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Prospects for a transparency revolution in the field of business history

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ABSTRACT

The last five years have seen an increasing emphasis on research transparency in many disciplines. Unfortunately, the field of business history is being bypassed by the movement for the creation of research transparency institutions. The article begins by showing why it is important for the business history community to engage with the research transparency movement by embracing the principle of Open Data. The article then argues that Active Citation is the right variant of Open Data for the business–history community and that the widespread adoption of Active Citation in the field of business history would be promoted by the creation of a specialised repository for business–historical research data. The challenges involved in establishing such a repository are discussed. The article concludes by arguing that business–historical journals and monograph publishers should not require authors to use Active Citation; rather, contributors should merely be required to state whether they have made the data underlying their article available online.

KEYWORDS

Research methods; open data; corporate archives; research methodology; Center for Open Science (COS)

Business historians are now vigorously debating issues related to research methodology. A recent issue of *Business History* included articles analysing various methodologies including affirmation of the utility of the case study model, quantitative approaches based on hypothesis testing, and the value of maintaining research pluralism within the business history community.¹ Important papers and books on business–historical research methods have appeared in other venues.² Management academics with a strong interest in business history have also contributed to the discussion about future research directions.³ Unfortunately, the various participants in the debate about research aims and methods have failed to grapple with the issue of research transparency. We argue that the failure to think about whether the business–historical community should adopt research transparency or ‘Open Data’ protocols risks putting our research tradition at a disadvantage. We advocate the development of a strong norm in business history that requires authors to place images of the primary sources they have cited in an accessible database whenever they are legally able to do so.⁴ Each business–historical work would then be linked to the underlying primary sources

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via Active Citation, a system explained below. This article discusses the various challenges to be overcome before such a system is in place.

The last five years have seen a growing emphasis on research transparency across a range of academic disciplines, and in government research.⁵ The various initiatives to promote research transparency have included data-sharing conventions, changes in journal submission procedures, and funding for replication studies. In many disciplines, researchers have concluded that greater transparency is essential if we are to maintain the confidence of knowledge users (e.g. an increasingly sceptical general public) and funding bodies. The drive to create systems that increase actual and perceived research transparency began in the physical sciences and then diffused to the quantitative social sciences. It has now spread to the largely qualitative social sciences and to the humanities.⁶ The emerging norm in many disciplines, that raw data be published along with the article, is designed to counteract the impression that researchers sometimes use data selectively or in an otherwise unscrupulous fashion. This principle is called 'Open Data.'⁷ In the physical and social sciences, online depositories of primary sources have been established to make it easier for authors to share the raw data on which publications are based. Some of these depositories serve researchers at one organisation, while others are open to academics who work at any university.

The concept of Open Data—the idea that researchers should place their data in open repositories—predates the research transparency movement. In the 1980s and 1990s, the primary motivation for the creation and use of data repositories was that research data collected at public expense should be reusable by other authors. As Louise Corti of the UK Data Archive notes, the advent of the 'recent transparency agenda' has created a different set of reasons for using Open Data.⁸ Today, the primary motivation for the creation of data repositories is to increase the rigour and credibility of academic research. Focus groups of academics indicate that the motives of individual scholars for adopting Open Data practices include 'grant applications', 'professional status', 'ethics, public good, and honesty', and a desire to ensure that their research outputs will have credibility sufficient to shape 'policy, laws' and to 'influence policymakers.'⁹ In 2015 and 2016, the national research councils in the United Kingdom,¹⁰ France,¹¹ and Canada,¹² began encouraging funded researchers to share their data. Canada's 'Tri-Agency Statement of Principles on Digital Data Management', which applies to virtually all medical, physical and social scientists, declared that 'researchers whose work is publicly funded have a special obligation to openness and accountability.'¹³ Individual universities have gone further by mandating the sharing of all research data, even when a project has not been funded by a research council.¹⁴

The field of business history risks being bypassed by this movement in many disciplines and research communities for the creation of research transparency systems. We argue that any research community that fails to participate in the 'transparency revolution' risks placing itself at a serious competitive disadvantage as it contends with other research communities for scarce resources. Some funding agencies have decided that they will prioritise funding proposals that explain how research data will be shared.¹⁵ A commitment to research transparency by a discipline or journal is increasingly regarded as a hallmark of research quality and relevance: in an effort to increase the perceived 'rigour' of their science journals, the German publishing giant Springer endorsed the Center for Open Science's Transparency and Openness Promotion (TOP) Guidelines in March 2017. This decision affects more than 2,100 of Springer's journals.¹⁶ In September 2017, Elsevier, a Dutch firm, announced that it had committed its journals to the TOP Guidelines.¹⁷ These moves by publishing companies

are a sign that the movement for research transparency is gaining momentum.¹⁸ They are also an indication of the increasing importance to the working lives of academics around the world of the Center for Open Science (COS). The COS, a non-profit organisation in Charlottesville, Virginia, seeks to 'increase the openness, integrity, and reproducibility' of all forms of research. It has attracted the support of a range of philanthropic foundations and government agencies as well as corporations such as Google.¹⁹

This article argues that the creation of research transparency institutions is vital for business history scholarship, and for the professional futures of business historians. Thanks in part to the recent historical turn in management research and teaching, business history has risen in prominence in business schools.²⁰ Leading scholars in fields such as Strategy,²¹ Organization Studies,²² and International Business²³ have advocated the adoption of historical research subjects and methods. Historical research articles have recently appeared in leading business and management journals.²⁴ Furthermore, business history appears to be making something of a revival in history departments.²⁵ Research produced by the 'historians of capitalism' in the US has, for example, attracted the attention of the financial press.²⁶ There are also signs that practitioners are increasingly interested in business history. For instance, in September 2016, a special report on large corporations in *The Economist* drew extensively on research of business historians.²⁷ For business historians, all of these trends inspire the hope that their research tradition may recover the position in the marketplace of ideas that it enjoyed in the 1960s and 1970s, when the ideas of the business historian Alfred Chandler exerted a well-documented and significant influence on practitioners and strategy theorists.²⁸ However, if business history is to continue to capitalise on its recent gains, business historians need to start constructing transparency institutions. This article is designed to initiate a conversation about what precisely these institutions should look like.

We argue that the business history community should attempt to move towards a regime of Active Citation in which references to primary sources contain a direct link to the historical document being quoted or otherwise cited. More concretely, under a regime of Active Citation, a researcher who wishes to quote or cite a document (e.g. an internal memorandum dated 1957) in a bank archive would place a scanned image of the document on an online repository. In addition to the standard bibliographic details, the footnote would contain a hyperlink that would take readers directly to this image. This process would require the consent of the bank's archivists to the uploading of a digitised document and appropriate archival identification metadata to a repository. As we show below, a variant of Active Citation has already been adopted by qualitative political scientists, a research community that includes scholars who do serious archival research.²⁹ Their precedent shows that the technological barriers to Active Citation have already been solved. We argue below that the main barriers to the adoption of Active Citation in business history are financial and legal.

Research transparency institutions are important for many reasons. High-quality business-historical research matters for society. Although the conclusions of business historians are less actionable than those of, for example, medical researchers, business-historical research has had a small but significant impact on decision-making in the private sector over the last 50 years. Roughly half of the MBA students at the Harvard Business School take business-history courses, which means that such future decision-makers derive 'take-home' lessons from historical research.³⁰ Sydney Finkelstein and Andrew Wild have argued persuasively that there are substantial, albeit difficult to quantify, negative consequences for the economy whenever business-school professors teach practitioners 'the wrong lessons' from business history.³¹

The consequences of distilling the wrong lessons from business history are illustrated by the recent debates about the influential writings of Clayton Christensen. His seminal book on disruptive innovation drew extensively on business–historical data from the previous 150 years. Christensen explored the rise of technologies such as steam-powered ocean ships, hydraulic excavators, and personal computers, doing so to develop a theory that went on to influence boardroom decisions.³² Recently, academics have questioned whether this theory was based on an accurate reading of the past, and whether the application of Christensen’s ideas has been good for firms, shareholders, and/or ordinary workers.³³ This debate has moved from academic journals to the popular and business press.³⁴ The growing scepticism about Christensen’s theory has been accompanied by an increased focus in the discipline of strategy on research transparency and on the importance of making only those claims that are fully supported by the facts.³⁵ This article takes no position with respect to the accuracy of Christensen’s theory of disruptive innovation, but the fact this dispute was reported in business newspapers supports our point that business–historical research matters to decision-makers. It is therefore important to get the facts straight and the historical research right. If the adoption of research transparency institutions can help to improve the rigour and robustness of business–historical research findings, we owe it to the societies that support our research to use them.

There are also instrumental reasons for the adoption of research transparency institutions by the business–historical community. Impressions matter. We do not think that data falsification and misrepresentation is a problem in the business history community. However, the avoidance of actual wrongdoing in the handling of research data are not sufficient: the creation institutions that dispel the *impression* of wrongdoing in research methods are also important. We believe that bolstering the credibility of business–historical research through the creation of a set of research transparency systems for business history can help to expand, as well as increase, the legitimacy of our scholarly community. Such systems would make it easier to demonstrate to stakeholders that business–historical research contributes towards the development of high-quality actionable knowledge. Demonstrating the relevance and quality of business–historical research can help the community gain additional resources.

