The politics of boundary objects: hegemonic interventions and the making of a document

# Isto Huvila Department of ALM Uppsala University

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#### **Abstract**

Boundary objects are artefacts that reside in the interface between communities and are capable of bridging assumed and experienced differences. Bridging is not, however, necessarily neutral or consensual activity. With an emphasis on documents, the present paper discusses the politics of boundary objects by analysing the role of archaeological reports at boundaries between communities with conflicting interests. The analysis demonstrates and discusses the political and purposeful nature of boundary objects, how they are devices of creating and maintaining hegemonies within communities and achieving authority over other intersecting groups of people. The study uses the notion of hegemony and the discourse theory of Laclau and Mouffe to conceptualise the role of boundary objects as articulations of power and to explicate the dynamics of how the power is exercised.

### Introduction

Documents such as reports and agreements are typically used to mediate views between communities. They function as a common ground between different interpretations on the topics they represent. In this respect a document captures the very essence of that what Star and Griesemer (1989) described as a boundary object. They are artefacts that reside in the interface between communities and are capable of bridging perceptual and practical differences. Boundary objects tend to be weakly structured on the level of common understanding and more rigorously demarcated within communities. Earlier studies have shown the diversity of boundary objects and their uses in different contexts (e.g. Harvey & Chrisman, 1998; Kuhn, 2002; Lee, 2007; Østerlund, 2008) and how boundary objects change when they are taken from a community to another. Similarly to all technologies and artefacts (Winner, 1980; Kling, 1994), Boland and Tenkasi (1995) note also that "creating and reshaping boundary objects is an exercise of power that can be collaborative or unilateral" acknowledging that boundary objects are not necessarily neutral or consensual. The authors discuss the functioning of these power relations as reflexive process of making own and assimilate perspectives of others. Gasson (2006) and Fleischmann (2006) elaborate further the analysis of the complex power relations in boundary activities from the actor-network analysis point of view focussing respectively on the network and the agency of boundary objects. The earlier studies have generated an increasingly detailed understanding of the specifics of how boundary objects and actors are related to each other and the translatory processes in organisations and actor networks (e.g. Czarniawska, 2004) as a useful counterbalance to the universalising tendencies of the earlier classical and Foucauldian theorising of power and hegemony (Sage et al., 2010). At the same time, however, the actor network theory has largely bypassed the question of the generic nature of the juxtapositions outside the scope of individual organisations or networks. Even the Latourian underpinnings of the notion of boundary objects with its acknowledging of the multiplicity of networks and power relations is particularistic in the sense that it lacks an explicit link between the particular (on the level of networks of individual actors and tools) and the universal (the level of discourses).

The aim of the present study is to discuss how power (as a universal notion) is exercised and resisted in creating and reshaping boundary objects, by whom and whether an agenda is

necessary for the emergence and functioning of a boundary object. Secondly, this study discusses from the perspective of politics how documents differ from other types of boundary objects. The theoretical premises of the study are the Gramscian (2007) notion of hegemony and the discourse theory of Laclau and Mouffe (2001). In contrast to the earlier research on power and boundary objects, the notion of hegemony provides a new complementary approach to articulate the use of power as a general phenomenon with a direct link to the discursive practices of individuals and communities.

# **Boundary objects**

Boundary objects are abstract or physical artefacts that reside in the interfaces between organisations or groups of people. They have the capacity to bridge perceptual and practical differences among communities and facilitate cooperation by emerging mutual understanding (Karsten et al., 2001). Star and Griesemer (1989) introduced the notion in their seminal work on information practices at the Berkeley's Museum of Vertebrate Zoology. They described boundary objects as translation devices and argued that shaping and maintenance of boundary objects is central to developing and maintaining coherence across communities. Boundary objects are a precondition for communication, cooperative work, and having and reaching mutual goals. In their study, Star and Griesemer identified four different types of boundary objects: repositories of things ("ordered piles of objects"), ideal types (e.g. diagram, atlas), coincident boundaries (objects with same boundaries but different contents, e.g. the idea of the state of California and what it means) and standardized forms (e.g. fill-out forms and other devices for standardising work methods) (Star & Griesemer, 1989).

The concept of boundary object has been applied to different contexts primarily in information systems and computer supported co-operative work research (Lee, 2007), but also in other

research communities (Kuhn, 2002). Studies have showed that different artefacts including visual representations (Henderson, 1991), cancer (as a conceptual artefact) (Fujimura, 1992), technical standards, geographic information systems (GIS) (Harvey & Chrisman, 1998), activities (Macpherson et al., 2006), group affiliations (Lindberg & Czarniawska, 2006) and documents (Østerlund, 2008) may function as boundary objects. The boundary objects are typically described to form liminalities between communities, but, for instance, Giorgi and Redclift (e.g. 2000) and Oppermann (2011) have demonstrated the applicability of the concept in the analysis of bounding discourses. Researchers have also made several distinctions between various types of boundary objects and boundaries. In addition to four types of boundary objects discussed by Star and Griesemer (1989), Briers and Chua (2001) introduced the additional type of visionary boundary objects. Visionary boundary objects, for instance, institutionalised codes or 'best practices', are conceptual and as such cannot be argued against. Garrety and Badham (2000) distinguish primary (technology) and secondary (physical and abstract objects that enable communication between communities) boundary objects. Carlile (2002) notes that communities need different types of boundary objects in altering situations and makes a distinction between syntactic (repositories), semantic (standardised form and methods) and pragmatic (objects, models, maps) boundary objects.

