

Celebrating change in archives¹

Celebrando a transformação nos arquivos

ERIC KETELAAR

Professor Emeritus Department of Mediastudies (Archival and Information Studies)

University of Amsterdam. The Netherlands

eketelaar@xs4all.nl

ORCID ID: <https://orcid.org/0000-0003-2966-1593>

ABSTRACT

This paper deals with a number of changes. The first is the new way of looking at and beyond the record, trying to read its tacit narratives of power and knowledge, and taking into account archivality, which refers to the acts of continuous and discontinuous change that transform the meaning and authenticity of a fonds as it is transmitted over time and space. This means a broadening — thus a change — of archival science and an openness to contributions from other disciplines. Looking beyond the record brings the contexts of archiving to the forefront, the why, who, what, and how, embedded in various temporalities. Contexts will change, *and* creation, capture, organization, and pluralisation will change, *and* societal challenges *and* technology will change. The major change in the 21st century and the major challenge for the archival endeavour is the existential threat from climate change (global warming),

¹ Conference delivered at the seminar “Rethinking the Archive(s)/ Repensar o(s) Arquivo(s)”, organized by the VINCULUM project, based at NOVA FCSH, and the Institute for Medieval Studies, NOVA FCSH. National Archive of Torre do Tombo, Lisbon, 9 November 2023. Comments by Fernanda Ribeiro and Armando Malheiro, FL-UP; CITCEM-FL-UP. VINCULUM (2023, December 15). 2.ª Sessão do Ciclo de seminários: “Rethinking the Archive(s)/ Repensar o(s) Arquivo(s)” [Video]. YouTube. <https://www.youtube.com/watch?v=PWyRXAbQQho>

requiring an urgent switch to environmental sustainability, in all areas of archival practice.

KEYWORDS: Archivistics; Archiving; Archival turn; Ephemerality; Carbon footprint; Sustainability.

RESUMO

Este artigo aborda uma série de transformações. A primeira é a nova forma de olhar para o documento e para além dele, tentando ler as suas narrativas tácitas de poder e de conhecimento, e considerando a “archivalterity” que se refere aos atos de mudança contínua e descontínua que transformam o significado e a autenticidade de um fundo de arquivo à medida que este é transmitido ao longo do tempo e do espaço. Isto implica uma expansão — ou seja, uma transformação — da ciência arquivística e uma abertura aos contributos de outras disciplinas. Olhar para além do documento traz para o centro da discussão os contextos da arquivagem: o porquê, quem, o quê e como, inseridos em várias temporalidades. Os contextos mudarão; e a criação, a guarda, a organização e a pluralização mudarão também; os desafios sociais e a tecnologia, mudarão também. A maior transformação no século XXI e o maior desafio de trabalho arquivístico empenhado é a ameaça existencial das alterações climáticas (aquecimento global), exigindo uma mudança urgente para uma maior sustentabilidade ambiental em todas as áreas da prática arquivística.

PALAVRAS-CHAVE: Arquivística; Arquivagem; Viragem arquivística; Efemeridade; Pegada de carbono; Sustentabilidade.

“If we want things to stay as they are, things will have to change.”
(Prince Tancredi Falconeri in Giuseppe Tomasi di Lampedusa’s *The Leopard*)²

Celebrating

In May 2023 it was 125 years since the Association of Archivists in the Netherlands published the *Manual for the arrangement and description of archives*: the Dutch Manual by Muller, Feith and Fruin (1898). That

² « Se vogliamo che tutto rimanga com'è, bisogna che tutto cambi. »

anniversary would lend itself to a historical overview, looking back at the development of archival science in 125 years. Many authors have contributed to such a history of the profession, I will not repeat it. We can also celebrate the 25th anniversary of the handbook *Arquivística: teoria e prática de uma ciência da informação* (1998, second edition 1999, third edition 2009), by Júlio Ramos, Manuel Luís Real, Fernanda Ribeiro and Armando Malheiro da Silva. The authors of *Arquivística* dedicated their book to the authors of the Dutch Manual who “opened new perspectives for the archival discipline” (“veio abrir novas perspectivas para a disciplina arquivística”).

Allow me to refer to another, more personal professional anniversary. A few days ago, it was exactly 25 years since my inaugural address as professor at the University of Amsterdam. I am not going to deal with those twenty-five years of history either, I just want to mention a few moments in the development of archival science, not as historiography, but as a starting point to present some reflections on the need for changes in archival science and in the archival profession. The temporality of our profession means that, like the Roman god Janus, we look in the present to the past on the one hand and to the future on the other, at least this is the traditional Western view which I am going to review later in this lecture.

Archivalisation

In my inaugural address, I introduced the concept of archivalisation: a neologism which I invented, meaning *the conscious or unconscious choice (determined by social and cultural factors) to consider something worth archiving* (“arquivização, um neologismo que eu mesmo inventei e que significa a escolha consciente ou inconsciente (determinada por fatores sociais e culturais) para considerar se algo merece ser arquivado”). By distinguishing archivalisation from archiving we gain an insight into the social and cultural factors, the standards and values, the ideology, that infuse the creation of archival documents (Matienzo, 2008). Acknowledging archivalisation means that archivists, beyond their preoccupation with the archive they manage, also look beyond the archive. This calls for looking up from the record and through the record, looking beyond — and questioning — its boundaries, in new perspectives, trying to read its tacit narratives of power and knowledge.

Archival Turns

This means a broadening — thus a change — of archival science and an openness to contributions from anthropologists, sociologists, philosophers, cultural and literary theorists, artists, and many more. These and other disciplines have experienced an archival turn in the past twenty-five years. The term archival turn was first used by the anthropologist and historian Ann Stoler, in a paper given at a conference in Saint Petersburg, May 1998. I also participated in that conference and I quoted Stoler in my inaugural lecture later that year. This archival turn, or this move from archives-as-sources to archives-as-subject was presented by Stoler on several occasions, three of them events of extraordinary importance for the discipline of archivistics: the Sawyer seminar *Archives, documentation and institutions of social memory*, the book *Refiguring the Archive* and the journal *Archival Science*.

In 2000-2001 the Sawyer seminar brought some 70 scholars from fifteen countries to the University of Michigan in Ann Arbor (USA) (Blouin & Rosenberg, 2006). Ann Stoler's two papers (she was one of the few participants with a double bill) were later published and evolved into a chapter in Stoler, 2009. The participants in the twenty-eight sessions came from various disciplines in the humanities and social sciences, less than one third being scholars and practitioners in archivistics. The point of departure of the seminar's organizers, Fran Blouin and Bill Rosenberg, was "a conception of archives not simply as historical repositories but as a complex of structures, processes, and epistemologies" (Blouin & Rosenberg, 2006, p. vii). This heralded a new view of archives as epistemological sites rather than as sources. Ann Stoler's two papers presented at the Sawyer seminar convincingly argued for this archival turn, which was visible in several other presentations. Stoler developed her two papers into a presentation at the seminar *Refiguring the archive*, hosted in 1998 by the South-African University of Witwatersrand in conjunction with four archival institutions. The thirteen sessions of the seminar attracted speakers and discussants from a wide range of disciplines and professions. Among them Ann Stoler and Jacques Derrida. The book *Refiguring the archive* was published in 2002. In their introduction of *Refiguring the archive*, editors Carolyn Hamilton, Verne Harris and Graeme Reid stressed the constructedness of archives, not simply as sources but as sites of contested knowledge: "today scholars pay greater attention to the particular processes by which the record was produced and subsequently shaped,

both before its entry into the archive, and increasingly as part of the archival record" (Van Zyl & Verne, 2001, p. 9).

