

Authority in Space?: Creating a Digital Web-based Map Archive*

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RÉSUMÉ Ce texte examine la création entre 1999 et 2002 de « *Charting the Nation* », une collection d'archives Web en commun qui comprend des images numérisées et un catalogue cartographique, qui ont été coordonnés par le Département de géographie de l'Université d'Édimbourg et la Bibliothèque de l'Université d'Édimbourg. La création de ces archives, basée sur des documents cartographiques, de l'information de catalogage et des sources manuscrites associées provenant de plusieurs institutions en collaboration, est examinée en relation aux questions entourant la nature même des archives de façon générale et la nature de ces archives spécifiques comme un « espace » d'autorité. Les questions posées par les archives électroniques comme un « espace virtuel » aussi bien que celles suscitées par la création et la gestion pratique de cette collection d'archives spécifique sont examinées. Pour ce faire, le texte fait un lien entre ces questions et les débats sur le postmodernisme et les archives, et sur la littérature – géographique et autre – sur la nature du savoir situé (« *situated knowledge* »).

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ABSTRACT The paper discusses the creation between 1999 and 2002 of a collaborative Web-based digital image and map catalogue archive, "Charting the Nation," coordinated by the Department of Geography, University of Edinburgh, and Edinburgh University Library. The creation of the archive, based on the maps, cataloguing information and associated manuscript sources in the holdings of numerous collaborating institutions, is examined in relation to questions concerning the nature of archives generally and to this archive in particular as a "space" of authority. Issues posed by the electronic archive as a "virtual space" and in the creation and practical management of this digital Web-based map archive are addressed in relation to debates on postmodernism and the archive and to geographical and other literature on the situated nature of knowledge.

This paper outlines the practical and theoretical issues confronted in the creation of a Web-based digital map archive. The archive in question, "Charting the Nation" (hereafter, for convenience, "Charting"), has as its focus the maps of Scotland created from 1550–1740 and their associated manuscript and printed texts (such as the manuscript correspondence of individual mapmakers, or related contemporary printed work). The new entity "Charting" was created between 1999 and 2002 as a result of collaboration among ten universities and major libraries in the United Kingdom.¹ Additionally, a further dozen or so European academic bodies and libraries and over thirty private owners were involved in, for example, allowing items from their collections to be included.

"Charting" aimed to bring together in one Web-based site digital images of all the relevant maps and associated material held by these geographically-dispersed institutions – to make, as it were, a single archive in the "virtual space" of the Internet from the holdings of different institutions located in real space. Our concerns at the time were, in general, to meet and stimulate research needs – amongst map historians, students of place names, and of Scottish history and geography – to widen access to these scattered sources and, by providing access to digital surrogates, to help preserve the original materials.

Our concerns in this paper are twofold. The first is to contribute to debates on the nature of archives as sites or "spaces" of authority. The second is to reflect upon the creation of "Charting" as a single, virtually placeless, archive based on the concentration into one "space" of material housed in, and managed by, other distant archival repositories. We do this in the hope that our reflections may interest archivists and other readers of this journal for whom

¹ In addition to the Department (now Institute) of Geography, University of Edinburgh, and Edinburgh University Library, the principal institutions were the universities of Aberdeen, Cambridge, Dundee, and Glasgow; the Bodleian Library, University of Oxford; the National Archives of Scotland; the National Library of Scotland; the Royal Commission on the Ancient and Historical Monuments of Scotland; and the Royal Scottish Geographical Society. Many other institutions and private individuals were involved in respect, usually, of individual maps or other sources.

these issues are a daily current or future responsibility. In order to realize these aims, the paper is in three parts. The first part describes “Charting” more fully – what it is, why it was undertaken, and how. Details of the project and the archive – currently containing over 3,500 images – are available on the Web site (<http://www.chartingthenation.lib.ed.ac.uk/>). The second part examines current understanding of “the archive” with reference to recent work on post-modernism and the archive, the politics of the archive, and questions of archival management.

We do so conscious that we are not in any sense experts in these fields but, rather, as historical geographers reflecting upon and contributing to current concerns about what the archive is as a site of and for knowledge, a space of authority and power. Our perspective is that of users – and we certainly began the project as users – even if, in undertaking the work, we were required to think about our emergent role as “keepers,” at least in the sense that we had a developing responsibility to the sources, their appropriate treatment, and to other institutions. In what follows, however, our viewpoint is informed by an engagement with literature in geography on the archive as a space of knowledge more than it is by that work that guides professional archivists in their established practices. Our hope, simply, is to effect dialogue between these worlds and to use “Charting” to do that. In this context in particular, we draw upon work in the literature on archives and in geography upon the postmodern “collapse” of space, ideas of virtual space, and of cyberspace. Some mention is made of work in other fields that emphasises the situated nature of knowledge’s making. Finally, we try to bring these several fields of work together in relation to our experiences in undertaking the creation of this particular Web-based digital map archive. “Charting” is discussed in relation to what we here term “the politics of archive making,” namely how we negotiated with collaborating institutions and brought together into a “virtual space” images of what is held and managed by others elsewhere as archival records and historical documents.

“Charting the Nation”: The Context to a Web-based Digital Map Archive

“Charting” was funded as the result of successful application to a UK-wide programme of library-related research funding, the Research Support Libraries’ Programme (RSLP), itself funded by the Higher Education Funding Council (HEFC) for England and Wales and the Scottish Higher Education Funding Council (SHEFC). “Charting” was thus part of a UK-wide research libraries’ initiative in which support was given, broadly, for projects that involved the retro-conversion of existing catalogues, and/or the digitization of archival materials. For all RSLP projects, widening access to primary sources and institutional collaboration were important considerations.

