

Authoring social reality with documents: From authorship of documents and documentary boundary objects to practical authorship

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**Abstract**

**Purpose:** In the context of organisation studies, Shotter and colleagues have used the notion of *practical authorship* of social situations and identities to explain the work of managers and leaders. This notion and contemporary theories of authorship in literary scholarship can be linked to authoring of documents in the context of document studies to explain the impact and use of documents as instruments of management and communication.

**Design/methodology/approach:** The conceptual discussion is supported by an empirical interview study of the information work of N=16 archaeologists.

**Findings:** Firstly, the making of documents and other artefacts, their use as instruments (e.g. boundary objects) of management, and the practical authorship of social situations, collective and individual identities form a continuum of authorship. Secondly, that because practical authorship seems to bear a closer affinity to the liabilities/responsibilities and privileges of attached to documents rather than to a mere attribution of their makership or ownership, practical authorship literature might benefit of an increased focus on them.

**Research implications:** This article shows how practical authorship can be used as a framework to link making and use of documents to how they change social reality. Further, it shows how the notion of practical authorship can benefit of being complemented with insights from the literature on documentary and literary authorship, specifically that authorship is not only a question of making but even more so, of social attribution of responsibilities and privileges.

**Originality/value:** This article shows how the concepts of documentary and practical *authorship* can be used to complement each other in elaborating our understanding of the making of artefacts, (documentary) boundary objects and the social landscape.

**Keywords:** Practical authorship, boundary objects, documentation, archaeology, reports, materiality, sociomateriality, documents, organisation studies

**Article classification:** Conceptual paper

## **Abstract**

Contemporary theories of authorship in literary scholarship and document studies can be a useful complement to understanding the interplay of authorship of documents and documentary boundary objects, and the practical authorship of social situations and identities in the context of organisation studies. The conceptual discussion is based on an empirical interview study of the information work of N=16 archaeologists. The study shows that 1) the making of documents and other artefacts, their use as instruments (e.g. boundary objects) of management, and the practical authorship of social situations, collective and individual identities form a continuum of authorship, and 2) that because practical authorship seems to bear a closer affinity to the responsibilities and privileges of attached to documents rather than to a mere attribution of their makership or ownership, practical authorship literature might benefit of an increased focus on them.

# 1 Introduction

Documents erect and lower boundaries, communicate, translate and mediate. More precisely, as Murphy suggests by using the term “summon”, they are *made* to do so in a liminal space between different communities of interest. Earlier studies have shown (e.g. Østerlund, 2008; Murphy, 2001) that this betweenness makes documents potentially powerful boundary objects (BO) that can be helpful in bridging gaps between communities and to function as shared “portable places” for virtual, non-physically based, communities (Østerlund, 2008). From the perspective of Shotter’s theory of practical authors (Shotter, 1993) in the context of organisation studies, a BO can be seen as a nexus of multiple community-specific shared ideas of self and of the organisational landscapes constructed and produced in the process of practical authorship in the context of bordering communities. As authored intangible or physical ‘things’ (Murphy, 2001; Huvila, 2012), the BOs can be seen as kernels of a shared landscape of a much larger constellation that encompasses all communities adjacent to them.

In spite of the interest in how documents and documentary BOs (DBO) come to being in specific contexts such as healthcare or museums (e.g. Østerlund, 2008; Star & Griesemer, 1989), there is relatively little research on the broader relation of the making of documents and that of DBOs, and especially on what implications their authorship has on their use and usefulness across communities. Authorship and authoring (e.g. Gorli et al., 2015) has been studied to certain extent in organisation and document studies literature (e.g. Huvila, 2012; Feinberg, 2011; Lund, 2009) but from the perspective of authorship studies (e.g. Wirtén, 2004; Biagioli, 2006), the conceptualisation of the notions has tended to be rather rudimentary and limited to making and makership. Further, in spite of the large corpus of literature on BOs (Huvila et al., 2017), it seems that there is no prior work discussing the relation of the authorship of BOs and practical authorship in their adjacent communities.

The aim of this article is to propose how to explicate the interplay of authorship of documents and DBOs, and the practical authorship of social situations and identities and to show how a closer look at the *authorship* (as understood in the contemporary authorship literature) of documents and DBOs can be helpful in elaborating the understanding of the making (i.e. practical authorship) of the social landscape. Somewhat roughly, the question is how the authoring of documents changes the world through the use of the same documents to transform the reality. Further, the authoring of a document, that is it authored to become a DBO, and the different instances of the use of the document or DBO in the authorship of social landscape mean that the document becomes a different thing in each of these different settings and situations. This perspective places the present text in the middle ground between documentation and organisation studies bringing insights from the latter to explain what documents are capable of doing beyond functioning as information carriers. The conceptual discussion in this text draws from observations made during an empirical study of the information work of professionals working with the management and archiving of archaeological information, contemporary theorising of authorship and the notion of practical authorship of Shotter (1993), and the model of the authorship of DBOs of Huvila (2012). The theoretical underpinnings of the discussion on documents are based on new document theory (Lund, 2009) (or neo-documentation). Documents are seen as socially constructed and constructing entities that serve a documentary function rather than a certain class of specific objects (third sense of understanding documents Pédauque, 2003; see also Lund, 2009;

Buckland, 2015) and BOs (in an essentially analytical sense) as entities with a BO function (Star, 2010a). The discussion on practical authorship builds on Shotter's (1993) concept and later scholarship on the topic (including Cunliffe, 2001; Shotter & Cunliffe, 2003; Gorli et al., 2015).

