information, signal a destabilization of reigning values and origins as well as an affirmation, even amplification, of intersecting discourses and their nomadic, elusive participants? Is data malleability a tool or a special effect? Does the seduction of customized virtual reality – the proxy real – threaten the construction and exposition of the socially shared truth – the "really" real? What from all this might still be archival? Can the traces which are left be Peircean indices of what went before, like footprints or snapshots, and if so (or equally if not), how should we understand and collect these iridescent symbols?[2] Does digital intercourse undermine the archival notion of a coherent, nameable, social construct; or of a traceable web of functions and actions responding to identifiable levers of power; or of a history built separately, subsequently, and sequentially upon the foundation of secure, permanent archives? Does the volume of digital information threaten to beggar and discredit the previously gigantic proportions of archives, rendering the hundreds of kilometres of manuscripts and millions of traditional images a far smaller world, a tarnished mirror?[3] Will the semi-automated, pattern-matching, statistical search strategies that mine these data banks make time-consuming cataloguing and subject indexing merely risible? How has digitization affected our understanding of the way archives may be transacting and translating knowledge about the past and how they can maintain integrity for the future, although so subject to the contingent decisions of today? Does digitization force questions about how data and records are unobtrusively massaged by archivists as managers of truth, memory, or history, so that through appraisal, selection, classification, restoration of supposed original order, description and, most revered rite of all, eternal preservation (I could also say salvation), they take on a new life as archives and are reborn as "fonds" and "sousfonds"?

Continuities

To an archivist, there are many reasons to look for signs of similarity and con-
tinuity between this new digital medium and other earlier ones. The first, iron-
ically, is that very strident rhetoric which insists upon the medium's
uniqueness, its newness, its breadth, and its influence. As an example of how
widespread and socially influential "new" media have been on previous occa-
sions, from a 1925 newspaper article entitled "Tremendous Influence of the
Movies," we can read:

"Somewhere in the bush an audience of home-loving Malays will see tonight the gay
white way. A tattered sheet will be stretched between two stanshions [sic] in a copra
shed ... [A]nd under a sky that is black with heat ... an audience of two hundred natives
will behold American life as it is lived, presumably, in our best families ... [T]here is no
question of the amazing reach of American films, or the completeness of their domina-
tion of the foreign market ... [B]ut most of us have given little thought to the fact that
this mammoth industry ha[s] gone adventuring overseas, and that we are suddenly, and
actually, exporting not only goods but ideas" ... The usual public concern is with regard
to the influence of the movies on the youth of our own communities. When one real-
izes, however, that the pictures we see are also being offered in Malay and everywhere
else in the wide world, the movie propaganda, for good or evil, becomes a force that
may well affect the destiny of the whole human race.[4]

The irony is that the industry was thought to be so "mammoth," and the
reach of American films so "amazing," even in 1925. This was the moment
when silent film was about to give way to talkies the next year, and the indus-
try was to soar to even headier heights of economic glory and social preva-
lence, so that the new Metro-Goldwyn-Mayer studios could churn out a movie
a week and be dubbed a "dream factory." Further, the 1920s were also the
years of new consolidation and growth in radio: Canada, for example, saw its
first national radio network. After the Second World War, television sets began
to invade the corners of our living rooms, and almost before the new mes-
sages, carried through the air on invisible waves, had finished exciting these
cathode ray tubes, mass-produced screens of a different type appeared. These
machines calculated only in 1's and 0's, but would nevertheless total up to
almost unimaginable profits for a new industry. Now it seems that the newest
memory storage tools are about to exploit the spaces between molecules,
inserting themselves into the building blocks of matter itself.
   The point here is the consistency with which we greet every new medium in
the same way, as both the ultimate in mass communication and a threat to
world social stability. We also tend to insist that this time, unlike the other
times, the new medium really will displace all the others, because of its stun-
ning new capacities and its "unlimited" future potential, just those characteris-

tics which previous new media were supposed to have, until we became accustomed to their capacities and discovered their limits. Have we done the same for the digital "revolution"? Is it regarded as the new elixir, a way to solve all our ills of communication and multi-media expression through "convergence" (the new word for technical homogenization and the ultimate replacement of other media), or is it, in fact, old wine in new bottles?

Next in significance to this similarity in rhetoric is the issue of technological continuity: what medium has ever disappeared altogether from the world's creative toolkit, or from archival and museum holdings, despite the preservation challenge? There may be a re-balancing of use and importance with the advent of new media, and some manifestations may disappear, for example, some of the multitude of video formats; but will video as a medium be entirely superseded and obliterated? For virtually all media to date, even if there have been reductions in popularity or fallow periods, revivals are frequent and almost predictable. Photography, for example, is particularly prone to this effect, with nineteenth century techniques still living out a renewed vogue which began in the 1970s. Other techniques, such as oil painting and book publishing, have endured through all vicissitudes, including repeated death knells. Who can forget the painter Paul Delaroche's statement of 1839, "From today, painting is dead," when he first saw a daguerreotype? And even as we speak, the loud claims that digital publishing will kill book publishing can hardly be heard above the din of the growth in book publishing, the opening of giant new bookstores, and the endowing of lucrative new book prizes.

This is because each medium adds to the collective body of expressive communication in unique ways, rarely entirely replaced in power or scope by a subsequent medium. Is it possible that digitization will be the sole historical exception, and will truly render all other media obsolete?

A further element of continuity is provided by archives themselves, which have already retained or anticipate retaining a few digital fragments, and find it possible to apply to them the same ordering and intellectually controlling functions as are applied to the management of all other media: that is, acquisition, description and cataloguing, preservation (including copying, migration, or other actions intended to address the fugitive attributes of the first collected version), and public access. I want to return to the implications of this absorption of digital information into traditional archival control mechanisms in a moment.

To return to a point alluded to earlier, the digital medium, like all media, is not just the forum for original creation, but also the platform for copying and disseminating old information. Repetition, with or without a little creative variation, has been the venerable characteristic which, from the time of the cave paintings, has enabled communication. Even those works most imbued with the aura of uniqueness were very frequently produced in multiple copies:

oil paintings were copied by the original artists or their studios (if not origi-
nally fashioned by multiple hands); images were produced specifically to be
reproduced through presses as engravings, lithographs, or other prints; books
were virtually never unique from the time of their creation, although now may
be treated as incunabula; compact discs flourished as the existing library of
music was copied from vinyl to the new format. Now, the huge digitized mass
on the Internet contains significantly more copied material (translated from
other media) than it does original creation, a circumstance which electronic
data archivists are discovering. But far from implying the atrophy of those
other media, digitization seems to depend on their continuance, at least for
now, as quantities of information are migrated to electronic form to fill the
demand of the digital users, or the promotional ambitions of digital data pro-
viders.