Archival Science: the Journal

Stoler's paper was subsequently published in the second volume (2002) of *Archival Science*. The journal (founded in 2001) marked the emancipation of archivistics as an autonomous scholarly discipline (Buchanan, 2011, p. 39). The founders formulated the journal's approach as integrated, intercultural and interdisciplinary (Horsman et al., 2001, pp. 1-2). *Integrated* because the journal would cover the whole of the records continuum. *Intercultural* because the journal would acknowledge "the impact of different cultures on archival theory, methodology and practice, by taking into account different traditions in various parts of the world, and by promoting the exchange and comparison of concepts, views and attitudes in those traditions" and *interdisciplinary* meant an association

with the scientific disciplines dealing with (1) the function of records and the way they are created, preserved and retrieved, (2) the context in which information is generated, managed and used and (3) the social and cultural environment of records creation in different times and places. (Horsman et al., 2001, p. 1)

This hospitality to other disciplines was and still is essential. As Terry Eastwood wrote in 2017 "In engaging other disciplinary perspectives, archivists have augmented their theory, methods, and practice with insights not of their own making but by no means foreign to their way of thinking. In some cases, these insights are surprising." (p. 19).

The Archive

Surprising, but I have to admit, sometimes staggering. In the past twenty-five years, much of the literature on "the archive" has often been received by members of the archival profession with "[r]ejection, indignation, speculation and even amusement" because "the archive" "seemed to them to be a misguided, misdirected, poorly understood and overly theorized construct of a primarily practical pursuit" (Bastian, 2016, p. 4). This narrow

view has been rectified in recent years by educators and scholars in archivistics like Jeannette Bastian who endeavoured to reconcile “the archive” with the archives. Indeed, one shouldn’t make a fuss over the conceptual and practical differences between the singular and the plural³. Archives and archive are as Geoffrey Yeo’s proposes “boundary objects”, which “straddle many different communities of practice; any given object could be claimed by two or more communities” (Yeo, 2008, p. 131).

Postmodernism

The second volume of *Archival Science* (2002) consisted of two thematic double issues *Archives, Records and Power*. The guest editors, Terry Cook and Joan Schwartz, argued in their introduction that archives “are not passive storehouses of old stuff, but active sites where social power is negotiated, contested, confirmed” (Schwartz & Cook, 2002, pp. 1-19). Terry Cook had, the year before, contributed to *Archival Science* the inaugural article “Archival science and postmodernism: new formulations for old concepts”. He ended that article by stating

Process rather than product, becoming rather than being, dynamic rather than static, context rather than text, reflecting time and place rather than universal absolutes - these have become the postmodern watchwords for analyzing and understanding science, society, organizations, and business activity, among others. They should likewise become the watchwords for archival science in the new century, and thus the foundation for a new conceptual paradigm for the profession. (Cook, 2001a)

Such a new paradigm — not only for the profession, but for archivistics as a scholarly endeavour — was presented in the first volume of *Archival Science* by Fernanda Ribeiro (Ribeiro, 2001; see also Ribeiro, 2007). She realized, like Terry Cook, that archival science was reaching a turning point at which old and new perspectives coexist. Her article confronted “the traditional and, admittedly, still dominant view, substantiated in the *historical-technicist* paradigm, and a new approach, which we will designate as *scientific-informational*”. This led *inter alia* to the design of a new curriculum for

³ Unlike Caswell, 2014.

teaching information science which went beyond the traditional separation between archives and libraries.

Terry Cook's article in *Archival Science* dealt with the impact of postmodern ideas on archival theory (Tognoli, 2010). In another article, published in the same year in *Archivaria*, Terry focused more on the societal conditions of postmodernity and how postmodern insights might improve archival practice and profession (Cook, 2001b, p. 14). Inspiration for this came from various thinkers and writers both within and outside archival science. Because, to quote Terry Eastwood again, "engaging other disciplinary perspectives" is essential to any discipline, to theory, methodology and practice (Eastwood, 2017, p. 15). What we have learned from postmodernism is the realization that the so-called "principles" cherished by our profession "such as *respect des fonds*, are likewise revealed as historically contingent, not universal or absolute" (Cook, 2001b, p. 27).

Archives and Collections

Take, for example, the notion of "organically grown" archives, as opposed to "artificially constructed" collections. The concept of a "collection" has been haunting archival practitioners and theorists ever since the *respect des fonds* was formulated in 1841 and codified in the Dutch *Manual for the arrangement and description of archives* of 1898. The core idea of the *Manual* was "that an archive is not so much an arbitrary collection, but a whole that has arisen organically" (Horsman et al., 2001, p. 261). Archives, according to the *Manual*, are the "reflection" of the creator's functions and therefore "not arbitrarily created in the way that historical manuscripts are accumulated" (Muller et al., 2003, p. 19). This organic growth, so many people believed, distinguishes archives from libraries and other "artificial" collections. That difference was obscured in the English edition of the *Manual* because the translator replaced the Dutch "archief" throughout by: archival collection (the Portuguese translation stuck to: arquivo). "Archival collection" became standard in American terminology to the extent that, for example, Mark Greene could write in the recently published *Encyclopedia of archival science* about an archival collection (what Europeans would call: *archief*, *arquivo*, *Archiv*) "Note that an archival collection is not to be confused with an artificial collection, which is a set of individual items with separate provenance brought together by a collector around a theme." (Duranti & Franks, 2015, p. 33).

The difference between “organically grown” archives and artificially constructed collections was effectively “deconstructed” by James Currall, Michael Moss and Susan Stuart in two articles published in 2005 and 2006 (Currall et al., 2005; Currall, 2006; see also Ketelaar, 2024, pp. 43-44). They argued that all collections in archives, libraries and museums are constructed and mediated. The creators of a collection privilege some items to be part of the aggregation and reject (often implicitly) others. In my country text messages sent and received by phone by public officials are considered to be archival documents. Very recently it became known that the Dutch prime minister used to select from the text messages he received and sent the ‘important ones’ — the rest he deleted every day from his phone, apparently assuming that the latter were not archival. In creating his archives, he thus privileged some text messages while rejecting others, putting some on the archival pedestal, sending others into oblivion as “non-archival documents”. Such privileging, Currall, Moss and Stuart argued, “is inevitably dynamic, reflecting contemporary circumstances and preoccupations”. They concluded that the “various stakeholders in information provision in both the physical and digital domains” should

enter into meaningful dialogue, not just to quibble about semantics but to debate the harder theoretical, technical and philosophical problems that we have raised and attempted to address. This presents new opportunities to us all, but threatens the carefully cherished boundaries between professions in the established order. (Currall et al., 2006, p. 117)

Process-bound

However, accepting the socially constructed nature of collections *and* archives should not lead to lumping them together. The logic of the archives⁴ involves that records and archives are what Theo Thomassen calls “process-bound”, that is: they are “generated by coherent work processes and structured and recorded by these work processes in such a

⁴ According to the Oxford English Dictionary logic is “a system or set of principles underlying the arrangements of elements in a computer or electronic device so as to perform a specified task” (*Oxford English Dictionary*, 1998).

way that it [the meanings of the record *EK*] can be retrieved from the context of those work processes.” (Thomassen, 2001, p. 374). Archival science is a contextual science, as Foscarini and Illerbaig wrote recently (Foscarini & Illerbaig, 2017, p. 177).

Consequently, we do not consider the record or document merely on its own, but within the context of the work process which created the document, and which gives each document its specific meaning within that context. Archiving includes creating and linking a document to a transaction and to the other documents of that transaction by some form of physical or virtual filing. The “archival bond” or the interrelatedness between the records created and received during a particular transaction, is an essential characteristic of archives (Duranti & Franks, 2015, pp. 28-29).

Contexts⁵

The process-bound character of records and archives entails, as I said, looking up from the record and through the record to its contextual agency: the why, who, what, and how⁶. Archiving is a cultural, social and political practice, influenced by societal challenges (including archivalisation) and by technologies, not directly but through the agency of actors who act in a function executing specific work processes, according to a mandate and the actor’s functions. In my book *Archiving people* I proposed a model of the archival context (Ketelaar, 2020). It is based on a model by Hans Hofman who adapted an Australian model (SPIRT Recordkeeping Metadata Research Project) by adding “business processes” (Hofman, 2000, p. 58; 2005, p. 138; Hofman’s model was based on the modelling in the SPIRT Recordkeeping Metadata Research Project: McKemmish et al., 1999, pp. 12-13). I renamed some of the labels and added “societal challenges” and “technology”.

