

Engagement has its consequences: the emergence of the representations of archaeology in social media

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Zusammenfassung – Social media werden oft als ein Instrument der Öffnung von Archäologen in eine Öffentlichkeit hinein wahrgenommen. Tatsächlich stehen sie jedoch für eine bidirektionale Kommunikation, sie sind ein Feld der Teilnahme und Aushandlung, das aus einer Infrastruktur der Kommunikation, einem Inhalt und Teilnehmern besteht. Der Beitrag diskutiert die Konsequenzen und Implikationen der Bidirektionalität der Social media. Auf der Grundlage einer empirischen Studie skizziert er die Stellung und Inbesitznahme von Archäologie in vier unterschiedlichen Bereichen der Social media. Die Analyse zeigt, wie populäre und wissenschaftliche archäologische Ergebnisse in die Social media hineingezogen werden, und wie die Bemühungen, die Bürger zu beteiligen, zu einer beidseitigen Bindung führen. Menschen beschäftigen sich mit Archäologen, aber auch anderen Bürgern, um an einem Austausch von Wissen und an einer Verhandlung über die Natur und Bedeutung von Archäologie teilzunehmen. Die Ergebnisse unserer Studie werfen ein Licht darauf, wie Social media nicht nur populäre Meinungen über Archäologie und ihre Bedeutung beeinflussen, sondern umgekehrt auch das bestehende archäologische Wissen einschließlich unserer Fragestellungen, seine materielle Darstellung und das Wesen der archäologischen Arbeit berühren.

Schlüsselwörter – Darstellung von Archäologie, Social Media, Facebook, Twitter, Second Life, Pinterest

Abstract – Even if social media is often seen mainly as an instrument for outreach from the archaeologists to the public, it is a two-way channel of communication and a context for participation and negotiation that consists of an information infrastructure, content and participants. This article discusses the consequences and implications of the bidirectionality of social media. The discussion is based on an empirical study of the representations and reappropriations of archaeology in four different social media services (Facebook, Twitter, Second Life, Pinterest). The analysis shows how the popular and scholarly archaeological information is appropriated in the social media services and how the efforts to engage people lead to a double bind of engagement. People engage archaeologists but also other members of the public to participate in an exchange of knowledge and negotiation of the nature and relevance of archaeology. The findings of the study shed light on the emerging patterns of how the use of social media can affect not only the popular ideas of archaeology and the contexts of its relevance, but also archaeological knowledge (i.e. what is known and what is desirable to be known), its documentary representations and the essence of the archaeological work itself.

Keywords – Keywords: archaeology, representation, social media, Facebook, Twitter, Second Life, Pinterest

Introduction

Social media are often perceived as an instrument for outreach from the archaeologists to the public. They are, however, a two-way channel of communication, and even more so, they form a context for participation and negotiation that consists of an information infrastructure, content and participants (i.e. people and organisations) (HOWARD & PARKS 2012). Huvila (2012b) has argued earlier that simultaneously with lowering barriers to information, the new information environment erects new boundaries that limit the ways in which we come to know things. By selecting and using particular sources of information and channels of communication, we influence what others, and we ourselves, know about different topics. This article discusses the consequences and implications of the bidirectionality of social media drawing on an empirical study of the representations and reappropriations of archaeology in four different social media services (Facebook, Twitter, Second Life and Pinterest). The theoretical underpinnings of the study are in infrastructure studies (BOWKER & STAR 2000), critical media theory (MANOVICH 2001).

The analysis shows how popular and scholarly archaeological information is appropriated in the social media services and how efforts to engage people lead to a double bind of engagement. People engage archaeologists but also other members of the public to participate in an exchange of knowledge and to negotiate the nature and relevance of archaeology. The findings of the study shed light on the emerging patterns of how the use of social media can affect not only popular ideas of archaeology and the contexts of its relevance, but also archaeological knowledge (i.e. what is known and what is desirable to be known), its documentary representations and the essence of archaeological work itself. At the same time, the findings give some indications on how to use and relate to the investigated social media services and how to engage as an archaeologist with social media in general.

Archaeology, public engagement and social media

Public engagement and use of a broad variety of media (in the broadest sense of the term) for the representation and communication

of archaeological knowledge are not new phenomena (KULIK 2007). Techniques such as archaeological illustration, Plaster of Paris models and popular archaeological literature have been used to engage the general public for a long time (ADKINS & ADKINS 1989; CAPLE 2006). The interest in the communication of archaeology to the public has a similarly long history and it precedes the era of social media (HARDING 2007) even if it is difficult to deny that digital information has had a profound impact on the premises and possibilities of communicating archaeological knowledge (SCHERZLER 2010). An additional aspect of social media, in contrast to many other tools of archaeological communication, is that the same services and venues are used for interaction with both professional and popular audiences. In this sense, various social media services do not function as exclusive outlets of outreach activities, or fora for merely professional or academic discussion.