The characteristics of physical objects affect their behaviour as boundary objects. The special aspect related to documents is that besides being boundary objects, they may be seen as mediating artefacts (McLeod & Doolin, 2010) that represent varying viewpoints and interests. McLeod and Doolin (2010) note also that documents do not necessarily represent a consensus, but rather reflect personal interpretations of their different stakeholders. However, as Østerlund (2008) remarks, documents are also physical objects. He suggests that they can be part of communicative practices in three respects as objects of evaluation (or focus), by their materiality as communicative medium and thirdly, as a part of the actional field (how document objects

affect communication) of communication. The categorisation has similarities with the approach of the RTP-DOC research group that discuss documents as a form, text and as social objects (Lund, 2009). Østerlund and Boland (2009) have further emphasised the significance of the links between the documentary boundary objects and other documents. In comparison to many other types of non-documentary boundary objects, documents have additional *explicit* levels of interpretation (materiality and content) and they tend to have several, both internal and external dependencies to their stakeholders and other related objects.

The literature on documentary boundary objects has its roots in computer supported cooperative work and information systems science, but the approach has similarities with the documentalist tradition of library and information science (Lund, 2009). Even if document theory does not seem to make direct references to the notion of boundary object or vice versa with the partial exception of the theorising on the notion of records by Yeo (2008), they both share roughly a similar understanding of documents and the significance of the role of documentary processes. From the documentalist point of view, the recent interest in documentary boundary objects may be seen as an example of the re-documentarisation (Pédauque, 2007), the re-emerging interest in documents. Even if the term boundary *object* may suggest a relative stability, the dynamism of boundary objects has been discussed in several studies. Drawing on Berger and Luckmann (1966), Gal et al. (2004) emphasise the dynamic nature of boundary objects and their relation to social infrastructures. Mambrey and Robinson (1997) discuss the dynamics of boundary objects from the perspective of the changes that occur in the status of documents when they cross boundaries from one community to another. According to their observations, the changes that occurred in boundary crossings did not occur within the limits of the boundaries and vice versa. Yeo (2008) refers to similar type of transformation in a discussion of how the notion of report is shared by several communities, but at the same time internally conceptualised within their confines as documents, records and information products. In spite of their versatility in boundary crossings, Subrahmanian et al. (2003) have showed that organisational changes disrupt existing common ground and consequently destroy existing boundary objects. New boundary crossings require new effort to establish new boundary objects. The observation seems to suggest that boundary objects are resilient to internal change, but less tolerant to changes in their bordering communities. In spite of the acknowledged theoretical and practical benefits of the notion of boundary objects, it has a number of ambiguities and complexities. Boundary objects are not only objects of translation. Brown and Duguid (1996) remark how the seminal work of Star and Griesemer already inevitably suggests that the act of translation incorporates an attempt to subordinate other groups to accept the interpretation of one group. Carlile (2002) and, for instance Feldman et al. (2006), underline further that boundary objects can be used jointly to transform knowledge by proposing alternatives views. They are incorporated in a reflexive process combining perspective making and perspective taking by bordering communities (Boland & Tenkasi, 1995), or negotiation (Fomin & Keil, 2000). Gal et al. (2004) show how boundary objects function as resources to form and express social identities. Their transformative and often purposeful nature is also highlighted by the conceptualisation of bounding entities as discourses (e.g. Oppermann, 2011) instead of communities. Even if Lee (2007) may be criticised of somewhat simplistic reading of the original notion of boundary objects and its underpinnings in the work of Latour, her emphasis of the significance and complexity of negotiations in the interface of communities is important. The present study assumes a broad understanding of that what a boundary object can be and how it can behave, essentially pushing the limits of earlier definitions to the direction of boundary negotiating artefacts. All boundary objects are complex and inseparable of social negotiation processes within and between communities and, therefore, empathetically purposeful constructs. The transformative capability of boundary objects means that they do not just passively bridge, but actively negotiate perceptual and practical differences between communities on the level of the interaction of discourses.

# Hegemony and the discourse theory of Laclau and Mouffe

The framework for discussing purposefulness and influence in this article is based on the notion of hegemony. In contrast to the earlier idea of political hegemony, Gramsci (2007) perceived (cultural) *hegemony* as a condition of attaining and holding the power of imposing a definition of how things are discussed and understood. In its original context of social classes, the theory claims that the viewpoint of the ruling class is perceived as a norm among all classes in spite of its detrimental nature for the members of the non-ruling classes.

The Gramscian idea was developed further by Laclau and Mouffe (2001) who argue that the fundamental condition of hegemony is that "a social force assumes the representation of a totality that is radically incommensurable with it". Their discourse theoretical view of hegemony posits that many of the fundamental societal 'constants' such as class, (political) identity or social selfunderstanding are in fact discursive constructs that come into being through articulations. An articulation can be any practice that establishes a relation among elements and has a capability to influence its identity i.e. alter the identity of a thing to another. In the conceptual vocabulary of Laclau and Mouffe, a differential position that belongs to a discourse (a stabilising system of articulations) is called a moment. In contrast, an unarticulated difference is called an element (Laclau & Mouffe, 2001, 105). Further, they call moments of particular significance that partially fix meanings in discourses as *nodal points*. Elements that are continually antagonised because of their diverse meanings in competing discourses are called *floating signifiers*. The totality of alternative elements and discourses that do not fit within a particular discourse is called the *field* of discursivity. The dominant group or ideology is in a hegemonious position to impose their moments over other groups and viewpoints that represent less comprehensive forms of influence and dominance within and between communities and individuals. A precondition of the

emergence of hegemony is a conflict, *antagonism*, between competing viewpoints. *Hegemonic intervention* is an articulation that dissolves antagonism and re-establishes unambiguity. When unambiguity is reached, the discourse comes to a *closure* (Laclau & Mouffe, 2001).