The turn to transparency

The transparency revolution began in the physical sciences then spread to the social sciences. Within the physical sciences, the creation of systems to promote research transparency had been driven by concerns related to research in fields as diverse as psychology, pharmaceuticals, and climate change.³⁶ The ongoing transparency revolution in the physical and social sciences has been driven, in part, by rising public scepticism about the claims of experts and the motives of powerful organisations such as universities, governments, intelligence agencies, and large companies.³⁷ Funding bodies have also become aware that the incentive structure for academics may encourage researchers to consciously or unconsciously cherry-pick or otherwise misrepresent data in order to fit preconceived research findings.³⁸ The move to create research transparency institutions has also been motivated by the growing realisation that flawed academic research can impose serious real costs on the economy if it induces changes in practitioner behaviour unsupported by evidence. For instance, the estimated annual costs associated with irreproducible preclinical medical research are \$28 billion for the United States alone.³⁹

Within the social sciences, the movement to create Open Data infrastructure for promoting research transparency has been encouraged by the Berkeley Initiative for Transparency in the Social Sciences (BITSS). Open Data gives independent researchers the opportunity to try 'to reproduce reported results... identify misreported or fraudulent results; reuse or adapt materials (e.g. survey instruments)' and otherwise assess the validity of research conclusions.⁴⁰ There are now various online data repositories. Figshare, a commercial venture, allows academics to share research data in a wide variety of formats that includes video and audio records.⁴¹ Dataverse is a non-profit repository run by Harvard University.⁴² The University of Michigan hosts that repository of the Inter-university Consortium for Political and Social Research (ICPSR), which is governed by a committee of academics that includes sociologists, economists, public health scholars, among others.⁴³ The UK's online repository for social-scientific data, ReShare (formerly ESRC Data Store), whose origins date back to 1967, is now being used to achieve the goal of greater research transparency.⁴⁴ The UK government has also funded the creation of a special research-transparency databank for qualitative research: the UK Qualibank. This repository is designed primarily for the sharing of interview transcripts, a data source that is important in disciplines such as sociology.⁴⁵

Researchers in some management-school disciplines are now beginning to adopt Open Data and other research transparency systems. These developments are relevant to the field of business history, since many business historians are employed in business schools and are expected to publish in core business and management journals as well as in business history journals. The first cluster of management journals to adopt the COS Transparency and Openness Promotion (TOP) Guidelines were those that intersect with the discipline of psychology and include the *Journal of Business and Psychology*, *Organizational Behavior and Human Decision Processes*, and the *Journal of Consumer Research*.⁴⁶ In 2013, the editors of *Management Science* adopted a research transparency protocol under which contributors were 'encouraged' to publish each article's underlying data on an associated website.⁴⁷ In 2015 and 2016, presenters at the Academy of Management's Research Methods division debated how to make case-study management research more rigorous and credible via greater transparency.⁴⁸ The Academy of Management *Annals* published a more general article on research transparency in September 2017.⁴⁹ In a very recent development, the *Strategic Management Journal* has decided to move towards a regime of Open Data: as of September 2017, the authors of new articles submitted to it are encouraged to upload their data to FIVES, a specialised repository. One of the aims of the creators of FIVES is to encourage the production of 'high quality research in strategy' that has a solid empirical basis.⁵⁰ It is true that some management-school disciplines, such as Entrepreneurship,⁵¹ are less engaged in transparency and Open Data than others, but the overall trend towards greater research transparency is clear.

Insights from research transparency in political science

In thinking about how the business history community can build research transparency institutions, we can derive valuable lessons from observing the messy process by which political science moved to a regime of Open Data. The process of making Open Data the norm in that discipline involved acrimonious debates about the distribution of the associated burdens. Political science has enough similarities to business history as to be make the saga of the Data Access and Research Transparency (DA-RT) policy worthy of discussion here.

These resemblances include similar research methods: qualitative researchers in business schools will note with interest that a majority of political scientists, even in the United States—the homeland of quantitative political science—use largely qualitative research methods. Qualitative research continues to dominate the field of political science, even in the field of International Relations (IR). In IR, ‘about 70% of scholars primarily employ qualitative methods, compared to 21% favouring formal or quantitative analysis.’⁵² Another similarity is that the political science and business–history communities both include scholars who seek to produce research that generates actionable advice to practitioners such as managers and policymakers.

In 2012, the American Political Science Association (APSA) adopted guidelines that encouraged member researchers to ‘facilitate the evaluation of their evidence-based knowledge claims through data access, production transparency, and analytic transparency’. These guidelines are formally known as DA-RT.⁵³ This move to improve the credibility of political science research via Open Data came at a time when National Science Foundation (NSF) funding for the discipline was being attacked by United States Congressmen who argued that political science was not a real science and was thus undeserving of taxpayer support.⁵⁴ In the aftermath of the political scientists’ successful defence of their NSF funding, a coalition of scholars within that discipline sought to go beyond the APSA’s aspirational statement of best practice by advocating the creation of an infrastructure to increase research transparency.⁵⁵ As a means of increasing the ‘transparency and replicability of textual, qualitative and historical research in international relations, political science, and the social sciences more generally,’ this group argued for the adoption of a system of ‘Active Citation’ in political science journals.⁵⁶ Active Citation involves the use of footnotes hyperlinked to source material in a permanent data repository. By seeing the words in their original context, the reader will be able to determine for herself whether the author has fairly represented the primary source being referenced and quoted.

Advocates of Active Citation in political science argue that several benefits to political science would come from the adoption of this system. First, it would improve the overall quality of research.⁵⁷ Second, it would allow a wider range of individuals to verify the claims of academics without the travel costs previously associated with viewing primary sources. By ‘revealing critical evidence at a single click,’ Active Citation has the potential to ‘democratize the field, permitting potential critics to make an immediate assessment of the evidence for empirical claims.’ Presenting primary sources in this fashion would immediately reveal ‘flaws like selective citation, poor use of sources, or contextually inappropriate interpretation... Livelier and more engaged debate would likely ensue.’ The political scientists who support Active Citation have convincingly addressed many of the possible objections to this proposal, namely, that it is technologically infeasible for journals and imposes an excessive logistical burden on scholars.⁵⁸

In 2014, the NSF decided to fund the creation of a Qualitative Data Repository (QDR) at Syracuse University aimed at the political science research community.⁵⁹ The initial grant from the NSF of US\$743,565 covered the costs of establishing the repository, which now employs five people.⁶⁰ In 2015, the move towards the creation of research transparency infrastructure in political science gained further momentum. The renewed emphasis on research transparency was driven, in part, by a scandal related to the publication and subsequent retraction of a political-science article in the prestigious journal, *Science*. This article, which had presented mildly sensational findings about the determinants of voter attitudes

towards same-sex marriage, had attracted extensive media attention in the United States and Ireland. Before the research was revealed as fraudulent, the intensity of attention to the findings gave the authors' careers a very temporary boost.⁶¹ The scandal helped to push political science towards research-transparency reform. In 2015, the leading political science journals announced Open Data requirements would apply to all articles submitted after January 2016.⁶²

News that the leading journals in their respective fields were moving swiftly to impose open data requirements on authors sparked an outcry from many political scientists. Criticisms came even from those who were sympathetic to the overall concept of Open Data and Active Citation. Their comments illustrate the adage that 'the devil is in the details'. More than 1,300 political scientists signed a November 2015 petition that complained about the manner in which the DA-RT proposals were being implemented. The concerns expressed by political scientists at the time related to both rigidity and cost.⁶³ Their petition suggested that many political scientists feared that journals would apply the new data sharing requirements rigidly, which would disadvantage scholars who used data that could not be published for reasons such as 'ethical concerns related to human subjects' and the expectation of privacy by the interviewees.⁶⁴

The financial concerns centred on the issue of who was to assume the costs associated with sharing raw data online. Many junior academics were alarmed by the idea that the costs might be covered by article contributors. Concerns over the distribution of costs were raised by Chris Blattman, then an assistant professor at Columbia. Blattman, who was then preparing to submit articles based on multi-year research projects, objected to the speed at which journals were adopting Open Data and other research transparency rules. In a 2015 article, Blattman agreed with the general idea of making research more transparent, but argued that the 'logistics' and 'marginal costs' should not fall on those least able to support them.⁶⁵ Blattman had a very reasonable point: the adoption of research transparency protocols should not add unduly to the financial pressures faced by junior academics, particularly those working on projects that were budgeted before DA-RT was approved in 2012. For early career and, a fortiori, independent scholars, the costs of creating—or even using—an online data repository for all the sources cited in their publications could be prohibitive.

