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The future historian: Reflections on the archives of contemporary sciences

Soraya de Chadarevian*

University of California Los Angeles, Department of History and Institute for Society and Genetics, 6265 Bunche Hall, Los Angeles, CA 90095-1473, USA

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ABSTRACT

Historians working on recent science work close to where the archives are created or become accessible. Based on this experience, the essay presents a reflection on the archives of contemporary life sciences. It addresses three questions: firstly, what is special about the archival situation of contemporary sciences? Secondly, which sources do contemporary historians use and what opportunities and challenges do they offer? And finally, what potential changes to the archives of contemporary sciences are we witnessing? The essay draws a distinction between, on the one side, the history of science when the actors are still alive—a situation that presents a particular set of issues in respect to the available sources—and, on the other side, questions relating specifically to the life sciences at the turn of the millennium—a period which will eventually not be considered as 'contemporary' any more. It reviews changes in scientific practice, historiographical trends and archival practices and considers the place of paper records, digital sources, material artefacts and oral sources in the archives of contemporary sciences. It argues that the commercialisation and privatisation of science may prove a bigger problem for the future historian than the shift to the digital medium. It concludes by welcoming the closer interactions between scientists, historians, curators and archivists prompted by recent developments.

Some sources make a big splash. A recent example is the letter penned by Crick to his twelve-year old son Michael in May 1953 that described the structure of the DNA double helix before it appeared in print. The letter had been in private hand for sixty years, when his son decided to sell it. It fetched an unprecedented six million dollars, paid by an anonymous buyer. This was more than all the other Crick papers together that were acquired by the Wellcome Trust a decade earlier for what then seemed a very hefty price. The sale of the letter was widely reported in the media and although the original document is held in an undisclosed location, digital copies now pop up on countless internet sites.

More usually, historical documents or sources—especially if of the paper kind—lead a more discrete life. They are collected in boxes and line the shelves of archives. History depends on sources. Where there are no sources (of some kind) there is no history. The reverse: where there is no interest in history there are no archives also holds true, although not all collections of documents and things presuppose a future historian; they may be kept for legal, emotional or other reasons—like sheer inertia—and only eventually become sources for historical research. What stories historians write and what sources they use as well as the shape of archives and the kind of sources that are collected and kept changes over time. These changes depend on historiographical trends and changes in the historical subject matter as much as on shifts in archival collecting practices and the interests and meanings that sustain them.

This sounds all rather obvious, but when we start thinking about these relations, they become increasingly complex, perhaps especially so in the history of science where the question of archives has only recently started gaining theoretical attention and where there remains a tension between the scientific enterprise that supposedly is all about the future and the historical enterprise that looks back

* Tel.: +1 310 267 4767.
E-mail address: chadarevian@history.ucla.edu.

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in time.[1] The meeting convened at the Wellcome Library that gathered historians, archivists and scientists and where the essays collected in this issue were first presented, offered a welcome occasion to think about these matters.

My reflections are based on my experience as a historian working on recent science as well as on my participation in various archive related committees, including especially the advisory board of the now defunct National Cataloguing Unit for the Archives of Contemporary Scientists in Britain, where I was first introduced to many of the issues concerning scientific archives.[2] Historians working on recent events work close to where records move from private hand to public repositories and at times they become themselves involved in the process by convincing scientists to deposit their papers or donate a piece of equipment to a museum rather than throw them out. As I have argued elsewhere, in this modest sense every recent historian is also a bit of an archivist (de Chadarevian, 2013).

The essay is structured around three questions: firstly, what is special about the archival situation of contemporary sciences? Secondly, which sources do contemporary historians use and what opportunities and challenges do they offer? And finally, what potential changes to the archives of contemporary sciences are we witnessing? To tackle these questions the essay will review changes in scientific practice, historiographical trends and archival practices and consider the place of paper records, digital sources, material artefacts and oral sources in the archives of contemporary sciences.

1. What is special about contemporary science?

There is a range of meanings for the term 'contemporary history'. Some take it to mean 'still in living memory', so roughly the last eighty years. In a more narrow sense it may be understood as the shared memory of most of the adult population, hence extending to about thirty years. On other occasions the 'contemporary' stretches to the events that define the current era which can be a longer or shorter period.[3] The first two definitions are most relevant for our concerns here.

