

8 THE ARCHIVE UNDER THREAT

JOHN FROW

This chapter is about the archive, by which I mean any place in which the vestiges of the past are stored. The archive is a repository of public memory, and it comes into existence by an act of construction and collection—but also by acts of selection and exclusion—usually stretching over very long periods of time. The making of an archive takes place under particular economic, political, cultural and legal conditions of existence; my concern here is with the way in which changes in those legal conditions are currently transforming the quality of our dealings with the archive in the digital era, and thus the quality of ‘publicness’ of our public memory.

Our understanding of what constitutes an archive has of course changed considerably in recent times, extending it from collections of government records, of public or private correspondence, of published or manuscript writings in general to more ephemeral and more popular materials, to oral records, to items of material culture, and most recently to electronic data; we are also more deeply aware of the complicity of the process of archive-formation with the history of class, state and

imperial power.¹ These extensions have unsettled the very notion of a historical record. Francis Blouin writes:

It could ... easily be said that a century ago archives and history occupied the same conceptual and methodological space. This sense of partnership in the study of the past has undergone a variety of stresses and strains over recent decades, to the point that what constitutes the archive has become a question fundamental to how our knowledge of the past is acquired and shaped.²

The focus of this chapter will eventually be on the digital archive and on the archiving of scientific knowledge in scholarly publishing; but let me begin by seeking to define the archive more carefully in terms of its institutional and particularly its legal conditions of existence.

In the first instance, then, an archive is a repository of copies of works: that is, of copyrighted and once-copyrighted materials that have been acquired by deposit or gift or purchase, and which are available for public consultation or borrowing under specific forms of legal exemption from the limitations of copyright. In the areas of the world governed by the World Intellectual Property Organisation convention, there are three main areas of exemption that make it possible for libraries to make copyrighted works publicly available. One is the *first-sale doctrine*, which stipulates that once the work has been legitimately copied and published, the author's rights in relation to that physical copy are exhausted. The second is the provisions for *fair use* or *fair dealing*, primarily for educational and scholarly purposes. And the third is the *libraries exemption* (given in Australian law in sections 49–53 and 110A and B of the *Copyright Act 1968*), allowing copying by the so-called prescribed libraries under certain very strictly circumscribed circumstances: in simple terms, what is allowed is the making of single copies of articles or short extracts from books for research or private study, and of replacement copies for preservation

purposes or where an item has been lost, but only where the item is no longer available on the market.

A second and broader specification would say that an archive is a repository of *information*, taking the form of copies of works that are regulated by a particular intellectual property regime. Information has in most societies been culturally framed as an inappropriate object of private and exclusive ownership, although in the societies that we think of as constituting Western 'modernity' this ethos has coexisted with the partial monopolies granted by copyright law and other forms of intellectual property rights. There has, however, been increasing commercial pressure for the privatisation of these categories and their removal from the commons.

The characteristic structure of information is that of gift exchange without monetary recompense but in contexts of calculation and strategic manoeuvre.³ The barter of information, and the estimation of who knows what, condition the forms of its reciprocity but can never endow it with real scarcity, since its most important quality is its inexhaustible reproducibility: if I tell you something I still 'possess' it myself, and so on indefinitely. Although the category of intellectual property is grounded in an extension of the concept of real property, the fact is that, unlike land or material goods, information is not consumed by use.

Thomas Jefferson put this much more eloquently than I can in a letter of 1813:

If nature has made any one thing less susceptible than all others of exclusive property, it is the action of the thinking power called an idea, which an individual may exclusively possess as long as he keeps it to himself; but the moment it is divulged, it forces itself into the possession of everyone, and the receiver cannot dispossess himself of it. Its peculiar character, too, is that no one possesses the less, because every other possesses the whole of it. He who receives an idea from me, receives instruction himself

without lessening mine; as he who lights his taper at mine, receives light without darkening me. That ideas should freely spread from one to another over the globe, for the moral and mutual instruction of man, and improvement of his condition, seems to have been peculiarly and benevolently designed by nature, when she made them, like fire, expansible over all space, without lessening their density in any point, and like the air in which we breathe, move, and have our physical being, incapable of confinement or exclusive appropriation. Inventions then cannot, in nature, be a subject of property.⁴

This indeterminacy of the positioning of information (its ability to exist in many places simultaneously) gives rise to a more general indeterminacy inherent in the fact that information is structured as an open system with multiple users.