   Another similarity which digitized data shares with other media is the hoary
tradition of trickery, "improvement," or composite amalgamation (now called,
with more chic, *bricolage*) – all employed for the same purposes of simulated
historicity, irony, and argument. Woody Allen's film *Zelig* of 1983, for exam-
ple, seemed to use digital tricks, but actually only applied ordinary imitative
and long-practised photographic legerdemain. *Zelig* ostensibly documents the
biography of a man from the 1920s who, lacking any personality of his own,
compulsively dons, like a chameleon, the personalities of the people around
him, becoming Greek around Greeks and even black around blacks.[5] The pro-
tagonist, played by Woody Allen, is shown in the movie apparently meeting
renowned personalities, such as the *chanteuse* and nightclub entertainer Jose-
phine Baker. There are many who would assume that his insertion of himself
into copied historic footage, not to mention his trick of reproductive mor-
phing, could only have been accomplished through digitization, like Forrest
Gump's meeting three Presidents of the United States in Robert Zemeckis'
hugely successful 1994 film, *Forrest Gump*.

   But arguing for the similarity of digitization with other media itself threat-
ens to become an unorthodox and marginal position, due to the overwhelming
insistence on technological determinism which proposes that, finally, this is a
new medium unlike any other, which will replace all other media. Our faith in
times past that earlier media would do that, and our repeated disappointments,
are now to be forgotten in the face of the impending full, and desirable realiza-
tion of the technological communications melting pot.

   The argument seems too familiar. So it is time to ask, are there really any
differences between digital data and other media which, within an archival
world, are fundamental? Are there any which shake up the foundational think-
ing of archives, what I have earlier called our thrall to the Enlightenment
Project? Or may we archivists be reassured that, as soon as we become
involved, the newest media will become like the rest, old and familiar, safe
and controlled, positioned in our categories, swallowed up in our systems?

Differences

Indeed, digitization does threaten, but not so much in the ways that the techno-rhetoricians usually expect or propose; that is, through sheer, unmanageable volume of data, or as a replacement for other media, creating obsolescence while concurrently robbing the world of variety in expression. It threatens more the prevalent expectation, held in common by those techno-rhetoricians as well, that archives have to do with safeguarding a consecrated past, preserved for the future. Archives began at the time of the world's earliest recorded transactions, in litigation and taxes, and became the obsession of bureaucrats and antiquaries, and they have largely behaved as though they were still exclusively the province of old evidence, political will, and institutional or historical genuflection. But digital players have begun to take over our word – "archive" (in the singular) has a sudden, new cachet, as in the "digital archive," or the "archiving" of "data." What does this new use mean, or imply? And how does it happen that we old-style archivists are not really included in this conversation?

We are overlooked because these digital data banks are not archives that have to do with the past, preserved like memories, succeeding upon done deeds and finished thoughts; these are archives whose future preservation is defined before they come into existence. They are not archives subject to selection, but to creation. Because digital data are so ephemeral and technologically dependent, they must be saved, if at all, at the moment of creation, or be lost. Consequently, these data recast the instrumental actors of history, turning it from a story proved later by the capture of remnants valued by experts, to a milieu imbued instantly with presence and worth by an unsanctioned and "historically" unpositioned individual. This individual is the one who selects the "save" key, for purposes usually other than commemorative engagement. This kind of making of meaning or history entails a myth-shattering realisation for archivists.

Archivists have rarely admitted the extensive reach of creation in our own activities of heritage preservation, not only in selection (which most archivists are prepared to admit does tend to shape history), but also in subsequent functions such as copying, which is a selection of our first selections; description, which orients meaning as well as research; and the permitting of new uses by the public, uses which continually redefine value and even the record itself.[6] We have retained the myth of an external and finished past as the essence of the meaning of our records; excavating, keeping, and servicing that past gives meaning to our own actions.

But it is the futurity of archives, rather than their pastness, which the digital medium forcefully installs, and which is the fundamental re-orientation affecting the meaning of historical records. By this I mean we, like the data creators, must now think about archives before they are made, not after they are left.

This is the postmodern condition, to chase memory before experience, to focus not on the was, but on the proliferating might be, to rebut teleology, to see life not as pieced and stitched into an ordered, determinable, and necessary whole, but as unavoidably porous and multiple, subject to particularized, decentred individual perspectives, meshed in continually and rapidly diversifying, never finally coalescing, always contesting discourses. Although not unique to digitization, the new medium has highlighted this polysemic postmodern condition. Like relational database applications, individual perspectives can never be resolved, either into a final, stable essentialism, or into an impotent, equally absolute relativity, but are always reconstituting a new supposed social and scientific truth through dialectical manoeuvring between redefinitions of the known and the knower, the data and the user.

Ironically, it is an unwelcome insight to discover, in practice, the endless repetition of homogenized sources in this digital world, another way it resembles the Enlightenment archival world which often catalogued its sources into homogeneity.[7] This obliges us to look actively to find the occluded, but nevertheless present, divergent marginal voices, to locate the many borderland regions where the new global mainstream, though pervasively represented as something natural and no more visible or noticed than air, exposes its constructed artificiality, and hence reveals and defines its sphere of acceptance. (As before, it was not until American films were seen among the Malays that their cultural specificity and spread, hence their influence and their margins, were perceived by those previously quoted writers on film.)

So what is the impact of this futurity, this theoretical and practical, present and coming overabundance of discrete particularities and repetitions, together with this new availability of marginal voices, all creating and saving their histories in a fluid soup of contingencies? What are its implications for our actions as archivists?