⁵ On contexts see Ketelaar, 2023a, pp. 35-56.

⁶ The term “contextual agency of records” is used by Foscarini & Illerbaig (2017, p. 191).

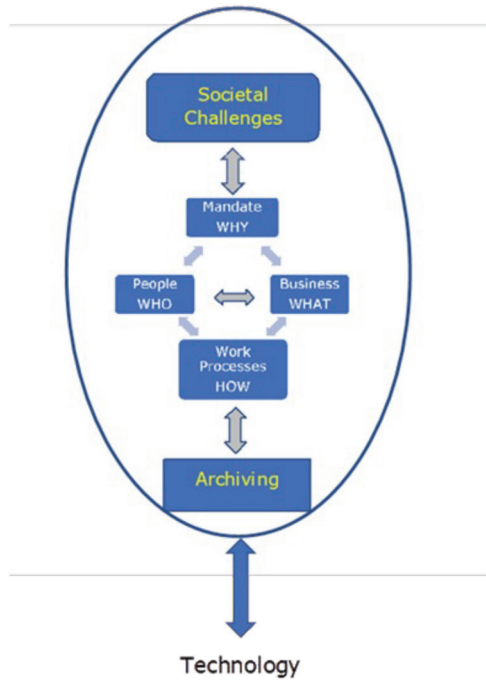


Figure 1 - Model of the archiving context (Ketelaar, 2020, p. 275b, Fig. 11.21).

For example, we acknowledge the need felt by society for an armed force that is anchored constitutionally (mandate: **why**). This results in functions (**what**) performed by actors (**who**) in specific work processes (**how/where/when**). All this leads to archiving (Ketelaar, 2020, p. 275b; 2023b, pp. 169-182). The changing views of society about, for example, military service have an influence on the military's mandate and subsequently on the functions (the enlisting system), actors (governments, citizens, businesses) and work processes, leading to changes in archiving. Each of these interdependent components is time- and place-bound and influenced by technology. This makes the model dynamic, the more so when we realize that "Archiving" in the model stands for the records continuum wherein archival documents travel back and forth in a recursive process across four dimensions: creation, capture, organization, and pluralization (making the records available to society). Therefore, the model is embedded in various temporalities: why, who, what, and how will change, *and* creation, capture, organization, and pluralisation will change, *and* societal challenges *and* technology will change.

Provenance

In this vision the provenance of archives is linked to functions and activities, rather than to structure and place. Provenance is one of the traditional tenets or principles in archivistics (Douglas, 2017; Michetti, 2017). However, “a new wave of theorizing the concept of ‘provenance’ (...) suggests that the archival field continues to explore and re-interpret both the affordances and inadequacies of what is generally considered a foundational principle”, as a call for papers for a special issue of *Archival Science* on provenance declared, some months ago.

An earlier wave of rediscovering provenance was marked, thirty years ago, by the publication of *Canadian archival studies and the rediscovery of provenance*, edited by Tom Nesmith (1993). Some years later, Nesmith proposed a new concept of provenance: “The provenance of a given record or body of records consists of the social and technical processes of the records’ inscription, transmission, contextualization, and interpretation which account for its existence, characteristics, and continuing history.” (Nesmith, 1999, p. 146; Millar, 2002, pp. 1-15).

Many scholars and practitioners are working with provenance, in various conceptualizations of the tenet. Peter Horsman said in 2011: “more conceptually, provenance is now rather defined as context” (Horsman, 2011, p. 2). Or rather: contexts (plural), what Verne Harris calls “an ever-unfolding horizon of context(s)” (Harris, 2011, p. 360). There is a risk, however, that in this “incessant movement of continual recontextualisation” the boundaries of provenance become infinite and that “meaningful distinctions between the various parties who concur in the formation of a group of records over time and the role they play may be obscured”, as Jennifer Douglas cautions. She advocates acknowledging “the ways in which each of these types of intervention differs from each other in their motives, methods and eventual impact” (Douglas, 2017, p. 40). This calls for more research both on each of the components of my model of the archival context and on their interdependencies and their relative value.

Records-in-Contexts

One of the operationalisations of this view of “provenance defined as context” is the conceptual model *Records in contexts* (note the plural!) or RiC, currently being developed by the International Council on Archives and

meant to replace older standards like ISAD (G) (International Council on Archives, 2023; Santos & Revez, 2023, pp. 137-158). The model recognizes that the contexts in which archival materials arise and are used over time are dynamic and complex. The model proposes a way of contextual description in order to offer different perspectives and different access options. According to RiC, the description of an archival item makes the network of related actors, documents, functions and processes and their contextual history transparent. Among these actors are not only record creators and archivists, but a host of “archivers” (Ketelaar, 2023c, pp. 287-295; or “activators” according to Douglas, 2017, pp. 129-149), in fact “everyone who has contributed to the record and has been affected by its action,” to quote Livia Iacovino who advocates a “participant model” of provenance along the lines of earlier proposals by Chris Hurley and others (Iacovino, 2010; Upward et al., 2011). As I argued at the Sawyer seminar and subsequently in my *Tacit narratives* (2001) “Every interaction, intervention, interrogation, and interpretation by creator, user, and archivist is an activation of the record.” (Ketelaar, 2001; Yeo, 2018, pp. 39-40). This is echoed in the RiC model: “ongoing use and reuse of the records becomes part of the history of the records; it re-contextualizes them. The use and reuse generate other records, thereby extending the social-document network” (International Council on Archives, 2023, p. 7; see also Santos & Revez, 2023, p. 149; McLeod & Lomas, 2023, p. 437).

The same is true for the use and reuse by records-subjects, their communities and other co-creators. But, as Jessica Lapp argues, “not all record interventions can be reduced or elevated to the level of co-creation” (Lapp, 2023, p. 125). She refers to Michelle Caswell’s refusal to position prisoners of the Khmer Rouge “as co-creators of their photographic prison record, suggesting that to do so would position victims of the Khmer Rouge as somehow complicit in their trauma, abuse, and murder” (Caswell, 2014, pp. 18-20, 58-59, 158). Nonetheless, “recognizing the rights of co-creators as part of an archive’s provenance” (Douglas, 2017, p. 43) is a first step towards decolonizing archival theory, methodologies and practices, decolonizing being one of the great challenges to the archival profession (Gordon, 2014).

Archivalterity

Postmodern views have led archival scholars to repudiate the assumption that archival documents are static, unchangeable, fixed. They are “shaped

by the decisions and actions of their originators and custodians” (Yeo, 2018, p. 42). I will deal later with the fixity of digital records.

The Australian records continuum model implies that an archival document while travelling throughout the continuum is created and recreated, getting different meanings along the way. This is called by Heather MacNeil archivalterity, which “refers to the acts of continuous and discontinuous change that transform the meaning and authenticity of a fonds as it is transmitted over time and space” (MacNeil, 2008, p. 14). This challenges archival theory and methodology to displace or at least change traditional conceptualisations of records and archives. I may refer to the important work of international multidisciplinary research networks like Interpares and RecordDNA (Duranti & Thibodeau, 2006, pp. 13-68; McLeod & Lomas, 2023, pp. 411-446; InterPARES. International Research on Permanent Authentic Records in Electronic Systems, 2002; Record DNA, n.d.). The former, led by Luciana Duranti (University of British Columbia) and the latter, led by Elizabeth Lomas and Julie McLeod (University College London and University of Northumbria) yielded important output, including a host of questions for future multidisciplinary or “convergent” research (McLeod & Lomas, 2023, p. 400).