Writing history when the actors are still alive raises a set of particular issues regarding the availability of the access to sources. Many sources will still be held in private hand. If they are deposited, access will be restricted. At the same time, actors may be available for interviews and might provide access to sources that may not end up in an archive later. However, when we speak of contemporary science today, we may mean specifically science in the late twentieth and early twenty-first century. Eventually this period will not be considered 'contemporary' any more but some specific issues, like for instance the much broader adoption of the digital medium, may still define this period. I suggest that it is important to keep this distinction clearly in mind to avoid confusion.[4]

In the contemporary period, we have witnessed quite decisive changes in the sciences. When Bruno Latour visited a cutting edge biological laboratory in California in the early 1970s, he was struck by the obsession of the researchers with literary devices, mostly involving paper technologies (Latour & Woolgar, 1979). Were he to visit a laboratory today, he might be surprised by the fact that most scientists stare at computer screens—much like the rest of the population does.

The omnipresence of the computer is not the only change in the way science is conducted. The size of the enterprise has grown dramatically. Aided by new communication technologies, scientific projects, also in the biomedical sciences, are often conducted in large collaborative teams, distributed over many laboratories. The term biomedicine was created to denote a new assemblage of science, medicine and commercial developments (Gaudillière, 2002). Sociologists have described these changes as a transition from 'mode 1' to 'mode 2' science, a distinction that historians have criticised, although many would agree that major changes have taken place in the postwar period (Gibbons et al., 1994; Nowotny, Scott, & Gibbons, 2001). The commercialisation of science as well as the expansion of secret military science have important implications for the availability of archival sources. The historian Peter Galison has exposed the staggering amount of classified material that is being produced in the US alone (an estimated five to ten times more than what is openly available), the extravagant efforts that are invested in keeping it secret and the damaging effects secrecy has on knowledge production and democracy (Galison, 2004).[5] Company archives are routinely closed, while the distinctions between private and public sector science are increasingly blurred.[6]

At the same time, history of science—following Latour and others—underwent a historiographical transformation, often described as practice turn or cultural turn. It resulted in an increased interest in the production of scientific knowledge and the material and social practices that sustain it.[7]

The changes in the way the sciences are conducted as well as in the historiography of the sciences have an impact on what kind of materials scientists leave behind, which material finds its way into the archives—often a highly serendipitous process that in any case only captures a very small fraction of the potential source material—and what kind of sources historians look for. These changes do not always go step in step. Scientific archives themselves have seen major changes, partly in response to the developments just described. Another example is the commercialisation of some scientific archives, most notably those of Nobel Prize winning molecular biologists. The price tag involved for acquiring such collections is forcing repositories to re-think their acquisition policies, to collaborate with other archives and overall to adopt a more pro-active attitude (Shaw, in this issue). A closer consideration of the different kinds of sources historians of contemporary sciences may be using will provide further insight into the changing nature of scientific archives.

2. Paper archives

Historians, including historians of science, generally feel most at home in paper archives and visiting an archive belongs to the initiation rites of becoming a historian. The term 'archive' without any further qualification generally means 'paper archive' although of course there are all kinds of other archives, such as picture, film and oral history archives.

[1] For a critical perspective on this opposition and the 'deep historicity' of certain sciences linked to enormous archiving efforts see Daston (2012). The quote is on p. 162.

[2] For a short description of the work of the National Cataloguing Unit see http://archiveshub.ac.uk/contributors/ncuacs.html. (Accessed 7 May 2015).

[3] See Catterall (1997); also entry 'Contemporary history' in Wikipedia, http://en.wikipedia.org/wiki/Contemporary_history. (Accessed 7 May 2015).

[4] On the historiographical challenges posed by the study of late twentieth century sciences, both in respect to specific features of the sciences in this period and in respect to writing recent history, see Söderqvist (1997) and Doel & Söderqvist (2006).

[5] Galison and others have made clear that the problem with secret science, both commercial and military, is not just a question of access to classified material but of the effects of secrecy regimes on the content and the role of knowledge itself; see for instance Gusterson (1996), Dennis (2006), Masco (2010), Wellerstein (2010) and Balmer (2012). For a first-hand account of the experience of working with security clearance in a government archive with classified scientific material see Fitzpatrick (2006).

[6] On the increasing privatisation especially of the biomedical sciences and the growing interdependence of 'private' and 'public' domains see, among others, Thackray (1998) and Harvey & McMeekin (2007).

[7] For a general introduction to this historiographical shift see Golinski (1998).

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