Acquisition and Selection

Starting with acquisition and selection, we have so far interpreted the impact to mean, absurdly, continued use of old notions of objectivity to predict what will be worth retaining. Where once we may have relied on an objective history, now we rely on an objective "fonds." A record presented for acquisition which can be positioned in an existing fonds has by that virtue an artificially enhanced value, no longer an orphan of time. Born of archivist parents as a descriptive category and useful in some instances, fonds has been displaced to a foster family called the "office of origin." By being seen as a defining and ordering attribute of the office of origin, rather than as an archivist's intellectual construct, it has been recast into a universally applicable acquisition criterion. What cannot be defined as or located within a fonds is now deemed to have questionable value or even validity as a record. However, it is a modern-

ist reaction to propose such rules of organizing hierarchies, of genus and spe-cies, of fonds and sous-fonds, to guide value and choice in this posited plethora, this unsettling infinity, of choices to come. Do we really believe that provenancial hierarchies chart the *loci* of debate where meaning is made, power is contested and actions are triggered, or do they merely privilege the mystifications of bureaucratic ideology? A business journalist recently wrote: "In the weightless economy, where an Internet startup can find itself as valu-able as General Motors Corp., creating wealth has little to do with the classical combination of capital, land, and labour. It has much more to do with what goes on in people's heads. Business success can no longer be commanded by hoarding information and managing its flow from the top."[8] Yet the fonds con-cept encourages archivists to establish archival value "from the top."

Less absurdly, the impact of digitization also means installing the retention (or "archiving") function within system programs, and then relying on the par-ticular creators rather than the collectors, the archivists, to open the option of inclusion in the historical record, to combat the alternative of almost instanta-neous loss into the ether of a world of deletions and of data lost by technolog-ical obsolescence. However, this opportunity for particularized action at self-selected, even random moments, is most precious not to the bulk of implementers of rules, followers of systems and surveillers of production, but to the obstinate, self-interested individuals, often at the margins, who are the mavericks of the mainstream, who engage strategies at the level of Michel Foucault's "micro-physics of power."[9] I expect that such creators will often enough resist our value systems, as well as those of their colleagues, respect-ing how to create and what to save, and, unmindful of archives, will make and save, delete and migrate, change and save again what they want anyway. Anecdotes already appear of crucial data salvaged by such actions.[10] This will allow room for chaos, that is, unpredictability and serendipity in the network of relations, and will leave unanticipated valuables still to be found, saving us from our own predilections and advice in the eyes of the next generation of archivists.

But what of those who instead seek the elimination of the record, the embarrassing, the damning data? How can we trust the sources of truth and history, of our collective memory or the integrity of evidence to the far-from-disinterested individual? Again, the modernist answer is to co-opt the machine, install multiple back-up routines, authority codes for destruction and (metadata) rules for business acceptable communication and record-keeping, rules craving a universal applicability of selected received archival concepts across time, space, and media.[11] This still assumes an identification of which data must be protected based on clear *a priori* principles, and a comprehen-siveness of knowledge – but a knowledge granted to whom? On whom, or on what did we rely before? Was it connoisseurship, antiquarianism, the embrace of Carlyle's great heroes, or a poeticized politics? Does our realization of the

futurity of archives, wherein archival selection precedes future creation, mean
we must now seek to eliminate these perspectives as discredited, but still with-
out delay to mimic their exclusionary action with new, supposedly more neu-
tral, constructs and criteria? And does digital data render inoperative that once
all-powerful selection tool, to which we were so grateful, time itself? Time did
us two entwined favours: it sank most creation so that there was much less to
drown in, while it yet favoured the "test of time" for significance, so that sur-
viving records were assumed to be the important ones anyway. That we now
believe this was not at all the case, is an old proof of the error we perversely
seem to be continuing, the unreflexive application of present values to a selec-
tion of archives, but credited to what we deem a value-free record of transac-
tions, or of history, or at least history of creation, that is, of provenance or
fonds.

The examination of this role of fonds gains in urgency when we recall that
digital data is unique among the compound arts for having no matrix. As
Rosalind Krauss has noted in another context, "compound arts" such as print-
making, photography, and some sculpture, among many other media, have an
"irreducible plurality" – their manifestations are all copies, "a condition of
multiplicity that will *not* reduce to the unit *one*, to the singular or unique."[12]
Yet they do all have a matrix, a plate, a negative, a cast or maquette, and so
forth. Both market and historical value was and is largely determined by prox-
imity to the creative moment embodied in the matrix, by how soon and how
faithfully the multiple "original copies" reproduce, match point-to-point, or
mimic the matrix. This valuation cannot hold for digital data: are we to say
that the initial or least amended version of a digital database or document, or
the first links in a distributed system, where multiple contributions over many
creative moments are the norm, are the most credible, the most valuable? In
struggling to come to grips with the clearly negative answer, will we cling the
more ardently to the concept of fonds, to make it play the proxy of the matrix
in determining value? Where Krauss faced the attribute of an irreducible plu-
rality without an original and, in a postmodern move, wanted to revalue the
repetition, archivists, in facing the issue, seem to want instead to re-establish a
singleness of source by installing a new universal, guiding authority. Seeing
the validation of yet-to-come, inherently unstable records as such a conun-
drum, archivists seem to be turning, rather, to validating the makers of records
through the fonds concept. This permits re-instatement of their control of his-
tory and memory, removing it once more from the unpredictable and unknown
individual, and from a context and arena so untrustworthy, uncorralled, self-
selected, quixotic, "expert" or antiquarian. At the same time, it leaves their
own instrumentality cloaked comfortably in a spurious neutrality, pointing
instead to predefined, safely identified, external records creators as the wholly
responsible actors.

Further, if digital data oblige the anticipation and pre-selected creation of

archives answering to the postmodern condition of privileging as yet un-lived memories, they also, as mentioned, predict their own obsolescence due to the prevailing technological churn. So archivists, to fulfil their mission, must at the same time commit to preserving in perpetuity at least some of those records captured through pre-planned retention (alas, not truly the whole fonds, in effect another admission of archival instrumentality), to repeated migration, and to permanent and usable retention of metadata. This is a commitment to an ever-growing museum of copies and emulations, or a museum of manuals and equipment.