The propositions made in this article expand the earlier observations of the individual and collaborative practices of making documents and making documents *to become* BOs to how they are used to *author* translation, mediation and communication between communities and what implications the (act of) authoring and authorship of documents to make them DBOs has on the practical authorship in the bordering communities. Simultaneously, this article continues the longstanding pursuit in the information and documentation field to shed light into information practices and work by following texts and documents (e.g. Davenport & Cronin, 1998; Frohmann, 2004). The central thesis of this text is that a better understanding of the relation of the modes of authorship of documents, of documents to BOs and their relation to practical authorship is potentially helpful in understanding why and how particular BOs are useful for different adjoining communities and how their authorship and uses are related in the processes of building and rebuilding positioning and sense of identity in various types of social constellations.

## 2 Boundary objects

BOs are abstract or physical things that reside in the interfaces between organisations or groups of people. They have a capability to bridge perceptual and practical differences between communities and facilitate cooperation by emanating mutual understanding (Karsten et al., 2001). BOs have been seen as premises for communication, cooperation and for having and attaining mutual goals (Star & Griesemer, 1989). Star and Griesemer (Star & Griesemer, 1989) introduced the notion in their historical study on the information practices at the Museum of Vertebrate Zoology, Berkeley during the first half of the 20th century. BOs were described as translation devices and Star and Griesemer argued that the shaping and maintenance of BOs is central to instituting and keeping a sense of coherence across communities (Star & Griesemer, 1989). In addition to BOs, researchers have proposed other types of informative objects and artefacts that enable, translate and mediate information work including boundary negotiating artefacts (Lee, 2007) and epistemic objects (Rheinberger, 1997). These related notions do typically have a somewhat different emphasis from the original concept of Star and Griesemer (Star & Griesemer, 1989; Star, 2010b), for instance, on negotiation (rather than translation) (Lee, 2007) or the stability of BOs versus the plasticity of epistemic objects (Ewenstein & Whyte, 2009).

The notion of BO has gained increasing popularity in several fields, including information studies (Huvila et al., 2017). Studies have shown that very different types of artefacts including visual representations (Henderson, 1991), technical standards (Harvey & Chrisman, 1998), cancer (Fujimura, 1992) and digital libraries (Worrall, 2013) may function as BOs. Even if many things can function as BOs, a large number of studies starting from Star and Griesemer's (1989) original investigation have found documents having this particular function. Østerlund and colleagues (e.g. Østerlund, 2008; Østerlund & Boland, 2009) have studied medical documents as BOs, Huvila (2011; 2012) archaeological reports and, for instance, Davies and McKenzie (2004) theatrical documents.

Even if the term boundary *object* might suggest that these things are relatively

stable artefacts, several researchers have emphasised the dynamism of BOs (e.g. Gal et al., 2004; Brown & Duguid, 1996) and their close relation to social infrastructures (Star, 2010a). Besides being dynamic as they are used, the objects themselves are similarly an outcome of a process of production as any other artefacts. Authoring of a thing is one act of making and turning it to a BO is another one (Huvila, 2012). The initial discussion of BOs by Star and Griesemer (1989), later commentary of Star (2010a) and perhaps most empathetically the work of Huvila (2012) put a lot of emphasis on how BOs come into being as an outcome of *making*. With documents this is especially apparent in terms articulated in the social document theory. Documents are dependent on agency both as produced and interpreted artefacts. Similarly to how making is a central premise for their use, for DBOs, their making is a central part of the process of generating and perpetuating coherence across communities (Brown & Duguid, 1996).

### 3 Authoring in documentation and practical authorship

A central tenet of the document theory (and the field of documentation studies) is to view a document as a result of a process of turning an abstract or physical object to a representation of something, referred to as *documentation* (Lund, 2009). Briet's (1951) example of antelope as a document illustrates this process. According to her thesis, an antelope becomes a document of a specimen when it is placed in a zoo whereas an antelope in the wild is not a document. The example puts emphasis on the significance on the *process* (i.e. documentation) of moving an antelope and the role of *someone* (i.e. author) who moves the antelope. In spite of being explicit on the activity, document theory has engaged conspicuously little in a comprehensive discussion of the forms and practices of authorship (Lund, 2009) and its implications on how the authored documents are appropriated in diverse practices and pursuits in organisations. There are some exceptions. Huvila (2012) discusses the authorship in the context of the making of documents and documentary boundary objects. Also Feinberg (2011) makes remarks relating to authorship while discussing the implications of the concepts of authorial voice and documents in the context of information systems. Further, Smiraglia (2014) discusses the role of authors in knowledge organisation noting that in that context the name of an 'author' is a concept used to refer to the creator of a document even if this conceptualisation is far from being unproblematic. Even if the exceptions are taken into account, the lack of interest in authorship in documentation is striking when compared to, for instance, literature studies, intellectual property rights research (e.g. Wirtén, 2004), science and technology studies (e.g. Haviland & Mullin, 2009; Knorr-Cetina, 2003), sociology of science (e.g. Crane, 1972), ethnography (e.g. Riles, 2006), and for instance, management studies (Holman & Thorpe, 2003; Lamond, 2005). A central insight of the recent authorship literature is to see authorship as a question of a social attribution (Love, 2002) of certain privileges and responsibilities (often a more significant association than the actual creatorship of a document) (Biagioli, 2006) than a form of an unambiguous intellectual ownership and parenthood. The question of responsibility versus parenthood is also central to Foucault's much cited critique of authorship written as a response to Barthes' at least equally influential *The Death of the Author* (Barthes, 1968). According to Foucault (1998), authors are individuals who are assigned to be legally punishable (i.e. responsible) for their texts.