The theory of Laclau and Mouffe and its underpinnings in the writings of Gramsci serve as a useful framework for discussing the notions of power and politics in the contexts of discourses. In spite of its widespread appeal, the conceptual apparatus cannot be fully appreciated without considering its political premises. In their work, Laclau and Mouffe (2001) analyse concepts of class, political identity and social self-understanding as discoursive constructs. The central tenet of the authors is to criticise Marxist theory for essentialising the notions of class and class identity, and making a series of *a priori* assumptions about the relevance of interpretative frameworks. Laclau and Mouffe emphasise instead the conflicting and discursive nature of the basic notions and the openness to alternative explicative models.

The relevance of the analytical notion of hegemony together with conceptual apparatus of Laclau and Mouffe is that they are posited to shed light on how power is exercised in creating and reshaping boundary objects and what are the consequences of this articulatory process to the interfacing communities. At the same time, it is postulated that their system of analytical concepts helps to explain why and how boundary objects tend to be internally stable and externally plastic. In contrast to the original work by Laclau and Mouffe, it is not claimed that all antagonisms are supposed to be as radical or the political nature of boundary objects would be as literally *political* (pertaining to organised forms of government) as the ones discussed in *Hegemony and Socialist Strategy*. What is claimed, however, is that even as divested of its original societal aspirations, the conceptual apparatus provides a useful framework for analysing antagonising tendencies even in the context of relatively mildly hostile conflicting hegemonic ambitions.

## **Method**

The empirical material analysed in the present study consists of thematic interviews (Hirsjärvi & Hurme, 1995) of 25 North European archaeologists conducted by the author. The work profiles of the informants combined several aspects of archaeological work. None of them could be considered, for instance, as a 'pure' field archeologist without any other duties. The method of selecting informants was based on theoretical sampling (Glaser & Strauss, 1967). The sample was balanced for relative representativity in terms of nationality, principal professional duties, archaeological expertise, institutional affiliation, place of study, geographical location of employment and gender. For the purpose of giving references, each of the 25 individuals was assigned a random number between 1 and 25. These figures are used inside parentheses (e.g. #1) in all citations and references in the present text. The focus of the interviews was to discuss the practices and premises of archaeological work and information use. The length of the individual interviews varied between 105 and 180 minutes (median 150 minutes). Information with a direct relevance to the present discussion emerged throughout the interviews. The interview data was transcribed and analysed using constant comparative method (Glaser & Strauss, 1967) to discern patterns of related to document use and especially their possible functions as boundary objects. Finally, after a preliminary analysis was finished the material was revisited using negative caseanalysis (Lincoln & Guba, 1985, 309-313) with a specific purpose of finding contradictory evidence (as e.g. in Zach, 2005) that would decrease the reliability of the drawn conclusions. The empirical approach has some obvious limitations. In spite of the theoretical sampling method used, the sample is relatively small and limits the possibilities to generalise the expressed views. In order to control the overexpression of individual opinions, the presented analysis is based on views expressed by multiple informants. Secondly, considering the exploratory aim of the present study to provide evidence for the existence of a phenomenon, the eventual lack of general representativity is not considered to be a major issue.

# **Archaeological reports**

The focus of the present study is on a specific type of documents, archaeological reports, and their role as boundary objects between different communities of stakeholders of archaeological sites. A report is a compilation of the description of an archaeological excavation or survey process, a survey of the related literature and an interpretation of the results of the investigation (Joukowsky, 1980). Because of an infrequent comprehensive publication of individual archaeological investigations in journal articles, books and popular media, the reports are typically the principal and often the only piece of documentation that relates to an investigation and an investigated site. In contrast to non-destructive surveys, due to the destructive nature of archaeological excavations, an excavation report (together with collected finds, samples and primary documentation data) is typically the only remaining description of the site (Greene, 1998).

The layout of an archaeological report differs slightly from one institution and country to another, but the general structure of the documents is mostly rather uniform. Basically the report is expected to be a systematic and exhaustive document that covers all relevant aspects about the site and the investigation process. The most important findings and implications are often summarised in a separate short introductory chapter located in the beginning of the report (Greene, 1998; Takala, 1998). The introduction is supposed to be accessible even for non-experts such as landowners, administrators and other non-archaeologists interested in the site and project (Huvila, 2006; emphasised also by #6). A report is accompanied by a catalogue of the finds unearthed during a field project, lists of photographs, plans, drawings and samples and often a series of appendices reporting specialist analyses of samples and other findings conducted during

the project (Pollard, 2006; Huvila, 2006; #4, #6, #10 and #13).

