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## Things That Work - Meditations on Materiality in Archival Discourse

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## THINGS THAT WORK: MEDITATIONS ON MATERIALITY IN ARCHIVAL DISCOURSE

The development of information technology in interplay with social and political changes has brought about a considerable shift in communication practices, production, and work processes. As a result, documentation practices and the creation of records have undergone considerable transformations. These changes led to a call for a paradigm shift in archival discourse during the late 1900s—a need for theory development, renewal of methodological principles, and changes in practice.<sup>1</sup> A significant part of the theory development that has taken place in these last decades concerns criticism and a reevaluation of fundamental concepts, such as the concept of records. Early conceptualizations of records focused on tangible documentary objects situated in a physical context. This means that the artefactual characteristics were considered significant. When circumstances changed, for instance when new technologies were introduced, the established definitions did not meet those changes. A reconceptualization focusing on principal aspects, applicable to various kind of objects in various environments, was thus more or less necessary. The renewal of archival theory has drawn on more abstract and functional qualities of records. This has led to a “shift from the actual record to the conceptual context of its creation, from the physical artifact to the intellectual purpose behind it, from matter to mind.”<sup>2</sup> It also brought on “a focus on records as logical rather than physical entities, regardless of whether they are in paper or electronic form.”<sup>3</sup> Material properties have therefore become less salient as attributes of “recordness.” Archivists need to consider records as conceptual artifacts, rather than purely as physical objects.

Another factor impacting the redefinition of the records concept has been the emergence of (at least by name) postmodern ideas, advocated by Brian Brotman, Terry Cook, and to some extent Erik Ketelaar, among others. Postmodernism arrived rather late in archival discourse, but it had an influential impact during the 1990s and early 2000s, contesting established “truths” and questioning the existence of essential qualities and the universal validity of ideas. Certain strands of the theoretical debate were influenced by poststructuralism and the so-called linguistic turn in philosophy, which regards language as constitutive and gives discourse primacy over matter. This conceptual shift, together with a commonsense notion that digital information (which constitutes contemporary records to a large extent) is “immaterial,” resulted in that materiality more or less being excluded from the theoretical discourse. However, postmodernism and poststructuralism carried a seed of materialism, and during the heyday of postmodernism in the 1990s, a reaction arose against the all-encompassing emphasis on discourse.

A renewed interest in materiality has gained foothold in several academic disciplines since then, including anthropology, cultural studies, language and literature, media studies, and organizational studies, among others. The emergence of various, partly overlapping philosophical schools identified or self-identified as materialism—new materialism, material feminism, critical materialism,

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<sup>1</sup> For further discussions on archival paradigms and paradigm shifts, see Cook, “What Is Past Is Prologue”; Thomassen, “The Development of Archival Science and Its European Dimension”; and Upward, “Modelling the Continuum as Paradigm Shift.”

<sup>2</sup> Cook, “Mind over Matter,” 38.

<sup>3</sup> Upward, “Structuring the Records Continuum,” 276.

speculative materialism, and so on—further demonstrate this focus.<sup>4</sup> That is to say, the linguistic turn has been overtaken by a “material turn” occupied with artifacts and objects, bodies, spaces, and technologies. Scholars have become interested in how human relationships are formed by a material environment, how humans act on and are acted on by material objects, and in the materiality of the human body as well. It might be presumptive to talk about a material turn in archival science so far, but an emerging interest in materiality is noticeable within academic archival discourse.<sup>5</sup>

Still, materiality is undertheorized in archival discourse. Rather, it can be considered a “black box” that needs to be unfolded in order to understand its impact on archival theory and archival practices. In this essay, I explore the concept of materiality and how it relates to records. I discuss what themes concerning materiality have emerged in contemporary archival discourse, and how recognizing materiality can contribute to the understanding of records. The article is based on a literature review. A search on “materiality” and “records” or “archives” gave only a handful of returns. Based on the reading of those, I identified some relevant proxies for materiality: “documentary form,” “artifact,” “significant properties,” and “intrinsic value.” I then performed a search on those terms in the bibliographic databases Scopus; Web of Science; Library, Information Science, and Technology Abstracts (LISTA); and Google Scholar, combined with a snowball sampling. However, the aim was not to perform an exhaustive systematic literature review but to identify areas within archival scholarly discourse of relevance for the topic. Out of the survey of literature I identified the following areas of research: the conceptualization of records, digitization, and the experiential encounter with records.

The following section of this article outlines the concept of materiality as an analytical lens, based primarily on the twenty-first-century discussion within the humanities on the materiality of digital information. The next two sections address the concept of records and how it has been challenged since the 1990s. The fifth section discusses how digitization and digital transformation have raised the issue of materiality, and the sixth section explores how material aspects might involve sensory, emotional, and affective reactions. In the final part, the themes are tied together, eliciting the materiality of records as a strand in archival discourse.