“Charting” as a project had three general concerns: to bring into one

“space” the extant maps and associated materials for one country for a given historical period, to widen access to them for the purposes of research, teaching and learning, and, thereby, to assist in the preservation of the originals. Its underlying rationale lay in the importance of maps and their associated archives to numerous scholarly disciplines, in widespread public interest in historical maps and, not least, in the political requirements placed upon many holding institutions (increasingly including the university sector) to widen public access to their holdings. Many of the maps and manuscript sources relating to the cartographic history of Scotland are fragile and rare, even unique. As a result, institutions have not been able to make them readily and widely available to researchers (and certainly not to the “general public”). An additional problem for researchers and other users has been the wide dispersion of the maps and associated materials, otherwise often related, in the collections of many different institutions, both within and outside the UK.

With these general concerns in mind, “Charting” had five more detailed aims: to meet and further stimulate proven research needs; to assist in the preservation of the original materials²; to link related visual and textual historical data in order to preserve context and to add further value to individual items in doing so; to provide, in electronic form, wider access to historical sources; and to ensure cataloguing to international standards for all sources and collaborating institutions. In practice, the realization of these aims presented different issues to do with what an archive is and with the politics of archive management. Further, funding constraints at the outset demanded that access to the image collection be provided for free. As both producers of this archive and as users of it, we were additionally concerned to provide fully searchable metadata, and tools to allow users to “work” with the images (such as a zoom function to enlarge/reduce, the capacity to display several different map editions on screen simultaneously, and so on).

Initially, the project aimed to cover the period 1590 to 1740. These dates were determined by the prior existence of related digital mapping projects: the late sixteenth-century work of Timothy Pont (c.1590–c.1614),³ and the maps dating from the Military Survey of Scotland, c.1747–1754. In practice, we extended this remit by including manuscript maps that pre-dated Pont (the ear-

2 It remains uncertain whether making digital images of originals available on the Web increases or decreases demand from users to view those originals. For recent contrasting viewpoints see two papers presented to the Forty-fourth Annual Pre-conference of the Rare Books and Manuscripts Section of the Association of College and Research Libraries of the American Library Association, Toronto, 2003: Arvid Nelsen, “Is a Picture Worth a Thousand Impressions? Digital Imaging and Special Collections”; and Leslie McGrath, “English Illustrated Books for Children: The 1979 Holp Shuppan facsimiles from the Osborne Collection of Early Children’s Books”; abstracts at: <<http://www.library.utoronto.ca/fisher/rbms2003/program/short-papers.html>> (accessed 10 March 2006).

3 On this, see the National Library of Scotland Web site, <<http://www.nls.uk/pont/index.html>>.

liest being one of the English-Scottish border dated 1552). Additionally, because of its integrity and provenance, we incorporated the National Library of Scotland's holdings of the Board of Ordnance collection of military maps and architectural drawings, dating from c.1690–c.1820.

The project team consisted of four persons: a project director providing overall strategic guidance, a full-time project manager, a digital photographer, and a project cataloguer. Additional, temporary staff were employed for particular short-term tasks, for example additional cataloguing and CD duplication. There were six main tasks: selection; conservation assessment and preparation; digital photography; image processing and archiving; creating searchable metadata for the images; and designing the Web site for them to be delivered on-line.

Technical Specifications

The chosen digital imaging equipment was a Phase One PowerPhase scan back, which employs a 7,000 x 7,000 pixel CCD chip enabling image captures of up to 144 Mb (24 bit RGB uninterpolated). This was mounted on a Hasselblad 501CM medium format camera body with a Zeiss 80mm lens. In addition, extension tubes were employed for scanning items smaller than 42 x 30 cm in size, including 4 x 5 inch transparencies.

The master ("archival") TIFF image files created were batch-compressed and compressed derivatives created using LizardTech's MrSid Geospatial encoder software. A compression ratio of 20:1 proved adequate and resulted in virtually no visible loss of quality on screen. The MrSid files proved invaluable for routine viewing by project staff, and these compressed images were employed for cataloguing. All uncompressed TIFF files and derived MrSid files were written to archival quality Kodak CD-R media (Gold Ultima 650Mb and, latterly, Ultima 80 silver and gold). These, together with preservation metadata, are now preserved by Edinburgh University Library and are subject to their policy on digital preservation.⁴ Copies of the master images created were supplied on CD to partner holding institutions and private owners for their own use. This proved to be a powerful incentive to owners to participate in the project.

Archivists and librarians are not, generally, as familiar with the issues concerning image quality as professional digital photographers. Conversely, users, collectors, and academics are not usually aware of archival practices and conservation concerns. As a result, misunderstandings sometimes arose, for example concerning the number of high quality images that could be created in any one time period, the degree of post-creation processing it was appropriate to apply to the images, and the perceived effect of the photo-

⁴ See <<http://www.lib.ed.ac.uk/sites/digpres/index.shtml>> (accessed 10 March 2006).

graphic studio lighting employed on the originals. A sustained and effective dialogue between the technician and the archivist was of paramount importance to the success of “Charting,” and will be for other similar projects. No partner institution received funding from the RSLP monies awarded to the project, and, perhaps as a consequence, the extent of active involvement of partners varied considerably. Promised images and corresponding technical metadata did not always arrive on schedule. Patience, persistence, and diplomacy were necessary in order to obtain a successful outcome in such cases.

Edinburgh University Computing Services built an Access 2000 database capable of holding all project metadata and to act as the back-end source for the future Web site. This database had a sophisticated architecture that maintained explicit relations between technical metadata and the individual images, and between all images and the descriptive record for the source item. The programme allowed for the exportation of relevant subsets of metadata to individual partner institutions.

The adoption of a full and complete technical metadata schema (such as that proposed at the NISO/CLIR/RLG Technical Metadata for Images Workshop, April 1999⁵) was considered initially. Given, however, the absence of tools to capture such data automatically, a more pragmatic practice was adopted in order to reduce recording times. As the information scientist Bernie Hurley has observed, “no clear understanding of metadata uses exists in terms of end-user needs and of program services that the metadata will support.”⁶ The refined schema adopted thus reflected mainly internal management requirements without compromising the needs of collaborating institutions.