The main audience of archaeological reports are other archaeologists. A report is a compilation of information that is supposed to add to the existing body of archaeological knowledge and function as primary documents for scholarly research. But professional archaeologists are not the only audience of archaeological communication (Harding, 2007). The reports are also administrative documents required and regulated by national and regional heritage boards and used by cultural heritage administrators to appraise the significance of a site and to decide appropriate measures for its eventual preservation. Reports are also needed in the management of archaeological collections at museums and they function as sources of information for popular science purposes, for example, museum exhibitions, documentaries, books and articles. Outside the archaeological community, the reports are records that document an archaeological expert opinion of a particular part of land. The record has direct implications in most of the developed countries to how the land can be used, whether something can be built on it and how. Therefore, land owners, national and regional planning authorities and developers have direct interest in these documents even if, as Hodder (1989) criticises, they are not necessarily very accessibly written for stakeholders outside the archaeological community.

The prevalent practices of documentation and writing are a central reason why reports can be difficult to understand (Hodder, 1989; Harding, 2007). In spite of the arguments made for interpretive archaeology (J. Thomas, 2000) and broader involvement of all excavators, reports are often written by the site director alone or together with only some of the participants of the excavation. The actual reporting is also started almost always first after the excavation has been finished. It is usually highly formal activity that follows a complex set of disciplinary codes of conduct learned early on by the archaeology students (#13 and Huvila, 2006). Another factor that steers documentation is a tradition of perceiving the report as a "copy" of the site. Consequently, the focus of the documenting has been on recording minute details instead of trying to make

sense of the data (D. R. Thomas, 2006). The most prominent obstacle for interpretative investigations is, however, the impossibility to make advanced inferences until the end of the process (e.g. #4, #6, #13, #17, #18). One of the informants described the fundamental nature of the problem.

"One of our students said we should interpret our findings on field, but the problem is - it is very difficult even during the post-excavation work. We know so little about a site. There are so few pieces in the puzzle that you can't really say that much about it." (#4)

Another challenge related to reports is that they are rather often characterised by the so called "specialist appendix syndrome" (Pollard, 2006) described also by the informants of the present study (e.g. #3 and #6). There is a tendency to resort to naming and mentioning the observations and analyses and a hesitance to reflect the broader implications of there findings. As Pollard (2006) suggests, the tendency relates partly to the expertisation of the discipline and the tendency of the experts to protect their expertise and territory. The territorial thinking is related to scarcity of employment opportunities and the temporary nature of the most of the available contracts. Consequently, archaeologists prioritise avoiding obvious mistakes and misinterpretations over publishing uncertain and far-reaching conclusions. Therefore the most important aspect of a report for an individual archaeologist can be their capacity to shape and maintain professional identities (Huvila, 2006).

The third typical reason for the lack of usability of the reports relates to underbudgeting of the post-excavation analyses and reporting or too optimistic budgeting of the fieldwork that takes resources from the latter phases of the project. The increase in the amount of analysable data caused by the adaptation new scientific methods and digital documentation techniques increases

the pressure in reporting (Greene, 1998; Renfrew & Bahn, 1996; Huvila, 2006). This tendency was very familiar for the informants of the present study (e.g. #1, #4, #6, #10, #20):

"The time available for post-excavation work depends on the orderer of the excavation. If there is a lot of material and a little time, the report is done hastily or written on own time" (#6).

The choice of archaeological report as a particular type of a document analysed in the present study was motivated by four main reasons. First, archaeological heritage, its ownership, definition and implications are debated and controversial topics (Skeates, 2000). Therefore it is of interest to have a better understanding how knowledge is constructed and negotiated by archaeological documents. Secondly, an archaeological report is easily conceivable as an example of a boundary object and as category of documents that incorporates a distinct form of a discourse. A report is situated at the boundary between the investigating team of archaeologists and the rest of the archaeological community. At the same time it is an artefact that is situated between archaeologists and other stakeholders of an archaeological site including landowners, exploiters and the general population with an interest in archaeology and the past. Thirdly, all of these stakeholder groups tend to have distinctly different ambitions and interests (Skeates, 2000). Landowners and exploiters look for a report to see if an archaeological site hinders forthcoming construction works. General public and educators are interested in information with a popular interest. Other archaeologists are looking for information that might be helpful in their own projects (Huvila, 2006). Finally, the present article argues in the spirit of Laclau and Mouffe (2001) that it is especially meaningful to expose and analyse implicit apriorisms and essentialisations of concepts and artefacts. In spite of their acknowledged role as boundary objects and devices of communication (e.g. Renfrew & Bahn, 1996), reports are asserted by

archaeological practices as (relatively) neutral (even if not anymore objective Greene, 1998) factual documents that represent the best available knowledge on an archaeological site.

# **Analysis**

The analysis of the interview data revealed eleven broad discourses relating to archaeological reports (Table 1). The list is apparently not an exhaustive one, but provides an insight into the interest in archaeological reports and information. The discourses were identified on the basis of how informants described their daily work. Categories are not exclusive and it was typical that individual informants and their contacts were engaged in several discourses. For instance, educators were engaged also in scholarly fieldwork and academic research (e.g. #8, #13), collection managers participated in public dissemination (e.g. #9, #10) and academic researchers were engaged in occasional rescue archaeology projects (e.g. #2, #4, #7). A landowner could also be an amateur archaeology enthusiast (e.g. #3) and a maritime archaeologist could be a member of a diving club (e.g. #1). In spite of the overlap, the discourses related to distinct identities and community memberships. Informants were able to identify and articulate overlapping memberships in different communities and engagement in their corresponding discourses.