Affordances

Most archivists would keep to the definition of records as “information created, received and maintained as evidence and information...” etc. (Yeo, 2018, p. 51). This circular definition (information is information) in the international standard ISO 15489 was amended later into “information created, received and maintained as evidence and as an asset by an organization or person...”. Both the original and the revised definition of records have been scrutinized by Geoffrey Yeo in his remarkable book *Records, information and data. Exploring the role of record-keeping in an information culture* (2018), the fruit of many years of thinking and writing about records and archives. In 2007 Yeo proposed that information is not an entity that can be managed; information is one of the properties (or, in Geoffrey Yeo’s terminology: affordances) of a record, “a capacity that records can supply to a user, or a benefit that can be derived from their use” (Yeo, 2018, pp. 95-96; *Oxford English Dictionary*, n.d.). Evidence is another affordance of records (McLeod & Lomas, 2023, pp. 418-420). Other affordances of records are values like “memory, accountability, legitimization of power, a sense of personal or

social identity and continuity, and the communication of such benefits across space and time” (Yeo, 2007, p. 330).

These affordances are potentials, awaiting to be activated and to give a meaning to the record. A record does not *have* meanings: “different meanings are assigned to the same resource by different people at different times”, as Jonathan Furner wrote, and he added “that “the” conventional meaning of a given resource is a matter of intersubjective consensus” (Furner, 2010, pp. 4155-4156). This approach brings the user and their meaning making to the forefront.

Para-archiving

Allow me a personal note here. In 1997 the chair of archivistics at the University of Amsterdam was transferred from the history department to book, library, and information studies which was renamed into library, archives and information studies. The latter two were subsequently moved to the newly created department of media studies. There I discovered how colleagues working with television, film, journalism, and new media were primarily interested in the reception of media and the interaction with readers and viewers, more than in the production. That opened my eyes to paying more attention in archival studies to the user as co-creator and to archiving as a human practice. People are involved in day-to-day acts of classification, arrangement, selection, etc. (Van Alphen, 2023, p. 16). Think of arranging books on a bookshelf, or using a mobile phone to capture images, or throwing away the shopkeeper’s receipt. These are basically archiving practices. Media scholar and artist Jacek Smolicki proposes the concept of para-archiving:

a practice performed on a personal level, by an amateur and dilettante interested in documenting and possibly preserving some aspects of the world that he/she is genuinely passionate and curious about in their everyday life. (...) [it] occurs parallel to other kinds of both voluntary and non-voluntary, automated, imperceptible capturing and micro-archiving practices and mechanisms taking place on daily basis. (Smolicki, 2017, p. 17; see also Smolicki, n.d.)

Recently Anne Klein, professor at the Laval University in Québec, has proposed a Copernican turn in archival theory and practice (Klein, 2019). She states “archives become truly archives only through their utilization”.

She advocates rethinking archives from the point of view of their exploitation rather than from their production. She amends the records continuum model by adding exploitation as a fifth dimension. This proposal to bring the exploitation of archives and thus the user of archives to the forefront is in line with other recent paradigmatic changes in archival theory, methodology and practice. One was labeled Archives 2.0, an approach in which archivists use technology to become more user-centered, another move towards archival autonomy. This is a concept recently proposed by Australian scholars, being “the ability for individuals and communities to participate in societal memory, with their own voice, becoming participatory agents in recordkeeping and archiving” (Evans et al., 2015, p. 347; Gilliland & McKemmish, 2014, pp. 78-88)⁷. Viewing archives as participatory frameworks is broadening into a view of archives as part of an ecology, a term I used “to stress the interdependence, mutuality, and coexistence of archives/records and other memory texts in a societal context” (Ketelaar, 2014, p. 150; see also Taylor, 1984, pp. 25-37; Wick, 2017, pp. 13-34). Actors in that ecology are the archivists I mentioned before. But not all archivists are equal in the deeply social world of the archive, as sociologists Damon Mayrl and Nicholas Hoover Wilson found out (Mayrl & Wilson, 2020, pp. 407-426). In the relationship between scholars/users and archivists, they write, “vectors of inequality” may be hidden. They are instances of power. Indeed, every interaction with the archive by an archivist is intentionally or unintentionally enforced by power (Ketelaar, 2002, pp. 221-238; 2005, pp. 277-298; Jimerson, 2009).

The Digital

Archival science in the 21st century studies phenomena that look like traditional facts and events, even carry traditional labels, but that are conceptually totally different. An ‘original’ is no original, a ‘record’ is not a record, ‘provenance’, ‘preservation’, ‘access’, and ‘use’ are no provenance, preservation, access, and use as we used to know them (Ketelaar, 2007, pp. 167-191).

Digital records don’t have their content, structure and form in or on a physical medium. They are *potential* documents, coming into existence only by virtue of software that understands how to access and display them. The

⁷ On people’s participation in the preservation of digital art, by crowdsourcing and webarchiving see Bartlett, 2017, pp. 131-148.

software sooner or later becomes obsolete, which necessitates “refreshing” the documents through migration or other techniques. The perceptible form of a digital document “is always being manufactured just-in-time, on the spot” (Levy, 2001, p. 152). This makes a digital document an ephemeral fluid manifestation. The same is true for digital instantiations of works of art — digital-born or digitized analogue materials. I argue that preserving an artwork or an archival document means enacting it by capturing the ephemeron, drawing on the reserves embedded in the originating instantiation of the work, at its inception. Further instantiations are what the people at the Rhizome digital archive (Rhizome Archive, n.d.) call variants, they will not and cannot be exact copies, they are approximations, if only because the public is not the same as in earlier performances. This makes the distinction between original and copy irrelevant “to those concerned with performance and liveness”, as Nash and Vaughan argue about digital performance artworks, but it would be also true for digital documents (Nash & Vaughan, 2017, p. 153; Ketelaar, 2003, p. 13).

Ephemerality

“Archives are comprised in their continuing and future enactment and use; in layers of performance.” (Clarke et al., 2018, p. 11). They are not static, “they are constantly refreshed so that their ephemerality endures”, to quote Wendy Hui Kyong Chun (Chun, 2008, p. 167; repr. in: Huhtamo & Parikka, 2011, p. 184). This enduring ephemerality has been tested, for example, by the Australian Circus Oz Living Archive, founded in 2014 and revived in 2022 (Circus Oz Living Archive, 2014; Carlin & Vaughan, 2015). This living archive “is not merely a digital repository; it is a dynamic part of the mediated enactment of design in, and as, cultural imagination and articulation” (Morrison et al., 2015, p. 163). The Circus Oz Living Archive is one example of the endeavours to preserve works of art by enactment, rather than by “freezing” a particular instantiation which traditionally has been seen as a characteristic of the archive.

Artists and archivists have to become “more permissive of change” (Jones et al., 2009, p. 169) of the work of art and the archive, more permissive of the ephemeral performance of art and archive. Annet Dekker signals that changing attitudes “towards archiving are increasingly focused on ephemerality and require strategies of modulation, movement, and mutation” (Dekker, 2017, p. 20).

Appraisal⁸

The editors of *Artists in the archive* define archiving as giving place, order and future to the remainder. “The double meaning of *remain*”, Jussi Parikka writes, “is that which is left behind as enduring legacy that is archived but also that which is *left out* of the classification or the archive” (Parikka, 2019, p. 5). Indeed, archives are a residue, left after the non-archivable has been removed (Miller, 2002, p. 6). Archiving entails appraisal, which is “distinguishing records of continuing value from those of no further value so that the latter may be eliminated” (The National Archives, 2022).

Appraisal is one of those interventions which co-determine the meaning of archives, because the archives after appraisal are not the same as the archives before appraisal. In the digital age, the appraisal process begins with the design of the recordkeeping system when one determines which documents are captured, that is: accepted by the system and thus becoming records. Moreover, digital records cannot be left on the shelves for years, waiting to be appraised. Therefore at the front-end one has to decide which documents have to be kept in the system as records, and which records can be disposed of later, either through destruction or by transferring them to another system. “Archiving by design” means that when designing the information systems that support work processes, one has to take into account the sustainability of the information from those work processes.