*Cataloguing*⁷

Cataloguing the virtual collection presented difficulties in so far as different institutions had, and demanded, different descriptive standards. Item level cataloguing was considered vital at the outset. The library standard adopted (MARC21/AACR2) exceeded the minimum standards specified by the RSLP and reflected particularly the requirement of the National Library of Scotland (the largest collaborating partner by number of items contributed). Nevertheless, by careful mapping it was possible to export records compatible with

5 Available 7 June 2002 as a draft standard for trial use: Z39.87 – Data Dictionary – Technical Metadata for Digital Still Images, at: <http://www.niso.org/standards/resources/Z39_87_trial_use.pdf> (accessed 10 March 2006).

6 NISO/CLIR/RLG Technical Metadata for Images Workshop, Washington DC, April 18–19, 1999, at: <http://www.niso.org/news/events_workshops/imagerpt.html> (accessed 10 March 2006).

7 We here use this term recognizing that “description” is more common in reference to archives and do so because most of our collaborating institutions required MARC records from us.

other purposes, such as the ISAD(G) records preferred by the National Archives of Scotland and the Dublin Core records required by SCRAN (an educational picture library with whom we collaborated). The on-line OCLC CORC system for creating MARC catalogue records, adopted initially, proved inefficient because on-line network access times were unacceptably slow. Subsequently, catalogue records were created directly in the Endeavour Voyager system common to both the National Library of Scotland and Edinburgh University Library. Some materials took up a significantly large amount of staff time in cataloguing.

Image Delivery

The software chosen for the final “Charting” image-serving Web site, following standard competitive tender practices, was the *Insight* system developed by Luna Imaging Inc. of California. This sophisticated system is widely used within the United States by major university libraries and other heritage and cultural organizations. *Insight* enables the simultaneous display of high-quality images together with relevant metadata. Images may be viewed and manipulated in several ways and exported to Powerpoint or to HTML pages. In summary, its rich functionality, attractive cosmetic design, wide user base, and responsive designers make this software ideal for virtually all image delivery purposes. The software additionally fulfilled the expectations and requirements of all “Charting’s” participating institutions.

Meeting these technical objectives and producing the final Web site involved the project team working both *within* extant archives and *across* archival boundaries with different institutional procedures as we created this new archive “in virtual space.” We were faced – in truth, more in hindsight than as we proceeded – not with the issues of archives in a “post-custodial” world but, rather, with a “multi-custodial” and, even, a “supra-custodial” world.⁸ That is, the bringing together of historic maps and other images in one “virtual” archive was welcomed in principle by the participating institutions. However, no clear practices existed within these bodies – and certainly none between them – that allowed for the production of a new digital archive to which all of them had access and for which each supplied material but of which none had sole ownership (although each did possess certain partial and shared proprietary rights). In short, questions of metadata standards, technical ones for image creation, storage, and access, and social and institutional ones of management led us to understand in different ways the nature and workings of archives, that is archival institutions, as spaces of and for authority.

⁸ We take these terms from F. Gerald Ham, “Archival Strategies for the Post-Custodial Era,” *American Archivist*, vol. 44, no. 3 (Summer 1981), pp. 207–16.

On the Archive as a Space of Authority

For most commentators from outside the archive profession, issues of place, of power, and of political and classificatory authority are central to what an archive, to draw from Derrida, is as both topological site and nomological space.⁹ Whatever else it may be, most authors would agree that an archive is a site located somewhere in real space. The archive, then, has both a history and a geography. Archives in their modern form emerged as part of the state control of knowledge in early modern Europe, notably from the mid-eighteenth century, and in the nineteenth century often functioned as sites of imperial administration.¹⁰ It is, after all, its very physicality – its location in Cartesian space, its shelving, the cataloguing systems, its quietness and capacity to promote a sense of solitude, and not least, its ambience – that helps to “define” an archive. As the historian Carolyn Steedman has observed, it is from being *in* the archive that one gets (to use Derrida’s terms) “archive fever” precisely because the archive also gets, as it were, “inside” the researcher: “You think, in the delirium: it was their dust that I breathed in.”¹¹ The researcher becomes part of the archive, a functioning constituent of the archival process.

If not necessarily in quite these terms, such attention as has been paid to archives by geographers has assumed the archive’s location in space or examined something of the archive’s internal geography as a reflection of particular systems of knowledge classification.¹² Geographers have paid almost no

9 In a wide-ranging literature, mention might be made of Jacques Derrida, *Archive Fever: A Freudian Impression*, trans. E. Prenowitz (Chicago, 1995); E. Ketelaar, “Tacit Narratives: The Meaning of Archives,” *Archival Science*, vol. 1, no. 2 (June 2001), pp. 131–41. Several of the papers in the theme issues of *Archival Science*, volume 2, speak to this issue; in particular see Joan M. Schwartz and Terry Cook, “Archives, Records, and Power: The Making of Modern Memory,” *Archival Science*, vol. 2, nos. 1–2 (March 2002), pp. 1–19; Margaret Hedstrom, “Archives, Memory, and Interfaces with the Past,” *Archival Science*, vol. 2, nos. 1–2 (March 2002), pp. 21–43; Terry Cook and Joan M. Schwartz, “Archives, Records, and Power: From (Postmodern) Theory to (Archival) Performance,” *Archival Science*, vol. 2, nos. 3–4 (September 2002), pp. 171–85. From perspectives outside the formal archive world, see Michael Lynch, “Archives in Formation: Privileged Spaces, Popular Archives and Paper Trails,” *History of the Human Sciences*, vol. 12, no. 2 (1999), pp. 65–88; Thomas Osborne, “The Ordinarity of the Archive,” *History of the Human Sciences*, vol. 12, no. 2 (1999), pp. 51–64; Thomas Richards, *The Imperial Archive: Knowledge and the Fantasy of Empire* (London, 1993); Carolyn Steedman, “The Spaces of Memory: In An Archive,” *History of the Human Sciences*, vol. 11, no. 4 (1998), pp. 65–84; Irving Velody, “The Archive and the Human Sciences: Notes Towards a Theory of the Archive,” *History of the Human Sciences*, vol. 11, no. 4 (1998), pp. 1–16.