So now we have the full and staggering implication: that digital data represent the first medium collected by archives which can be totally dependent on the "archiving function" for its birth, its definition of value, and its continued life. These are not in fact archives whose value is derived from their office of origin, but from the theorizing and selection principles of archivists who identify their source and scope, judge their value, select and preserve them prior to their creation and then "appraise" them once again post-creation. They exist as the creatures of archival intentionality, naturalized by archivists as the external manifestations of the actions of others. (It is also no accident that so many words equating to "appraisal" in the archival argot are derivatives of natural-seeming processes: weeding, distilling, refining, cleaning out.) If in addition, these data (given technological change) are truly to become the converged media archives, which is to say, the only platform for all original visual and textual communication and hence the only archives available to be collected of our age (not a future I admit), then we would indeed have entered an age legitimated not, as anticipated, by digital documentation, but by archival actions; it would be a new "archival age," more profoundly re-oriented than Walter Benjamin's age of mechanical reproduction.[13] In any case, the digital artefacts acquired are not, as in the past, to be random fragments, the flotsam of disappeared or changing civilizations preserved by chance and captured almost by luck. These are to be deliberately targeted excisions. The problem tackled is not a poverty of survival, but a richness of data overload in, paradoxically, a medium with almost no apparent physicality except its cage of technology. This seemingly bodiless data is not fixed but is fundamentally affected by its contingency, its rapidly morphing and aging historicity, and its distributed trans-border locales, just the sort of fissured, unstable authority which disquiets traditional champions of archives as the reliable sources of evidence, history, and foundational truth.

This is why the new players in "the archive" are not just archivists, but the formulators of the data, the web explorers and the *bricoleurs*, who are comfortable combining, patching, and building, and who intervene in determining the life span of the products of their joint actions. They also, along with the lawyers and auditors, sometimes want to deny the ephemerality intrinsic to the very nature of their creations, whether related to the copying of records from

other media or the permanent retention of new efforts. That ambition to pre-
serve what was originally made specifically to be passed on, updated, super-
seded, replicated, compared, matched, cut-and-pasted in new ways on a
million discrete screens, not one of which could retain it forever – that ambi-
tion can be dated to the makers of the cave paintings too, who overpainted
each others' work, but in a place that might never be disturbed. Yet never has
that ambition for permanence and continuity been so paradoxically expressed,
as among the many workers who toil to produce that very ephemerality they
would also seek to countermand. Is this the new millennium's work of Sisy-
phus? And will it make archivists, that is, new Sisyphuses, of us all?

Preservation

The second major implication of the futurity of digital archives – their future
existence owed to present decisions – shifts our attention from the getting
function back to the keeping function which we have already mentioned. We
have perceived that there is a melding of selection for acquisition and selec-
tion for preservation through the concurrent commitment to eternal migration
or other re-"production" of this rapidly escaping, near undefinable product
(now being called, in a keen and apparently unconscious irony, the "digital
object"[14]). But, again, that too defines the postmodern condition: eternal
migration, the forever changing, never at rest, never at a final destination,
postmodern fate of a postmodern medium. It forces the archival repository
suddenly to face itself as forever a way station (as it always was), never a des-
tination, never a home where definitive documents definitively reside. Given
that we need to scrutinize migration, copying, platform conversion, or other
surrogating actions as intellectual as well as technical strategies with repercus-
sions no matter what the method or medium employed, do we need to ask if
there is a particular difference in such migration *et al* when it affects digital
records, a difference that is fundamental, a schism which makes the character-
istics of its migration or copying different in kind from the migration or copy-
ing of other records?
   First we need to distinguish, again, the difference between a translation from
another medium, say a printed page or a photograph, into digitized data and
that migration or other reproductive action which relates to data that always
were in existence only in digital form, the true electronic record. The former
leaves behind another originating document (whose disposal or retention can
inspire other archival debates focused around original attributes and meanings
not "translated" into, even distorted by, the new medium); is it possible for the
latter to leave anything behind, any "thing" designated as the authoritative
original for comparison for any substantial period of time? Does translating
digital data into standard formats such as ASCII (for text) or TIFF (for visual
images) at the moment of acquisition create an alternative embodiment which

would allow such long-term, multi-generational access? To date, experience argues that this action too is limited in its effectiveness in supporting the kind of longevity envisaged by archives. Further, no standardization, whether for electronic or other records, can ever be neutral; it re-packages and reduces multiplicity and variety to an arbitrary unity in conformity to the standards of a specific time and place and of specific decision-makers; these are obscured behind the apparent objectivity of the standards, projected to exist in a realm independent of time, place, and specific actors. Electronic media have never been a single, undifferentiated medium, no more than "painting" or "film" are single media of image-making. So, what are the attributes of an "original," or of the first electronic record to be collected, which are lost with standardization in digitization? How might we attempt, through metadata, to keep a "permanent" record of those attributes and their context, format, or value over time if no records – particularly no digital records – are "permanent"?

Despite the daunting challenge, migration or other strategies such as hard copy output, or the deployment of the newer, largely untested "emulation" software (intended to imitate older hardware and software in order to unlock the content and functionality of older digital data) will still need to be undertaken for new collections of old digital material, and for aging, previously collected data, due to ineluctable obsolescence and continual software invention and revision. An irony being played out in the archival profession, as elsewhere, is the belief, particularly prevalent among the techno-rhetoricians, that data is "salvaged" or rescued by transference, for example, from tape media to digital formats; present readability is bought at the cost of even greater ephemerality and more rapid intervals of future reformatting. At the same time, the total digital record mass, growing in an archives through both new acquisitions and through the internal digitization of records in other media to provide automated access, is no longer amenable to any selectivity or exception in the application of active (rather than passive) preservation techniques; again unlike other media, it must all, in its burgeoning volume, be regularly, repeatedly, and endlessly "preserved" or reformatted.

But are there different levels of intrusion in the reformatting or migration of collections of electronic records, or is reformatting or migration of this kind of record the very first "conservation" technique which can only be applied at one level of intrusion – and that level a total one, which entirely swallows the previous version and which is ultimately irreversible? If that is its true nature, then, indeed, it is fundamentally postmodern in character in a second way, for it argues not just continuous instability, but also the impossibility of a transcendent, authentic authority. Instead, it presupposes total change and redefinition. It obliges archival preservation treatment which is the diametric opposite of that considered fundamental to the ethics of preservation theory, which demands minimal intrusion, or stabilization, as well as reversibility, so as to be able to undo what was previously done.