These concerns about the costs of sharing data have since been addressed by the creation of the Syracuse QDR. This service became fully operational in late 2015, around the time Blattman wrote his piece.⁶⁶ Our reading of the situation is that much of the researcher opposition to DA-RT ended soon after the launch of the Syracuse QDR as a free service open to all political scientists regardless of their institutional affiliation.⁶⁷ Once it became clear that complying with DA-RT would not result in personal financial expenditure, many political scientists dropped their opposition to the proposal. The fact that Harvard University generously opened its Dataverse to all researchers for free helped to address the concerns of political scientists worried that they would have to pay to create online repositories for their data.⁶⁸ Harvard was able to open its Dataverse to all scholars around the world due to the financial support of partner organisations such as the 'Alfred P. Sloan Foundation, National Science Foundation, National Institutes of Health, Helmsley Charitable Trust, IQSS; Henry A. Murray Research Archive, and many others.'⁶⁹

In response to the concerns raised by political scientists about DA-RT, the editorial board of the *American Political Science Review* (APSR) built some flexibility into its 2016 rules regarding data sharing. That journal now requires the authors of 'quantitative, experimental, and

simulation' articles to submit 'data sets, software and code, and all information needed for reproducing their findings' to Harvard's Dataverse repository. The rules for qualitative submissions are softer, as the journal's guidelines for contributors merely 'encourage qualitative scholars to make their research transparent and accessible.' The editorial board recognised 'that reproduction standards in qualitative research are under discussion' and asked contributors to contact an editor for clarification about how they might apply to a particular paper. In fact, the wording of the journal's guidelines suggests that the sharing of qualitative data will be decided on a case-by-case basis. The guidelines note that 'appropriate embargo periods' for the research materials can be 'negotiated with authors' whenever doing so is consistent with the spirit of the guidelines.⁷⁰

In moving forward with the creation of a system of Active Citation in our field, business historians should profit from the example of political science. One key lesson to take from the struggles in political science in 2015 about the implementation of the DA-RT protocol is that there needs to be a frank conversation in advance about the distribution of financial costs arising from the adoption of Active Citation and research transparency institutions more generally. There are three models for how the infrastructure to support Open Data can be funded. The first option is to expect individual researchers to construct their own online repositories for the data cited in their publications. Such an expectation would be particularly onerous for junior scholars and independent researchers. The second option is a system whereby each university is expected to create a data repository for the use of their employees, regardless of their discipline. This system might disadvantage scholars employed by institutions where the libraries and IT departments have fewer financial resources. It may also complicate matters for academics who switch employers, not to mention independent scholars. The third option involves creating data repositories open to all researchers in a particular research field, regardless of institutional affiliation.

When the DA-RT protocol was drafted in 2012, it was not entirely clear which of these three models political science would end up using. By 2016, that discipline had collectively decided in favour of the third option. The initial lack of clarity about details contributed, in our view, to the extent of the opposition to DA-RT's rapid implementation. Once data repositories serving all political scientists were created, opposition within that discipline to the Active Citation and Open Data requirements largely dissipated. The lesson for business historians here is that whatever data repository is created to serve the needs of business-historical researchers, it must be free to use. Since creating data repositories involves costs, business historians will likely need to secure outside financial support for this initiative. The experience of political science suggests that this support would likely come from a mixture of public and private bodies. There is another lesson business history can learn from the experience of political science: business history journals should adopt a flexible approach similar to that taken by the *American Political Science Review*, which does not insist in data sharing in all cases.

We believe that the business history community should adopt a system of Active Citation whereby a simple click on the footnote would take the reader to an image of the *entire* document being cited. Our proposal thus differs from the version of Active Citation that has been adopted by some political science journals and which is advocated by Andrew Nelson, a qualitative management academic. Nelson argues for a version of Active Citation whereby a click takes the reader to 'a short excerpt from the source (presumptively 50–100 words long).'⁷¹ In contrast, we want an image of the whole document, including marginalia, to be

available at one click. We think that our system would be make for more rigorous historical research than the provision of short excerpts.

The particularities of business history

We referred to developments in qualitative political science as an example of the challenges that a scholarly community can face when it moves towards greater research transparency. We now need to start thinking about how the distinctive nature of business–historical research would complicate the process of creating research transparency institutions for this community. In our view, the barriers to creating such systems are high but potentially surmountable. The central challenge facing the business history community is to design a depository infrastructure that will suit the needs of the core business–historical journals, such as *Business History Review*, *Business History*, *Entreprises et Histoire*, *Enterprise and Society*, *Zeitschrift für Unternehmensgeschichte* and *Keieishigaku*. The repository would also need to meet the needs of business historians who publish their research in the form of monographs with university presses. It also involves addressing the concerns of the corporations on whose consent the whole system will rest. Unless corporate archivists agree to permit scanned images of primary sources to be uploaded to depositories, Active Citation will never become the norm in the business history community.

One possible barrier to the widespread adoption of Active Citation in the field of business history is the highly multinational nature of this research community. National business history communities emerged independently in the early twentieth century, in Germany, the UK, the US, and Japan. Profound national differences in business–historical research methods and questions remain, notwithstanding the existence of transnational business historical conferences and organisations.⁷² Representatives of these very different national research traditions cooperate in international business–history conferences and journals. The multinational orientation of business history can also be observed in the geographical distribution of the archival sources cited in business history journals. For instance, the articles published in the *Business History Review* in 2015 presented research on many countries, including the US, the UK, Latin America, and India. The corporate archives cited in 2015 included records owned by the Ullstein Group in Norway,⁷³ the BBC,⁷⁴ and Bayer AG.⁷⁵

The multinational nature of the field of business history has implications for how we go about securing the support of corporate archivists for Active Citation. In designing research transparency institutions, we need to ask ourselves how a corporate archivist in, say, Japan or Brazil, would respond to a request to upload images of their firm's documents to a repository hosted elsewhere in the world. The laws governing data protection differ substantially between jurisdictions and data users and managers appear to have become more sensitive to the issue of the movement of information across jurisdictional borders in recent years, as the political disputes related to the US-EU Privacy Shield show.⁷⁶

For Active Citation to work, business historians will need to take national differences in data protection laws and privacy cultures into account in designing the infrastructure required. Conversations with colleagues in law schools and other experts who are aware of the intricacies of the national and international rules governing data protection should inform discussions within business history over the design principles informing data repositories. Another crucial factor is culture. A 2014 report on Open Data practices in 13 Asian countries suggested that the comparatively slow adoption of Open Data in this region of

the world was related to culture. This report suggested that slow adoption was a result of these cultures being more hierarchical than the countries where the Open Data and research transparency movements began.⁷⁷ Although this cultural explanation is debatable, it is consistent with the fact that the Open Data infrastructure for academics in many Asian countries is still extremely limited, notwithstanding the recent creation of Harvard-style Dataverses at China's Peking and Fudan Universities.⁷⁸ This pattern implies that it may be harder to persuade organisations in particular countries to support Open Data, which would complicate the adoption of Active Citation in business–historical scholarship throughout the world.

Another barrier to the introduction of research transparency mechanisms in business history is the fact that scholars in history departments have been slow to adopt Open Data and the other systems intended to make research outputs more transparent. It is true that historians have been involved in innovative Digital Humanities projects such as Transcribe Bentham and Old Bailey Online, which were designed to digitise archival sources and to make them freely available to researchers, undergraduates, and the general public.⁷⁹ However, the motives for such projects were unrelated to those that inform the research transparency movement, which is concerned with research rigour. Since about 2016, however, scholars in humanities disciplines such as philosophy and English literature have been discussing how Open Data can increase research rigour, a movement called 'Open Science in the Humanities'. Several historians have attended these events.⁸⁰

Since humanities scholars are only now joining the research transparency movement, it is perhaps too soon to come to any firm conclusions about which humanities disciplines are early adopters. However, it does appear that academics in history departments have been slow to participate in the movement. As of October 2017, just ten of the 5,000 journals that have subscribed to the COS guidelines are in the field of history, broadly defined.⁸¹ To our knowledge, no academic organisation or major journal based in a history department has implemented an Open Data requirement for contributors. Our tentative explanation for this pattern is that historians have been disengaged from the research transparency movement because their publications tend not to explicitly discuss their research methods. As John Gaddis observed, historians are generally reluctant to make their methods explicit because they do not want their books to resemble the Centre Pompidou in Paris, which has all of the pipes and escalators on the outside rather than hidden on the inside.⁸² Historians such as Richard Evans are rightly proud of the way in which the traditional citation conventions in our discipline impose rigour by facilitating the verification of claims made on the basis of archival documents.⁸³ Unfortunately, scholars in history departments do not appear to have reflected on how new technologies such as Active Citation can further increase the level of rigour by reducing the costs of fact checking. Until there is a strong movement in history departments for the adoption of some type of Open Data requirement, the ability of the business history community to participate in the research transparency revolution will be limited.