The problems of conceptualising authorship as a form of parenthood is apparent both in the examples Foucault himself draws from the literary modernism and, for instance, in De Kosnik's Foucauldian inspired studies of the postmodern struggles of several popular writers to prohibit the use of their literary characters in fan-fiction (De Kosnik, 2016). Whereas the Foucault's work focuses on the impact of literary modernism and De Kosnik's on a specific form of postmodernism, others including Kittler (2007) and McGann (2014), have focused on the impact of technologies of writing and editing that similarly reveal the multiplicity, disconnectedness and indirectness of the links between individuals, machines and texts. The significant difference of the discussion started by Barthes and Foucault (e.g. Barthes, 1968; Foucault, 1998; Burke, 2011), and the research of the practices of authorship (e.g. (e.g. McGann, 2014; Kittler, 2007; Love, 2002) is that whereas the first has focussed on the question what is 'author' the latter is engaged in mapping the practices of authorship.

Even if the notion of authorship has been discussed relatively little in explicit terms in the field of documentation studies (i.e. there is not a single definition of the authorship of a document), the common understanding of documentation as a generative rather than translational activity and a form of the making of reality pays resemblance to how Shotter (1993), and later, for instance, Cunliffe (2001) and Shotter and Cunliffe (2003), have conceptualised the notion of practical authorship in management science. According to Shotter, managers (as active human agents) need to be more "than just a 'reader' of situations, more than just a 'repairer' of them. Perhaps a good manager must be seen as something of an 'author' too" (Shotter, 1993, 149) of situations. The authoring is not an arbitrary activity but it "must be 'grounded' or 'rooted' in some way in circumstances others share" (Shotter, 1993, 149). Authored situations cannot be fiction without any relation to "what the unchosen conditions they face will 'permit' or 'afford'" (Shotter, 1993, 149). "[A]uthorship is a dialogical practice in which features of experience and surroundings are articulated and brought into prominence" (Shotter & Cunliffe, 2003, 22). Cunliffe (2001) has developed Shotter's idea further and suggested that authorship relates to how authors develop a sense of who they are, collective sense of the aspects of their organisations and how they steer others to talk and act through conversations. As much as it is a question of making, developing authorship is about perceiving the "richness and density of work experiences, dialogues and discourse" and valuing the learning as an integral element of these experiences (Gorli et al., 2015). With authorship, Cunliffe (2001) emphasises also that it is not merely a question of designing organisational structures, systems or objectives but "creating" new opportunities for acting, being and relating. Others including Thorpe and Cornelisson (2003) have broadened the scope of practical authorship and suggested that not only (linguistic) language but also, for instance, visual media can function as an instrument of making in practical authorship. Gorli et al. (2015) emphasise further that (organisational) authorship is social, institutional and material rather than merely linguistic enterprise. They also propose making a distinction between "authorship" (implicit, hardly conscious, pre-discursive and taken-for-granted mode of making) and "authoring" (conscious, critical and explicit activity of managers).

Instead of being an act of reproduction, translation or transmission (even if Cooren and Fairhurst make a good case on why practical authorship *also* implies translation *by* making between communities, Cooren & Fairhurst, 2003), both management and documentation are examples of practices of constructing (i.e. authoring) premises for individual and collective pursuits. Both practical authorship and

documentation studies emphasise the significance of the social dimension of making – of documents or the social landscape and operational space of organisations. The act of documentation by placing an antelope in a zoo and the role of zoos are necessarily based on a social contract in the work of Briet. The significance of documents as socially constituted entities has been further emphasised in the context of social document theory (Lund, 2009). Shotter and Cunliffe (2003) do similarly highlight the social and participatory nature of practical authorship and the dialogical nature of the artistic rather than scientific making of social landscape and shared and individual identities related to social space. The more recent material and institutional emphasis of organisational authorship literature maintains a similar emphasis of its social disposition (e.g. Gorli et al., 2015). Another broad similarity of documentation studies and practical authorship is their emphasis of making rather than reception (even if the significance of them both has been recognised in the documentation and practical authorship related literature, e.g. Pédauque, 2007; Deetz, 2003; Pedler, 2003), agency and use of things (including documents, contexts, tools and spaces) that has been common both in the studies of social documentary practices and in the management scholarship. Brown and Duguid (1996) and Star and Griesemer (1989), and consequently, the literature on DBOs share an emphasis of the social agency of documents in their contexts of creation and use, similarly to how management literature tends to be focussed on the agency in a given rather than specifically authored social landscape.