10 Peter Burke, *A Social History of Knowledge from Gutenberg to Diderot* (Cambridge, 2000), pp. 138–41; Steedman, “The Spaces of Memory,” pp. 67–68.

11 Carolyn Steedman, *Dust* (Manchester, 2001), p. 19.

12 James S. Duncan, “Complicity and Resistance in the Colonial Archive: Some Issues of Method and Theory in Historical Geography,” *Historical Geography*, vol. 27 (1999), pp. 119–28; Matthew Kurtz, “Situating Practices: The Archive and the File Cabinet,” *Historical Geography*, vol. 29 (2001), pp. 26–37.

attention to the question of the virtual archive prompted by the emergent digital age.¹³

The archive of course is more than a space in any simply geographical sense. For Michel Foucault, the archive has an abstract quality and a political function beyond its location. That is, beyond the archive's being something more than "the sum of all the texts that a culture has kept upon its person as documents attesting to its own past, or as evidence of a continuing identity."¹⁴ For sociologist Thomas Osborne:

Our historical sociology of the archive would do better to see things more in the technological terms of the sociology of power. For those who work in the historical disciplines, the archive is akin to the laboratory of the natural scientists. Perhaps the archive is akin to what Bruno Latour would call a *centre of calculation* except that what goes on there is less likely to be calculation as such than a certain art of deposition, preservation and – for both the archivist and the historian, if more so the latter – interpretation. A *centre of interpretation*, then: that is what the archive is.¹⁵

This idea of the archive as a site or centre of interpretation accords with Richard Brown's remarks about the changing role of archives when he notes that "we must also recognize the function and role of an archives as a site of historical agency, or signification, or interpretive decipherment."¹⁶ And it is a point made by archivists Joan Schwartz and Terry Cook in discussing the connections between archives, records, and power, specifically in noting that if the routinized repetitive practices of archivists are to engage with the ideas of postmodern writers on the archive, it is not to suppose an unwilling combination of opposites, but, rather, an integrative connection between theory and practice that will benefit both communities and enhance professional competencies.¹⁷ To connect these points, there are indeed parallels with studies of the laboratory as a site for the interpretive making of authoritative scientific knowledge. Just as is the case for the archive, the laboratory

13 For a preliminary attempt, in relation to the implications of the "Unlocking the Archives" project of the UK Royal Geographical Society (with the Institute of British Geographers) and the creation of an archive for a department of Geography (University of Edinburgh), see Charles W.J. Withers, "Constructing 'the Geographical Archive'," *Area*, vol. 34, no. 3 (2002), pp. 303–11.

14 Michel Foucault, *The Archaeology of Knowledge* (London, 1972), p. 129.

15 Osborne, "The Ordinarity of the Archive," p. 52.

16 Richard Brown, "Records Acquisition Strategy and Its Theoretical Foundation: The Case for a Concept of Archival Hermeneutics," *Archivaria* 33 (Winter 1991–1992), p. 35.

17 Schwartz and Cook, "Archives, Records, and Power: The Making of Modern Memory," *passim*; Cook and Schwartz, "Archives, Record, and Power: From (Postmodern) Theory to (Archival) Performance," *passim*.

straddles the realm of private seclusion and public display ... On the one hand, the laboratory is a place where valuable instruments and materials are sequestered, where skilled personnel seek to work undisturbed, and where intrusion by outsiders is unwelcome ... On the other hand, what is produced there is declaredly “public knowledge”; it is supposed to be valid universally and available to all.¹⁸

Yet seeing the archive as just a *site* – akin to laboratories, libraries, ships, botanical gardens, even public houses in which knowledge of a certain sort is made according to particular cultures¹⁹ – is limited unless account is taken of the social questions of credibility and warrant underlying such interpretive acts and sites. This is as true for the archive user – and, as we found, of the virtual archive producer – as it is of the natural scientist and, perhaps, the professional archivist. Thomas Osborne discusses something of what we mean here for the archive in relation to what he terms “the principle of credibility”:

To take the most obvious example, the discipline of history, for instance, in whatever form, places a premium on archival credibility. One can write about the past in many ways, but unless one is able to generate archival credibility, one is not *really* doing history. The status of such principles of credibility is at once epistemological and ethical: *epistemological* credibility because the archive is a site for particular kinds of knowledge; particular styles of reasoning that are associated with it; and *ethical* credibility because knowledge of the archive is a sign of status, of authority, of a certain kind of author-function.²⁰

These brief remarks have centred upon the archive as a site of historical and epistemic power, the storehouse of “the nation’s memory,” a phrase used both of England by the National Archives (formerly the Public Record Office), of Scotland by the National Archives of Scotland, and others as well, including the former National Archives of Canada.²¹ As the social historian Patrick Joyce put it in reviewing the emergence of archives of spaces of and for his-

18 Jan Golinski, *Making Natural Knowledge: Constructivism and the History of Science* (Chicago, 1998), p. 84.

19 For a review of the spatiality of scientific knowledge, see for example Crosbie Smith and Jon Agar, eds., *Making Space for Science: Territorial Themes in the Shaping of Knowledge* (Basingstoke, 1998). The example of the pub as a “sanctioning space” or “centre of interpretation” for certain kinds of natural history (to take just one example from this list) is illustrated in Anne Secord, “Science in the Pub: Artisan Botanists in Early Nineteenth-Century Lancashire,” *History of Science*, vol. 32 (September 1994), pp. 269–315.