## The Meaning of Materiality

To discuss the materiality of a phenomenon, it is necessary to pinpoint the notion of materiality itself. Materiality is a complex idea with different meanings in different philosophical contexts, as well as in the vernacular. Contemporary definitions of materiality suggest that the concept of materiality has several, slightly different connotations.<sup>6</sup> To start with, materiality is a quality related to *matter*, being composed of or consisting of matter, that is, having a physical or bodily existence. Materiality can also refer to having relevance or significance, for instance in law, for example, material evidence. In this sense, materiality is a more abstract notion, not necessarily referring to physical phenomena but to phenomena with an impact on other phenomena.

The discussion of materiality has its roots in classical philosophy. Aristotle distinguished in his

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<sup>4</sup> See, for instance, Eagleton, *Materialism*.

<sup>5</sup> Ketelaar, “Archiving Technologies”; Lester, “Of Mind and Matter.”

<sup>6</sup> For example, “Materiality,” in *Oxford English Dictionary*, <https://www.oed.com/>.

*Metaphysics* between *hyle*, matter, and *eidos*, form.<sup>7</sup> Those two are analytically separate but cannot exist without each other in the actual world. For Aristotle, matter was the original element out of which things could develop, while form was the organizing principle making things into what they are. Matter thus represents a potential actualized by form. Form is what merely gives an object its identity, and form and matter together make possible the fulfillment of the cause of the object, its purpose. This reflects Aristotle's teleological worldview in which everything has an ultimate purpose that it strives to fulfill. Few admit today to a teleological worldview concerning the natural world, but in the social world purpose and intentionality have explanatory value. If confining our discussion to the world of human-made objects, that is, artifacts, purpose is of focal interest. An artifact is an "object that has been intentionally made or produced for a certain purpose."<sup>8</sup> Artifacts are made or arranged in ways that render them certain affordances in order to achieve certain results, that is, they are assigned specific *functions*. The qualities of an object that are relevant to its functioning are the *significant* properties of the object.<sup>9</sup> Those traits make it possible for objects to do something, to have an impact. Or, perhaps more accurately, they make it possible to do something with those objects.

The technological development of new media and digital artifacts has led to a discussion on the status and constituents of "the digital," not least digital information. Since digital information lacks the tangibility and fixity of analog information objects, it has often been regarded as immaterial. The internet might have augmented this reasoning, giving the impression that digital information is ethereal and unbounded. For example, the metaphor "cloud computing" suggests something free-floating in the air. It disregards the fact that creation, transfer, and storing of digital information are all dependent on a material infrastructure. Furthermore, scholars have contested the idea of digital immateriality. In his studies of technology and organization, Paul M. Leonardi defines materiality in the Aristotelian tradition as a combination of material and form: "the ways an artifact's physical and/or digital materials are arranged into particular forms that endure across differences in place and time."<sup>10</sup> Materiality thus offers a degree of resistance toward the environment, enabling a certain amount of stability. Ultimately, this leads to the quality of being *real* in an ontological sense. Leonardi questions the digital artifacts as *physical* while still keeping to their materiality. He claims that materiality should not primarily be equated with being composed of (physical) matter but rather as practical instantiations of theoretical concepts and manifestations, or as having significance in a particular context: "Something is 'material' if it makes a difference in the current situation."<sup>11</sup>

The materiality of digital information can be defined in different ways, partly depending on its complexity. Paul Dourish and Melissa Mazmanian, for instance, consider how various aspects of digital media can be regarded as material and identify five conceptualizations of the materiality of information: (1) information as cultural objects with symbolic value; (2) information linked to platforms and networks in overarching information infrastructures; (3) the material conditions of information production, distribution, and consumption; (4) information metaphors conditioning our understanding of the world with material consequences; and (5) the materiality of

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<sup>7</sup> Aristotle, *Metaphysics*.

<sup>8</sup> "Artifact," in *Stanford Encyclopedia of Philosophy*, <https://plato.stanford.edu/entries/artifact/>.

<sup>9</sup> "Artifact."

<sup>10</sup> Leonardi, "Materiality, Sociomateriality, and Socio-Technical Systems," 29.

<sup>11</sup> Leonardi, "Digital Materiality?" 8.

representation, that is, how textual and visual expressions of information impact interpretation, understanding, and use.<sup>12</sup> Scholars within the humanities have shown interest particularly in the last. Literary critic N. Katherine Hayles claims that “electronic textuality—along with many others—*cannot be separated from the delivery vehicles that produce it as a process with which the user can interact,*” and that “the text creates possibilities to create or pursue meaning by mobilizing certain aspects of its physicality.”<sup>13</sup> The material manifestation accordingly impacts the meaning of digital information and users’ understanding of it.

Matthew G. Kirschenbaum, professor of English and digital studies, emphasizes the significance of matter and digital objects. His notion of materiality involves a distinction between *forensic* materiality and *formal* materiality. The former refers to an individual trace inscribed to matter that could be identified by forensic means, while the latter refers to the possibility of manipulation of digital objects, for instance by different software—“the imposition of multiple relational computational states on a data set or digital object.”<sup>14</sup> Materiality seems thus to be a combination of the unique and the manifold, the fixed and the fluid, albeit restricted by certain conditions. As Kirschenbaum says, it is governed by a particular “regimen that assigns certain behaviors and affordances and denies others.”<sup>15</sup> Johanna Drucker, artist and critic as well as professor in information studies, recognizes other aspects of materiality than the objects’ inherent (physical) properties. Without denying the existence of such properties, she shifts the focus from what things are to what they do: “Objects don’t *represent*, they *perform*.”<sup>16</sup> Further, she introduces the concept of “performative materiality.” This concerns the effects of engagement with and interpretation of artifacts, which are always historically and culturally situated.