The principal difference between the conceptualisation of authorship in the documentation theory and Shotter’s notion of practical authorship can be argued to reside in the framing of action and its scope. In practical authorship of Shotter (and Cunliffe), the emphasis is on conversational practices and the constitutive nature of language. In the socio-materially oriented literature on organisational authorship and authorship of documents and BOs, language is only one of the constitutive practices and instruments of interest. In contrast to organisational emphasis of practical (and organisational) authorship, documentation theory is rather obviously interested in documents as artefacts and the act of documentation as their nexus of coming into being. Similarly to the BOs and the discussion on their authorship, the notion of practical authorship can be posited to put more emphasis on the implications of making. Akin to practical authorship, the main concern with the authorship of BOs is to understand what happens as a result of a particular agency and how authorship (or agency, rather than mere reception) makes a difference in certain situations. Another way of conceptualising the relationship of the different forms of authorship is to see them as a part of a longer continuum. In this continuum, the making of documents (documentary authorship) forms an instrument of the making (or authorship) of (D)BOs that in turn functions as an instrument of practical and organisational authorship. In other words, practical authorship is performed by authoring of documents and turning them into BOs.

## 4 Reports and archaeological information

Earlier studies of archaeological information work (Huvila, 2011) have established that archaeological (investigation) report is a foundational DBO in archaeology. A report is the main source of information gathered during a fieldwork project (excavation or survey) whether the project is small or large, or whether it is produced by a commercial archaeology contractor or by an academic field researcher. The contents of a report are almost always an outcome of a group effort even if the practical

work of authoring the documentary artefact, responsibility and attribution are with the director of the investigation project. The aim of producing reports is to be able to distil and mediate all significant information of the project and its findings in a digestible form that is informative to other field archaeologists, archaeological and cultural heritage administration, infrastructural developers, archaeological scholarship, archaeologists working with public dissemination of archaeology and to a limited extent, even to the general public. A report is intended to function as a 'bridge' or a (D)BO between the different communities of imagined and actual 'users' of the investigated site and the outcomes of the project.

The significance of reports and appropriate 'high quality' reporting practices is widely acknowledged in professional archaeological literature, textbooks and theoretical works (e.g. Gustafsson & Magnusson Staaf, 2001; Drewett, 1999; Lucas, 2012). Report writing and especially pro forma based (using preprinted forms) standardised documentation have been criticised of harmful reductionism (Lucas, 2012, 233), lack of reflection, and homogenisation of archaeological knowledge (Shanks & McGuire, 1996). As Pavel (Pavel, 2010) has meticulously described, the last couple of centuries of the history and theoretical evolution of archaeology has been closely intertwined with the development of formal documentation schemes.

Partly because of their relative usefulness within and between communities and partly because of the lack of feasible alternatives, reports have retained their position as central intermediaries even if they have been criticised of being difficult to access and their usefulness especially for non-professionals has been acknowledged to be limited (e.g. Gustafsson & Magnusson Staaf, 2001; Huvila, 2006). Based on a various and varying degrees of theoretical and practical rationales ranging from performativity (e.g. Shanks, 2004; Shanks & Svabo, 2016) and reflexivity (e.g. Hodder, 1997; Berggren et al., 2015) to the availability of new technologies, various alternative formats, including video diaries (Brill, 2000), three-dimensional representations (Reilly, 1991) and digital media (e.g. Kansa et al., 2011; Zubrow, 2006; Shanks, 2001) have been proposed for reporting archaeology. There is also emerging work on introducing open notebook research (Boettiger, 2012) in archaeology (Graham, 2017), based on the rationale on documenting scientific and scholarly processes in openly available (laboratory) notebooks (Boettiger, 2012).

Even if the most of the novel approaches have not become mainstream, the work on developing new means of reporting archaeology both related and unrelated to an on-going, albeit partly slow, digitisation of the means of producing, managing and communicating archaeological information has potential to change the current status quo both within the discipline of archaeology and in how archaeology is communicated and negotiated and authored in the interface between professional and non-professional communities. Especially, when archaeological knowledge is brought to a broader public attention, the reports are only a part of a much broader fabric of discourse (e.g. Robb, 2009). Professional archaeological authority and its premises are changing when broader stakeholder groups are engaging in archaeological discourse in the social media (Richardson, 2014) similarly to the archaeology itself when it is authored in practice (as in practical authorship) with new digital tools used by archaeologists themselves (Huvila, 2013a).

However, even when the report is confronted by alternative artefacts, it has shown considerable resilience (Huvila, 2016). The significance of reports as archaeological BOs is underlined by the long-lasting debate on the necessity, extent and methods of archiving other forms of information originating from an investigation (e.g. Richards, 2002). The importance of other types of data including first-hand ob-

servations, data and notes used while writing the reports, measurements and images is regularly emphasised in the literature, but in practice, they tend to be difficult to access, may or may not be available and are rather seldom asked for or used. From this perspective, it seems that the prominence of reports as BOs depends on the lack of alternatives with a similarly broad range of affordances, rather than that of alternatives *per se*, or arguments why other options would be needed.

## 5 Methods and material of the empirical study

Next we will turn to the work of Swedish archaeology professionals with special interest in issues pertaining to the archiving and preservation of archaeology to illustrate some of the pertinent aspects of the interplay of the practices of authorship of DBOs and the practical authorship of social landscape and identities. A qualitative interview study of the work of altogether sixteen professionals was conducted in 2013-2014. The aim of the empirical investigation was to explicate archaeologists' views, opinions and experiences of their own work and their understanding of the archiving and preservation of archaeology. In the present paper, the empirical material is used illustrate and exemplify the conceptual and theoretical propositions rather than to present new empirical insights *per se*.