20 Osborne, “The Ordinarity of the Archive,” pp. 53–54.

21 On the idea of the archive as a “memory house,” see for example, Richard J. Cox, “The Concept of Public Memory and Its Impact on Archival Public Programming,” *Archivaria* 36 (Autumn 1993), pp. 122–35; Richard Harvey Brown and Beth Davis-Brown, “The Making of Memory: The Politics of Archives, Libraries and Museums in the Construction of National Consciousness,” *History of the Human Sciences*, vol. 11, no. 4 (1998), pp. 17–32.

torical authority in the nineteenth century, “the archive is always a place where authority resides.”²²

This summary attention to the history of the archive and, implicitly, to its role as a fact of geography – that is, it is sited somewhere and has internal social and spatial differences – has been further complicated of late by work that has examined the connections between postmodernism and the archive. There is not the space here to review in full the “defining” features of postmodernism. But in respect of the intellectual and practical issues posed by postmodernism for archives, archival commentators have begun to point *inter alia* to the collapse of the idea of the archive as a site “for dead certainties”; to the challenge of competing claims to “truth” and legitimacy and the deconstruction of authorial power; to the rejection of Grand Theory in historical explanation; and, not least, to the very questioning of the nature of *the* historical record.²³ What is also true, of course, is that postmodernism’s challenges are geographical as well as historical: to do with the collapse of distance – even, some have claimed, with the “end” of geography – with competing claims to authority in and over space and what counts as legitimate knowledge.²⁴ New forms of information technology in particular, it is argued, such as the Internet, have “collapsed” space. It is possible to access information about places without being in that place, and for virtual representations to displace real world encounters and, given claims about the relativism of knowledge, for competing claims to authority to be made without, to draw upon Osborne’s terms, archival, epistemological, or ethical credibility.

These issues are particularly apparent in works on the geographical implications of the Internet, the Web, and cyberspace, and they are, of course, central to archivists’ engagement with “the digital archive.” Work on the geography of the Internet and of new information technology, if by no means in complete agreement, has emphasized the transformative nature of the new technologies. For the geographer Rob Kitchin, cyberspace may be simply a “dataspace,” and it is not at all clear that access to the Internet has led to new

22 Patrick Joyce, “The Politics of the Liberal Archive,” *History of the Human Sciences*, vol. 12, no. 2 (1999), p. 38.

23 See, for example, Brien Brothman, “The Limits of Limits: Derridean Deconstruction and the Archival Institution,” *Archivaria* 36 (Summer 1993), pp. 205–20; review of Jacques Derrida, *Archive Fever: A Freudian Impression*, *Archivaria* 43 (Spring 1997), pp. 189–92; “The Past that Archives Keep: Memory, History, and the Preservation of Archival Records,” *Archivaria* 51 (Spring 2001), pp. 48–80; Terry Cook, “Fashionable Nonsense or Professional Rebirth: Postmodernism and the Practice of Archives,” *Archivaria* 51 (Spring 2001), pp. 14–35; “Archival Science and Postmodernism: New Formulations for Old Concepts,” *Archival Science*, vol. 1, no. 1 (2001), pp. 3–24; Carolyn Heald, “Is There Room for Archives in the Postmodern World?,” *American Archivist*, vol. 59, no. 1 (Winter 1996), pp. 88–101.

24 For a useful single work on the geographical implications of postmodernism (but by no means the “last word”), see David Harvey, *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change* (Oxford, 1989).

forms of participatory democracy.²⁵ Yet what is crucial is the fact that making data available via new information technologies has the capacity to displace the physical sense of an archive as we have historically understood the term, by allowing an archive to exist and to be accessible in “virtual space.” One may not need archival or epistemological credibility to enter an archive, or, indeed, to create one. Bernadine Dodge highlights this point about the potential displacement of established (geographical) notions of the archive in noting: “The archival repository and the collective *fonds* within it will no longer necessarily be restricted to a physicality predicated on walls, shelves, and boxes.” Yet, as she continues, “But the continued presence of archives as heterotopia, or places apart, physically containing fragments from a time when time moved slowly enough to be discerned, and acted as a visual site where records in all media can be accounted for, is a worthy objective.”²⁶ As Lilly Koltun also notes, what is at issue is the capacity of the digital age to make a different sort of archive and, potentially, to alter the nature of the historical record – and, we would add, the geography of the archive – in doing so. For her, “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.”²⁷

These issues to do with the nature of the archive, digital and virtual or physically located and, in Steedman’s view at least, “dusty,” are of course also matters of archive management and the practices of archiving. We were not aware, at least initially, of the distinctions that one leading archivist has made, for example, between archival practice, with its attention to archival terminology and administrative systems, archival theory, and archival science with its interests in diplomatics and questions of provenance.²⁸ The production of “Charting” as a digital map archive demanded, then, a process of continuous negotiation on our part. In one sense, this was between the theoretical concerns briefly reviewed here, over what an archive is and what in the future it may be as a digital resource, and the more practical questions of archival

25 For recent work on these issues, see for example Rob Kitchin, *Cyberspace: The World in the Wires* (Chichester and New York, 1998) – the quote on “dataspace” is taken from page 2 of this work; Martin Dodge and Rob Kitchin, *Mapping Cyberspace* (London and New York, 2001); Barney Warf, “Segueways into Cyberspace: Multiple Geographies of the Digital Divide,” *Environment and Planning B: Planning and Design*, vol. 28, no. 1 (January 2001), pp. 3–19; Aharon Kellerman, *The Internet on Earth: A Geography of Information* (Chichester and New York, 2002).

26 Bernadine Dodge, “Places Apart: Archives in Dissolving Space and Time,” *Archivaria* 44 (Fall 1997), pp. 117–31; quotation on pp. 127–28.