Perhaps the most significant obstacle to the introduction of research transparency mechanisms in the field of business history is the nature of the sources we use. Most of the raw data used by qualitative political scientists consists of documents that were created by public sector organisations, government departments, or elected politicians. In many democracies, national laws require that documents be made available to researchers after a designated period, such as 20 or 30 years.⁸⁴ Radically different rules apply to the corporate archives that are crucial to business historians.⁸⁵ It is true that some corporate records have migrated to

national archives and other public-sector archives, where they are relatively easy for academics to access, as in the case of UK railway companies nationalised in 1947.⁸⁶ However, most corporate records remain under the control of the companies and are housed either in company buildings, as in the case of the HSBC and Unilever. Others are often located in a charitable foundation closely linked to the company, as in the case of Fondazione Pirelli and the Rothschild Archive.⁸⁷

Private companies are very guarded about access to the documents created for internal use. As the UK's Business Archives Council noted, companies have 'no legislative requirement to keep records of historical interest... companies routinely destroy them, as they are often perceived as a liability to store, and to make available for legal discovery.' Moreover, Britain's 'Data Protection Act is often misinterpreted as an instruction to destroy any records that contain personal data,'⁸⁸ and the situation is broadly similar in many other countries. As Susanna Fellman and Andrew Popp have recently noted, corporate archives are anything but neutral repositories of historical documents; corporate archives are the products of deliberate editorial decisions about which materials should be saved for posterity.⁸⁹ While government archivists also make judgement calls about document preservation, their decisions concerning document preservation are not informed by responsibilities to a firm's shareholders.

The legal regime that governs how political scientists access their raw data is therefore different from those confronting business historians. Unlike public archivists, who have a statutory duty to make documents open to researchers, corporate archivists have a legal duty to protect the reputation of the corporation that employs them. Access to a corporation's archives depends, in part, on the organisational culture of a particular firm and the extent to which firms in that country generally trust academic researchers. A range of nation-specific factors can influence this level of trust. For instance, after the completion of an official investigation of the activity of Swiss firms during the Second World War, many firms in that country re-restricted access to their archives.⁹⁰

In attempting to introduce the practice of Active Citation into business history, we need to be cognizant of the internal dynamics of the firms whose archives we use. For instance, an individual corporate archivist might well understand why Active Citation is necessary and be personally sympathetic to a request to upload copies of researched documents to a qualitative data repository. However, if the firm's legal department fears that proprietary data might create risks for the company, authorisation to upload documents to a data repository will be denied. Making Active Citation and data sharing widespread in business history will involve persuading corporate archivists and the legal departments in different companies around the world that this practice is safe and worthwhile.

There is a further challenge that the business historical community must overcome if it is to adopt Active Citation. Qualitative and mixed-method business historians employ a process referred to as *hermeneutics*, and often draw conclusions based on reading a wide range of materials in an archival collection. They interpret the meaning of a particular archival document by considering the broader social context in which it was created and the document's relationship to others in the same collection.⁹¹ Researchers in the physical sciences, who were the first to adopt robust research transparency rules, based their work on measurable and measured phenomena, but this is not the case for business historians.

Hermeneutics often involves a researcher's rough estimates about relative frequency. For instance, a business historian might declare that executives of a French company 'were

increasingly worried about war with Germany' in 1938 on the basis of seeing a large number of letters on that subject in a folder in the firm's archive. The researcher may have noticed that whilst there were many references to possible war in the folder from 1938, letters from the same executives in the 1936 folder had few if any references to war. Based on reading these archival materials, the researcher might draw the conclusion that by 1938 the French executives had become worried about German re-militarisation.

The presentation of such conclusions are an entirely legitimate part of qualitative business–historical research. Moreover, as Louise Corti of the UK Data Archive has noted, the presentation of assertions based on the reading of many documents is also an accepted practice in qualitative research in many disciplines.⁹² The question for those of us who advocate the adoption of Active Citation in business history is how we can accommodate claims based on hermeneutic research within the Active Citation format. If a scholar is making a claim based on a single document, creating a hyperlink to a scanned image of that document is straightforward. We believe that in cases when an assertion is based on the overall impression a researcher has formed by reading many documents, statements by authors should be supported by an Active Citation hyperlink to an online folder containing all the documents that were the basis of the statement, along with a brief explanatory note. Although this approach may seem cumbersome, as it would require storing a larger number of primary sources, we believe that it is the most appropriate solution.

Creating a data repository suited to the needs of business historians and business archivists

We propose that business historians and business archivists from around the world cooperate to create a data repository that is similar to the Syracuse QDR, but serves the particular needs of business historians. As this repository is being developed, journal editorial boards and publishers of business–historical monographs should begin the process of modifying their submission guidelines to encourage contributors to share their data via this repository whenever doing so is legal and practicable. As a first step towards making Active Citation the norm, meetings of business historians, archivists, and other interested parties should be held in conjunction with the main business–historical conferences. These meetings can serve as a forum for discussing the difficult issues that will inevitably be confronted in moving towards greater research transparency. To avoid the replication of the acrimonious disputes that DA-RT created within political science, the introduction of research transparency systems in business history should be very gradual, so that researchers have advance warning of the change. Journal editors should also have the discretion to waive the requirement that underlying data be published whenever the Active Citation would block the publication of research based on proprietary archival holdings.

In trying to persuade firms that they should permit their archival materials to be uploaded to this repository, we need to be extremely sensitive to the needs of firms concerned about their reputational capital. It is true that a shoe company may care little about what historians say about the firm's activities more than a century ago. Archivists at such a firm would likely acquiesce to the uploading of primary source images from the distant past to a research transparency repository. However, business–historical research on more recent periods may run into various obstacles if they seek to apply transparency protocols to primary sources perceived to have greater commercial relevance. If business history journals insist inflexibly

on Active Citation and Open Data in all cases, this stance might prevent the publication of important business–historical research on, for example, environmental and medical topics. As we proceed with the creation of transparency institutions, we also need to address the concerns of corporate data owners and the needs of scholars in different parts of the world. Members of the multinational business–history community may need to help corporate archivists to convince their superiors of the merits of this practice. Doing so might involve producing succinct and persuasive explanatory documents in multiple languages that could be shown to the corporate lawyers and executives to whom archivists report.

The need to defuse the concerns of corporate data owners is one of the reasons we advocate the creation of a special data repository serving business historians rather than basing Active Citation in business history on another scholarly community's data repository. The International Institute of Social History (IISH) in the Netherlands has created a data repository to serve social and economic historians who need to publish their data. This data repository contains, for example, documents on coin production in the Low Countries 1434 to 1830 and strikes in Canada between 1901 and 1916.⁹³ To a certain extent, it might seem logical for business historians to use the existing IISH data repository. However, the main website of the IISH data repository contains references to strikes, labour relations, and social conflict, topics that might be considered 'risky' by firms. In many countries, many business people associate social-scientific research with the political left.⁹⁴ Archivists and other decision-makers in corporations are unlikely to authorise the sharing of data via a repository perceived to be associated with anti-business viewpoints. If a repository for business historians were hosted by a business school, it may be that firms would be more likely release some of their primary sources to it than if the repository was linked to an academic discipline with different political associations.

If Active Citation is to work for the business history community, the requisite online repositories of data must be designed to inspire confidence within the firms whose consent is required for the uploading of primary sources to online repositories. We believe that such consent would be easier to obtain under the following conditions. First, the online repository should be associated with the business school of a leading university. Second, the online repository should be supervised by an advisory council that includes representatives of the business archivist organisations and several blue-chip companies. It should also include academic societies such the Business History Conference, the Association of Business Historians, the Gesellschaft für Unternehmensgeschichte, the European Business History Association, and the Business History Society of Japan. Ideally, representatives of all the major regions of the world, including Latin America and Africa, would be on the council. The Business History initiative at Harvard Business School, with its global footprint, should also be involved in the data repository, regardless of where the repository's server is physically located. To establish confidence among corporations, business representatives on the advisory council should occupy senior posts in their organisations. Since many corporate archivists report to corporate lawyers, lawyers at leading global law firms could also be asked to join the repository's advisory board.

While it is desirable for the business history community to create institutions to support the use of Active Citation, there are limits to the degree to which our community can adopt the principle of Open Data in the near future. A rigid ruling mandating Active Citation and data sharing in all cases would be impractical due to the issues mentioned earlier. This reality means that the leading journals in business history are unlikely to obtain more than Level I

TOP certification from COS for data transparency. The COS grants three levels of certification to journals that commit to the principle of data transparency. Journals with Level I certification merely encourage contributors to share the raw data underlying their writing. They do so by requiring authors to state whether they will make their data available to other researchers. Journals with Level II certification actually require authors using original data to 'make the data available at a trusted digital repository.' The editors of Level II journals are, however, allowed to 'grant exceptions to data and material access requirements' in cases where 'data or materials cannot be shared for legal or ethical reasons' despite the 'best efforts' of the authors. Journals that obtain Level III data transparency certification must mandate that 'all materials supporting the claims made by' all articles 'must be made available to the journal' and that the journal, or an entity acting on its behalf, will use the data to attempt to replicate the researchers' conclusions prior to publication.⁹⁵ In our view, it is most unlikely that any business history journal or monograph publisher will achieve Level III certification. However, by aiming for the adoption of Level I certification in its journals, the business history community will be able to signal to stakeholders that it is serious about research transparency.