Two obstacles to commodification develop immediately from this radical indeterminacy. The first is the problem of defining and enforcing exclusive property rights (which are the precondition for capital investment) in something both intangible and diffuse. The simple solution to this problem is to treat information as a secret. The more complex solution, and the one that has been worked out in great detail by Western law over the last three centuries, is to restrict access to and use of information without necessarily restricting possession of it; thus copyright law restricts only the making of unauthorised copies, patent and trademark law restricts commercial exploitation, and so on.

The second obstacle is the problem of attaching exchange value to an entity that has an almost limitless use value: that is, of making an abundant good scarce. The uncertainty that flows from the indeterminacy of uses (the unpredictability of the 'take' of any information product) entails considerable risk for capital investment. At the same time, the relatively high costs of initial production and the relatively low costs of subsequent copying of information goods make predictability

imperative. The problem of the minimisation of risk can be solved in part by the production of scarcity through control of the right to copy, which in turn is regulated by the legal institution of authorship, the single most important channel for the creation of textual desire and the minimisation of market uncertainty.

For all libraries except deposit libraries, a condition of their successful existence is that they negotiate a path between the costly scarcity induced by this strategy and their role of making information broadly accessible to a public. A third specification of the archive, then, would look at the way libraries and other repositories work both as concrete institutions and as a model of one set of social relations for the circulation of knowledge: the so-called library model of knowledge management, in which a hybrid mode of free or nearly free lending threads a middle way between the economy of the commodity and the economy of the gift.⁵

A library in this sense is a collection of informational materials, traditionally but not necessarily printed matter, which have typically been bought in the market but which, in most public library systems, do not circulate as commodities. But neither do these materials circulate as gifts; they are, rather—to use Marcel Mauss's term—prestations, 'gifts' that return without conferring any rights of ownership or permanent use.⁶ While the 'library model' thus tends to collapse rather than to dichotomise the categories of gift and commodity, it does nevertheless represent a genuine alternative to the privatisation of the commons in information. This model is, however, under threat.

Public libraries as we know them came into being as part of that massive expansion of state institutions in mid-nineteenth century Europe and North America that also gave rise to the public schooling system, post offices, railways and public hospitals, and which set an ethos of public service against the monopolistic tendencies of the uncontrolled market.⁷ Their

present existence is framed by a tension between that expanded model of the state and its role in the provision of free (that is, subsidised) public services and a more restrictive view of the state that seeks to open the provision of information to market forces. To put it crudely, a model centred on the informing of citizens has been replaced, at least in part, by a model of choices made by consumers. The causes of this shift are many and complex, but a major one in the case of the public library system has been the change in the status of information itself from being 'economically valueless, mainly government produced and largely public, to being value-added, commercially sensitive and high cost'.⁸

In an American study, Herbert and Anita Schiller identify a 1982 US government report as a turning point in the progressive weakening of the 'library model'.⁹ Announcing an end to the principle of co-operation between the public and private information sectors, the report represents 'the private industry's challenge to the right of the public sector (government, libraries, universities, etc.) to engage in *any* activities the industry regards as its own province'—that is, any activities that might have a commercial potential.¹⁰ Since then the pressure has been on the public library system (perhaps the most genuinely popular of all cultural institutions)¹¹ not only to implement various local forms of commercial practice—'charging users for information, relying on private vendors for databases, contracting out functions to private firms, and so on'¹²—but more generally to relinquish its primary role in the provision of information.