27 Lilly Koltun, “The Promise and Threat of Digital Options in an Archival Age,” *Archivaria* 47 (Spring 1999), p. 119.

28 George Mackenzie, “Archives: The Global Picture,” *Archives: The Journal of the British Records Association*, vol. 24, no. 101 (October 1999), pp. 2–15.

management. In another sense, it meant entering established physically located archives to confront and understand them as working social spaces, each with its own politics of management and administrative and epistemological credibility.

“Charting the Nation”: The Politics and Practices of Digital Archive Creation

Perhaps the first question we faced was that of archival credibility. Generating initial archival credibility for the project – why do it at all? – was dependent less upon the epistemological credibility either of our selves or upon the kind of knowledge in question. That is, archivists and map librarians welcomed the intentions and aims of the project overall and were involved from the outset in determining the nature and range of materials to be digitized. Making the project work did not at once confront the theoretical questions outlined above. Rather, it depended upon the mutual recognition and solution of questions “on the ground” as it were – of our being able to work with and through others’ pre-determined credibility and the authority ascribed in them by virtue of their prior training as archivists or librarians. Only later in the implementation of the project – when considering how it might be accessed and what the parameters of the Web site should be – did we face questions to do with the nature of archives and the implications of digitization.

Something of what we mean can be illustrated with reference to what has been termed the politics of archives in the “making of memory.” In their study, Brown and Davis-Brown emphasise four related issues. “Collections” embrace the bringing together of disparate material or housing the already assembled. “Collection development” concerns decisions about what is and what is not collected, what is merely stored but not catalogued, and what is jettisoned. “Cataloguing and classification” centres upon the organizational and intellectual description of what is held, and “circulation and access” involves decisions about who gets to see what (and, indeed, how).²⁹ As others have put it, “what is recorded is never simply ‘what happened’.”³⁰

In “Charting,” questions concerning the collections and collection development – about the accommodation of local “organizational culture” with wider “virtual” archive questions – were made by the project team in association with archive staff. But questions of what to include – notably in relation to the question of what was an “associated manuscript” – were often determined by extant catalogue description, that is, by existing systems of archival practice.

29 Brown and Davis-Brown, “The Making of Memory,” *passim*.

30 Ciaran B. Trace, “What is Recorded is Never Simply ‘What Happened’: Record Keeping in Modern Organizational Culture,” *Archival Science*, vol. 2, nos. 1–2 (March 2002), pp. 137–59.

At one level, this made sense, at least at the outset. We had some direction to our research of what maps and other material existed. At another level, it did not make sense, since prior systems of archival policy had the effect of limiting what was understood as a map or its associated papers. We found, for example, that bundles of seventeenth-century estates' papers and legal documents sometimes incorporated sketch depictions of the land or boundary under dispute. And yet we were not always able to incorporate such material, either because archivists did not deem it worth including or because the catalogues of their institutions did not consistently list the items as "containing" maps. Indeed, what was thought a "map," or a "plan," or an associated manuscript was not straightforwardly agreed upon across the institutions with which we worked. Even when it was, conservation restrictions (often imposed because of poor practices of manuscript care and binding in the nineteenth century) sometimes meant that tightly bound folios could not be opened flat to be digitized. Isolating – dislocating might be a more appropriate term – maps from listed collections for digitization and representation elsewhere in a new and virtual archive raised concerns about the map's provenance and its relationship to the integrity of any collection of which it was part in the holdings of given institutions.

Dodge has put succinctly something of the issues we faced in discussing as she does the "conversation" between archivists, social theorists, and the users of archives in the digital age:

What I want to suggest is that we need to examine carefully not only the theoretical and methodological implications of those conversations, but the discursive sites in which they are located. The logistical problems which electronic records present to the archivist are real and pressing. We may, however, be in danger of succumbing to another round of "tyranny of the medium" if we in any way compromise the principle of provenance for the convenience of the "information management" of electronic records, quantities of public records, or in the cause of providing instant and universal electronic access to decontextualized scanned images.³¹

It was for just such reasons that we sought from the outset to associate maps with related textual materials, a point lent significance by the insistence of at least one leading historian of cartography upon the importance of maps' wider context.³² Copyright and reproduction rights in the resultant digital image are issues that should be settled at the outset of any digital imaging project. With such a large number of collaborators, negotiations regarding

31 Dodge, "Places Apart: Archives in Dissolving Space and Time," p. 124.

32 We think in this instance of the work of J. Brian Harley (although the point is more widely made). Several of the more important of his writings have been collected together as *The New Nature of Maps: Essays in the History of Cartography* (New York, 2001).

(copy)rights and permissions for “Charting” proved to be both time consuming and complex, particularly given the requirement to establish clearly a user agreement on copyright and reproduction rights to be posted on the Web site. Useful advice, legal and otherwise, was obtained from both the National Archives (England) and the National Archives of Scotland. It was agreed, finally, that the copyright in the digital image created by the project team rested with the institution holding the original material scanned.³³ “Charting” then, as a separate entity, claimed no copyright in any original material. It simply acted as an “agent” for the collaborating institutions. In an attempt to satisfy concerns regarding Intellectual Property Rights (IPR) the project team investigated the digital watermarking of images and the application of digital signatures. However, at that time (1999) no truly effective, practical, and cheap system was found to be available that did not also result in the degradation of the image. Therefore, following consultation, collaborators agreed that the attempt should be abandoned. However, this made it even more important to negotiate and subsequently impose strict limits on the format and size of images that users were permitted either to print or to download for non-commercial use only.

Making “Charting” work involved, then, a more prosaic and personal politics *in* the archive than some of the literature on the history, politics, and geography *of* the archive would suggest. The politics was more personal and more “messy” and involved the cross-institutional negotiation of personal credibility and archival credibility for the project as well as the repeated giving of assurances about the provenance of items, the integrity of holdings in given institutions, and the benefits that would accrue to individual institutions from collaboration. Indeed, “Charting” often involved really very mundane “political” questions: the number of maps that could be scanned in a day; questions of secure storage; negotiations over room use; lighting standards; working practices between the more relaxed cultures of universities and the civil service attitudes of national records offices and some libraries. Sensitivity to the differing conservation requirements of partner institutions was vital. At one institution, for example, it was considered necessary to scan all items *within* archival quality polyester envelopes (notwithstanding our own expressed reservations on this), despite the fact that the resultant images exhibited slight colour casts and occasional interference patterns and lighting flares as a result, and hence could not serve as archival quality images.