One technical question to be addressed as we move towards the adoption of Active Citation is which software to use to manage the online repository that serves business historians. Our preference would be to use Dataverse, an open-source software package. Many users will be familiar with this interface because it has already been adopted by universities in India, Canada, and Norway, as well as by the DataverseNL inter-university consortium in the Netherlands.⁹⁶ However, it may be that some business archivists and business historians will favour DSpace, the rival open-access system developed by MIT, or CKAN, another data-sharing program.⁹⁷ There needs to be consultation with librarians, archivists, and other data professionals prior to a decision about which software package to use. Another technical issue that will require attention is the storage of Born Digital materials in corporate archives, particularly the increasing proportion of such documents stored in the cloud rather than on in-house servers.⁹⁸

Conclusion

As our discussion has made clear, the move for greater research transparency in scientific and social-scientific research has been driven, on a fundamental level, by rising levels of distrust. This phenomenon is not limited to the academic community, as recent discussions over *fake news* attest. Distrust is clearly an unpleasant topic, but we should remember that once open data systems are in place, they will perform functions aside from fact-checking authors' claims. The widespread adoption of Open Data and Active Citation will help to accelerate the move towards the digitisation of primary sources. Once a primary source is placed online for one academic purpose, a researcher in another part of the world can use it for a new project. The proliferation of digitised historical sources and the diffusion of information over time and space offer us unprecedented opportunities to pursue new forms of business–historical research. Currently, only a tiny percentage of written documents ever created been placed online. By incentivising the scanning and uploading of primary sources, the adoption of an Active Citation norm would help to disseminate the raw materials for business–historical research.

We believe that the adoption of research transparency is important for the future of the business historical research community. Our support for Active Citation is, however,

tempered by a recognition of the practical challenges involved in using it. We therefore believe that journals should be allowed to exempt contributors from the requirement to use Active Citation, particularly when their research is based on archival material that a company that does not give consent to share primary sources. Strict enforcement of the Active Citation rule might also preclude the publication of research on sensitive topics or firms in particular regions of the world. In this context, we should aim for Level I COS certification and the development of a research culture in business history that encourages authors to use Active Citation whenever possible. We believe that this relatively modest goal is achievable. The authors hope that this article has convinced business historians of the need to create research transparency institutions for our community, and to have conversations about what exactly the supporting institutions should look like.

Notes

1. De Jong, Higgins, and van Driel, 'Towards a new business history?'; Decker, Kipping, and Wadhvani 'New business histories! Plurality in business history research methods'; Whittle and Wilson, 'Ethnomethodology and the production of history'.
2. Scranton and Fridenson, *Reimagining Business History*; Bucheli and Wadhvani, *Organizations in Time*, Hyman, L. 'Why Write the History of Capitalism? *Symposium*, Decker, 'The silence of the archives'.
3. Godfrey, Hassard, O'Connor, Rowlinson, and Ruef, 'What Is Organizational History?'
4. The sharing of high-quality images of documents rather than simple transcriptions of texts is important, particularly for historians who work with the types of documents that contain extensive handwritten marginalia."
5. Kitchin, *The Data Revolution*; OECD, *OECD Principles and Guidelines for Access to Research Data*.
6. Moravcsik, 'Trust But Verify'; McLaughlin, 'A New Open Humanities'.
7. Open Data is distinct from Open Access, a set of protocols that relates to the copyright status of research publications.
8. Corti, 'Research transparency: a welcome climb or a slippery slope?'
9. Lyon, Jeng, Mattern, 'Research Transparency', Table 6.
10. Research Councils United Kingdom, *Guidance on best practice in the management of research data*.
11. CNRS. 'Les enjeux éthiques du partage des données scientifiques'.
12. Science.gc.ca, 'Tri-Agency Statement of Principles on Digital Data Management'.
13. SSHRC. 'Research Data Archiving Policy'.
14. For example, see Aston University, 'Research Data Management: Policy Requirements'.
15. For instance, applicants for the EU's Horizon 2020 grants have been informed that they should make their research data 'findable, accessible, interoperable and reusable (FAIR)'. European Commission, 'Guidelines on FAIR Data Management'.
16. Nature, Transparency upgrade for *Nature* journals'.
17. Elsevier, 'Center for Open Science'.
18. Nature, 'Announcement: Transparency upgrade for Nature journals'.
19. Center for Open Science, 'Our Sponsors'.
20. Rowlinson, 'Revisiting the Historic Turn'.
21. Silverman & Ingram, 'Asset Ownership and Incentives in Early Shareholder Capitalism'.
22. Hassard, Cox, Rowlinson 'Where are the old theories of organization?'
23. Buckley, 'Historical Research Approaches'.
24. Braguinsky & Hounshell, History and nanoeconomics, Schrempf-Stirling, Palazzo, & Phillips, 'Historic corporate social responsibility'; Friesl & Kwon, 'The strategic importance of top management resistance'.
25. New York Times, 'In History Departments Its Up With Capitalism'.
26. The Economist, 'The Pain of the Past'.

27. *Economist*, 'Companies: Driving forces'.
28. Jones, 'Alfred Chandler'; McKenna, 'In memoriam'; Whittington, 'Alfred Chandler', McKenna, *World's Newest Profession*, 170.
29. Trachtenberg, *The Craft of International History*.
30. Email Communication with Tom Nicholas, 13 October 2016.
31. Finkelstein, 'Why smart executives fail'; Wild, 'Learning the wrong lessons from history'.
32. Christensen, *The Innovator's Dilemma*, 68, 75, 72, 108; Christensen, 'Rigid Disk Drive Industry'.
33. King, and Baljir, 'How Useful Is the Theory of Disruptive Innovation?'
34. Lepore, 'Disruption Machine'; Bennett, 'Clayton Christensen Responds'.
35. For this interest in strategy in research transparency, see Bergh, Sharp, Aguinis, and Li, 'Is there a credibility crisis in strategic management research? Evidence on the reproducibility of study findings', *Strategic Organization* (2017): 1476127017701076.
36. Ross, Gross, & Krumholz, 'Promoting transparency in pharmaceutical industry-sponsored research'; Akst, 'Keeping Science Pubs Clean'; Wechsler, 'Pressure Mounts'; Miguel et al., 'Promoting Transparency in Social Science Research'; Nosek, 'Promoting An Open Research Culture'.
37. Gauchat, 'Politicization of science in the public sphere'; Ravetz and Saltelli, 'Policy: The future of public trust in science'.
38. Miguel et al., 'Promoting Transparency', 30.
39. Freedman et al., 'The economics of reproducibility in preclinical research'.
40. David Brower Center, 'Transparency Practices for Empirical Social Science Research'; Miguel et al., 'Promoting Transparency', 30.
41. Figshare, 'Main Page'.
42. King, 'An introduction to the Dataverse Network'.
43. Inter-university Consortium for Political and Social Research,.
44. UK Data Archive, 'About Us'; Corti, 'Research transparency: a welcome climb or a slippery slope?'
45. Eynden and Corti, 'Advancing research data'.
46. Center for Open Science, '757 Signatories'.
47. *Management Science*, 'Data Disclosure Policy'.
48. Bergh, Sharp, and Li, 'Methods for Identifying 'Red Flags' in Empirical Findings'; Gibbert, Nair, Ruigrok, 'What passes as rigorous replication logic in management case study research?'; Nair, Gibbert. 'Hot on the audit trail'.
49. Aguinis, Ramani, and Alabduljader, 'What You See is What You Get?'
50. FIVES, 'Five Project Links' <http://five.dartmouth.edu/links>
51. Open Data is not discussed in Javadian et al. 'Qualitative Research In Entrepreneurship'.
52. Moravcsik, 'Trust But Verify', 663.
53. American Political Science Association. '2012 DA-RT Ethics Guide Changes'.
54. Uscinski & Klofstad, 'Determinants of Representatives' Votes on the Flake Amendment'; Elman & Kapiszewski, 'Sharing qualitative data'.
55. Lupia and Elman, 'Openness in political science', 19.
56. Moravcsik, 'Active Citation'.
57. Trachtenberg, 'Transparency in Practice: Using Written Sources'.
58. Moravcsik, 'Active Citation', 32.
59. Elman and Kapiszewski. 'Sharing qualitative data'.
60. From 2015 to the autumn of 2017, it was free for an academic researcher to upload the data underlying an article to the Syracuse QDR repository. University of Syracuse Qualitative Data Repository, 'Institutional Membership'.
61. *The Guardian*, 'Study of attitudes to same-sex marriage retracted'; Gelman, 'Political scientists are debating how to make research more transparent'.
62. American Political Science Association, Data Access and Research Transparency Initiative (DA-RT), November 2015.
63. Petition by 1,300 political scientists dated 3 November 2015.
64. Flaherty, 'More Time on Transparency'.
65. Blattman, Blog Post of 9 November 2015.