The interviewees represent a convenience sample of Swedish professionals with a special interest in archiving archaeology. The initial sample was formed by asking professionals who participated in a workshop on archaeological archiving organised by a third party in 2013 in Sweden to participate in an interview. During the interviews of this initial group, the interviewees were asked to provide names of individuals they considered would be relevant to interview. New informants were interviewed until the interviewees did not indicate new relevant informants and on the general level of the describing the archaeological information process, the interviews had become substantially repetitive in terms of information (Rubin & Rubin, 2005). The sample is not representative of a larger population, but it can still be considered useful considering the conceptual rather empirically confirmatory aims of this study. For reporting purposes, the informants were assigned false names (Table 1).

The design and conducting of the interviews was based on the semi-structured thematic interview approach of Hirsjärvi and Hurme (1995). All interviews were conducted by the author, taped, and transcribed by a professional transcriber. The interviews lasted in average 60 minutes. The interviews focussed on the interviewees' professional work, their views on the current state and future prospects of archaeological archiving.

The author analysed the interviews using a method based on the combination of constant comparative method (Glaser & Strauss, 1967) and close reading (DuBois, 2003). A negative case analysis (Lincoln & Guba, 1985) was conducted after three weeks of the original round of analysis with a specific purpose of finding contradictory evidence that would decrease the reliability of findings.

The empirical approach has apparent limitations. Findings are based on a relatively small number of interviews from a single country. This limits to the possibilities to draw general conclusions of the expressed perspectives. In order to control for the over-expression of individual views, the analysis puts special emphasis on perspectives, which are expressed by multiple interviewees. Secondly, considering the conceptual aim of the present study to provide evidence for describing the nexus of authorship and practical authorship, the possible inability to generalise empirical

Interviewee	Description of interviewee and work duties
Karl-Oskar	Finds information administrator at a national institution
Margareta	Administrative director of a contract financed archaeological department a regional museum
Anna	Archivist, information manager at a national institution
Johan	Administrative director of a contract financed archaeological department a regional museum
Märta	Finds administrator at a national institution
Eva	Coordinator at a private archaeology consultancy
Aron	Researcher
Charlotta	Field archaeologist at a private archaeology consultancy.
Vilhelm	Archivist at a national institution
Danjel	Coordinator at a contract archaeology department, regional museum
Ulrika	Archivist at a national institution
Elin	Data archivist
Gladan	Administrator at a county administrative board
Lorentz	Researcher
Robert	Information manager at a national institution
Kristina	Researcher, data archivist

Table 1: Interviewees.

observations is not considered to be a major issue.

## 6 Reports and practical authorship

In addition to providing additional evidence to support earlier findings (e.g. Huvila, 2012; Gustafsson & Magnusson Staaf, 2001) on the role of reports in archaeological work, the data shows how they function within the social context of archaeology as a central instrument of what can be described as practical authorship. As informant Eva explained, “[t]he report is naturally an archive quality paper [document]” of an investigation. “One removes a site [in an excavation and], [i.e.] information, and then transforms it to information that will remain in a report”. Informants Margareta and Märta made the point even clearer by referring to archaeological investigation projects as “reports” when they were describing a larger number of projects and their results. Anna noted, the most of the people who came to her organisation to find information were interested in reports: “archaeologists want to get an overview and to see what [there i.e. at an excavation site] has been before”. The quotes illustrate how an investigation is archived “through the report” (direct quote from Eva) and how the report becomes a basis for the manuscript that determines future actions towards and with the archaeological site in the future.

The articulation of the significance of a particular archaeological site, the setting of the priorities of the investigation, the making of individual and shared identities of the fieldwork team and of the social landscape of archaeological work is conducted to a significant extent as a part of the work of documenting the field work and authorship of the final report. In this sense, the imagined and actual modes and practices of authorship a particular DBO are intricately intertwined with the practical authorship of the operational space and social landscape within one work-

place (an individual fieldwork project) but also through its quality as a DBO with the practical authorship and collective making of the social space of and identities within archaeology as a whole.

The earlier literature contains parallel empirical observations of the role of documents as the nexus of social action in other contexts from medicine (e.g. Gorli et al., 2015; Berg & Bowker, 1997) and manufacturing industry (e.g. Michel, 2016; Murphy, 2001) to financing (e.g. Huvila, 2013b) and legal work (e.g. Riles, 1999). In some cases, with medicine and the medical record as an illustrative example (e.g. Berg, 1996; Østerlund, 2008), the role of a particular document in its context is comparably significant to the one of archaeological investigation report in archaeology. In others, the documentary landscape is more diverse. What is common to them all is, however, that independent of how the role of documents have been framed in the specific studies, they function as instruments of social action that can be described using the notion of practical (organisational) authorship.