Further, no matter what the levels of precision achieved in the transfer of intellectual or "logical" content to new digital codes and formats (which should be distinguished from the precision achievable in a simple change of physical platform), there is a slight loss with each new generation. What is the acceptable level of loss before the record is effectively degraded and "used up?" A one-time or cumulative five or ten percent loss can garble content irretrievably if it, for example, eliminated tabulation or all the spaces between words or numbers during output. This question of the moment of effective degradation, while it may seem distinctive to digital data, is also faced with traditional media due to issues related to use levels and storage. However, again, digital data force an unwontedly pressing attention to it. They exhibit little tolerance for allowing the guess-work which can in-fill meaning in fragmentary analog records, and they have eliminated our accustomed, multi-generational lead time to deal with deterioration, so leisurely for other media that it may hardly be noticed, and may even be discounted. With the rapid emergence of unavoidable, radical new software or digital storage techniques, and with the multiplication of variety in the electronic media, the future may soon hold uncalculated challenges, shifts, muteness, and losses of data, along with utter irreversibility, making data unreadable, context irretrievable, or functions inoperative. How do we reconcile ourselves to such an impermanent future for such a massive, open-ended investment? Do we admit to the inevitable discrediting of a past that is at present presumed to be immutable, "forever" unchanged because it is in the archives? Is the interim use by our clients our only consolation, and the subsequent return of old data used in new formulations in later acquisitions our only bonus?

Public Access and Use

Finally, the futurity of the digital record and the digital copy, their future forms ever predicated on a succession of recurrent "present-tense" actions, encompasses an enhanced potential for mutability, for easy re-contextualization and multiform cultural construction and re-construction. This ease is integral to digitization's very nature, and means we now need to ask more urgently how intrusive archivists will be, and allow others to be, in use and manipulation. For example, would we deny Oliver Stone his extensive use of archival documentation, whether altered through traditional or digital means, in his creation of the 1994 film *Natural Born Killers*?[15]

A key sequence in the film occurs when Mickey and Mallory Knox, a demonic couple on the run from the law in New Mexico because of a killing rampage, take refuge in the desert home of a Native shaman and his young grandson. They recognize that these two are different from their usual victims, and for the only time in the movie, they show remorse when Mickey, tormented in his sleep by a nightmare about the childhood abuse he has suffered,

unintentionally murders the shaman. Of particular note is the way in which archival clips are inserted to enhance the characterization of both the shaman and Mickey; this sequence includes both a genuine clip of a Native canoe with another shaman in a bird costume rising up in the prow and a simulated clip in the black-and-white sequence of Mickey's nightmare.

In Oliver Stone's film, archival documents and simulated clips like these are contextualized such that they acquire their meaning *subsequent to*, not *prior to* the experience he proffers to the audience. They are not treated as remnants of the past, but as ingredients in a new proposition. The critical proposition underlying this film is the famous "nature *versus* nurture" debate: are the shaman's powers derived from his inborn affinity with nature, shared with all Natives? Are Mickey and Mallory Knox fated by their genes to wreak Armageddon on the southwest United States? (This is certainly what Mickey asserts when he describes himself as a "natural born killer.")

Both the authentic and apparent archival clips and documents in the sequence are used to frame, respectively, the two sides of this debate, and ultimately to serve Stone's conclusion that culture has determined the characters we see, not nature, not birth. The footage with the bird shaman was originally orchestrated and shot between 1910 and 1914 by the ethnographic filmmaker and photographer Edward S. Curtis, and was released as part of a melodrama entitled *In the Land of the Headhunters* in 1916.[16] It was supposed, at the time, to represent Kwakiutl Native beliefs and customs in British Columbia, although couched in terms of a fictional commercial film (not a disinterested record). But the implication of Stone's including it, without contextual explanation, in connection with a desert shaman of New Mexico is to suggest, perhaps unconsciously, that all Native people are to be understood as similar, with a special spiritual relationship to animals, and through them to nature, allowing them access to supranatural powers. (The desert shaman, in a recollection of genuine Hopi Native traditions of Northern Arizona, handles live rattlesnakes.) The film clip on British Columbia Natives is used to trigger this stereotyped characterization of shamans, not to narrate its own original content, which was about a white man's interpretation of Native B.C. warfare. Nevertheless, in other shots, the desert shaman is defined as the embodiment of a learned history of spirituality, which he is in the process of passing to his young grandson in a night ceremony. Though the ceremony is intended to initiate his grandson into "being a man," it also seems to have conjured up Mickey's nightmare of vicious victimization, which reveals how Mickey, too, came to be the man he is. Hence, by the end of this sequence, the "nature *versus* nurture" debate is resolved by Stone heavily in favour of nurture, or culture, but a culture so externalized as to be confused with nature by all the participants themselves. The Roland Bathes who unpacked popular culture in the 1950s to identify socially revealing instances of cultural assumptions projected as manifestations of nature would have recognized the phenomenon.[17]

In this way, an original archival clip documenting a past unconnected to the fictional plot in *Natural Born Killers*, and other seemingly archival clips, can actually be made to promulgate arguments and ideologies key to the film. For this reason, it is of no importance to the filmmaker that these or other clips are fragmented and de-contextualized or even invented; the new film provides a new context within which the various clips operate coherently. Stone's film (like Curtis') provides a "history" to follow; it is biographical respecting its characters, with a sequence easily grasped by a mass audience, irrespective of its radical pastiche technique. Indeed, the film is shot through in this and other respects with an abiding interest in historical evidence and documentation which is as much a protagonist as any character: Mickey and Mallory Knox want to be identified with their crimes and always leave one witness alive. By the end of the movie, this becomes the video camera of the newsman whom they kill as they make good their escape.

Consequently, the archival footage becomes part of a new fictional history which is in turn the commodity offered for sale to a mass public. It is not the past recorded in the footage which is offered, but rather the *recorded relic* from the past, the fragment re-positioned in a new, fictional history, a history which, as presented by Stone, subjects itself to an aware and ironic self reflection.[18] What does such a re-positioning, and commodification, do to the integrity (or the history) of the archival record? Most obviously, it does two things: It "fictionalizes" the record, hiding its provenance and original intended meaning (using the archival definition of provenance as records creator rather than the art historical definition meaning the hands through which an artefact has passed). At the same time it "realizes" the fiction, making the fictional appear real, authenticating the present meaning through a proposed resemblance to the past and rendering the commodification invisible. The digital processing of the home video version of *Natural Born Killers* lends its own implication of qualitative value to the seamless visual presentation of a pastiche.