66. Karcher et al., 'Beyond the Matrix'.
67. University of Syracuse Qualitative Data Repository. 'Institutional Membership'.
68. Harvard Dataverse, 'Getting Started: Researchers'.
69. Harvard Dataverse, 'About: the Project'.
70. American Political Science Review, 'APSR Submission Guidelines'.
71. Nelson, 'Standing on [Transparent] Shoulders'.
72. Kipping et al., 'A Revisionist Historiography'.
73. Amdam, Petter, and Bjarnar, 'Globalization and the Development of Industrial Clusters'.
74. Tworek, 'Political and Economic News'.
75. Lubinski, 'Global Trade'.
76. European Commission. 'Exchanging and Protecting Personal Data in a Globalised World'; Allison, 'Template for Adequacy'; Soroka, 'How To Disappear Completely', *Financial Times*, 'Microsoft unveils German data plan to tackle US internet spying.' 11 November 2015.
77. Ritter, 'Open Data in Asia', 4.
78. Interactive Map on Dataverse Project Website.
79. Hitchcock and Shoemaker, 'Making History Online'.
80. McLaughlin, 'A New Open Humanities'; 'The long tail of science' ? Humanities, Social Sciences, and Open Science and Innovation', conference held in Brussels, 25 April 2017.
81. Center for Open Science, List of Signatory Journals.
82. Gaddis, *Landscape of History*, xi.
83. Evans uses the controversy over the research of David Abraham to illustrate the role of footnotes in disciplining historical analysis. Evans, *In Defence of History*, 116–118.
84. Duchein, 'History of European Archives', 22.
85. Scranton & Fridenson, *Rethinking*, 215–217.
86. Edwards, *Railway Records*.
87. Strickland, 'Organizations and Objectives' 152–3.
88. Business Archives Council, 'National Strategy for Business Archives'.
89. Fellman and Popp, 'Creating Narratives from Archives in Business History'.
90. Smith, 'Dusting Off the Cobwebs'; Christeller, 'L'accès aux archives d'entreprises', 92.
91. Kipping et al., 'Analyzing and interpreting historical sources' p. 320.
92. Corti, 'Research transparency: a welcome climb or a slippery slope?'.
93. IISH Dataverse.
94. For instance, a recent article in the *Wall Street Journal*, a newspaper read by many US business people, bemoaned the fact that universities dominated by leftist viewpoints. *Wall Street Journal*, 'Those Snowflakes'.
95. Center for Open Science. Guidelines for Transparency and Openness Promotion.
96. Crosas, 'The DataVerse Network'; DANS, 'DataverseNL'.
97. DSpace, 'About'; Winn, 'Open Data Meets the Academy'.
98. McLeod and Gormly, 'Using the cloud for records storage'.

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References

- Aguinis, H., R. Ramani, and N. Alabduljader. "What You See is What You Get? Enhancing Methodological Transparency in Management Research." *Academy of Management Annals* 12, (2017). doi:10.5465/annals.2016.0011.
- Akst, J. "Keeping Science Pubs Clean: Science Releases New Guidelines for Research Transparency, Hoping to Stem the Tide of Retractions and Misconduct." *The Scientist*. Accessed June 29, 2015. <http://www.the-scientist.com/?articles.view/articleNo/43408/title/Keeping-Science-Pubs-Clean/>
- Allison, M. "A Template for Adequacy: EU Pitches for Data Protection Gold Standard." Accessed February 9, 2017. http://www.circleid.com/posts/20170209_template_for_adequacy_eu_pitches_for_data_protection_gold_standard/
- Amdam, R. P., and O. Bjarnar. "Globalization and the Development of Industrial Clusters: Comparing Two Norwegian Clusters, 1900–2010." *Business History Review* 89, no. 4 (2015): 693–716.
- American Political Science Association. "Data Access and Research Transparency Initiative (DA-RT)." November 24, 2015. Accessed December 9, 2015. <http://www.politicalsciencesnow.com/data-access-and-research-transparency-initiative-da-rt/>
- American Political Science Association. "2012 DA-RT Ethics Guide Changes." Accessed December 9, 2015. <http://www.dartstatement.org/2012-apsa-ethics-guide-changes>
- American Political Science Review. "APSR Submission Guidelines." August 26, 2016. Accessed November 11, 2016. <http://www.apsanet.org/APSR-Submission-Guidelines-August-2016>
- Aston University. "Research Data Management: Policy Requirements." Accessed August 9, 2016. <http://libguides.aston.ac.uk/ResearchData/Policy>
- Bennett, D. "Clayton Christensen Responds to *New Yorker* Takedown of 'Disruptive Innovation' Innovation." *Bloomberg News* 20 (June 2014). <https://www.bloomberg.com/news/articles/2014-06-20/clayton-christensen-responds-to-new-yorker-takedown-of-disruptive-innovation>
- Bergh, D. D., B. M. Sharp, H. Aguinis, and M. Li. "Is There a Credibility Crisis in Strategic Management Research? Evidence on the Reproducibility of Study Findings." *Strategic Organization* 1476127017701076 (2017).
- Bergh, D. D., B. M. Sharp, and M. Li. "Methods for Identifying 'Red Flags' in Empirical Findings." Academy of Management Research Methods Division panel on Qualifying and Quantifying Data Quality, Anaheim, California, August 8, 2016.

- Blattman, C. Blog Post of 9 November, 2015. https://www.washingtonpost.com/news/monkey-cage/wp/2015/11/09/political-scientists-are-debating-a-new-initiative-to-make-research-more-trustworthy-heres-why-im-skeptical/?utm_term=.d8041f6f98d8.
- Braguinsky, Serguey, and David A. Hounshell. "History and Nanoeconomics in Strategy and Industry Evolution Research: Lessons from the Meiji-Era Japanese Cotton Spinning Industry." *Strategic Management Journal* 37, no. 1 (2016): 45–65.
- Bucheli, M., and D. Wadhvani. *Organizations in Time: History, Theory, Methods*. Oxford: University Press, 2014.
- Buckley, P. J. "Historical Research Approaches to the Analysis of Internationalisation." *Management International Review* (2016): 1–22.
- Business Archives Council. "National Strategy for Business Archives (England and Wales)." 2009. Accessed December 9, 2015. <https://www.businessarchivescouncil.org.uk/>
- Business History. Editorial Board. Accessed December 9, 2015. <http://www.tandfonline.com/action/journalInformation?show=editorialBoard&journalCode=fbsh20>
- Center for Open Science. "Guidelines for Transparency and Openness Promotion (TOP) in Journal Policies and Practices 'the TOP Guidelines' Version 1.0.1." 2015. <https://cos.io/our-services/top-guidelines/>.
- Center for Open Science. "757 Signatories." Accessed November 1, 2016. <https://cos.io/top/#list>
- Center for Open Science. "List of Signatory Journals." Accessed September 30, 2017. <https://cos.io/our-services/top-guidelines/>
- Center for Open Science. "Our Sponsors." Accessed September 30, 2017. <https://cos.io/about/our-sponsors/>
- Center for Scientific Integrity. "Retraction Watch." Accessed December 9, 2015. <http://retractionwatch.com/the-center-for-scientific-integrity/>
- Christeller, L. "L'accès aux archives d'entreprises en Suisse. Conserver et communiquer un patrimoine entre secret et transparence." *Informationswissenschaft: Theorie, Methode und Praxis* [online] 2, no. 1 (2012): 87–104.
- Christensen, Clayton M. "The Rigid Disk Drive Industry: A History of Commercial and Technological Turbulence." *Business History Review* 67, no. 4 (1993): 531–588.
- Christiansen, C. *The Innovator's Dilemma*. Boston, MA: Harvard Business School Press, 1997.
- CNRS. "Les enjeux éthiques du partage des données scientifiques." 2015. http://www.cnrs.fr/comets/IMG/pdf/2015-05_avis-comets-partage-donnees-scientifiques-2.pdf.
- Corti, L. "Research Transparency: A Welcome Climb or a Slippery Slope?" December 2015. <http://blog.ukdataservice.ac.uk/research-transparency-a-welcome-climb-or-a-slippery-slope/>.
- Crosas, M. "The Dataverse Network: An Open-Source Application for Sharing, Discovering and Preserving Data." *D-Lib Magazine*, January, 2011. <http://www.dlib.org/dlib/january11/crosas/01crosas.html>.
- DANS. "DataverseNL." Accessed April 24, 2017. <https://dans.knaw.nl/en/about/services/archiving-and-reusing-data/DataverseNL>
- Dataverse. "The Dataverse Project." Accessed May 1, 2017. <http://dataverse.org/>
- David Brower Center. *Transparency Practices for Empirical Social Science Research*. Berkeley: University of California, 2014. <http://www.bitss.org/wp-content/uploads/2015/12/BITSS-Summer-Institute-Agenda.pdf>.
- Decker, S. "The Silence of the Archives: Business History, Post-Colonialism and Archival Ethnography." *Management & Organizational History* 8, no. 2 (2013): 155–173.
- Decker, S., M. Kipping, and R. D. Wadhvani. "New Business Histories! Plurality in Business History Research Methods." *Business History* 57, no. 1 (2015): 30–40.
- Dreber, A., T. Pfeiffer, J. Almenberg, S. Isaksson, B. Wilson, Y. Chen, B. A. Nosek, and M. Johannesson. "Using Prediction Markets to Estimate the Reproducibility of Scientific Research." *Proceedings of the National Academy of Sciences* 112, no. 50 (2015): 15343–15347.
- DSpace. Accessed April 23, 2017. <http://www.dspace.org/introducing>
- Duchemin, M. "The History of European Archives and the Development of the Archival Profession in Europe." *The American Archivist* 55, no. 1 (1992): 14–25.
- Economist. "The Pain of the past: Lessons from a Fight between Economists and Historians." Accessed December 9, 2016. <http://www.economist.com/blogs/freexchange/2016/12/pain-past>