## 7 Authorship beyond making

However, even if the perspective to authorship as a question of determining and acknowledging who is a creator of a thing (document or social landscape) has proven to be highly useful both in the context of document theory and for understanding managerial practices and organisational learning, from the perspective of the authorship studies (Wirtén, 2004) they represent a “simple way of defining authorship” (Huvila, 2012). Studies of literary and legal authorship have demonstrated that type of a conceptualisation has multiple problems (Wirtén, 2004), which have been acknowledged also in, for instance, knowledge organisation literature (e.g. Smiraglia, 2014). Literary scholarship has not only rebutted the myth of solitary authorship i.e. that the creatorship of things like books, documents or even DBOs can be attributed to a single person only. Authoring happens in a social context and it is very unlikely that no direct or indirect external influences would affect the creative process. McGann (2014) stresses further that, as a rule, the cultural production of a document involves a plethora of individuals, groups and agents beyond those attributed as authors. The making is conditional to and happening under the influence of material and ideological institutional frameworks specific to the particular occurrence of cultural production. Actors and frameworks alike are subject to inheritances from the past and the fluctuations of temporary phases. Also, as Sidoti (2006) suggests, authorship is closer to be a scale rather than a binary trait. Problems with the claims that attributions of authorship can be equalled with creatorship and ownership (Wirtén, 2004) become apparent when the processes of authorship and attribution are subjected to a closer scrutiny in contexts like copyright legislation (e.g. Eechoud, 2014; Wirtén, 2004), scientific work, (e.g. Stengers, 1997; Knorr-Cetina, 2003; Wirtén, 2004) and scholarly publishing (Ravetz, 1971). In the context of scholarship, even if the authorship of a scientific paper is based on an assumption of (co-)creatorship, it is far from being clear what creating or co-creating entails. The perceptions differ whether creatorship includes, for instance, the making of data, experiments and concepts, and to what extent authorship applies to observations, ideas and their implications and exploitation. As Knorr-Cetina (2003) notes, scientists are defined as authors by Foucauldian (Foucault, 1998) idea of legitimate attribution, not by their degree of writership of a particular piece of text. Simultaneously, being attributed as an academic author, is at least as much a question of taking responsibility of the reported findings, their veracity and the rigorosity of the research process

(Ravetz, 1971) than of individual makership. As Knorr-Cetina suggests, author is a “representative” (Knorr-Cetina, 2003, p. 353) of a larger collaboration consisting of a constellation of multiple individuals that, as described by McGann (2014), form together a complex assemblage of authorship. The introduction of technologies of production and reproduction including xerography and digitisation of information have also blurred the idea of who is creating what and when (Wirtén, 2004).

Therefore, instead of defining authorship as unambiguous intellectual ownership and parenthood, as Love and Biagioli suggest that authorship should rather be seen as a form of social attribution (Love, 2002, see also Smiraglia, 2014) of certain privileges and liabilities (Biagioli, 2006) and responsibilities. Communication-oriented authorship theorising emphasises a similar standpoint of perceiving authorship as a vehicle of distinguishing communication in one’s own name versus communication in another’s name (Biron, 2014).

The attribution, privileges and liabilities/responsibilities based model of authorship has several advantages from the perspective of practical authorship. In the light of the literature on authorship, the tenet of practical authorship to see managers as the authors of the social landscape in their organisations appears as equally problematic as the assumption of solitary literary authorship. The increasing diversity of the arrangements of (collaborative) work and the simultaneous resilience of formal hierarchies (Hales, 2005; Campbell, 2000) can be argued to have a similar effect on practical authorship as an eye-opener as the technologies of production and reproduction of document has had in the context of documentary and literary production. Even if there is no reason to deny the influence of managers, in the current working life the privileges, responsibilities and attribution can follow very different organisational trajectories than the practical making of documents and DBOs. Azevedo and Vaccaro’s (2015) critique of the use of the notion of authorship and its incompatibility with practice-based theorising (and empirical reality) of human activity highlights the same issue. However, if the authorship-as-creatorship model would be replaced by a privileges, responsibilities and attribution, much of the criticised problems would be solved. This would also clarify the nature of the particular type of “background, scarcely conscious, prediscursive, taken-for-granted mode” of authorship distinguished by Gorli et al. (2015) from *authoring* i.e. a conscious, critical and explicit mode of the making of organisation. Making a further distinction between authorship (perceived privileges and responsibilities) and makership (agency of creating) in both authoring and the ‘authorship’ of Gorli et al. (2015) would be similarly helpful in organisation and documentation studies contexts than in literary scholarship to elucidate how individual and collective attribution and creatorship can be independent and entangled to each other. From this perspective, it could be more useful to refer to authorship (privileges and liabilities/responsibilities), and explicit and implicit modes of authoring rather than authorship and authoring as Gorli et al. (2015) do. Even if the distinction of the background and foreground modes of making is useful and compatible with the tenets of practice theory and comparable lines of social theory that are observant to explicit and implicit forms of action, it is not enough to capture the nuances of individual and collective making and attribution.

The conceptualisation of authorship in terms of prerogatives and responsibilities does not imply, however, that the act of making would be insignificant. It is compatible with the idea of authorship as an attribution of “relevant contributions” (Bently & Biron, 2014). Authored works still have processes of coming into being and, for instance, to cite the example of xerography discussed by Hemmungs Wirtén

(Wirtén, 2004), the person who uses a copying machine is not an insignificant agent in how a thing is created and made available for certain actors and activities. What is also significant, however, is that a closer look at the privileges and responsibilities in the context of the making of (D)BOs and practical authorship reveals that they have certain implications to understanding these activities and their outcomes. Both for (D)BOs and the social landscape, the identity and especially the agency of and the decisions made by the (practical) authors have direct consequences to how adjacent communities can work together and how a particular social landscape functions, for instance, in an organisational context as a platform for reaching specific goals. A part of the process of how things emerge during these processes is how they are perceived and received and to whom their related privileges and responsibilities are attributed. Even if the action of (authorship as) making a document or a DBO is constitutive (as an act of practical authorship) of work, its organisation and outcomes, the privileges and responsibilities related to the act of making, its outcomes (i.e. documents and DBOs) influence how it is acted upon.