Hence, the concept of materiality also includes a capacity to impact and cause effects with certain consequences—to make a difference. In this sense, digital artifacts are no less material than physical objects. However, I would argue that this impact is at least partly due to the inherent properties of the artifacts, which brings us back to the combination of matter, form, and function as the pivotal notions of materiality.

### Materiality and the Concept of Records

Conceptualizations have long played an important role in archival discourse but gained a renewed interest in the 1990s. They are still considered an important part of archival science, and research projects like the Record DNA, with the aim to problematize the concept of digital records, show that the concept of records remains an intriguing problem in contemporary research and professional discourse.<sup>17</sup> The concept of records is today focal to archival theory. Even if it has its roots within an English common-law tradition and was originally confined to a more narrow, legal definition, the concept has now gained recognition internationally in archival discourse, despite the fact that many languages traditionally lack an equivalent term.<sup>18</sup> This is not to say that records have not existed in other legal environments, but they have been conceptualized differently, if at

<sup>12</sup> Dourish and Mazmanian, “Media as Material.”

<sup>13</sup> Hayles, “Translating Media,” 276.

<sup>14</sup> Kirschenbaum, *Mechanisms*, 12.

<sup>15</sup> Kirschenbaum, *Mechanisms*, 133.

<sup>16</sup> Drucker, “Performative Materiality and Theoretical Approaches to Interface,” para. 25.

<sup>17</sup> “Record DNA. International Research Network.”

<sup>18</sup> E.g., Yeo, “Records.”

all. More or less adequate equivalents to the records concept have only recently been developed outside the Anglo-American sphere. Such a conceptualization is necessary due to the emergence of an increased desire to talk about the phenomenon. This is due in part to the influence of international archival theory and the adherence to international standards but probably also to the need for a more inclusive concept, not limited to narrow legal definitions.

However, the concept of records is not entirely unambiguous in an English-speaking context either. Geoffrey Yeo distinguishes at least four interpretations: records as evidence, records as information, records as representations, and records as documents.<sup>19</sup> Traditionally, the last interpretation has been most prevalent in archival discourse. Records have often been equated with documents by records professionals and by the users of records, and “document” is still used as an equivalent to “records” in certain legal contexts. In archival scholarly discourse records have also long been linked to documents.<sup>20</sup> The definition of a document is not in itself unambiguous, and due to technological developments, it differs considerably from the traditional vernacular notion of “a piece of paper.”<sup>21</sup> More recent archival discourse has abandoned the connection between documents and records. Instead, recent definitions generally relate records to information rather than documents. For example, in the second edition of the international standard for records management, records are defined as “information created, received, and maintained as evidence and as an asset by an organization or person, in pursuit of legal obligations or in the transaction of business.”<sup>22</sup> The international standard for archival description describes records as “recorded information in any form or medium, created or received and maintained, by an organization or person in the transaction of business or the conduct of affairs.”<sup>23</sup> This means that the concept of records is to some extent dematerialized, that is, form, medium, and material are not prerequisites for their conceptualization. It is not the physical attributes that make an object qualify as a record according to these definitions. Still, implicit in these approaches is the idea that records are constituted by information that is recorded, which means in some sense objectified. The record is delimited by its connection to transactions or certain obligations and is possible to maintain, that is, has boundaries and a certain endurance. This suggests that records have “thingish” qualities even if those are ambiguous.

Nevertheless, the “thingish” characteristics of records are still emphasized in fairly recent conceptualizations. According to Richard J. Cox, “A record is a specific entity and is transaction oriented. It is evidence of activity (transaction), and that evidence can only be preserved if its content, structure, and context are maintained. Structure is the record form. Context is the linkage of one record to other records and to the originating process. Content is the data or information, but *content without structure and context cannot be reliable data or information.*”<sup>24</sup> Structure, an undoubtedly material feature, is thus regarded as a necessary component of a record. Structure is further explained in the Society of American Archivists’ glossary as “a record’s physical characteristics and internal organization of the contents. Record structure is the form that makes the content tangible

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<sup>19</sup> Yeo, “Records.”

<sup>20</sup> E.g., Thomassen, “A First Introduction to Archival Science,” and Duranti, Eastwood, and MacNeil, *Preservation of the Integrity of Electronic Records*.

<sup>21</sup> Weinberger, “What’s a Document,” para. 2.

<sup>22</sup> International Organization for Standardization, *ISO 15489-1:2016*, para. 3.14. Interestingly enough, the standard refers to records as “assets,” which can be regarded as assigning them a material value in the economic sense.