- Economist. "Companies: Driving Forces Why Giants Thrive the Power of Technology, Globalisation and Regulation." Accessed September 15, 2016. <http://www.economist.com/news/special-report/21707049-power-technology-globalisation-and-regulation-why-giants-thrive>
- Edwards, C. J. *Railway Records: A Guide to Sources*. London: Public Records Office, 2001.
- Elman, C., and D. Kapiszewski. "Sharing Qualitative Data: The Launch of the Qualitative Data Repository." *Washington Post*. Accessed February 25, 2014. <https://www.washingtonpost.com/news/monkey-cage/wp/2014/02/25/sharing-qualitative-data-the-launch-of-the-qualitative-data-repository/>
- Elsevier. "Center for Open Science Announces Elsevier as New Signatory to TOP Guideline." September 5, 2017. Accessed October 2, 2017. <https://www.elsevier.com/about/press-releases/corporate/center-for-open-science-announces-elsevier-as-new-signatory-to-top-guideline>
- Ethiraj, S. K., A. Gambardella, and C. E. Helfat. "Improving Data Availability: A New SMJ Initiative." *Strategic Management Journal* 38, (2017): 2145–2146. Editorial Published 11 September 2017. doi:10.1002/smj.2690.
- European Commission. "Guidelines on FAIR Data Management in Horizon 2020." Version 3.0. Accessed July 26, 2016. http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-data-mgt_en.pdf
- European Commission. "Exchanging and Protecting Personal Data in a Globalised World." Accessed January 10, 2017. http://europa.eu/rapid/press-release_MEMO-17-15_en.htm
- Evans, R. *In Defence of History*. London: Granta Books, 2001.
- Eynden, V., and L. Corti. "Advancing Research Data Publishing Practices for the Social Sciences: From Archive Activity to Empowering Researchers." *International Journal on Digital Libraries* 18, no. 2 (2016): 113–121.
- Financial Times*. "Microsoft Unveils German Data Plan to Tackle US Internet Spying." November 11, 2015.
- Finkelstein, S. "Why Smart Executives Fail: Four Case Histories of How People Learn the Wrong Lessons from History." *Business History* 48, no. 2 (2006): 153–170.
- Fives. "Five Project Links." Accessed September 14, 2017. <http://five.dartmouth.edu/links>
- Flaherty, C. "More Time on Transparency Political Scientists Debate Standards Adopted by Leading Publications." *Inside Higher Ed*, November 16, 2015.
- Freedman, L. P., I. M. Cockburn, and T. S. Simcoe. "The Economics of Reproducibility in Preclinical Research." *PLoS Biology* 13, no. 6 (2015): e1002165.
- Friesl, M., and W. Kwon. "The Strategic Importance of Top Management Resistance: Extending Alfred D. Chandler." *Strategic Organization* 15, (2016): 100–112.
- Gaddis, J. L. *The Landscape of History: How Historians Map the Past*. Oxford: Oxford University Press, 2002.
- Gauchat, G. "Politicization of Science in the Public Sphere a Study of Public Trust in the United States, 1974 to 2010." *American Sociological Review* 77, no. 2 (2012): 167–187.
- Gelman, A. "Political Scientists Are Debating How to Make Research More Transparent. Here's a Way Forward." *Washington Post*. Accessed November 13, 2015. <https://www.washingtonpost.com/news/monkey-cage/wp/2015/11/13/political-scientists-are-debating-how-to-make-research-more-transparent-heres-a-way-forward/>
- Gibbert, M., L. B. Nair, and W. Ruigrok. "What Passes as Rigorous Replication Logic in Management Case Study Research?" Academy of Management Research Methods Division panel on Qualifying and Quantifying Data Quality, Anaheim, California, August 8, 2016.
- Godfrey, P. C., J. Hassard, E. S. O'Connor, M. Rowlinson, and M. Ruef. "What is Organizational History? Toward a Creative Synthesis of History and Organization Studies." *Academy of Management Review* 41, no. 4 (2016): 590–608.
- Harvard Dataverse. "Getting Started: Researchers." 2017. Accessed April 4, 2017. <https://dataverse.org/researchers>
- Harvard Dataverse. "About: The Project." 2017. Accessed April 4, 2017. <http://dataverse.org/about>
- Hassard, J., J. W. Cox, and M. Rowlinson. "Where Are the Old Theories of Organization? Prospects for Retrospection in Organization Theory." *Academy of Management Review* 38, no. 2 (2013): 309–313.
- Hitchcock, T., and R. Shoemaker. "Making History Online." *Transactions of the Royal Historical Society* 25 (2015): 75–93.
- Hyman, L. "Why Write the History of Capitalism?" *Symposium Magazine*. Accessed July 8, 2013. <http://www.symposium-magazine.com/why-write-the-history-of-capitalism-louis-hyman/>

- International Institute of Social History. "IISH Dataverse." 2017. Accessed April 7, 2017. <https://datasets.socialhistory.org/>
- Inter-university Consortium for Political and Social Research. 2015. <https://www.icpsr.umich.edu/icpsrweb/content/membership/governance/council.html#achen>.
- Javadian, G., A. Gupta, and A. R. Knights. "Qualitative Research in Entrepreneurship: Current Research Practices and Suggestions for Future." *Academy of Management Proceedings* 2016, no. 1. <http://www.effectuation.org/wp-content/uploads/2017/06/Qualitative-Research-in-Entrepreneurship-1.pdf>
- Jones, Geoffrey. "Alfred Chandler and the Importance of Organization." *Enterprise and Society* 9, no. 3 (2008): 419–421.
- De Jong, A., D. M. Higgins, and H. van Driel. "Towards a new business history?." *Business History*, 57, no. 1 (2015): 5–29.
- Karcher, S., D. Kirilova, and N. Weber. "Beyond the Matrix: Repository Services for Qualitative Data." *IFLA Journal* 42, no. 4 (2016): 292–302.
- King, G. "An Introduction to the Dataverse Network as an Infrastructure for Data Sharing." *Sociological Methods & Research* 36, no. 2 (2007): 173–199.
- King, A. A., and B. Baatartogtokh. "How Useful is the Theory of Disruptive Innovation?." *MIT Sloan Management Review* 57, no. 1 (2015): 77.
- Kipping, M., T. Kurosawa, and R. D. Wadhawni. "A Revisionist Historiography of Business History: A Richer past for a Richer Future." *The Routledge Companion to Business History*: 19–35.
- Kitchin, R. *The Data Revolution: Big Data, Open Data, Data Infrastructures and Their Consequences*. London: Sage, 2014.
- Lepore, J. "The Disruption Machine." *The New Yorker* 23 (June 2014): 30–36.
- Lubinski, C. "Global Trade and Indian Politics: The German Dye Business in India before 1947." *Business History Review* 89, no. 3 (2015): 503–530.
- Lupia, A., and C. Elman. "Openness in Political Science: Data Access and Research Transparency." *PS: Political Science & Politics* 47, no. 1 (2014): 19–42.
- Lyon, L., W. Jeng, and E. Mattern. "Research Transparency: A Preliminary Study of Disciplinary Conceptualisation, Drivers, Tools and Support Services." *International Journal of Digital Curation* 12, no. 1 (2017): 46–64.
- Management Science. "Data Disclosure Policy." Accessed December 9, 2015. <http://pubsonline.informs.org/page/mnsc/datapolicy>
- Management Science. "Submission Guidelines." Accessed December 9, 2015. <http://pubsonline.informs.org/page/mnsc/submission-guidelines>
- Massachusetts Institute of Technology. "SocialScienceRegistry.Org." 2015. <https://www.socialscienceregistry.org/site/about>.
- McCraw, T. K. "Alfred Chandler: His Vision and Achievement." *Business History Review* 82, no. 2 (2008): 207–226.
- McKenna, C. D. "In Memoriam: Alfred Chandler and the Soul of Business History." *Enterprise and Society* 9, no. 3 (2008): 422–425.
- McKenna, C. D. *The World's Newest Profession: Management Consulting in the Twentieth Century*. Cambridge: Cambridge University Press, 2010.
- McLaren, P. G., Mills, A. J., & Weatherbee, T. G. (Eds.). (2015). *The routledge companion to management and organizational history*, 70–80. Routledge.
- McLaughlin, J. L. "A New Open Humanities: Introduction." *Bulletin of the Association for Information Science and Technology* 43, no. 5 (2017): 12–15.
- McLeod, J., and B. Gormly. "Using the Cloud for Records Storage: Issues of Trust." *Archival Science* 17, no. 4 (2017): 349–370. doi:10.1007/s10502-017-9280-5.
- Miguel, E., C. Camerer, K. Casey, J. Cohen, K. M. Esterling, A. Gerber, R. Glennerster, et al. "Promoting Transparency in Social Science Research." *Science* 343, no. 6166 (2014): 30–31. doi:10.1126/science.1245317.
- Mir, R., & Jain, S. (Eds.). (2017). *The Routledge Companion to Qualitative Research in Organization Studies*, 378–390. Routledge.
- Moravcsik, A. "Active Citation: A Precondition for Replicable Qualitative Research." *PS: Political Science & Politics* 43, no. 1 (2010): 29–35.