#### Insert Table 1here

In spite of the concurrency of different categories in individual job descriptions, there are observable tensions between the different areas of archaeological work and between the work of archaeologists and the enterprise of many other actors in the society. The Table 2\_summarises a sample of conflicting discourses (respectively a and b in the fields of discursivity A-E) identified in the interview data. For instance, the scholarly doubts expressed by academics are in conflict

with the necessity to make definite decisions and to balance between archaeological and broader societal interest in the context of rescue archaeology and cultural heritage management. The distinction between the fields of discursivity A-E is analytical and serves a purpose to highlight the particular antagonisms between the related discourses (a) and (b). As a whole, the fields A-E may be conceptualised also as a single field of discursivity related to the appraisal of archaeological sites that incorporates all individual antagonistic discourses (a) and (b). The criterion for selecting the particular antagonisms for further analysis in the present study was that they were linked to archaeological reports. All controversies that were accepted and are listed as antagonisms (in Table 2) were also expected to have been articulated by multiple informants in order to avoid purely subjective conflicts of opinions.

#### Insert Table 2 here

The floating signifiers of the discourses with antagonising tendencies (a and b) in cases A-F and their respective nodal points are summarised in Table 3. It is noteworthy that the exposed controversies are not related to the general idea of the nature and relevance of archaeology. When the informants were asked about the nature and aims of archaeological work in general, they tended to give similar answers with only a little variation. Archaeology is significant because of its capability to shed light on questions such as who we are and where we come from and to satisfy the fundamentally very human quality of curiosity. As informant (#15) expressed it,

"I think it is first and foremost that it is interesting to know [...] about the past. [...]People like to know about history, where we came from and what is this all about." (#15)

#### Insert Table 3 here

Similarly, the informants explicitly stated that landowners and developers seldom question the significance of archaeological sites and cultural heritage *per se*. In contrast to earlier prevalence of evaluative attitudes, the current tensions tend to be more practical and relate to the implications of archaeologists' expert opinions: what implications an archaeological site and its extents have on land use and access, who controls the site and what rights the different stakeholder groups have (e.g. #1, #3, #12, #13, #14, #18). The antagonistic tendencies tend to stem from the practical implications of trying to solve the dialectic tension of empirical observation and subjective interpretation. All informants underlined the role of reports as the most significant information carriers in archaeology, but in case of the controversies that were discussed also their equivocality. The form and content of reports is affected by their affiliation with several discourses with antagonising tendencies.

The floating signifiers of the antagonising systems of articulation tend to revolve around the broad issues of the perceived quality and relevance of documentation (A, B, F) and the significance (in relation to other sites documented in reports and the literature) of that what is being documented (C, D, E). Nodal points reflect similarly the simultaneous need and difficulty of making a commitment (C, D, E) and deciding what needs to be done and what is possible to achieve in practice (A, B, F). Archaeological interpretation is not purely subjective or objective *per se* (Shanks & Tilley, 1992, xxi). Archaeology is about expressing contextual and situated *claims* on the implications of the gathered evidence on past human activity (Lavento & Suhonen, 2003). The specificity of these claims is, however, a paradox that may decrease the immediate usability of a report as a source of information (e.g. #15, #17). Scholars are reluctant to express uncertainties as facts while many other stakeholder groups need definite answers. As one of the

"the most typical problem is that an archaeologist hasn't been courageous enough to commit himself on the matter. A report with a short mention that there was a three meter wide, 50 cm deep historical period pit is of little use for anyone" (#6).

Archaeologists themselves emphasise topicality, novelty, accuracy and representativeness of observations and measurements, but the final conclusions made about the past human activities involve a decisive subjective factor that is largely independent of precise measures (#7; Gowlett, 1997; Jones, 2002, 66). The subjective factor is always dependent on how broadly archaeologists can relate their findings to earlier observations and conclusions of other archaeologists available (or unavailable) in reports, literature and as personal knowledge (#1, #3, #6, #9, #10, #12, #13, #16, #17, #19, #20).

Shanks and Tilley underline the societal dimension of the political relevance of archaeology by emphasising that "archaeology is of the present" and it "involves taking an ethical and political stand on the past in the present" (Shanks & Tilley, 1992, xxi). Being simultaneously an academic and professional discipline with broader popular interest and societal implications, the advocacy needs to reach several very different types of communities. People "don't like here this kind of a building and then they find someone who says that yes, grandfather told that here was [something historical]" (#3). Landowners, who are eager to build and develop their properties, are not happy about restrictions how they can proceed with their projects (e.g. #13). Even if these conflicts originate from different contexts, all of them coalesce in an archaeological report that makes explicit or deliberately avoids conveying and expression of opinion.

In spite of the antagonistic nature of archaeological reports, the different discourses incorporate articulations (described in Table 4) that legitimise archaeological reports within their

respective fields of discursivity and are attempts of hegemonic interventions over the alternative discourses. The discourse (a) within the discursive field A with the nodal point "Approximate data and relatively superficial observations are better than nothing" enunciates that the present practices are perfectly adequate. One of the informants described the reality:

"In general, I don't think that you should specify everything. It depends on the economy of work. Usually you have to work in awful hurry under pressure and with little money. You have to compromise and usually you compromise by stopping worrying. I think it is a bad way of working. [..] But usually you don't have a choice" (#7)

A typical explanation is that an excavation team is following a 'procedure'. One informant described the outcomes of following a procedure:

"Everything is in there [report] {laugh}. If you would look at field documentation, something would be missing, but I think that enormously has been included and nothing has been left out consciously." (#9)

The opposing discourse A-(b) with nodal point "Superficial investigations and documentation is a form of self-deception" incorporates articulations that attempt to explain all reports do not have to be superficial after all. Other conflicting discourses incorporate similar articulations that are hegemonic interventions within their respective discourses and attempt to reach a closure within the broader field of discursivity.