<sup>23</sup> International Council on Archives, *ISAD(G)*, 11.

<sup>24</sup> Cox, *Managing Records as Evidence and Information*, 46; emphasis added.

and intelligible. Physical characteristics include components and methods of assembly, such as paper, ink, seals, and font families, or character sets, encoding, and file formats. Structure also includes the intellectual organization of a document.”<sup>25</sup> Structure or documentary form is therefore constituted by the physical or visual outline of the record and the components from which it is made. Accordingly a material attribute is integral to the records concept, however secondary to the more recognized properties of information and evidence.

Traditionally the physical outline of the document and its constituent elements (e.g., textual elements, signs, and seals) were carrying testimony of the context of the document, its purpose, legal validity, and dispositive and performative functions, besides the actual content. Luciana Duranti claims that “the elements of a record’s physical form are intended to convey meaning.”<sup>26</sup> In Western legal history this is the outcome of two traditions.<sup>27</sup> Under the notarial system, formal requirements on the composition of a document, including written signs, were used to ascertain the validity of a document as a substitute for the personal testimony of the notary. In areas where the notarial system did not gain influence, the affixing of seals was the common mode, based in an oral tradition, to provide closure for dispositive and performative acts. Those elements could then be used to verify the authenticity of the document and its “recordness,” and to contribute to its understanding and interpretation. Both the physical form and composition, the sign and the seal, are obviously artifactual elements, that is, material attributes of the records that represent the intentions of the original agents. The importance of documentary form is recognized by both traditional and contemporary (digital) diplomatics. In the latter case, the physical attributes are substituted by, for instance, mandatory metadata elements, document architecture, time stamps, and electronic signatures representing origin, intent, purpose, technological and custodial history, and so on.<sup>28</sup>

The gist of this discussion is that material attributes are crucial both for the evidentiality and the understanding of the records. Materiality is a contextual attribute, but it is also augmenting content and it can be an information source as such.

### Challenging the Records Concept

As stated above, reconceptualization and reevaluation of theoretical principles have been an important feature of archival discourse since the 1990s. The concept of records has been both challenged and elaborated.

Geoffrey Yeo refers in several of his works to records as “persistent representations.”<sup>29</sup> The aim is perhaps not to challenge the records concept per se but to highlight some aspects that could contribute to a more inclusive notion of records. His main point is that the primary function of records is to represent acts or events. They can be used instead of, or function on behalf of, something or someone, and thus enhance the human capacity to act. In order to fulfill these functions records must have a certain degree of persistence. This representative function is fundamental and a prerequisite for all other functions or potential uses of records. Yeo thus emphasizes function, rather

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<sup>25</sup> Pearce-Moses, *A Glossary of Archival and Records Terminology*, 328.

<sup>26</sup> Duranti, “The Concept of Electronic Record,” 13.

<sup>27</sup> MacNeil, “Trusting Records”; MacNeil, “From the Memory of the Act to the Act Itself.”

<sup>28</sup> Duranti, “The Concept of Electronic Record.”

<sup>29</sup> Yeo, “Concepts of Record (1)”; Yeo, “Representing the Act”; Yeo, *Records, Information and Data*.

than the inherent properties of the actual objects, as the primacy of recordness. In his words, records have “affordances.”<sup>30</sup>

The concept of affordance has its roots in cognitive psychology and relates to “the perceived or actual properties of the thing, primarily those fundamental properties that determine just how the thing could possibly be used.”<sup>31</sup> For example, information is not a fixed property but arises in interaction with a user who becomes informed. According to Yeo, records provide possibilities that can be realized in different ways during different circumstances: “Besides information and evidence, affordances of records may include construction or reinforcement of memory and senses of identity and community, as well as generation of emotions, ideas, inspiration and guidance for future action.”<sup>32</sup> A similar position is held by Angelika Menne-Haritz, who claims that records can be sources of information but do not constitute information themselves.<sup>33</sup> Information can thus be constructed from the records through a process of use and interpretation. This is a possibility but not an invariable constant inherent in the records as such. Still, I would say that affordances are rooted in some (material) properties of the object itself. The representational function of records is, for instance, often expressed by physical and visual attributes, such as is examined in the discussion of documentary form above.

The reevaluation of theoretical principles has, to some extent, been technology driven. The technological development has challenged the notion of records and archives as stable, physical units, which in turn has influenced conceptual constructs. This has somewhat resulted in neglect of material aspects, but certain scholars have also advocated consideration of materiality as an element in the conceptualization of digital records. Amelia Acker, for instance, emphasizes the role of technological infrastructure. Her view of digital records includes “the physical form . . . but also extends to the systems, practice, and social institutions that are built up around artefacts.”<sup>34</sup> She argues that records are made possible *when* they are transmitted through different layers of infrastructure. Ciaran B. Trace likewise emphasizes the impact of the technological environment and regards records as *both* physical and logical objects, besides being conceptual objects.<sup>35</sup> By physical objects Trace refers to an inscription on a medium, but her focal interest lies with records as logical objects—objects that can be represented, processed, and manipulated by programs and software, an approach similar to Matthew Kirschenbaum’s notion of “forensic” and “formal” materiality.<sup>36</sup>

Even if technology and its impact have been an overriding theme in contemporary archival scholarship, there are other lines of thought. Not the least, postmodern and postcolonial thinking have raised issues previously unaccounted for. Among other things, that scholarship has contested established conceptualizations of records. A main criticism is that those conceptualizations and their practical employment represent a Western cultural and institutional perspective, disregarding other forms of memory-making, sources of evidence, and legal traditions. The result is a biased and deficient documentation of society, that is, an imperfect social and societal memory and the

<sup>30</sup> Yeo, *Records, Information and Data*, 93–97.