The focus of my chapter is on the tension between this impetus to make information scarce and expensive, and the electronic revolution—a revolution in the technologies of proliferation and dissemination—which has generated the possibility of a vast increase in the accessibility and visibility of information, and in particular of a transformation of the archive into something like a model of the public domain in which

knowledge circulates freely: a model, let me add, that corresponds closely to that Enlightenment ideal of open knowledge systems which underlies the Western scientific ethos.

My concern here is not with the totality of the electronic revolution but with its specific effects on archives; in particular, I am not directly concerned with the Internet except as it concerns the storage and retrieval of research materials. Two main areas are of direct relevance: the effect of intellectual property law on the workings of the archives stored in public and research libraries; and the role of intellectual property in the current crisis in scholarly and scientific publication.

At the centre of the electronic revolution is the technology of digitisation: that is, the transformation of analogue print or visual or auditory materials into a common machine-readable form. The digital in this sense is a 'copy' of an original, produced by the keying in or scanning of documents, by downloading or transferral from another database, or by the networking of material. This means in turn that the distinction between 'reading' and 'copying' that governs the use of print becomes far more difficult to define and enforce in the digital domain, and it means that one of the salient effects of digitisation is the creation of new forms of property relation: its proliferation of copies at virtually zero cost tendentially undermines the tight control of copying that is at the centre of Western intellectual property regimes.

Despite these consequences, however, the institutions of intellectual property continue to work within a framework designed for print and for the figure of the individual author who supposedly uses publishers as mere intermediaries. Among other things, this means that many copyright exemptions for print have not been extended to digital copying. Libraries' limited rights to copy print materials for their users are largely not available for electronic copying; any use of copyright digital information must be licensed by the copyright holder, although

in Australia a limited right of copying was granted under the Digital Agenda amendments of 2001.

In the United States and Australia, digital copying is allowed for preservation (that is, for ‘archival purposes’, effectively the replacement of an owned original copy), but this archiving right does not include the right to convert print and other non-digital media to electronic form for storage and retrieval purposes; libraries have no right to lend digital copies of works, which means the first-sale doctrine does not apply to them. Similarly, the European Commission Directive on the harmonisation of copyright makes it possible, at least in some countries, for libraries to digitise materials in their collection but not to communicate it to the public without explicit permission—something that is very difficult to obtain in the case of older materials or material published outside mainstream sources, and especially given the fact that in the current circumstances of commercial uncertainty publishers have often been unwilling to give any permissions for digital reproduction. Finally, there is no Australian, US or European right to make back-up copies of audio and videotape recordings: libraries can only replace damaged copies, and only if there is no market alternative. The general effect of this is a *de facto* prohibition on electronic browsing, since only the copyright holder may ‘communicate to the public’; there might well be cases where the paper form of a work could legally be made available to the public but not the electronic form.

Digitisation takes place at the two levels of metadata and data. The category of metadata includes the making of catalogues, the construction of search engines, the downloading of content from search engines, abstracting, and the creation of bibliographies. That of data refers to the digitisation of existing content, or the creation of new digital content, as part of the archival function of libraries. Carol Henderson, the president of the American Libraries Association, recently wrote about this:

Libraries ... recognize that a key societal function of libraries—the archival function—is at risk because electronic information is so seldom actually available for purchase and permanent retention or preservation. Libraries play this archival role because history has shown that it is not economically viable for profit-based businesses to do so. The disappearance of much electronic information after a very short period of time, the fragility of digital bits, and the short life of hardware and software suggest that this role of libraries will be more needed than ever before, but harder and harder for libraries to accomplish.¹³

There are a number of issues at stake here:

- University libraries often need to pay several times over for archiving rights to electronic journals: for the journal subscriptions; for the photocopying licence to enable them to make copies for teaching purposes; for clearance to include the same material in study packs. Yet, after these various levels of licensing, they still do not necessarily have a collection of archived back issues.
- Increasingly, libraries are purchasing or leasing digitised materials that are based on collections held in other libraries: it is the intermediaries that are profiting from this exploitation of the value of special collections.
- As resource archives, libraries increasingly make use of digitised teaching resources, especially multimedia resources. A key problem here is that a CD-ROM, for example, may incorporate the rights of multiple authors, including the developer of the underlying software; and any authors whose work is incorporated in another work become copyright holders: for example, in the case of a sound recording of a musical performance, the owners of the copyright in the ‘underlying works’ represented by the music and the lyrics will have to give their consent before the recording can be lent to the public by a public library.