Brown and Davis-Brown have hinted at something of these issues when they note:

33 For a general discussion of the issue of copyright in this context, see Alison Coleman and Susan J. Davies, “Copyright and Collections: Recognising the Realities of Cross-Domain Integration,” *Journal of the Society of Archivists*, vol. 23, no. 2 (October 2002), pp. 223–32.

Between these “free” intellectuals and the knowledge workers who claim the title of curator, archivist, librarian, or director that such institutions bestow, there runs a symbolic and natural border, a line that divides the orthodox representations of knowledge and memory from the non-orthodox and unauthorized speakers. This distinction, this boundary between institutional and freelance representatives, is but one instance of the power that is structured in and through the official knowledge discourse of the archive.³⁴

As users of archives in our own other research work, we had some scholarly credibility in advance. As creators of a new digital archive brought together in space from other dispersed holdings, however, we had to cross this “symbolic and natural border” again and again to demonstrate credibility: technically, epistemologically, and ethically. We had to establish – and to renew – what Velody has called “archival warrant.”³⁵

We were not alone in facing such “ordinary questions” about what an archive was. Steedman has spoken of “the need, then, to start with, a definition of the Archive that is prosaic, that does not for the moment involve questions of meaning, that understands it simply as a name for the many places in which the past ... has deposited some traces and fragments, usually in written form.”³⁶ But it was not always easy for us to separate our “archival hermeneutics” as Brown has it,³⁷ from what established archivists and map librarians elsewhere wanted from us as a reflection of their prior claims (and archival credibility). It was, therefore, difficult to accept Steedman’s view that “The archive is a place in which people can be alone with the past.”³⁸ In “Charting,” we were never “alone with the past.” Previous archival enactments and current archival practices to do with cataloguing, describing, and provenance meant that we could never be. Further, the length of time available to interrogate different archives meant we were not always able to follow-up on associated material (on networks of patrons and/or producers, for example, or the background of engravers, or the instruments available to surveyors in different periods).

“Charting” was of course not alone in facing these issues, either within Scotland or more generally. In a review of the Scottish Archive Network, a three-year £4 million project with fifty participating archives begun in Scotland in 2000, Barnes identified three issues for the future: “For users of archives there is the issue of access. Linked directly to this, at least in the minds of many archivists, there is the issue of archival standards and interoperability. Finally, for everyone, there is the issue of funding.”³⁹ Something of

34 Brown and Davis-Brown, “The Making of Memory,” p. 21.

35 Velody, “The Archive and the Human Sciences,” p. 9.

36 Steedman, “The Spaces of Memory,” p. 77.

37 Brown, “Records Acquisitions Strategy,” p. 40.

38 Steedman, “The Spaces of Memory,” p. 77.

39 Ishbel Barnes, “The Scottish Archive Network and Future Issues for Scottish Archives,” *Scottish Archives* 6 (2000), p. 13.

what we have noted here has concerned the politics of interoperability – simply, working to ensure (where we could) cross-sectoral standards in description, cataloguing, and so on. Different questions were raised by “Charting” in respect of access.

As noted here, the development of the digital archive has begun to disrupt that traditional exclusiveness of access that has, historically, sustained the ideas of geographical separateness, historical authority, and epistemological credibility in archives. Archival information – however understood – is now no longer just housed in a topological site so much as located in virtual space that requires neither travel nor an *a priori* declaration of scholarly credibility to have access to it. For Koltun, this is a matter of moment:

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.⁴⁰

It may also be this presumed “naturalization” of digital archives that underlies the question of wider public access via the Internet. Sociologist Mike Featherstone has considered, for example, what he terms the “struggle to turn archives from a private, or restricted access place into one of open public access.”⁴¹ In considering the possibility of extending the archive – “should the walls of the archive be extended and placed around the everyday world?”⁴² (a notion consistent with that different sense of geography informing the virtual archive) – he discusses the potential of the Internet to facilitate the archive of and for the digital age. He is cautious. So, too, are we. The space of the Web is not a new coherent totality. It is, rather, an aggregate space, “a collection of numerous files which may be hyper-linked, but have no overall perspective to unite them.” The World Wide Web has itself become, effectively, “an archival system based upon information retrieval from an existing stock.”⁴³ For “Charting,” the main benefits lay in gathering together into one virtual space material in scattered holdings and in the linkage of visual and textual data. But the digital archive created has not transcended established notions of what an

40 Koltun, “The Promise and Threat of Digital Options,” p. 123.

41 Mike Featherstone, “Archiving Cultures,” *British Journal of Sociology*, vol. 51, no. 1 (January 2000), p. 168.

42 *Ibid.*, p. 170.

43 *Ibid.*, p. 174 and p. 177 respectively.

archive is. Kitchin has noted in this respect that “Cyberspaces and the rules of engagement within them do bear a remarkable resemblance to real-world spaces and protocols,”⁴⁴ and, with Martin Dodge, that “When persons enter cyberspace they bring with them preformulated cultural scripts which they use to map the new territory. In other words we use existing cultural representations to give meaningful order to uncharted netscapes.”⁴⁵ Michael Lynch has noted that “A Web site may be difficult to visit for persons who do not possess or have access to the requisite technology and skills, but together with other forms of electronic media it has the potential to turn a body of documentary evidence into a ‘popular archive’ subjected to mass visitation, reproduction and dissemination.”⁴⁶

But for the reasons outlined, we would want to be more circumspect. The technologies currently available to ensure interoperability of metadata-driven Web delivery systems often still limit cross-sectoral linkage and evolve rapidly. Cataloguing Web archives, as Kitchin notes of cyberspace, has hitherto tended to reflect extant archival systems designed to catalogue the original object from a particular societal viewpoint rather than the universally available digital surrogate, and has not necessarily applied new standards designed to connect diverse knowledge fields or, by their union, create new ones.⁴⁷

Thoughts in Conclusion

In retrospect, it is not strictly proper for us to judge the success or failure of “Charting.” Judged in some formally accountable terms, it may be deemed a success. It provided a major national historical map resource for Scotland of interest to a wide variety of disciplines and audiences. It has also demonstrated the possibility of collaborative project work in Web-based digital imaging within the higher education sector, and between higher education and other national public institutions. It ran within budget, on time, and with an extended remit in terms of the period covered. It identified new maps.