<sup>31</sup> Norman, *The Psychology of Everyday Things*, 9.

<sup>32</sup> Yeo, *Records, Information and Data*, 155.

<sup>33</sup> Menne-Haritz, “What Can be Achieved with Archives?”

<sup>34</sup> Acker, “When Is a Record?” 298.

<sup>35</sup> Trace, “Beyond the Magic to the Mechanism.”

<sup>36</sup> Kirschenbaum, *Mechanisms*, 10–11.



negligence of Indigenous traditions and minority cultures.<sup>37</sup> Alternative or extended conceptualizations of records are advocated as a response. Kimberly Anderson, for instance, rejects the ideas of “externalization and physical capture” as a foundation for recordness.<sup>38</sup> In that mode of thinking, records are assumed to be fixed in a physical form and temporally separated from their origination and the records creator. She claims that many social phenomena—oral speech, dance, and rituals—are immediate, dynamic, and indispensably connected to their creators. Thus, they cannot be captured in time and disembedded from the originating situation. Instead, she proposes an extended notion of records as “an intentional, stable, semantic structure, that moves in time.”<sup>39</sup> The question is how radical this reconceptualization actually is. I would argue that these forms of communication still require a medium, or perhaps more accurately a mediator, that embodies the message which should be communicated and makes a certain endurance possible by allowing the message to move in time. It could also be disputed how to define the creator and the origin of the message, but this is not the aim of the current discussion. My point is that such “records” no doubt are material, or materialized, due to bodily action.

To extend the notion of records to nontypical materials has also been the objective of authors such as Juan Ilerbaig and Amelia Acker, who argue the recordness of specimens and cell culture respectively. Ilerbaig’s fundamental question is to what extent material culture, here represented by natural specimens from a museum collection, can be read as records. In the course of the activities of the museum, the specimens have been part of a standardized system of record creation and gained documentary value, that is, representing knowledge about nature, which they once were a part of but now are separated from. Together with field notes, maps, and photographs they form an infrastructure that mediates scientific activity and knowledge. Ilerbaig further claims that the specimens share the properties of prototypical records: “A stable content, a fixed documentary form, an archival bond with other records, an identifiable context, are the result of an action, and were created by and for the appropriate persons.”<sup>40</sup> Acker for her part discusses the recordness of biological cells. As living biological material, cell culture challenges the traditional conceptualization of records by being changeable and self-reproducing. Cell cultures are testing “the linearity of time and externality because they carry multiple layers of time in the artifact.”<sup>41</sup> Acker, however, argues that cells could become records through a process of standardization and the transition over time through an infrastructure.

A common trait of the so-called non-prototypical records described above is some sort of fixity or stability and a potential of temporal endurance. These qualities are attributes of conventional records as well, and they are maintained by material means.

## The Digital and the Material

The proliferation of electronic information and particularly the occurrence of so-called born-digital records has been a recurring theme in academic and professional discourse since the early 1990s.

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<sup>37</sup> E.g., Pylypchuk, “The Value of Aboriginal Records as Legal Evidence in Canada”; McRanor, “Maintaining the Reliability of Aboriginal Oral Records and Their Material Manifestations”; and Frogner, “Innocent Legal Fictions.” For a general discussion on the topic, see Gilliland, “Archival and Recordkeeping Traditions in the Multiverse.”

<sup>38</sup> Anderson, “The Footprint and the Stepping Foot,” 351.

<sup>39</sup> Anderson, “The Footprint and the Stepping Foot,” 362.

<sup>40</sup> Ilerbaig, “Specimens as Records,” 479.

<sup>41</sup> Acker, “How Cells Became Records,” 5.

The digital artifact has become a sort of “wicked problem” for the archives and record-keeping communities. In one sense, this development has led to increasing interest in the material aspects of records. The management and preservation of digital information objects has become one of the most prioritized tasks for practitioners and institutions, and it has been subject to comprehensive research and development ventures. In another sense, the idea of records as material objects has been overlooked, as the contemporary definitions of the concept of records indicate.