Sustainability

Sustainability implies acting “that meets the needs of the present without compromising the ability of future generations to meet their own needs”⁹. The major change in the 21st century and the major challenge for the archival endeavour is the existential threat from climate change (global warming), requiring an urgent switch to sustainability, in particular environmental sustainability, in all areas of archival practice (Pendergrass et al., 2019, p. 166). Much of the as yet scarce literature on archives and climate change concerns the “receiving end”: the threat to archives of climate change. But equally (and perhaps more) important is to look at the “producing end, to

⁸ This paragraph is taken from Ketelaar, 2023a, p. 46.

⁹ Adapting the definition of sustainable development in the Brundtland report *Our common future* (1987), cited by Pendergrass et al., 2019, endnote 5.

the treat *from* archives: how much is archiving contributing to global warming through emission of greenhouse gasses. Recently a special issue of *Comma*, the journal of the International Council on Archives was devoted to archives and climate change. It contains, among others, an in-depth study by Aurèle Nicolet and Basma Makhoul Shabou, on the ecological costs of our archival practices (Nicolet & Shabou, 2021, pp. 399-415).

In my country, the impact on climate change of the National Archives of The Netherlands has been calculated as 3879 ton CO² equivalent, just as much as the emission of 204 Dutch households (of 2.2 people). Nearly all (87%) of that footprint is caused by IT and data storage, plus energy (9%). Reducing emissions and energy consumption are the key solutions to tackle global warming and its effects (loss of biodiversity, forest fires, sea level rise, etc.). “Archival workers,” Samantha Winn writes, “have both an ethical imperative and a functional exigency to develop practices which do not require infinite exploitable resources” (Winn, 2020, p. 12). As the code of ethics of the Archives & Records Association (UK & Ireland) states: “Insofar as it is within their power to do so, members should minimise the adverse effects of their work on the environment.” (Archives & Records Association (UK & Ireland), 2020).

In 2019 the *American Archivist* published an extensive report *Toward environmentally sustainable digital preservation* which not only includes a thorough literature review, but importantly offers a roadmap (see also Abbey, 2012, pp. 92-115; Paschalidou et al., 2022, pp. 1066-1088) for strategies to reduce the environmental impact of digital archival practices. Even more important and more difficult are the report’s recommendations to reevaluate the archivist’s basic assumptions of appraisal, permanence, and availability of digital content (Pendergrass et al., 2019, pp. 167, 181). Such a reevaluation is urgent. Cultural heritage organisations, the authors Keith Pendergrass, Walker Sampson, Tim Walsh, and Laura Alagna argue, “need to reduce the amount of digital content that they preserve while reducing the resource-intensity of its storage and delivery” (Pendergrass et al., 2019, p. 177). This entails a number of paradigm shifts.

Paradigm Shifts

The first paradigm shift concerns appraisal. Some people assume that appraisal of records (what to keep, what to destroy) is no longer necessary in the digital age because of the unlimited storage capacity and searchability of

digital media. That is, however, a myth. Enduring storage and enduring access require enormous resources: buildings, staff, energy, constant upgrading and migration of software and hardware, etc. Every terabyte less as a result of appraisal, is not only a saving in these annually recurring costs, but more importantly a reduction of the archives' carbon footprint¹⁰. To reduce the environmental impact, archival institutions have to develop additional criteria alongside existing principles for selection and appraisal (Pendergrass et al., 2019, p. 182). Pendergrass and his co-authors formulate questions like "Is there a demonstrated need for digital availability of the analog materials?" Do you need to preserve all copies of a digital record or (a more uneasy question) do you need to preserve the analog original that has been digitized? Should every item be migrated or digitized to the highest quality possible?

The second paradigm shift, signaled by Pendergrass and his co-authors, concerns permanence (O'Toole, 1989, pp. 10-25). They challenge the assumption in current digital preservation practice of "a goal of zero change or loss in digital collections over time" (Pendergrass et al., 2019, p. 186); and they urge archival institutions to "determine acceptable levels of loss in digital preservation programs". Paschalidou et al. (2022, pp. 1072-1074) "advocate a paradigm of 'sufficiency'". As Jeff Rothenberg wrote two decades ago in a report commissioned by the Dutch National Archives: we must choose what to lose (Rothenberg & Bikson, 1999, p. 6; Rothenberg, 2000, p. 56). Instead of striving for permanence, archivists should decide what constitutes "good enough" digital preservation, using terms as "continuing" or "enduring". "Perhaps the rhetoric of the archive should move away from notions of fixed, stable records" (Jones et al., 2009, p. 169). Rinehart and Ippolito advocate to relinquish the "fixation with fixity" (Rinehart & Ippolito, 2014, p. 95; see also, McLeod & Lomas, 2023, p. 413), and embrace "lossyness" (Goldman, 2019, p. 289). Furthermore, improving the efficiency of preservation practices (for example reducing the frequency of fixity checks and the number of redundant copies), will lead to the storage of less data and thus reducing the storage footprint.

The third and final paradigm shift proposed in the report *Toward environmentally sustainable digital preservation* relates to availability. Users expect "near-constant" (24/7) and immediate access to any and all digital born and digitized materials (Pendergrass et al., 2019, p. 191). But they usually do not realize that retrieving files from a digital collection causes CO² emissions. The footprint of the archive service grows with every action in which its

¹⁰ Geoffrey Yeo discusses various options of keeping everything digital and minimizing appraisal of digital records: Yeo, 2018, pp. 45-63; see also Bussel & Smit, 2014, pp. 271-277.

servers use computing power and also with the loading of web pages and the downloading of files. However,

Cultural heritage organizations can reduce the environmental impact of digital access and delivery by critically examining the justifications for mass digitization, implementing on-demand access strategies, adjusting storage technologies for access, and ensuring timely — but not necessarily immediate — delivery. (Pendergrass et al., 2019, p. 192)

Changes

Each of these three paradigm shifts (regarding appraisal, permanence, and availability) entails changes in archival science and the archival profession. Each of these paradigms shifts calls for theoretical and methodological revisiting of canonical principles and practices. They were once conceived, adapted and adopted. They are not immanent and immobile. On the contrary, in the longer term they are variable and changeable. This offers room for agency, for evolution and often also for revolutionary changes in archival principles and practices. Changes that are often the consequence of changes in society, technology, etc. Opposing those changes with an appeal to tradition (“it has always been like that”) is a bad tactic. This also applies to an appeal to the law or to professional ethics: “that is not allowed”. After all, the rules of law and professional conduct were created by people, people who acted in a certain environment at a certain time for a certain purpose.

Archivistics as a scholarly and professional endeavour, too, is not immanent and immobile. It moves through time and space, adapting, inhaling, and infusing from other disciplines. Archivistics has profited from positivism, structuralism, postmodernism, from scholarship in historiography, anthropology, critical race theory, sociology, psychology, philosophy, cultural and literary theory, and art. Archivistics is being enriched by feminist, queering, and postcolonial methodologies and epistemologies which “are a powerful means of addressing the tenets of Western archival scholarship and practice” (Lapp, 2023, p. 133). They are the “archival returns” or new perspectives endowing and changing archival theory, methodology, and practice (Ketelaar, 2016, pp. 228-268).

Everything flows and nothing stays, Heraclitus said. No person ever steps in the same river twice. And so I am back at the beginning: “If we want things to stay as they are, things will have to change”.