So with the new media and the flexibility of digitization come not just new outlets for displaying the archival record but also new applications which represent new meanings infused in the record – a record *qua* presence, not *qua* history. The record is used for new meaning-making, for new authentication, new "witnessing," not as a container or expression of some pre-existing information or meaning of its own. As archives jump on the bandwagon of commodifying or selling their own holdings commercially, particularly in digital form, and search for the most lucrative markets, which are undoubtedly in popular culture, archives will face their implication in the same issues as those facing popular culture generally. That is, they will find themselves negotiating among ideologies in a way they have resolutely thought to avoid to date, such as the classic oppositions of patriarchy *versus* feminism, of capitalism *versus* Marxism, of nature *versus* nurture, and of civilisation *versus* barbarism (other-

wise recognizable in archives as the opposition of elite *versus* popular history). Or, armed with the newest techniques of archival denial, they will become implicated in submissively promulgating one side of a story which privileges the records of archives-sponsoring institutions over the expressions of unincorporated, hence scattered and archivally voiceless members of society. (Will the home computer and the Internet, like the home video camera, become their voice, their archives, even their resistance?)

At a deeper level, the happy re-contextualization represented by *Natural Born Killers* also indicates that archives are already implicated in practical examples of the postmodern dissolution of the real behind the representation, where there is considered to be no retrievable "original meaning" of the archival record which Oliver Stone could have respected. Instead, as with the Curtis clip, there is only another series of previous interpretive interactions with an earlier culture's never really locatable "structure of feeling," to use Raymond Williams' words.[19] Williams offered three interacting definitions of culture: as an "ideal" set of values with "permanent reference to the universal human condition;" as the "documentary record" or the body of "intellectual and imaginative work" subject to critical analysis; and as the "description of a particular way of life" of a society. Only in the analysis of the interaction of these three elements could the fundamental "structure of feeling" which animated a society as a whole be approached. Although his tripartite definition of culture is arguable now, Williams' concluding insight remains valid, that analysis of a lived past culture is hampered by the "selective tradition" operative within a changing present culture; this chooses its own past according to its *contemporary* system of interest and values, discarding large areas of what was once a living culture. It may be that when archives limit themselves to being guardians only of what Williams defined as the second aspect of culture, and furthermore, take on some of the previously mentioned selecting, discarding role (while often unconscious of the extent of historical and contemporary contingency), then archives will come to have less relevance to culture than films like *Natural Born Killers*. These films construct a nexus where Williams' three aspects of culture may meet – the ideal values, the imaginative or documentary work, and the particular way of life – and overtly select and realign relics and documents of the past with reference to present interests. *In the Land of the Headhunters*, after all, tells us more about Curtis and white perspectives than about British Columbia Natives. And Stone's quotation from it in *Natural Born Killers* tells us more about Stone than about Curtis, whose presence in the film would be imperceptible to most of Stone's audience.

Is this wrong, or just postmodern? Is changing meaning through use just another, inevitable stage in the redefinition of the artefact, another, additional, element defining provenance and creation, rather than a distortion of some static truth that was once supposed wholly to define the real thing? When Stone imbued the clip he used with new meaning because of his own response

to the imagery and its fit with his cultural/commercial context, was this an instance of authorship as authoritative as that of Curtis? His meaning, inside his use, now defines that document too, inescapably part of its presence, because it is inescapably part of his film. Has provenance not become an on-going process, with origins in the present as much as the past? If an analysis tried to embed *Natural Born Killers* in its own historical moment, revealing, for example, the alternatives which had been discarded in expressing particular contemporary values, would this not render its use of the Curtis clip more than pastiche, making Stone's film a new archival document itself? Or has the Curtis clip rather taken on a life unconnected to any reality, as pure a simulacrum as Baudrillard could have wished?[20] Was this always the case? So here, in public use, is the postmodern condition of reality slippage, of instability, made more thorough in digital records by the difficulty of detection through reference back to some authentic original, long superseded in the mists of migration and digital enhancement.

Implications

The implications are again formidable: respecting intellectual content, elements such as intentionality, deceit, inauthenticity and, as well, concurrent authentic re-contextualized or ideologically driven meaning can only be approached through an exercise in deconstructing context; that is, by identifying the present conflicting discourses, including those about the past, whose nexus gives rise (insofar as anything can, in a world of *différance*[21]) to the meanings and realities of a record.[22] These intellectual elements can no longer find closure and definition through even a sophisticated look at the techniques, physicality, format, or supposed content of some "original," kept fixed and unadulterated in an archives. Yet, the writing of an archival note to set context, as much as a lengthy historical narrative, is that very thing which, to now, has generally been supposed to be at the end, the constructed result, of historical research into records, not the determinant of their originality, genuineness and meaning-value. Here, however, the service of archivists to a previously constructed "grand narrative,"[23] whether of history or of the truth and reliability of records of institutional or personal transactions, poses the danger of mistaking that history or that recorded reflection of a system in a sequence, for a "deconstructed context." It encourages a placid belief that such a grand narrative provides not only a context, but a sufficient one. The symptom of this error is the belief that archival selection is intended to "fill gaps" in a total, integrated record. Instead, by making room for unassimilated material of tentative historical positioning (and even denied value or definition as "archives"), and by recognizing the inescapable contingency of the naming of any records as real or evidentiary, selection can and should undermine unreflexive loyalty to the concept of an independently existing and unified totality,

one that needs only to be properly represented in all its pertinent or "significant" parts. Deconstructed contextualization is an exploration of the multiple and conflicting, "meaning making" capacities of the particular archival item or group, as formulated through its continual dialectical interaction with diverse present knowers acting to effect diverse pasts. It is not the positioning of the item or group in a received, pre-determined schema, assumed to find all its coordinates in a distanced past that is over and done with, hence a past (and an archival record) able only to be unveiled and variously interpreted, rather than actually constituted by the present.

Our archival tendency to think – that is, to classify – from the general (for example, fonds) to the particular (such as individual records) is another symptom of the hierarchical paradigm, from whole to part. It is this paradigm which Internet research has entirely turned upside-down. In that digital world, thinking (classifying) is done ad hoc, through taxonomies of association that then dissolve with a keystroke and that shift from one particular to additional similar or unrelated particulars, plucked from vast general categories, in a networked, broad sweep. Here, unintended elements can be scooped up with the intended and suddenly expose a fruitful connection or dissension, the essence of intellectual creativity. More powerful thesauri, soon to emerge, will be matched by expanding hinterlands of information, never outrunning anarchic curiosity, even as more controlled expert systems and automated record-keeping, themselves in flux, map out corners of temporary order and bounded legitimacy. What has been the traditional archival response to this new use and search methodology? We want even more urgently to fence and direct records access and research strategies, to compel these to progress from the general to the specific. We want to educate people to use our systematizations, our authorities and subject headings, to think like us, to discover and use the clues we leave to locate and hence define the archival treasures. We want to create descriptions, which are actually value interpretations, by rote and by rules, to "facilitate" records access in the "neutral" environment we formulate; and we want to call this "contextualization" when it is more truly reductivism. We are, therefore, in danger of being entirely by-passed by our own clientele; and those who read our descriptions will quite rightly demand to see, use, and revalue the particulars for themselves, impatient of the delay.