One instance where material aspects have been taken into consideration regards digital transformation and the transfer of records among different technological platforms. The value of records traditionally stems from the fact that they are considered original remnants of past actions and events, and thereby serve as authentic evidence of those events. Still, in order to enhance preservation or dissemination, records have been multiplied and copied throughout history. In the mid-twentieth century microfilming became a usual method to multiply records, later substituted with digital media. The materiality of digitally born records has been touched upon in the discussion of the significant properties of records, which also is a matter of transformation. Scholars such as Geoffrey Yeo and Margaret Hedstrom and colleagues have questioned and problematized the possibility of transferring such properties fixed and unaltered.<sup>42</sup> The significant properties of digital objects are those “that affect their quality, usability, rendering, and behavior,” often discussed in relation to long-term preservation. The aim is to identify properties affecting “quality, functionality and *look-and-feel*” and to select adequate methods for preserving those properties considered significant by users.<sup>43</sup> A dimension of user experience is, interestingly enough, recognized beside the more traditional aims of preserving information and evidence.

The issue of materiality has perhaps been explicitly considered more often in connection with digitization of analog materials, rather than with digitally born records. A common purpose has been to create surrogates of the actual records, which could substitute for the original materials. To what extent these surrogates actually can stand in for the original records has depended on how much of the original properties could be transferred into a new medium. Even though the ambition has been a mere transfer to another technological platform, digitization implies a qualitative transformation. The result is the creation of representations with properties more or less in common with the original information objects but not identical reproductions. Digitization thus means the creation of new artifacts with specific properties adherent to their material instantiations. This has required some authors to emphasize the particular qualities of digitized material, qualities different from those of the originals.<sup>44</sup> Others emphasize the loss of materiality. For instance, Joanna Sassoon in her analysis of photographic objects claims that digitization of analog photographic materials results in a loss of materiality that changes the meaning of the materials. She problematizes the concept of an “original photograph.”<sup>45</sup>

Marianne Dever argues that digitization (and digitalization in general) raises the awareness of the material qualities of archives and uses the concept of “heightened materiality” for the “paradoxical

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<sup>42</sup> Hedstrom and Lee, “Significant Properties of Digital Objects”; Hedstrom et al., “The Old Version Flickers More”; Yeo, “Nothing Is the Same as Something Else”; Yeo, *Records, Information and Data*.

<sup>43</sup> Hedstrom and Lee, “Significant Properties of Digital Objects,” 218; emphasis added.

<sup>44</sup> Conway, “Archival Quality and Long-Term Preservation”; Conway, “Digital Transformations and the Archival Nature of Surrogates.”

<sup>45</sup> Sassoon, “Photographic Meaning in the Age of Digital Reproduction.”

moments when the actual or threatened disappearance of archived documents makes their distinctive material embodiment suddenly apparent to us.”<sup>46</sup> Her essential point is that as long as paper records are considered the “normal,” their particular qualities are more or less invisible and not brought to our attention until they are disrupted or threatened. The advent of digital technology has made the physical and visual conditions of paper records more salient, and it has raised new questions to explore on materiality. A similar approach is taken by Kiersten F. Latham, whose studies pursue the physicality of paper and how digital conversions of original materials impact the understanding and experience of the archives, considering “an acknowledgement of the role our senses and emotions play in the usage of this material.”<sup>47</sup> This leads to a discussion about the archives’ inherent and attributed values, and how they are affected by material transformations. Both authors focus on the materiality of original *paper* records, but they raise important questions regarding the implications of digital transformations and bring out the sensory and emotional experiences of archival material.

Angelika Menne-Haritz and Niels Brübach also emphasize the value of physical, visual, and formal attributes. Such attributes have testimonial qualities and bear contextual evidence because they “link texts to the material world and thus to their history and their transitoriness,” but also because “the [records’] content is linked to certain external features which bind it to material objects.”<sup>48</sup> Archival scholars refer to those material attributes with testimonial qualities as the “intrinsic value” of records. The notion of intrinsic value is used here as a general designation for properties that could be established with objective means—physical, visual, and formal characteristics (even if those could be experienced and interpreted in different ways). According to Menne-Haritz and Brübach, the application of intrinsic value in connection with appraisal concerns the identification of those attributes that have testimonial qualities, and the identification of the preservation strategies adequate to uphold them. Digitization as a preservation strategy thus requires thorough analysis of which properties are necessary to preserve. Menne-Haritz argues that “any aspect of form or appearance may be useful for the interpretation of the meanings. Any phenomenon, which may perhaps not be realized today as a sign or a carrier of information, can be useful for specific questions about reasons, intentions and effects.”<sup>49</sup>

Ala Rekrut holds a similar position and regards records as material culture, where physical evidence has to be assessed to preserve the meaning of the records. She argues that materiality is a source of information and integral to archival value, showing “traces of their [the records’] contexts of creation and re-creation by considering the choices of their creators, the functions they were intended to serve, and the technologies available to their creator(s), and how they have been further shaped by their users and custodians through time to the present.”<sup>50</sup> Even unintentional physical characteristics, such as material deterioration, wear and tear, olfactory sensations, and contamination, can carry information about the records, for instance of the object’s age, use, and custodial history. The physical imprints due to handling and environmental conditions convey information and bear evidence on extra-archival phenomena, that is, on other things than what the records are expected to represent.

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<sup>46</sup> Dever, “Provocations on the Pleasures of Archived Paper,” 174.