In archaeology, the report and the investigation is traditionally a domain of the director of the investigation even if the project itself is in most cases a group effort. Only very small investigations and surveys are carried out by a single archaeologist. The attribution has direct consequences to how other archaeologists read the documentation, how reliable it is, how it is interpreted and what are the implications of the text. Sometimes, as Pavel (2010) notes for instance of the well-known investigator of Troy, Heinrich Schliemann, the reputation of an individual has led to underrating of particular observations even if a closer look would suggest something else. In contrast to its worth as a measure of the quality of findings, authorship has not (yet) become a comparable universal currency and a measure of the worth of individual researchers as it is in the sciences (cf. e.g. Knorr-Cetina, 2003).

In the context of an investigation project, the attribution of the authorship of the social space has also broader consequences to knowledge creation process than to the quintessence of a particular, albeit significant and influential documentary artefact. Project directors are in a position to author the social landscape within which archaeological knowledge of a particular site comes to being, influence the emergence and (to a degree) form both the collective and individual identities of the stakeholders of the process. In addition to their (always somewhat limited) direct influence on the act of making documents and DBOs, they exert their authorship by assuming certain responsibilities and privileges related to these artefacts instead of letting their subordinates carry the onus. The ways how the participating individuals perceive and act upon the responsibilities and their holders shape how the social situation is played and experienced. Moreover, what might be even more significant, the attribution of the responsibilities and privileges related to the act of making may be of a more decisive significance in the future than the mere act of making, which can be to a certain extent delegated, given and taken over.

## **8 Making, responsibilities and privileges in archaeological information work**

The authorship related responsibilities and privileges could be observed in several passages in the interview transcripts. The general impression of the archaeological information process described by the informants is to a large degree of based on an assumption of the stability of the collective and individual identities of the central

stakeholders in the social landscape of archaeological information work. The making of certain outputs, most importantly the investigation report and to a lesser degree of the physical finds (artefacts) and raw documentation data are of central significance in how the social situation of an archaeological investigation comes into being (i.e. is made). Here, as in Latour's (2014) discussion on agency at the time of the anthropocene, the question turns from probing the construction of facts, information or documents about phenomena to the shaping of the phenomena themselves. Even if the tangible act of the making of a situation is central to its outcomes, in practice, the actors do often rely on proxies, and the making and the existence of physical objects and the situation itself is assumed on the basis of responsibilities and privileges rather than directly verified.

Firstly, the subtlety of the forms and implications of authorship can be observed in the context of making archaeological documentation. Even if it is apparent on the basis of the analysis that the original maker, the excavating or surveying individual or organisation is the principal maker (author) of documentation, report, DBO and other data, including retrieved finds and the social situation of an archaeological investigation with its related collective and individual identities, the interviews showed that there are other authors and authorships as well. This is not entirely surprising in the light of earlier literature, which has demonstrated the variety in the functions, implications and expectations relating to authorship in different disciplines (e.g. Biagioli, 2012; Biagioli & Galison, 2003; Crane, 1972; Ravetz, 1971). The complexity of the contemporary archaeological information process (Huvila, 2014) means that not all making or responsibilities and privileges land on one actor only. From the perspective of the contemporary theorising on authorship and the notion of practical authorship, it is apparent that both archivists (cf. Märta) and finds administrators (as explained by Danjel) have the double responsibility and privilege to act as authors (as gatekeepers to information) of the social situations related to the investigation and its outcomes. This is in contrast to the traditional tendency, common to many fields of scholarship (Borgman, 2007, 174), to perceive excavating archaeologist-authors as the owners of 'their' sites, documentation and finds (Richards, 2004). Danjel's description provides evidence of a change towards a more nuanced understanding of authorship also in the context of the daily work archaeologists. Danjel explained that instead of owning the outcomes, he has a dual role regarding the outcomes of his fieldwork. As a project director and excavating archaeologist he claims an 'authorship', including privileges and responsibilities, of that what he has accomplished (i.e. made). As a researcher and user of that data, however, he considered that he is required to access the data in a similar manner as a non-maker (of the particular materials), as any other researcher with a different set of responsibilities and privileges but at the same time as a maker and author of new documents and DBOs, and as a practical author of new social situations emerging from the interplay of other documents and tools and another process of making.