I have dealt with a number of changes. The first was the new way of looking at and beyond the record, trying to read its tacit narratives of power and knowledge, and taking into account archivality, which “refers to the acts of continuous and discontinuous change that transform the meaning and authenticity of a fonds as it is transmitted over time and space” (MacNeil, 2008, p. 14). This means a broadening — thus a change — of archival science and an openness to contributions from other disciplines. In the move to the digital, Michael Moss and David Thomas argue, “records have stepped beyond their boundaries” (Moss & Thomas, 2024, pp. 139-150). Looking beyond the record brings the contexts of archiving to the forefront, the why, who, what, and how, embedded in various temporalities. Contexts will change, *and* creation, capture, organization, and pluralisation will change, *and* societal challenges *and* technology will change. Major changes in archival theory, methodology and practice are effected by bringing the exploitation of archives and thus the user of archives to the forefront. This is in line with other recent changes such as viewing archives as participatory frameworks, acknowledging archival autonomy, and viewing archives as part of an ecology. I have argued that archivists have to become “more permissive of change” of the archive, more permissive of the ephemeral performance of the archive.

Temporalities

Before closing, I want to return to climate change and time. Climate change endangers the archivist’s core mission to steward records and archives for the benefit of present and future generations. In a non-linear time framework is the past never past, it is never “over”, as trauma victims know all too well (Caswell, 2021, pp. 26-47). The past is present in the here-and-now, time future is “contained in time past,” as T.S. Eliot wrote (Burnt Norton).

Time present and time past
Are both perhaps present in time future,
And time future contained in time past (Ketelaar, 2004, pp. 20-35).

These words could serve as a motto of records continuum thinking, wherein (as I said) archival documents have no single temporality but travel in time back and forth. “They are configured and refigured through spacetime.”

(McKemmish, 2016, p. 140). Once written or spoken they “enter past time and can only be understood from present time” (Moss & Thomas, 2017, p. 55), in a non-linear but recursive sequence not separating past, present and future. Derrida writes that every interpretation of the archive is an enrichment, an extension of the archive. That is why the archive is never closed. It opens out of the future (Derrida, 1996, p. 68). The archive is not just a sheltering of the past: it is, in Derrida’s words, an anticipation of the future (Derrida, 1996, p. 18). That future has already begun.

References

- Abbey, H. N. (2012). The green archivist: a primer for adopting affordable, environmentally sustainable, and socially responsible archival management practices. *Archival Issues*, 34(2), 92-115. <https://www.jstor.org/stable/41756175>
- Archives & Records Association (UK & Ireland). (2020). *Code of Ethics*. https://static1.squarespace.com/static/60773266d31a1f2f300e02ef/t/6082c97ac1fa88333ca028b1/1619183995112/Code_Of_Ethics_February_2020_final.pdf
- Bartlett, V. (2017). Web archiving and participation. The future history of performance? In T. Sant (Ed.), *Documenting performance. The context and processes of digital curation and archiving* (pp. 131-148). Bloomsbury Publishing.
- Bastian, J. (2016). Moving the margins to the middle: reconciling ‘the archive’ with the archives. In F. Foscari, H. MacNeil, M. Bonni, & G. Oliver (Eds.), *Engaging with records and archives. Histories and theories* (pp. 3-20). Facet.
- Blouin, F. X., & Rosenberg, W. (Eds.). (2006). *Archives, documentation, and institutions of social memory. essays from the Sawyer seminar*. University of Michigan Press.
- Buchanan, A. (2011). Strangely unfamiliar: ideas of the archive from outside the discipline. In J. Hill (Ed.), *The future of archives and recordkeeping. A reader*. Facet.
- Bussel, G-J. van, & Smit, N. (2014, September 11-12). *Building a green archiving model: archival retention levels, information value chain and green computing* [Conference]. Proceedings of the 8th European Conference on IS Management and Evaluation, Ghent. https://www.researchgate.net/publication/273777831_Building_a_Green_Archiving_Model_Archival_Retention_Levels_Information_Value_Chain_and_Green_Computing#fullTextFileContent
- Carlin, D., & Vaughan, L. (Eds.). (2015). *Performing digital. Multiple perspectives on a living archive*. Ashgate.
- Caswell, M. (2014). *Archiving the unspeakable*. University of Wisconsin Press, Madison.
- Caswell, M. (2016). “The archive” is not an Archives. Acknowledging the intellectual contributions of archival studies. *Reconstruction: Studies in contemporary culture*, 16(1). <https://escholarship.org/uc/item/7bn4v1fk>
- Caswell, M. (2021). *Urgent archives. Enacting liberatory memory work*. Routledge.
- Chun, W. H. K. (2008). The enduring ephemeral, or the future is a memory. *Critical inquiry*, 35(1), 148-171. <https://doi.org/10.1086/595632>

- Circus Oz Living Archive. (2014). *Living Archive*. <http://hdl.handle.net/11343/287014>
- Clarke, P., Jones, S., & Kaye, N. (Eds.). (2018). *Artists in the archive*. Routledge.
- Cook, T. (2001a). Archival science and postmodernism: new formulations for old concepts". *Archival Science*, 1, 3-24. <https://doi.org/10.1007/BF02435636>
- Cook, T. (2001b). Fashionable nonsense or professional rebirth: postmodernism and the practice of archives. *Archivaria*, (51), 15-35.
<https://archivaria.ca/index.php/archivaria/article/view/12792>
- Cook, T. (2012). A ciência arquivística e o pós-modernismo: novas formulações para conceitos antigos. *InCID: Revista de Ciência da Informação e Documentação*, 3(2), 3-27.
<https://www.revistas.usp.br/incid/article/download/48651/52722/59371>
- Currall, J., Moss, M., & Stuart, S. (2005). What is a collection? *Archivaria*, (58), 131-146.
<https://archivaria.ca/index.php/archivaria/article/view/12480>
- Currall, J., Moss, M., & Stuart, S. (2006). Privileging information is inevitable. *Archives and manuscripts*, 34(1), 98-122.
<https://publications.archivists.org.au/index.php/asa/article/view/9839>
- Dekker, A. (2017). Introduction. What it means to be lost and living (in) archives. In A. Dekker (Ed.), *Lost and living (in) archives. Collectively shaping new memories*. Valiz.
- Derrida, J. (1996). *Archive fever: A Freudian impression*. University of Chicago Press.
- Douglas, J. (2017). Origins and beyond: the ongoing evolution of archival ideas about provenance. In J. MacNeil, & T. Eastwood (Eds.), *Currents of archival thinking* (pp. 25-52). Libraries Unlimited.
- Douglas, J. (2018). A call to rethink archival creation: exploring types of creation in personal archives'. *Archival Science*, 18, 29-49. <https://doi.org/10.1007/s10502-018-9285-8>
- Duranti, L., & Franks, P. C. (Eds.). (2015). *Encyclopedia of Archival Science*. Rowman & Littlefield.
- Duranti, L., & Thibodeau, K. (2006). The concept of record in interactive, experiential and dynamic environments'the view of InterPARES. *Archival Science*, 6, 13-68. <https://doi.org/10.1007/s10502-006-9021-7>
- Eastwood, T. (2017). A contested realm. The nature of archives and the orientation of archival science. In H. MacNeil, & T. Eastwood (Eds.), *Currents of archival thinking* (pp. 3-24). Libraries Unlimited.
- Evans, J., McKemmish, S., Daniels, E., & McCarthy, G. (2015). Self-determination and archival autonomy: advocating activism. *Archival Science*, 15.
<https://doi.org/10.1007/s10502-015-9244-6>
- Foscarini, F., & Illerbaig, J. (2017). Intertextuality in the archives. In F. Smit, A. Glaudemans, & R. Jonker (Eds.), *Archives in liquid times* (pp. 176-195). Stichting Archiefpublicaties.
- Furner, J. (2010). Philosophy and the information sciences. In M. Bates, & M. Niles Maack (Eds.), *Encyclopedia of library and information sciences* (pp. 4155-4156). Taylor & Francis.
- Gilliland, A., & McKemmish, S. (2014). The role of participatory archives in furthering human rights, reconciliation and recovery. *Atlanti: Review for Modern Archival Theory and Practice*, 24, 78-88. <https://escholarship.org/uc/item/346521tf>
- Goldman, B. M. (2019). It's Not Easy Being Green(e): Digital Preservation in the Age of Climate Change'. In C. Weideman, & M. A. Caldera (Eds.), *Archival values: essays in honor of Mark Greene* (p. 289). Society of American Archivists.