<sup>47</sup> Latham, “Medium Rare,” 15–16.

<sup>48</sup> Menne-Haritz and Brübach, *The Intrinsic Value of Archive and Library Material*, 3.

<sup>49</sup> Menne-Haritz, “Access,” 72.

<sup>50</sup> Rekrut, “Reconnecting Mind and Matter,” 6.

To what extent material properties can be maintained in a digital environment is thus a disputed issue. Digitization of analog materials, but also digital transformations of digitally born records, imply loss of certain properties and gain of others. Whether one outweighs the other depends on the circumstances and might be a matter of perspective, but the transformation no doubt impacts the users' experience and understanding of the material. Regardless of the diverging opinions of the significant properties—if those can be preserved over time and migrated to new technological platforms and to what extent migration and remediation impact the meaning and trustworthiness of the records—digitization does not diminish the importance of materiality; rather, it enhances that importance.

### Artifacts and Affect

The experience of records, their sensory and sensuous impacts, and how these affect people is another area where materiality is meaningful. The concept of intrinsic value can be used with a slightly different connotation in North American appraisal practice, where it seems to have its roots. In this context, intrinsic value seems to be a rather pragmatic notion not necessarily grounded in archival theory. It is used to identify records that “should be retained in their original form rather than copies.”<sup>51</sup> Intrinsic value refers to such technological and legal properties of records that need to be maintained to protect evidence, but also to aesthetic and artistic qualities, unique or curious physical features, age that implies uniqueness, and records' association with significant people, places, things, issues, or events.<sup>52</sup> Intrinsic value thus concerns extra-archival aspects of records such as aesthetic, antiquarian, or curiosity values, not records as evidence or information. It emphasizes the significance of records as unique artifacts.

James O'Toole poses a similar but perhaps more subtle view. He advocates an increased awareness of the “non-practical” values of records, “when the true significance and meaning of a record derive less from what appears on its surface text and more from its symbolic standing-in for something else.”<sup>53</sup> In some sense, this is inherent in the records concept per se, that records fulfill a “stand-in” function, as discussed above. However, O'Toole's focus lies beyond the instrumental or legalistic representative functions. His aim is to recognize records *as* symbols, *as* artifacts with, for instance, religious or historical significance for individuals or communities. That significance is not necessarily tied to the original purposes of the records or to them as records at all. Here, emotionally laden values are acknowledged, values that until recently archival discourse mostly disregarded. The symbolic function is, according to O'Toole, often manifested in documentary forms and visual attributes, for instance as decorative ornaments, expensive materials, or other spectacular features. The examples O'Toole brings forward are Bibles with annotations, diplomas, wills, and epitaphs. However, I think even more mundane attributes can carry such symbolic value. An example is the manual signature, which is still of legal importance, not to mention the handwritten letter. In a world primarily characterized by digital communication, those are awarded a certain sense of authenticity.<sup>54</sup>

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<sup>51</sup> National Archives and Records Service, “Intrinsic Value in Archival Material,” para. 1. For a critical analysis of the concept, see McRanor, “A Critical Analysis of Intrinsic Value.”

<sup>52</sup> National Archives and Records Service, “Intrinsic Value in Archival Material.”

<sup>53</sup> O'Toole, “The Symbolic Significance of Archives,” 238.

<sup>54</sup> Taylor, “My Very Act and Deed”; Neef, van Dijck, and Ketelaar, *Sign Here!*

Recent years have seen an increasing interest in the emotional and affective consequences of records and archives. This, for example, is manifested in a special issue of *Archival Science*.<sup>55</sup> Peter Lester's 2018 article "Of Mind and Matter" gives a comprehensive overview of the materiality of archival objects and argues that archives could render sensory responses which contribute to both intellectual understanding and emotional reactions in a holistic experience.<sup>56</sup> Notably, feminist scholars, for example, Marianne Dever, Kathy M. Carbone, and Marika Cifor, have acknowledged the affective impacts of records and archives related to their material properties. Dever says that we "think through paper," and its materiality—the form, the amount, the assemblage—mediates and conditions our experience of it and of the archive. She further argues that papers "have the capacity to do things," with emphasis on "do." That is, the papers in themselves have agency or, as she puts it, "vitality."<sup>57</sup>

Carbone emphasizes the potential of records and archives to evoke feelings and emotions but also agency due to their material properties: "Records are not solely representations of particular realities, but through the forces of their materiality and the presence of human bodies and activity they invoke, are affectively charged objects able to move people into new ways of being and doing."<sup>58</sup> This means that not only the informative content or the evidential nature affects people but also the artifactual and material qualities. Not the least is it the (once) bodily closeness to someone or something, or the physical presence in a situation at some moment in time (which as such are material phenomena), that evokes emotions and activity and mediates relations. Carbone thus brings forward the performativity of records and archives and claims that it is an important aspect of their materiality.