There exists yet another related issue regarding client use: Does commodification of those "originals" (electronic records included) necessarily inspire, through selection and wider and wider access, a simultaneous dilution, simplification, or reduction, of them to mere "treasures," requiring not critical analysis and contextualization but only appreciation, like a new canon of art masterpieces? At the other extreme from this consecration of archives as unique treasures, stands the seamless manipulation of records, which makes re-use and re-integration, *bricolage*, in new, linked contexts so pervasive, so much a matter of creation in its own right, that an originating creativity can be

impossible to define as its edges become invisible. The records can become authorless and sourceless, although brimming with the adaptations of users. So, at one and the same moment, they can both escape provenance, the most fundamental of archival classifications, and install use as a concurrent part of records creation and definition, rather than as a subsequent action. While archivists are familiar with multiple creators who amend and reformulate records in the course of institutional or other transactions, they are much less comfortable with admitting that client users of records, once the records are housed and hence "fixed" in an archives, might be co-creators of the same magnitude. With the legitimacy enjoyed by client uses which impose on and reformulate digital data, both before and after archival preservation (was the data not created for such use?), digital data can destroy two archival distinctions upon which professional action is founded. They can displace authors and sources, and they can ignore the ethical boundary, the rite of passage to continuity, permanence, and inviolability, which is represented by the transfer of a record to an archives. So, to preserve provenance, as well as the use values protected by copyright and exploited by commodification, how ironic it is that we align ourselves with those interests within our society which fight to maintain the aura of the unique and the original, and which rush to distinguish authorship, in this newest mass reproductive medium. Would Walter Benjamin have smiled or been saddened to see the urge to thrust the values of a transcendent uniqueness onto the new electronic media, as had occurred earlier with photography and film? He, like every believer before him in the revolutionary character of a new medium, had anticipated that film and photography would be used for egalitarian mass communication, for undermining institutions of power, not for widening their discipline.

Further, when we insist on the application of the notion of provenance to electronic records, as to all records, and on the construction of a family of creative transactions which we archivists delineate and call fonds, and then externalize to the status of a given reflecting the "nature" of the records and supposed records creators, do we not hide the critical instrumentality of our own involvement? We tread behind Mickey Knox who evades the recognition of his power to shape his own truth by claiming to act according to a nature that made him. In projecting fonds from an artificial concept of our own making to a natural definition of the records, do we not simply re-categorize the world again? But now it is under a new overarching and totalizing umbrella, as fallacious as any which we proposed to see superseded, like the grand social and historical narratives underlying the thematic record and manuscript groups of yore.

It is digital data which mock the status of classically eternal authority, of delimited fonds. Having conjured forth these fonds, we meticulously serve them through myriad additional, carefully parsed and ordered archival distinctions and judgements. These distinctions of sous-fonds, series and sub-series

are equally characterized as following universally applicable and external rules, as though a hieratic rendering necessarily expressed truth rather than invention. But digital files may frequently repose unsystematized, warehoused with no consistent internal organization, or multi-systematized, distributed across countries and crossing through individual and institutional organizational links, interrelated yet escaping predictable, dependent relationships and the volumetric limits imposed by localized sites. Is not the fluid, borderless character of digital data, often unclassified and unauthorized, but entirely available to ever more powerful search engines, a threat to the pyramidal, sequentializing stability of fonds-based rules, so recently bestowed with reality by archivists? The old system of collection or accession level categorization at least retained the virtue of leaving transparent, by embedding in primary description, the particularities and contingencies of the action of the archivist and the archives in determining case by case and over time the value to the archives and to historical meaning, as then constituted, of particular sets of records. The extent of collections or accessions, their physical conformations, were those of the moment of acquisition, not their relationship to some supposed unity of original transactions or creators. In the collection or accession, the act of acquisition and the acquisition source (even be it an auction house) were valorized as organizing principles of the record. They were not marginalized nor erased by submersion in a constructed fonds as dubious a notion as the naive belief, for example, that a film or a photograph escaped the intentionality of a framer, and (like a fonds) could offer a transparent window on another world. Rather, organization by act of acquisition revealed the archival records as a managed world framed by both a maker – whether of films, photographs, or texts, or even collections – and an archivist, with both maker and archivist inside the frame.

Ultimately, what is revealed by digital options in their new impact on archival actions is an older but unminded perception: archives expose not a finished past society, but, as always, and as Raymond Williams pointed out, our own, present society, which does the selecting, the keeping, the using, and the constituting of its many stories in continuous and contingent re-making. It is a present society, and a present generation of archivists, which will shortly, in the digital age, mine the future it has helped to circumscribe, searching out pre-determined raw materials, rather than only the more random survivals and selections of the past. Which archives, I wonder – those we have created of the past or those we propose to create of the future – will we delight in more?

Notes

Brown, and Terry Cook for their thoughtful comments during the preparation of the article, and to John McDonald for drawing my attention to the article in *Nature* magazine.

1 See Terry Cook, "What is Past is Prologue: A History of Archival Ideas Since 1898, and the Future Paradigm Shift," *Archivaria* 43 (Spring 1997), pp. 17–63; also, his "Mind Over Matter: Towards a New Theory of Archival Appraisal," in Barbara L. Craig, ed., *The Archival Imagination: Essays in Honour of Hugh A. Taylor* (Ottawa, 1992), pp. 38–70. See also Richard Brown, "Macro-Appraisal Theory and the Context of the Public Records Creator," *Archivaria* 40 (Fall 1995), pp. 121–72, and the related Ian Wilson, "Commentary: Reflections on Archival Strategies," *American Archivist* 58 (Fall 1995), pp. 414–29.

2 To explore the connection between history and semiotics, see Brooke Williams, "What Has History To Do with Semiotic?" *Semiotica* 54, nos. 3 & 4 (1985), pp. 267–333, available revised with index and bibliography as *History and Semiotic* 4, (Summer 1985), published by the Toronto Semiotic Circle, Victoria College, University of Toronto; and also *Semiotica* 83, nos. 3 & 4 (1991), Special Issue on History, ed. Brooke Williams and William Pencak.