## **Discussion**

The principal findings of this study may be summarised in two points. First, the analysis explicates how archaeological reports function as boundary objects and how the shaping of these objects is related to the exercising of power. The archaeological reports are simultaneously physical artefacts and representations of more abstract judgments of relevance made by an archaeologist. They reside in an interface between different archaeological discourses (e.g. field archaeology and outreach) and between archaeologists and external actors such as landowners and exploiters (cf. Karsten et al., 2001). In contrast to the earlier studies, the present analysis underlines the role of discourses as a fundamental locus of antagonising viewpoints. Instead of explicating the boundary crossings as forming a network of actors and intermediaries with paradoxal and changing perspectives, the focus on discourses helps to see individual paradoxes in a broader context as shifting priorities. An individual archaeologist (an actor) and boundary objects may have aspirations relating to several conflicting discourses. A report is a precondition of forming community wide mutual understanding of the significance of an archaeological site. At the same time, however, the same boundary object can lead to widely different interpretations within interfacing discourses. As Subrahmanian et al. (2003) underline, it is necessary that the concept of report remains relatively stable and uniform in the inter-community context. Otherwise it would not be able to facilitate boundary crossings.

In spite of the apparent significance of reports as boundary objects and articulatory devices in the archaeological field of discursivity, similarly to all boundary objects (Lee, 2007), they do not function in isolation. Besides reports, the different archaeological discourses are mediated by a wealth of other objects from literature and people to technologies and physical archaeological sites. In addition, the reports have multiple dimensions. The intrinsic value of archaeological sites is a visionary boundary object (Briers & Chua, 2001) no one is ready to deny. The report,

however, is more like an ideal boundary object: "hard' outside and 'plastic' inside" (Briers & Chua, 2001). The report and its significance is shared in all discourses, but at the same it is articulated by differently and embodies different moments in different discourses. As the principal source of information and appraisal of an archaeological site, the field of discursivity on archaeological sites and their significance is highly dependent on the existence of reports. In this respect, an archaeological report is a *primary* boundary object in terms of Garrety and Badham (2000). Further, in terms of the categorisation proposed by Carlile (2002), the system of reports embodies syntactic, semantic and pragmatic dimensions. The infrastructure of reports and report writing forms a *syntactic* boundary object. The standardised form of reports a semantic one while the individual instances of reports constitute a pragmatic boundary object between different discourses with antagonistic tendencies.

The community specific views of the boundary objects and their contents are predicated by community specific discourses. Educators focus on the educational value of the documented information and landowners relate it to their ambitions on their property. At the same time, even if the reports have a capacity to bridge perceptual and practical differences among communities, they are produced within one of the interfacing discourses. Because of the subjective dimension of archaeological knowledge claims, mediation of archaeological knowledge is a question of advocacy of their trustworthiness, relevance and importance across the boundaries of communities within archaeology and outside. The report-writing archaeologist is always the one who puts forward in the first place an *articulation* about an archaeological site. This articulation is, in terms of Laclau and Mouffe (2001), (an attempt to make) a hegemonic intervention, a firm unambiguous interpretation of the significance and meaning of an archaeological site (or, a similarly unambiguous argument of the impossibility make such a definite statement) that would be accepted by all bounding communities. As all of the described antagonisms show, the articulation is often contested. Sometimes it is because the articulation is ambiguous in the first

place and sometimes because of the high hegemonic ambitions of the other competing discourses. The fundamental conflict of the bounding discourses relates to their aspirations to make a hegemonic intervention that would stabilise the entire field of discursivity to a single discourse that would accept the primacy of their nodal point.

Secondly, the present study has more general implications by suggesting a theoretical framework based on the theories of Gramsci, Laclau and Mouffe for conceptualising the dynamics of how especially documentary boundary objects create and maintain hegemonies within communities and achieve authority over other intersecting communities. In general terms, it is argued that the creation or reshaping of a boundary object is always an attempt to make a hegemonic intervention. As discussed earlier, the understanding of (cultural) hegemony assumed in the present article does not presuppose as a radical form of an open hostility as the one in the original work of Gramsci. But even if the articulation would emphasise a relative consensus and the boundary object would be established as a mediating artefact (McLeod & Doolin, 2010), the boundary object and boundary crossing have a purpose. This purpose, even a very lenient one, is an attempt to influence adjacent communities and as such a more or less belligerent form of hegemonic intervention. The interventions are not unilateral, but the process usually incorporates a series of interventions made by involved communities. This struggle of alternative hegemonic aspirations has been described in earlier literature as reflexive process of perspective making and perspective taking (Boland & Tenkasi, 1995), and negotiation (Fomin & Keil, 2000). A specific characteristic of a boundary object is that it makes hegemonic interventions easier to accept for communities with antagonistic tendencies even if the emerging norm would be (as suggested by Gramsci, 2007) advantageous by default only from the point of view of the hegemonic position. Boundary objects may thus be seen as facilitators of hegemonic interventions of different levels embedded in the boundary practices of interfacing communities.