- Distance education raises particular problems to do with the provision of digital materials, since these require the making of copies and, in addition, may render the provider liable as an online service provider.
- One of the most important activities of libraries is document delivery. Under the constraints of current intellectual property law, this can only be construed as a commercial activity, licensed by copyright holders and thus dependent on the granting of permissions.
- The lending of software (at least where the software is less than fifty years old) is prohibited in most contemporary intellectual property regimes, even though it is clearly a 'literary work' in the sense of the relevant Acts. There is no exemption for fair dealing in the case of software, and there are problems in lending books that have software attached.
- Finally, there is a different set of problems associated with image archives and with the collection and holding of material objects, where other kinds of intellectual property rights obtain and where, crucially, the dimensions of work and copy coincide.

The most general level of the transformation of the function of the archive concerns the evolution of new conditions of access, or restriction of access, for digital material. More than 50 per cent of the fee income collected on behalf of authors in the developed countries derives from photocopying royalties from the print medium; significant moves are now under way to extract royalties from digital reproduction: from the licensing of digital archive copies, of works made available to disabled people, of the first digitisation of a work, and of value-added services such as the provision of course packs. In one sense, the use of a licence mechanism is a technical question about the facilitation of permitted exemptions to the limitations of copyright; but in another sense it has economic consequences that are potentially crippling for public libraries and other archives.

This brings me to my second area of concern: the transformation of scholarly and scientific publishing. In many domains, especially the sciences, print publication is in the process of being phased out, to be replaced not just by electronic journals but also by powerful electronic interfaces. Publishers such as Reed-Elsevier (Science Direct) and OCLC (First Search) deliver content—both metadata and data—from vast archival databases. First Search, for example, references more than 5.9 million online full-text articles from over 3500 electronic journals. Libraries are licensed intermediaries for these databases, but in one sense act merely as brokers to squeeze better deals from publishers. One consequence of this is that ‘the ability to click from abstract or citation to the full text of an article is prompting a shift in the way that journals are used. Scientists often care less about the journal title than the ability to track down quickly the full text of articles relevant to their interests. Increasingly, users view titles as merely part of hyperlinked “content databases” made up of constellations of journal titles’,¹⁴ and new forms of publishing and research practice have developed accordingly. In high-energy physics, for example, the Los Alamos e-print archives have become the primary vehicle of publication. Here, articles are published as pre-prints, with peer review coming *after* publication; a similar model is currently being developed for the biomedical sciences.

These moves are of course in part a response to the crisis in the publishing of scholarly serials, which saw a 291 per cent cost increase between 1986 and 2000. Science publishing is now dominated by three huge conglomerates: Elsevier, Thomson and Bertelsmann. Elsevier controls something like 1500 journals, including key journals and databases in medical science, biology and business; it had profits of US\$500 million on sales of \$1.1 billion in 1997 from its scientific activities alone. Its title *Brain Research*, to take one example, doubled in cost between 1992 and 1996 to US\$15 000 annually. The US

Association of Research Libraries calculates that its 114 member libraries spent 142 per cent more on journals in that year than ten years before but ordered 6 per cent fewer titles.¹⁵

The effect on the budgets of research libraries has thus been catastrophic: they are massively distorted towards the costs of scientific journals and database licences, and there have thus been extensive cut-backs in monograph purchases—which in turn hurts scholarly publishers, which in turn makes it much harder for young scholars to publish, and so on down the line.