- Gordon, A. A. (2014). *Eurocentric archival knowledge production and decolonizing archival theory* [PhD thesis, York University of Toronto]. Yorkspace: York University's Institutional Repository. <https://yorkspace.library.yorku.ca/bitstreams/4c24eedc-f13a-440d-93a7-609c1d2029b6/download>
- Harris, V. (2011). Ethics and the archive. In T. Cook (Ed.), *Controlling the past. Documenting society and institutions. Essays in honor of Helen Willa Samuels* (p. 360). Society of American archivists.
- Hofman, H. (2000). Een uitdijend heeler? Context van archiefbescheiden. In P. J. Horsman, F. C. J. Ketelaar, & T. H. P. M. Thomassen (Eds.), *Context. Interpretatiekaders in de archivistiek* (p. 58). Stichting Archiefpublicaties.
- Hofman, H. (2005). The archive. In S. McKemmish, M. Piggott, B. Reed, & F. Upward (Eds.), *Archives. Recordkeeping in society* (p. 138). Charles Sturt University.
- Horsman, P. (2011, October 10-11). *Wrapping records in narratives. Representing context through archival description* [Paper presentation]. Usability of the Archives of the International Tracing Service Workshop at the ITS, London.
https://www.academia.edu/88882181/Wrapping_records_in_narratives
- Horsman, P., Ketelaar, E., & Thomassen, T. (2001). Presenting archival science. *Archival Science*, 1, 1-2. <https://doi.org/10.1007/BF02435635>
- Horsman, P., Ketelaar, E., & Thomassen, T. (2003). New respect for the old order: the context of the Dutch Manual. *The American Archivist*, 66(2), 249-270.
<https://doi.org/10.17723/aarc.66.2.452235k813568872>
- Huhtamo, E., & Parikka, J. (Eds.). (2011). *Media archaeology. approaches, applications and implications*. University of California Press.
- Iacovino, L. (2010). Rethinking archival, ethical and legal frameworks for records of Indigenous Australian communities: a participant relationship model of rights and responsibilities. *Archival science*, 10, 353-372. <https://doi.org/10.1007/s10502-010-9120-3>
- International Council on Archives. (2023). *Records in Contexts – Foundations of Archival Description (RiC-FAD)*. <https://www.ica.org/en/records-in-contexts-foundations-of-archival-description>
- International Research on Permanent Authentic Records in Electronic Systems (InterPARES). (2002). *The InterPARES 1 Project*. <http://www.interpares.org/>
- Jimerson, R. C. (2009). *Archives power. Memory, accountability, and social justice*. Society of American Archivists.
- Jones, S., Abbott, D., & Ross, S. (2009). Redefining the performing arts archive. *Archival Science*, 9, 165-171. <https://doi.org/10.1007/s10502-009-9086-1>
- Ketelaar, E. (2001). Tacit narratives: The meanings of archives. *Archival Science*, 1, 131-141. <https://doi.org/10.1007/BF02435644>
- Ketelaar, E. (2002). Archival temples, archival prisons: modes of power and protection. *Archival Science*, 2, 221-238. <https://doi.org/10.1007/BF02435623>
- Ketelaar, E. (2003). Being digital in people's archives. *Archives & Manuscripts. The Journal of the Australian Society of Archivists*, 31(2), 8-22.
<https://publications.archivists.org.au/index.php/asa/article/view/9661>
- Ketelaar, E. (2004). The future contained in time past: archival science in the 21st century. *Journal of the Japan Society for Archival Science*, 1, 20-35.
<https://hdl.handle.net/11245/1.227317>

- Ketelaar, E. (2005). Recordkeeping and societal power. In S. McKemmish, M. Piggott, B. Reed, & F. Upward (Eds.), *Archives: Recordkeeping in Society* (pp. 277-298). Charles Sturt University.
- Ketelaar, E. (2007). Archives in the digital age: new uses for an old science. *Archives & Social studies: A Journal of interdisciplinary Research*, 1(0), 167-191. http://archivo.cartagena.es/doc/Archivos_Social_Studies/Vol1_n0/10-ketelaar_archives.pdf
- Ketelaar, E. (2014). Archives, memories and identities. In C. Brown (Ed.), *Archives and recordkeeping. Theory into practice* (p. 150). Facet.
- Ketelaar, E. (2016). Archival turns and returns. Studies of the archive. In A. J. Gilliland, S. McKemmish, & A. J. Lau (Eds.), *Research in the archival multiverse* (pp. 228-268). Monash University Press. <http://library.oapen.org/handle/20.500.12657/31429>
- Ketelaar, E. (2020). *Archiving people. A social history of Dutch archives*. Stichting Archiefpublicaties. https://archivisticshome.files.wordpress.com/2020/01/archiving-people_eric-ketelaar_2020_webversion.pdf
- Ketelaar, E. (2023a). Archival contexts. *Archeion*, 124, 35-56. https://www.researchgate.net/publication/376719164_Archival_contexts
- Ketelaar, E. (2023b). A social history of military archiving: the case of the Netherlands in the nineteenth century. In C. Santoro, «*Gli archivi nelle sommosse e nelle guerre*». *Dall'età napoleonica all'era della cyber war* (pp. 169-182). Archivio di Stato di Milano. <https://dgagaeta.cultura.gov.it/public/uploads/documents/FuoriCollana/659b9b52276e0.pdf>
- Ketelaar, E. (2023c). The agency of archivists. In A. Prescott, & A. Wiggins (Eds.), *Archives: Power, Truth and Fiction* (pp. 287-295). Oxford University Press.
- Ketelaar, E. (2024). Commentary on *Privileging information is inevitable*. In J. McLeod, A. Prescott, S. Stuart, & D. Thomas (Eds.), *Michael Moss on archives. Beyond the four corners of the page* (pp. 43-44). Routledge.
- Klein, A. (2019). *Archive(s), mémoire, art. Éléments pour une archivistique critique*. Presses de l'Université Laval.
- Lapp, J. M. (2023). "The only way we knew how:" Provenancial fabulation in archives of feminist materials. *Archival Science*, 23(1), 117-136. <https://doi.org/10.1007/s10502-021-09376-x>
- Levy, D. M. (2001). *Scrolling forward. Making sense of documents in the digital age*. Arcade.
- MacNeil, H. (2008). Archivalterity: Rethinking Original Order. *Archivaria*, 66(1), 1-24. <https://archivaria.ca/index.php/archivaria/article/view/13190>
- Matienzo, M. A. (2008, July 9-11). *Canonization, archivalization, and the "archival imaginary"* [Paper presentation]. Archive fervour/archive further: literature, archives, and literary archives, Aberystwyth, Wales. <https://repository.arizona.edu/handle/10150/216929>
- Mayrl, D., & Wilson, N. H. (2020). The archive as a social world. *Qualitative Sociology*, 43, 407-426. <https://doi.org/10.1007/s11133-020-09462-z>
- McKemmish, S. (2016). Recordkeeping in the continuum. An Australian tradition. In A. J. Gilliland, S. McKemmish, & A. J. Lau (Eds.), *Research in the Archival Multiverse* (p. 140). Monash University Press. <http://library.oapen.org/handle/20.500.12657/31429>
- McKemmish, S., Acland, G., Ward, N., & Reed, B. (1999). Describing records in context in the continuum. The Australian recordkeeping metadata schema. *Archivaria*, 48, 3-37. <https://archivaria.ca/index.php/archivaria/article/view/12715>