In the present study, the field archaeologists were attempting to make a point for other

communities that a certain site or find is archaeologically interesting and, for instance, needs to be preserved or shown to the public. In the study of Star and Griesemer (1989), the Berkeleyan Museum of Zoology had similarly a goal of benefiting of the cooperation with amateurs. The dynamic nature of boundary objects, emphasised by Gal et al. (2004), and the possibility to interpret them from different angles allow hegemonic ambitions in all related communities. The ultimate hegemonic ambition of discourses is to make their own nodal points to become a nodal point of a united discourse that dissolves antagonism. As Mambrey and Robinson (1997) have observed, the boundary objects change when they cross boundaries. Similarly, an archaeological report changes from being a documentation of an investigation to become an information source for educators, an appraisal for cultural heritage manager, a different type of documentation for scholarly research and a positive or negative decision for a landowner when it crosses the boundaries between different discourses.

In spite of their transience, (in terms of Laclau and Mouffe 2001) the power of boundary objects may be argued to lie in their capability to smooth and partially bridge discourses with antagonising tendencies. Boundary objects can facilitate hegemonic interventions by arbitrating common nodal points without completely eradicating the antagonising *moments* of conflicting discourses or by making the hegemonic intervention acceptable within the frame of the subordinate discourse. Even if the field of discursivity reaches a closure, the internal plasticity of boundary objects makes it possible to accommodate the hegemony of an antagonising viewpoint by reinterpreting the closure in terms of the original discourse. A boundary object establishes a cultural hegemony (even if in Gramscian 2007\_sense, mostly a pre-eminently delicate one) and permits bordering communities to perceive the hegemonic point of view as non-detrimental and even advantageous. In case C, (a) can make a hegemonic intervention over (b) and turn the relative insignificance of the particular archaeological site (e.g. settlement site) into a nodal point of a new unambiguous discourse. The boundary object (i.e. archaeological report) used to make

the hegemonic intervention may, however, allow simultaneous readings that accommodate the validity of the both original *moments*. Even if a site is deemed relatively insignificant as a whole according to the discourse (a), a boundary object can help (b) to retain the relative validity of its opposite moment by permitting a reading that the site was documented extremely well or it was significant but not unique. In case B, the generally acknowledged primacy of a report as a document of archaeological field work can help exhibition planners to accommodate their interpretative viewpoint to the hegemonic intervention of the appropriateness of merely technical documentation of a site. The view of boundary objects as hegemonic devices underlines their dual role as objects of translation and transformation discussed by Carlile (2002). As he observes, boundary objects can be used jointly by proposing alternative views or as the present analysis shows, unilaterally to make hegemonic interventions.

Even if it would be tempting to argue that all boundary objects incorporate hegemonic aspirations, the specific characteristics of documents make them especially suited for making hegemonic interventions and crossing antagonising boundaries. The notions of power and the translatory and transformative capacities of documents have been discussed earlier by several theorists (e.g. Lund, 2009; Foucault, 2002). From the point of view of document theory (Lund, 2009), the argument about the hegemonic nature of documentary boundary objects may be broadened to encompass documents in general. Similarly to the creation and reshaping of a documentary boundary object, *making and modifying a document incorporates an attempt to make a hegemonic intervention* in the sense that the act of documenting inscribes and privileges a certain viewpoint (or viewpoints) over some others. The intervention does not have to be conscious or similarly radically hostile as in the work of Laclau and Mouffe. Further, the act of documentation is not *only* about making hegemonic interventions, but an intervention is an inevitable, whether conscious or not, consequence of creating or reshaping a document. As McLeod and Doolin (2010) remark, documents are capable of representing personal

interpretations of different stakeholders and they can be part of communicative practices on multiple levels (Østerlund, 2008). For archaeologists, a report is an *object of evaluation* (Østerlund, 2008) *per se* that is discussed as a concrete subject of attention. Secondly, the physical report that can be held, given and read is an *expressive medium* (Østerlund, 2008) i.e. evidence of the existence of an evaluative process and articulation. Thirdly, the report is a *part of an actional field of archaeology* (Østerlund, 2008) that *makes* a site archaeologically significant (or not) and reinforces the significance of interpretations (a certain observed feature *becomes* a wall if it is described as such in a report). Finally, the presence of multiple explicit levels of interpretations in documents (Oesterlund & Boland, 2009) emphasise their suitability for crossing more or less radically antagonising discourses. Even if a documentary boundary object incorporates a purposeful hegemonic intervention, its multi-faceted nature can help discourses to appropriate a hegemonic articulation.

## **Conclusions**

The present study has discussed the significance of power and articulatory processes in the emergence and use of boundary objects. The empirical analysis of the role of archaeological reports as mediators between different communities of archaeologists and other stakeholders of archaeological information showed that the boundary crossings and shaping of boundary objects incorporate articulations of power even if a boundary object may appear as a seemingly consensual device. The creation and reshaping of a boundary object is always an exercise of power, or in terms of Gramsci, an intervention with hegemonic aspirations, even if the agenda would have been made highly implicit by consensual articulation. A significant characteristic of a usable boundary object and its internal stability and external plasticity is that its embodied hegemonic interventions are capable of establishing a hegemonic state of unambiguity that does

not completely abolish the moments and nodal points of alternative discourses.

Finally, the analysis of archaeological reports suggest that the political dimensions of documentary boundary objects differ from other types of boundary artefacts because of their meta-discursive ability to simultaneously incorporate and represent moments that belong to conflicting discourses. Even if the making and reshaping of a document can be conceived as similarly hegemonic articulations as the creation of any boundary object, the complexity of documentary artefacts can help antagonising discourses to accommodate the primacy of a hegemonic viewpoint as a part of their own system of articulations.