“Charting” is not, it is true, a topological site or nomological space in any conventional archival sense. Yet neither is it a site for which one needs prior credibility to access it. But it does demand access to a certain technology and some understanding of maps to use it fully. Its creation involved a recognition by us of the power of archivists over the artefacts in their collections, and a recognition by archivists that, in time, we would in our practices create a dif-

44 Kitchin, *Cyberspace*, p. 97.

45 Dodge and Kitchin, *Mapping Cyberspace*, p. 42.

46 Lynch, “Archives in Formation,” pp. 75–76.

47 Anne J. Gilliland-Swetland, *Enduring Paradigm, New Opportunities: The Value of the Archival Perspective in the Digital Environment* (Washington, DC, 2000) p. 4.

ferent sort of archive and, potentially, give new value to the materials housed there.⁴⁸

Yet measuring the success of “Charting” in terms of circulation and access is not at all clear to us, even now, without knowing just how it meets the needs of its several audiences or, more presumptively, creates new knowledge and new publics altogether. With what aim do people access “our” site? Has digital access promoted a desire to consult the original artefact or are people happy with surrogacy? Koltun has highlighted this as a more general problem in posing the question “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.”⁴⁹ A crucial issue for both users and owners of the “Charting” Web site was that of the authenticity of the digital image. All digital images created for “Charting” (or indeed for most other digital imaging project) are necessarily (re-)presentations of analogue originals.⁵⁰ Our avowed aim as creators of these surrogates was to assure the highest possible quality, both in terms of the objective metrics of the image files and in the subjective appreciation of the images on the user’s monitor screen. This was necessary as much to satisfy the demands of our various collaborators (who required images of the highest archival quality for their own purposes) as to satisfy the needs of the end users of “Charting.” By “quality” we mean that the supplied digital image should approach *as far as is possible* an exact facsimile of the original. And upon the degree of authenticity achieved rested, in part, our credibility as creators of the archive. Clearly, the creation of an exact digital facsimile of the analogue original which retains the total evidential value of that original remains an idealised desideratum, not a reality, despite the extreme care taken in the digitization process and subsequent image processing.

In addition, there remains an emotional and aesthetic relationship between the observer and the original object that the digital image-viewer relationship cannot replicate. The experiences are not the same, and never can be. And yet the digital experience may remain sufficient for all reasonable research-based purposes. As the heritage and cultural informatics specialists David Bearman and Jennifer Trant have suggested, “we are just beginning to understand the social, economic and philosophical baggage that travels with our sense of the

48 On this point of creating new values, see Brien Brothman, “Orders of Value: Probing the Theoretical Terms of Archival Practice,” *Archivaria* 32 (Summer 1991), pp. 78–100.

49 Koltun, “The Promise and Threat of Digital Options,” p. 131.

50 For an interesting discussion of “the simulacra and the hyperreal” in the context of digital imaging see Matthew G. Kirschenbaum, “A White Paper on Information” (1998), part IV, Ways of Seeing, available at: <http://www.iath.virginia.edu/~mgk3k/white/white_four.html> (accessed 10 March 2006).

authentic.”⁵¹ Our experience in “Charting” would support this point, not least with regard to the problematic issue of our virtual archive prompting (or not) new meanings of the original materials. Questions of credibility, accuracy, and context are never posed and answered only once. As Bearman and Trant further put it:

... rather than searching for a single solution, we should be developing our understanding of the various requirements for authenticity. Exploring these definitions, by looking at the relationship between humanistic research methodologies and aspects of authenticity, such as validity, originality, and credibility, will help us understand our assessment of a resource as genuine, certified, accurate, trustworthy or reliable.⁵²

For Osborne, it is in the nature of archives that their creators cannot determine how the archive is used or by whom:

The archive is there to serve memory, to be useful, but its *ultimate* ends are necessarily indeterminate. It is deposited for many purposes; but one of its potentialities is that it awaits a constituency or public whose limits are of necessity unknown. Needless to say, across that gap between the archive and its motivating interests there is a perpetual agonism. There are all sorts of moral and ethical difficulties that are likely to get in the way of a smooth passage between performative intentions and the ultimate constituency of the archive. It is never a matter of just revealing a given truth that is to be found there. So it would be a mistake ever to think that there could be an archive without a *politics* of the archive.⁵³

For the reasons addressed here, the question of the archive as one of politics might also be understood to embrace those issues our experience with “Charting” raised concerning the authority of archives as sites in space. What we hope to have raised here are issues to do with how the virtual consolidation of dispersed material may give new meaning to the items and new and significant opportunities to their users. Further, we would like to think that the questions raised might help to connect the worlds of the professional archivist, the geographer, and the theoretician of archives in those actual spaces in which we spend our time.

51 David Bearman and Jennifer Trant, “Authenticity of Digital Resources: Towards a Statement of Requirements in the Research Process,” *D-Lib Magazine* (June 1998), available at: <<http://www.dlib.org/dlib/june98/06bearman.html>> (accessed 10 March 2006).

52 Ibid.

53 Osborne, “The Ordinarity of the Archive,” p. 55. Emphasis in original.