A second parallel but contrasting example of the interplay of making, responsibilities and privileges can be observed in the context of administrative work. Gladan who is working as an administrator of contract archaeology work, admits that she does not have time to read all reports submitted by contractors. She does, however, think that the high level of professionalism of the contractors, her overseeing of their work and reporting process, and the general requirement of the contractors to process finds and submit documentation within a given timeframe guarantees the quality of the outcomes. Instead of making remarks on the actual act of making of

a document, secondarily a DBO and thirdly by bringing the (boundary) object into existence or of making of the social situation within which a particular archaeological site is available and exists in the future, she refers to process of making through a set of responsibilities and privileges. Contractors have a responsibility to her to ensure that investigations are adequately (or, as the national guidelines state, in a way that “scientific [scholarly] content of the site becomes available for researchers and the general public” RAÄ, 2012, 4) documented. In a secondary authorship role of the DBOs and the situation, Gladan has a responsibility to see that the contractors do what they are expected to do and to ensure that the DBO is of acceptable quality. At the same time, because of their professionalism and the dependability of the information process, the authorship means that the contractors have a privilege to conduct their work (i.e. making) as they consider to be appropriate and that as authors of the BOs and other outcomes of the process, to be privileged by the attribution of being authors of the particular investigation process and its outcomes. The privilege translates to a tangible possibility to use reports as marketing material on the web (as noted by Eva and Margareta) and for contractors, to a competitive advantage in the (quasi-)marketplace of archaeological tenders. The authorship translates also to the privilege and responsibility of becoming the principal authority of the investigation that others potentially contact and interrogate in the future (as explained by e.g. Margareta and Johan). As Margareta and Märta critically remark, in cases when the explicit responsibility to deposit other research data than finds and a report does not exist or it is not enforced, these materials often remain in the custody of their makers (contractor) and from a societal perspective, the preservation of and accessibility to these materials cannot be guaranteed.

The accounts of contractors and administrators, it is apparent that archivists and finds administrators might have some reluctance to assume an explicit role as (practical) authors. According to Danjel’s account, the (practical) authorship of archaeological information work and both the exercise of making documents and DBOs and their associated responsibilities and privileges are shared by several actors on a temporal continuum. According to the administrators and contractors, his idea of shared authorship might not apply everyone and everything. Ulrika noted that in the archives, there is a strong tendency to the black-boxing of documentation and finds. Everything archaeologists submit from investigations is archived as is without critical consideration and appraisal of its nature. Even if archives and museums are privileged by a degree of authorship in the social landscape of archaeological information work by keeping certain documents and DBOs, they avoid taking responsibility and an active authorship role.

## 9 Conclusions

The observations made in this text have twofold implications. The first set of repercussions build on the proposition of relating authorship and the making of documents (and other informational and non-informational artefacts) as a prerequisite of the authorship and making of (documentary) BOs and the related, subsequent idea of conceptualising the making of BOs as an instrument in the context of the process of practical authorship. This proposition provides a framework for explicating the roles of objects and documents in the process of the making of social situations, collective and individual identities i.e. how the making of documents is linked to managing and changing the social reality. The thesis of this article is that the ways how documents are made and how the responsibilities, privileges and ownership are

construed and distributed, have an influence on how the documents can be further authored into BOs and used by managers and others as instruments of management and leadership, or as Shotter and colleagues would put it, of practical authorship.

Even if this text has focused on such deeply linguistic objects as textual documents and DBOs, there is nothing that defies the possibility to see authorship as a broader activity of making beyond the linguistic realm. This broadens the implications of the discussed approach of (practical) authorship to the domain of sociomaterial theorising of organisations (as e.g. in Orlikowski, 2010) and informing. Besides (linguistic) conversational practices, archaeologists engage in similar visual conversations Thorpe and Cornelisson (2003) describe in their study of the visual media use of managers, when they are drawing and taking photographs of sites and finds. In addition archaeologists can be argued to be participating in *material conversations* by unearthing sites using particular (partially highly similar, partially divergent) methods and by recovering, keeping and working with physical artefacts. Building, for instance, on the work of Orlikowski and Scott (Orlikowski & Scott, 2008; Orlikowski, 2010) on sociomateriality, it is possible to elaborate the understanding of these material conversations further to develop a better understanding of the material aspects of the (practical) organisational authorship.

Another implication of the propositions made in this article is the possibility to extend the scope of the present discussion by using the proposed continuum perspective to authorship in explicating the role and parenthood of other types of 'knowledge objects' and their functioning as instruments of practical (organisational) authorship. For instance, an analysis of the documentary authorship of certain epistemic objects (which are by definition, far from being solitary and unambiguous, cf. Rheinberger, 1997) and the implications of a particular constellation of attributions and responsibilities to the practical authorship, could contribute to the better understanding of their role in the becoming of social landscape and identities. The same questions can be asked of the authorship of boundary concepts (Nolin, 2009), boundary constructs (Holford, 2016) and, for instance, conscription devices (Henderson, 1991), and their role in practical authorship.

The second constellation of implications of this study builds on the proposition to elaborate the notion of authorship in the context of practical authorship with the premises derived from the contemporary authorship theories. As argued, they nuance the idea of practical authorship as a practice that goes beyond the (act of) making of social situations. Practical authorship implies also a set of responsibilities and privileges than a mere attribution of makership or ownership. This expands the understanding of the implications of practical authorship for practical authors, whether they are managers or employees. As Shotter (1993) suggests, managers can and should be authors of the social landscape in their organisations and able to take an active role in the making of the individual and collective identities that contribute to organisational learning and knowledge exchange. What should be considered further is that the practical authorship and specific measures of assembling social situations come with particular responsibilities and privileges that relate to the specific process of making, an exercise, which is, as Deetz (2003) emphasises, a dialogic process. Practical authors do not own 'their' situations they have made but are responsible for them and have certain rights and liberties that are inscribed (i.e. authored) in them. These responsibilities and privileges can be plausibly argued to have implications on both the process of making (how situations are and should be authored) and also to how the different authored situations evolve, both like author possibly expected and in contrast, how they become something completely different

and unexpected.

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