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**Table 1:** Categories of discourses relating to archaeological information

Description
Education of future archaeologists at universities.
Obligatory archaeological field work on the basis of the sites and monuments legislation that is financed by land users.
Archaeological field work initiated by a scholarly interest for investigation.
Collection management and artifact analysis duties at archaeological museums and research institutions.
Popularization of archaeological knowledge in different forms: books, films, museum exhibitions and workshops.
Academic research in archaeology.
Cultural heritage management duties in state organizations responsible for the preservation of archaeological heritage
Development of methods and techniques for archaeological work, e.g. analysis methods, information systems or best practices
The positive idea of having an archaeological site on personal property.
Land is to be used for profitable activity such as construction or agriculture.

Amateur archaeology and history	Non-professional interest in archaeological knowledge.
Amateur investigation	Non-professional interest in unearthing archaeological sites (e.g. treasure hunters)

**Table 2**: Sample of antagonisms between different areas of archaeological work and non-archaeological work

Fields of discursivity	Antagonising discourses	Description of the field of discursivity	ldMentioned by informant (e.g.)
	(a)	(b)	
A	Rescue archaeology	Other fields of archaeology	Rescue archaeology is #14, #20, #21 controversial because of the haste, limited funding, need to make compromises with land users and the non-archaeological motivation to start an investigation. There is seldom time and possibilities to use exhaustive (and thus time consuming) investigation methods and produce detailed reports.
В	Public dissemination	Rescue archaeology, scholarly field archaeology	Archaeological #2, #11, #19 investigation reports and occasional research publications written on the basis of the provide often very little material that is directly usable in popular archaeology contexts (museum exhibitions, popular literature).
C	Cultural heritage management	Rescue archaeology, scholarly field archaeology	Cultural heritage #3, #6, #9 managers need explicit evaluations of archaeological sites and their significance in relation to other sites, an opinion a cautious and conservative scholarly oriented field archaeologist is seldom

willing to write down in a report.

D	Rescue archaeology	Development	Landowners are mistrustful of archaeologists who decide in their reports that their land use projects need to be cancelled because of the presence of an archaeologically significant site	#3,#6,#9,#13
Е	Rescue archaeology	Amateur curatorship	Some landowners are mistrustful of archaeologists who declare that the ancien ruins situated on the property are not ancient or ruins.	,
F	Rescue archaeology, scholarly field archaeology (earlier investigator)	Rescue archaeology, scholarly field archaeology (present investigator)	Even if earlier reports of earlier investigations are perceived to be the most important source of information in new projects, they are not always satisfactorily detailed or complete.	#12,#13,#17

**Table 3**: Floating signifiers and sub-discourse specific nodal points in archaeological antagonisms

(a) (b)

	Floating signifier	Nodal point	Nodal point
A	Necessary quality of observations	Approximate data and relatively superficial observations are better than nothing	Superficial investigations and documentation is a form of self-deception
В	General implications of the findings for an average person	Documents need to contain something that an average person can understand or made to understand.	Individual investigations produce only anecdotal evidence of historical cultures
С	Significance	It is possible to decide whether an archaeological site is significant or not.	The possible significance of a site cannot be ruled out
D-E	Significance	Archaeological significance is independent of external interests	Archaeological significance is a matter of 1) economical or 2) personal significance
F	Relevance of documented information	Relevance was determined by the earlier conditions and knowledge	Relevance is determined by the specific needs of the present project

Table 4: Articulations used as (attempts of) hegemonic interventions in antagonising discourses.

	Articulations used in antagonising discourses	
	(a)	(b)
A	* Efficient and relatively detailed but simultaneously cheap and easy methods exist * E.g. "We do calculate how much resources are needed and then we do [investigation and reporting]" (#13)	* This particular investigation was not that superficial after all * E.g. "There are these really good reports." (#4).
B	* The data may be complemented with parallels from neighbouring sites and countries * E.g. "We try to find parallels from the nearby cultures [] ethnographic line of investigation is rather good" (#12)	* Popular presentations should be based on reported facts as far as possible, but some approximations might be necessary. * E.g. "I think it is important that as much as possible is based on [reported] facts" (#20)
C	* The site is significant (because it is definitely not insignificant)  * The significance may be evaluated again later  * E.g. "If you can't say, you have to be as precise as you can" (#3)	* The site was documented extremely well  * It was significant but not unique * Cultural heritage managers make occasionally unwise decisions.  * E.g. "You just have to make a decision even if you couldn't get all the information" (#20)
D	* External interest did not contradict seriously with the archaeological interest * E.g. "You just have to explain the situation [that a ruin is not medieval] and try to convince that a 19th century stone base can be also very interesting"	* The site was not that what I thought, but it was interesting anyway.  n* E.g. "Even if people can be very upset, they tend to calm down in the end if you explain the situation calmly" (#3)

E	* External interest did not contradict seriously with the archaeological interest * E.g. "In the end, it is often possible to negotiate." (#13)	* Even if the investigation takes time and money, it is just something archaeologists have to do. * E.g. "Nowadays developers are more professional than before and see that we are just doing our job like they are doing theirs" (#12)
F	* It is practically impossible to take into account all possible viewpoints. The documentation is always based on the perspective of an individual archaeologist.  * E.g. "I try to do it [documentation] as well as I can, but of course I'm not an expert of everything" (#4)	earlier researchers are always