- McLeod, J., & Lomas, E. (2023). Record DNA: reconceptualising digital records as the future evidence base. *Archival Science*, 23, 411-446. <https://doi.org/10.1007/s10502-023-09414-w>
- Michetti, G. (2017). Provenance in the archives. The challenge of the digital environment. In F. Smit, A. Glaudemans, & R. Jonker (Eds.), *Archives in liquid times* (pp. 228-246). Stichting Archiefpublicaties. <https://hdl.handle.net/11573/1109870>
- Millar, L. (2002). The death of the fonds and the resurrection of provenance: archival context in space and time. *Archivaria*, 53, 1-15. <https://archivaria.ca/index.php/archivaria/article/view/12833>
- Morrison, A., Arnall, T., Nordby, K., & Westvang, E. (2015). Breathing life into research mediation. In D. Carlin, & L. Vaughan (Eds.), *Performing digital* (p. 163). Routledge.
- Moss, M., & Thomas, D. (2017). Overlapping temporalities – the judge, the historian and the citizen. *Archives*, 52(134), 51-66. <http://dx.doi.org/10.3828/archives.2017.4>
- Moss, M., & Thomas, D. (2024). The four corners of the page and the digital record". *Arşiv Dünyası*, 7(2), 139-150. <https://dergipark.org.tr/en/pub/ad/issue/58522/837284>
- Muller, S., Feith, J. A., & Fruin, R. (2003). *Manual for the arrangement and description of archives*. (2nd ed.). Society of American Archivists.
- Nash, A., & Vaughan, L. (2017). Documenting digital performance artworks. In T. Sant (Ed.), *Documenting Performance: The Context and Processes of Digital Curation and Archiving* (pp. 149-160). Bloomsbury Publishing. <https://researchrepository.rmit.edu.au/esploro/outputs/9921860611301341>
- Nesmith, T. (1999). Still fuzzy, but more accurate: some thoughts on the 'ghosts' of archival theory. *Archivaria*, 47, 136-150. <https://archivaria.ca/index.php/archivaria/article/view/12701>
- Nesmith, T. (Ed.). (1993). *Canadian archival studies and the rediscovery of provenance*. Scarecrow Press.
- Nicolet, A., & Shabou, B. M. (2021). Coûts écologiques de nos pratiques archivistiques. *Comma*, 2021(2), 399-415. <https://doi.org/10.3828/coma.2021.35>
- O'Toole, J. (1989). On the idea of permanence. *The American Archivist*, 52(1), 10-25. <https://doi.org/10.17723/aarc.52.1.3x85283576r43387>
- Oxford English Dictionary. (1998). Logic – 2. In J. Pearsall (Ed.), *The New Oxford Dictionary of English* (p. 1085). Clarendon Press.
- Oxford English Dictionary. (n.d.). *Affordance*. OED - Oxford English Dictionary. <https://www.oed.com/search/dictionary/?scope=Entries&q=affordance>
- Parikka, J. (2019). Remain(s) scattered. In I. B. Jucan, J. Parikka, & R. Schneider (Eds.), *Remain*. Meson press. <https://doi.org/10.25969/mediarep/12385>
- Paschalidou, E., Fafet, C., & Milios, L. A. (2022). A Strong Sustainability Framework for Digital Preservation of Cultural Heritage: Introducing the Eco-Sufficiency Perspective. *Heritage*, 5, 1066-1088. <https://doi.org/10.3390/heritage5020058>
- Pendergrass, K. L., Sampson, W., Walsh, T., & Alagna, L. (2019). Toward environmentally sustainable digital preservation. *The American Archivist*, 82(1), 165-206. <https://doi.org/10.17723/0360-9081-82.1.165>
- Record DNA – International Research Network. (n.d.). *Record DNA*. International Research Network. <https://recorddna.wordpress.com/>
- Rhizome Archive. (n.d.). *Rhizome.org*. <http://archive.rhizome.org/>

- Ribeiro, F. (2001). Archival science and changes in the paradigm. *Archival Science*, 1, 295-310. <https://doi.org/10.1007/BF02437693>
- Ribeiro, F. (2007). An integrated perspective for professional education in libraries, archives and museums: a new paradigm, a new training model. *Journal of education for library and information science*, 48(2), 116-124. <https://www.jstor.org/stable/40323813>
- Rinehart, R., & Ippolito, J. (2014). *Re-collection: Art, new media, and social memory*. MIT Press.
- Rothenberg, J. (2000). Preserving authentic digital information. In Council on Library and Information Resources. *Authenticity in a digital environment*, (56). <https://www.clir.org/pubs/reports/pub92/>
- Rothenberg, J., & Bikson, T. K. (1999). *Carrying authentic, understandable and usable digital records through time*. RAND Corporation. https://www.rand.org/pubs/rand_europe/RE99-016.html
- Santos, C., & Revez, J. (2023). Applying Records in Contexts in Portugal: the case of the scientific correspondence from António de Barros Machado and Dora Lustig archive. *Archival Science*, 23, 137-158. <https://doi.org/10.1007/s10502-022-09401-7>
- Schwartz, J. M., & Cook, T. (2002). Archives, records, and power: the making of modern memory. *Archival Science*, 2, 1-19. <https://doi.org/10.1007/BF02435628>
- Smolicki, J. (2017). *Para-archives. Rethinking personal archiving practices in the times of capture culture* [PhD thesis, Malmö University]. Malmö University Publications. <https://mau.diva-portal.org/smash/resultList.jsf?aq=%5B%5B%7B%22localid%22%3D23599%7D%5D%5D&dswid=-3829>
- Smolicki, J. (n.d.). *Jacek Smolicki*. <https://www.smolicki.com/>
- Stoler, A. L. (2002). Colonial archives and the arts of governance. *Archival Science*, 2, 87-109. <https://doi.org/10.1007/BF02435632>
- Stoler, A. L. (2009). *Along the archival grain. Epistemic anxieties and colonial common sense*. Princeton and Oxford, Princeton University Press.
- Taylor, H. A. (1984). Information ecology and the archives of the 1980s. *Archivaria*, 18, 25-37. <https://archivaria.ca/index.php/archivaria/article/view/11075>
- The National Archives. (2022). *What is appraisal?* The National Archives. <http://www.nationalarchives.gov.uk/documents/information-management/what-is-appraisal.pdf>
- Thomassen, T. (2001). A first introduction to archival science. *Archival Science*, 1, 373-385. <https://doi.org/10.1007/BF02438903>
- Tognoli, N. B. (2010). *A contribuição epistemológica canadense para a construção da arquivística contemporânea*. [Dissertação de Mestrado, Universidade Estadual Paulista]. Repositório Institucional Unesp. <http://hdl.handle.net/11449/93669>
- Upward, F., McKemmish, S., & Reed, B. (2011). Archivists and changing social and information spaces: a continuum approach to recordkeeping and archiving in online cultures. *Archivaria*, 72, 197-237. <https://archivaria.ca/index.php/archivaria/article/view/13364>
- Van Alphen, E. (2023). Introduction. When is archiving productive, and when is it not? In E. van Alphen (Ed.), *Productive archiving. Artistic strategies, future memories, and fluid identities* (p. 16). Valiz.
- Van Zyl, S., & Verne, H. (Eds.). (2001). *Refiguring the archive*. David Philip Publishers.
- Wick, A. (2017). We're all vegans here: the twenty-first century archival ecosystem. *Journal of archival organization*, 14(1-2), 13-34. <https://doi.org/10.1080/15332748.2018.1503020>

- Winn, S. (2020). Dying well in the Anthropocene. On the end of archivists. *Journal of Critical Library and Information Studies*, 3(1), 1-12. <https://doi.org/10.24242/jclis.v3i1.107>
- Yeo, G. (2007). Concepts of Record (1): Evidence, information, and persistent representations. *The American Archivist*, 70(2), 315-343. <https://doi.org/10.17723/aarc.70.2.u327764v1036756q>
- Yeo, G. (2008). Concepts of record (2): prototypes and boundary objects. *The American Archivist*, 71(1), 118-143. <https://doi.org/10.17723/aarc.71.1.p0675v40tr14q6w2>
- Yeo, G. (2018). *Records, information and data: exploring the role of record keeping in an information culture*. Facet Publishing.