3 Databases are entering the terabyte (1 trillion byte) and petabyte (1000 terabytes) size; although not in existence (yet), names exist for the exabyte (1000 petabytes), the zettabyte (1000 exabytes) and, most endearing, the yottabyte, to express 1000 zettabytes.

4 "Tremendous Influence of the Movies," *Sherbrooke Daily Record* (30 December 1925), a journalist repeating the comments of Charles Merg of *Harper's Magazine*.

5 The film thanked thirty-three archival and private family sources, and interspersed interviews with seven prominent personalities who were not actors with interviews with fourteen characters who were actors and voice-overs from five actual announcers from past news services.

6 Respecting archival authoring, see Tom Nesmith, "Seeing with Archives: The Changing Intellectual Place of Archives," paper presented at the annual conference of the Association of Canadian Archivists, Ottawa, 6 June 1997 (publication forthcoming); also, Brien Brothman, "Orders of Value: Probing the Theoretical Terms of Archival Practice," *Archivaria* 32 (Summer 1991), pp. 78–100.

7 See Allan Sekula, "Photography Between Labour and Capital," in Benjamin H.D. Buchloh and Robert Wilkie, eds., *Mining Photographs and Other Pictures 1948–1968* (Halifax, 1983), pp. 193–268, particularly "Introduction: Reading an Archive," pp. 193–202.

8 Simon Caulkin, of the London Observer Service, "The case for open-book management," Toronto *Globe & Mail* (28 June 1999).

9 Michel Foucault, *Discipline & Punish, The Birth of the Prison* Alan Sheridan, trans. (New York [1975], 1995).

10 For example: "The Australian Oceanographic Data Centre recently advertised in a marine science newsletter in an attempt to root out hidden treasure held by individual scientists. Centre head Ben Searle estimates that 70 to 80 per cent of the marine and coastal data that has been collected in Australia 'resides in filing cabinets and on personal computers, and its existence is unknown to all but the owners'." Tony Reichhardt, "It's sink or swim as a tidal wave of data approaches," *Nature* 399 (10 June 1999), p. 518.

11 See David Bearman, "Archival Strategies," *American Archivist* 58 (Fall 1995), pp. 380–413 and, for a critical perspective, Paul Marsden, "When is the Future: Comparative Notes on the Electronic Record-Keeping Projects of the University of Pittsburgh and the University of British Columbia," *Archivaria* 43 (Spring 1997), pp. 158–73.

12 Rosalind E. Krauss, "Sincerely Yours," (1982) in *The Originality of the Avant-Garde and Other Modernist Myths* (Cambridge, Mass. and London, England, 1996), p. 181. This is a companion article to an earlier essay, "The Originality of the Avant-Garde," (1981), reprinted in the same volume, pp. 151–70. There, Krauss is aware of the relevance of her argument not only for visual art, but for historical enquiry: "The theme of originality, encompassing as it does the notions of authenticity, originals, and origins, is the shared discursive practice of the

museum, the historian, and the maker of art. And throughout the nineteenth century all of these institutions were concerted, together, to find the mark, the warrant, the certification of the original" (p. 162). It is worth noting how heavily archives rely upon the notion of themselves as repositories of unique records to justify their sponsorship, even while collecting heavily among the compound media.

13 Walter Benjamin, "The Work of Art in the Age of Mechanical Reproduction" in Hannah Arendt, ed. *Illuminations* (New York, 1968), pp. 217–51. Paper originally published in 1936.

14 The term is used, for example, in Alison Bullock's concise, plain language résumé, titled "Preservation of Digital Information: Issues and Current Status," No. 60 (May 1999), in the *Network Backgrounder* series of internal documents of the National Library of Canada. Most issues of this internal series are translated and made available as *Network Notes* and *Flash Réseau* on the National Library of Canada website: *Network Notes*: http://www.nlc-bnc.ca/pubs/netnotes/netnotes.htm; *Flash Réseau*: http://www.nlc-bnc.ca/pubs/netnotes/fnetnote.htm. Bullock's work also cites links to other digital preservation efforts internationally.

15 The credits to *Natural Born Killers* list some sixteen sources of archival footage, from film libraries and archives to news and magazine sources, as well as quotations from seven previous fictional television films and broadcasts.

16 See Bill Holm and George Irving Quimby, *Edward S. Curtis in the Land of the War Canoes: A Pioneer Cinematographer in the Pacific Northwest* (Seattle, c.1980).

17 Roland Barthes, *Mythologies* (Paris, 1957).

18 The evident and surreal montage of archival records in the film directed by Stone acknowledges overtly the complicit act of consumer viewing which docudramas and traditional documentaries attempt to hide or overcome from their position of supposed seamless and impersonal narrative. It acknowledges that the audience for popular culture products is defined differently from previous observers; that audience oscillates between ironic detachment, encouraged by the evident historicizing placement of events, and identification and emotional involvement, incited by the sometimes camouflaged rhetoric.

19 Raymond Williams, *The Long Revolution* (Harmondsworth, 1965) and *Culture and Society* (Harmondsworth, 1963).

20 Jean Baudrillard, *The Mirror of Production*, trans. Mark Poster (St. Louis, 1975). Original French publication, 1973.

21 See Jacques Derrida, *Of Grammatology*, trans. Gayatri Chakravorty Spivak (Baltimore, 1976). Original French publication, 1967.

22 An instance of how this worked for Natalie Zemon Davis, including a nice distinction from the "radical grammatology" of Derrida's theory of deconstruction, is explored by Richard Brown in his review article "The Value of 'Narrativity' in the Appraisal of Historical Documents: Foundation for a Theory of Archival Hermeneutics," *Archivaria* 32 (Summer 1991), pp. 152–56. He was reviewing Davis' *Fiction in the Archives: Pardon Tales and their Tellers in Sixteenth-Century France* (Stanford, 1987). As follow up, see Richard Brown, "Records Acquisition Strategy and Its Theoretical Foundation: The Case for a Concept of Archival Hermeneutics," *Archivaria* 33 (Winter 1991–92), pp. 34–56.

23 Jean-François Lyotard, *The Postmodern Condition: A Report on Knowledge*, trans. Geoffrey Bennington and Brian Massumi (Manchester, 1989). Original French publication, 1979.