Cifor also call attention to the corporeality of archives and their connection to human bodies. She uses the concept of "liveliness" to express "how matter itself, including the bodily matter, is animate and imbued with a particular kind of agential and affective vitality."<sup>59</sup> Archival records are considered as dynamic, as lively agents whose materiality contributes to the production of meaning, emotions, and activity. There are similarities to Drucker's idea of performative materiality, where the material base provides "a point of departure" for production, that is, for action and agency and a course of events.<sup>60</sup> Similarly, Terry Cook argues that a record is "an active agent playing an on-going role in lives of individuals, organizations, and society."<sup>61</sup>

Materiality is here enhanced, since the symbolic, affective, and ultimately performative functions of records usually are tied to specific items. They are related to particular artifacts, artifacts with individual histories. However, materiality is also accentuated because the records might have been in bodily contact with the agents performing an original act, and hence they result from a physical performance. Consequently, the physical authenticity is usually of utmost importance to obtaining the experienced values.

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<sup>55</sup> "Affect and the Archive, Archives and Their Affects," special issue, *Archival Science* 16, no. 1 (March 2016).

<sup>56</sup> Lester, "Of Mind and Matter."

<sup>57</sup> Dever, "Photographs and Manuscripts," 291, 289.

<sup>58</sup> Carbone, "Artists and Records," 102.

<sup>59</sup> Cifor, "Stains and Remains," 6.

<sup>60</sup> Drucker, "Performative Materiality and Theoretical Approaches to Interface."

<sup>61</sup> Cook, "Archival Science and Postmodernism," 22.

## The Materiality of Records

Even if contemporary archival discourse has seldom addressed materiality explicitly, this quality is an underlying theme in such discourse. The issue of materiality primarily concerns three overarching subjects: the ontological status of records as a constituent of the conceptualization of records and their *raison d'être*; records as epistemological objects and mediators of significance and meaning; and, finally, the phenomenological dimension—the perceptual, cognitive, and emotional experiences of records. The topics of discussion are the records themselves as artifacts with certain properties; the environment of records such as systems, infrastructure, or social settings; and the impact or effects of records. The triad of matter, form, and function is thus still applicable as a manifestation of materiality.

In the analog world the information content—the “message”—and the structural elements situating it are integral to the matter, to a medium. The so-called prototypical record can be described as a substrate with information content, an inscription, and a form, organized according to certain rules and designed to fulfill certain purposes. In a digital environment the medium and the message, the substrate and inscription, are separated from each other, and physical fixity cannot be upheld more than temporarily. However, in each instance the actual record consists of a material foundation where, for instance, the technological infrastructure can function as a proxy for a physical substrate, carrying an information content. The objective of current preservation and migration strategies is to maintain the records’ potential to extend the immediate context of their creation and to be transferred between contexts with at least some of their attributes remaining. An analogy can be drawn to records as bodily performance. The physical embodiment serves as the medium for an information content that is structured according to certain rules as dance, gestures, rhymes, and so on, and recurringly performed. The message is in a sense objectified and made transferable in time and space.

Records are artifacts—intentionally made constructs aimed at fulfilling certain purposes, which brings functions and effects. They are manifestations of actions, decisions, or events, with evidential, informative, and not the least performative functions.<sup>62</sup> However, the functions of records might depend on circumstances and change over time, and they are contingent on the *use* of records. Due to the fact that records can be transferred to other contexts than the originating, they can have an impact that exceeds time and space. They can be used and reused for different purposes regardless of the originators’ intentions.

Records might also have an unintentional impact, for example, creating emotions. Archeologist Michael B. Schiffer has argued for and studied the pivotal role of artifacts in human life and activity, manifesting societal organizations and social relationships. As one of the fundamental functions of artifacts, he identifies “emotive functions” that evoke emotions and sensuous experiences besides technical, social, and symbolic functions.<sup>63</sup> As a secondary effect, these functions can elicit aesthetic experiences and memories. From this perspective, we can regard records as what Sherry Turkle, in her studies of psychological effects of human-technology interaction, refers to as evocative objects—objects that evoke and mediate emotions, sustain relationships, and render and

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<sup>62</sup> It is notable that the performative function is not explicit in established definitions of the records concept.

<sup>63</sup> Schiffer, *Studying Technological Change*, 23.

support intellectual activity.<sup>64</sup> The crux is that *objects* do affect humans, and they do so by merely being objects.

Records are things that work. They have the capacity to change status, extend human agency, and impact other agents' behavior. This capacity is possible because they are assigned agentive functions due to sociocultural practices or institutional frameworks, which are manifested in material attributes and thus recognizable. These functions are also transferable in time and space. A critical issue is their persistence or endurance, which is one of the actual points with keeping records and a material property, irrespective of whether the records are physical or digital. It is their materiality that enables records to do things, to enable or constrain human activity, either according to their original purpose or as an epiphenomenal effect.

Materiality is an undercurrent in archival discourse. Materiality matters, but it is rarely brought to the surface. By taking materiality into consideration we better understand records as sociocultural artifacts and their actual function and potential. A further critical conceptual discussion about the materiality of records would contribute to widen the perspectives of the archival discipline, and a fruitful approach could be to draw on tools and concepts from other disciplines.

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<sup>64</sup> Turkle, *Evocative Objects*.

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