The situation has generated a number of attempts to circumvent it by means of alternative forms of organisation of publishing. In 1995 Stanford created High Wire Press to return scholarly publishing to non-profit organisations. SPARC, the Scholarly Publishing and Academic Resources Coalition, set up in 1997 by the US Association of Research Libraries, is underwriting the launch of titles directly competing with expensive titles, with its members committed to buying each of them; its electronic chemistry journal, *PhysChemComm*, for example, sells for US\$353 and competes directly with Elsevier's *Chemical Physics Letters* at US\$8000. The Public Library of Science has similar aims: academics who have signed up to this initiative have promised to publish in, edit or review for, and personally subscribe to, only those scholarly and scientific journals that have agreed to grant unrestricted free distribution rights to any and all original research reports that they have published, through PubMed Central and similar online public resources, within six months of their initial publication date. Finally, George Soros's Open Society Institute has recently sponsored the Budapest Open Access Initiative. The preamble to its manifesto says:

An old tradition and a new technology have converged to make possible an unprecedented public good. The old tradition is the willingness of scientists and scholars to publish the fruits of their research in scholarly journals without payment, for the sake of

inquiry and knowledge. The new technology is the Internet. The public good they make possible is the worldwide electronic distribution of the peer-reviewed journal literature and completely free and unrestricted access to it by all scientists, scholars, teachers, students, and other curious minds. Removing access barriers to this literature will accelerate research, enrich education, share the learning of the rich with the poor and the poor with the rich, make this literature as useful as it can be, and lay the foundation for uniting humanity in a common intellectual conversation and quest for knowledge.¹⁶

The initiative goes on to call for an extension of such access to all of the scholarly and scientific literature, through two mechanisms: self-archiving, and the development of alternative journals that do not charge subscription or access fees and do not use copyright to restrict use of the materials they publish.

What is at issue here is the lopsided market situation in which the costs of generating intellectual property are met by, mostly, public institutions, and the intellectual property rights are then donated to publishers who resell them to university libraries at a high cost. John Sutherland, writing in the *London Review of Books* in 1999, put it this way:

It's a sweet deal for the publisher, who pays none of the costs of originating his material. Those costs, which can run into millions of dollars and years of salaried time, are picked up by the authors' institutions or by grant-awarding bodies. Authors are paid nothing for the publication of their work. Nor do journals normally pay for the confidential peer reviews which guide their selection. The publisher thus gets an excellent product gratis, and all he has to do is package it. And, sweetest of all, his running costs and overheads are covered by subscriptions, the level of which he himself sets. Effectively, this means that he can make universities pay through the nose for something that the universities have paid to produce in the first place.¹⁷

Any solution to this problem rests with the universities making use of the market leverage given them by the intellectual property rights that they themselves generate. Caltech, to take one example, has announced that in the short term it wants all its faculty to agree that they will publish in journals only on the basis that they and Caltech, as joint copyright holders, lease the material to the publisher for a limited period, with a proposed reversion after two years. MIT has released its online courseware into the public domain. More generally, it seems to me likely that any solution to the crisis in the cost of scientific publication will come only when the world's major research universities use their collective market power to overcome these market distortions, as well as using their political leverage to restrain the claims that publishers are making to extensive intellectual property rights.

What I have been describing are two distinct but inter-related areas of struggle over control of and access to the archives that are the repository of our cultural memory. The situation is not yet a disaster, and in many ways it is counterbalanced by the construction and release of immense new research archives in electronic form, as well as by the multiplying resources of the Internet, including, to name just two areas, resources for genealogical research and for the study of local history.

At the same time, however, we are witnessing the gradual marginalisation of those without privileged access to research archives—and particularly that majority of people in the poorer parts of the world who can no longer, or could never, afford the entry fee at the doors of the digital archive. The paradox with which we are living is that there is simultaneously a massive expansion of the world's archival reserves, and a closing down of the public domain as the commons in information is converted into privately owned holdings from which rent can be extracted, and as the archives that have been bequeathed to us, and that we ourselves have in part helped to construct, are removed from our control.

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9 THE ART MUSEUM AS MONUMENT

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