- Moravcsik, A. "Transparency: The Revolution in Qualitative Research." *PS: Political Science & Politics* 47, no. 1 (2014): 48–53.
- Moravcsik, A. "Trust, but Verify: The Transparency Revolution and Qualitative International Relations." *Security Studies* 23, no. 4 (2014): 663–688.
- Nair, L. B., and M. Gibbert. "Hot on the Audit Trail: How to Assess Methodological Transparency of Grounded Theory in Management?" Academy of Management Research Methods Division panel on Qualifying and Quantifying Data Quality, Anaheim, California, August 8, 2016.
- Nair, L. B., and M. Gibbert. "Hot on the Audit Trail: How to Assess Methodological Transparency of Grounded Theory in Management?" Paper presented at the European Academy of Management conference, Paris, June 2, 2016.
- Nature. "Announcement: Transparency Upgrade for Nature Journals." Accessed March 15, 2017. <http://www.nature.com/news/announcement-transparency-upgrade-for-nature-journals-1.21627>
- Nelson, A. J. "Standing on [Transparent] Shoulders: Applying Open Source Approaches to Qualitative Management Research." In *The Routledge Companion to Qualitative Research in Organization Studies*, edited by Raza Mir and Sanjay Jain, 378–390. London: Routledge, 2017.
- New York Times. "In History Departments, It's up with Capitalism." Accessed April 6, 2017. <http://www.nytimes.com/2013/04/07/education/in-history-departments-its-up-with-capitalism.html>
- Nosek, B. A., G. Alter, G. C. Banks, D. Borsboom, S. D. Bowman, S. J. Breckler, and T. Yarkoni. "Promoting an Open Research Culture: Author Guidelines for Journals Could Help to Promote Transparency, Openness, and Reproducibility." *Science* 348 (2015): 1422–1425.
- OECD. "OECD Principles and Guidelines for Access to Research Data from Public Funding." 2007. <http://www.oecd.org/sti/sci-tech/38500813.pdf>.
- Petition by 1,300 Political Scientists. Accessed November 3, 2015. <https://dialogueondartdotorg.files.wordpress.com/2015/11/petition-from-concerned-scholars-nov-12-2015-complete.pdf>
- Popp, A., and S. Fellman. "Writing business history: Creating narratives." *Business History*, 59, no. 8 (2017): 1242–1260.
- Ravetz, J., and A. Saltelli. "Policy: The Future of Public Trust in Science." *Nature* 524, no. 7564 (2015): 161–161.
- Research Councils United Kingdom. "Guidance on Best Practice in the Management of Research Data." Accessed August 9, 2016. <http://www.rcuk.ac.uk/documents/documents/rcukcommonprinciplesondatapolicy-pdf/>
- Ritter, W. "Open Data in Asia an Overview of Open Data Policies and Practices in 13 Countries." Publisher unknown, 2014. <https://knowledgedialogues.files.wordpress.com/2014/07/open-data-asia-09-2014.pdf>.
- Ross, J. S., C. P. Gross, and H. M. Krumholz. "Promoting Transparency in Pharmaceutical Industry–Sponsored Research." *American Journal of Public Health* 102, no. 1 (2012): 72–80.
- Rowlinson, M. "Revisiting the Historic Turn: A Personal Reflection." In *The Routledge Companion to Management and Organizational History*, edited by McLaren, P. G., A. J. Mills, and T. G. Weatherbee, 70–80. London: Routledge, 2015.
- Sapienza, P., A. Toldra-Simats, and L. Zingales. "Understanding Trust." *The Economic Journal* 123, no. 573 (2013): 1313–1332.
- Schrempf-Stirling, Judith, Palazzo, Guido, and Phillips, Robert A. "Historic corporate social responsibility." *Academy of Management Review*, 41, no. 4 (2016): 700–719.
- Science.gc.ca. "Tri-Agency Statement of Principles on Digital Data Management." 2016. http://www.science.gc.ca/547652FB-9F97-4C5F-8AA5-AF507AFBD83E/statement_of_principles_data_management.pdf.
- Scranton, P., and P. Fridenson. *Reimagining Business History*. Baltimore: JHU Press, 2013.
- Silverman, B. S., and P. Ingram. "Asset Ownership and Incentives in Early Shareholder Capitalism: Liverpool Shipping in the 18th Century." *Strategic Management Journal* 38, no. 4 (2016): 854–875.
- Smith, G. "Dusting off the Cobwebs: Turning the Business Archives into a Managerial Tool." *The American Archivist* 45, no. 3 (1982): 287–290.
- Soroka, G. "How to Disappear Completely: Europe's Right to Be Forgotten Laws and the Future of Internet Privacy." *Foreign Affairs*, 2015. <https://www.foreignaffairs.com/articles/europe/2015-11-16/how-disappear-completely>.

- SSHRC. "Research Data Archiving Policy." 2016. http://www.sshrc-crsh.gc.ca/about-au_sujet/policies-politiques/statements-enonces/edata-donnees_electroniques-eng.aspx.
- Strickland, J. "Organisation and Objectives." In *The International Business Archives Handbook: Understanding and Managing the Historical Records of Business*, edited by A. Turton, 151–173. London: Routledge, 2017.
- The Guardian*. "Study of Attitudes to Same-Sex Marriage Retracted over 'Fake Data.'" May 20, 2015.
- Trachtenberg, M. *The Craft of International History*. Princeton: Princeton University Press, 2009.
- Trachtenberg, M. "Transparency in Practice: Using Written Sources." *Qualitative and Multi-Method Research: Newsletter of the American Political Science Association's QMMR Section* 13, no. 1 (Spring 2015): 13–17.
- Tworek, H. J. S. "Political and Economic News in the Age of Multinationals." *Business History Review* 89, no. 3 (2015): 447–474.
- UK Data Archive. "About Us." 2015. Accessed December 9, 2015. <http://www.data-archive.ac.uk/about/archive>
- University of Syracuse Qualitative Data Repository. "Institutional Membership." Accessed April 17, 2017. <https://qdr.syr.edu/membership>
- Uscinski, J., and C. A. Klofstad. "Determinants of Representatives' Votes on the Flake Amendment to End National Science Foundation Funding of Political Science Research." *PS-Political Science and Politics* 46, no. 3 (2013): 557–561.
- Wall Street Journal. "Those 'Snowflakes' Have Chilling Effects Even beyond the Campus." Accessed April 21, 2017. <https://www.wsj.com/articles/those-snowflakes-have-chilling-effects-even-beyond-the-campus-1492800913>
- Wechsler, J. "Pressure Mounts for Greater Clinical Trial Data Transparency." *Pharmaceutical Executive*. Accessed November 17, 2015. <http://www.pharmexec.com/pressure-mounts-greater-clinical-trial-data-transparency>
- Weiss, M., L. Balachandran Nair, M. Gibbert, and H. Koepplin. "What Passes as a Transparent Field Study in Management?" Academy of Management Research Methods Division panel on Transparent Reporting of Methods, and Text Analysis Methods, Vancouver, British Columbia, August 10, 2015.
- Whittington, R. "Alfred Chandler, Founder of Strategy: Lost Tradition and Renewed Inspiration." *Business History Review* 82, no. 2 (2008): 267–277.
- Whittle, A., and J. Wilson. "Ethnomethodology and the Production of History: Studying 'History-in-Action.'" *Business History* 57, no. 1 (2015): 41–63.
- Wild, A. M. "Learning the Wrong Lessons from History: Underestimating Strategic Change in Business Turnarounds." *Business History* 52, no. 4 (2010): 617–650.
- Winn, J. "Open Data and the Academy: An Evaluation of CKAN for Research Data Management." May, 2013. <http://eprints.lincoln.ac.uk/9778/>.
- Yong, E. "Can a Futures Market save Science? A Creative Solution for Psychology's Replication Problem." *The Atlantic*, November, 2015. <http://www.theatlantic.com/science/archive/2015/11/gambling-on-the-reliability-on-science-literally/414834/>.