One of the lessons learned from the public archaeology initiatives is that the convergence of popular and professional spheres of discussion has consequences. It can help to make archaeology more accessible, improve popular understanding of archaeological work and general interest in archaeology. At the same time, direct engagement may lead to controversies and misunderstanding, as in some cases when archaeologists have engaged in collaboration with the public (HOLTORF 2005; FERGUSON 1996). The risk is that the context of the archaeological discourse is not understood in similar terms by all of the participants in the discussion. Even if the scholarly archaeology would be more correct than some other views of the past, the alternative religious, cultural or other pseudo-archaeological can still have cultural significance for those who advocate for these views. Holtorf's (2005) critique of the patronising attitude of (scholarly) archaeology can be extended from the non-understanding of the rationale of pseudo-archaeology to the similar attitudes of non-archaeological ideas of the significance of the material remains of the ancestors among, for instance, using the example of Ferguson (1996), the Native Americans. The risk is that the context of the archaeological discourse is not understood in similar terms by all of the participants of the discussion.

The specific challenges of communicating archaeology in the electronic environment have been discussed also in the context of digital archaeology. Much of the literature on virtual archaeology in the late 1990s focused on debating the need to focus on producing scholarly valid

digital representations of archaeological subjects in contrast to the early technology-driven and archaeologically unsatisfactory digital imagery (UOTILA & HUVILA 2011). During the first decade of the new millennium, the focus turned from the presentations and content-related metadata to paradata (GREENGRASS 2008) to paradata and documentation of the processes of creating the representations (BENTKOWSKA-KAFEL ET AL. 2012). Later on, Gardner (2007) has investigated how archaeology is portrayed in computer games. Morgan (2009) and, for instance, Huvila and Uotila (2012) have discussed the use of Second Life in archaeology making some remarks on the implications of adopting these particular tools. Harris (2012) has similarly laid out the potential of open participatory geographic information tools. The book *Archaeology 2.0* from 2011 discusses the issues from a somewhat broader perspective and addresses a number of premisses and potential outcomes of the engagement in Web 2.0. Many of the contributors agree on the positive potential of the opening and sharing of archaeological data, and the introduction of a more flexible and direct means of consulting and interacting with the community. While summarising the contributions of the volume, Limp (2011) makes in his conclusion two noteworthy remarks. Firstly, a major impediment in achieving the potential goals depends on how the archaeological community adapts to the participatory culture of the social media, and secondly, how fast and effectively archaeologists develop means to address such central issues as sustainability and interoperability in the context of the new technologies.

In contrast to the optimistic views of the opportunities provided by digital tools e.g., (TRAPP ET AL. 2012) and digital forms of engaging with the public (MORGAN & EVE 2012), it has been noted that the rapid introduction of new technologies poses serious challenges to the development of infrastructures needed for providing sustainable access to new forms of information (JEFFREY 2012). Scherzler (2010) has made general remarks on the consequences of using social media (Web 2.0) for communicating archaeology on the basis of two surveys on, respectively, archaeologists and the general public in the context of a much debated Maya expedition sponsored by the German magazine *Bild*. She underlines the radical change of how the public sphere is constituted in the social web in comparison to the traditional media. The primacy of the web as a source of information and the mechanisms of how knowledge is crafted on the web removes the realistic possibility of

being influential in the social web without being engaged.

Methods and material

In order to map the uses of popular social media tools for archaeological communication, the authors conducted an exploratory content analysis of a sample of archaeology related material in four popular social media services Facebook, Twitter, Pinterest and Second Life, in August 2012. The aim of the empirical work was to get an idea of how archaeology is represented in some of the major social media platforms and to analyse the possible consequences of the types of engagement found on the platforms. The choice of the particular platforms was motivated by their relative popularity by the time of the study and that they represent different types of popular social media services (social network, micro-blogging site, virtual world and social curation service). The sample was formed by searching on the services (using the built-in search functions) by using keywords "archaeology", "archaeological" and "archaeologist" and picking the first 50 results for closer analysis. The exploratory analysis was based on visual and textual content analysis (SVERRISSON 2011; WHITE & MARSH 2006) and focused on investigating 1) how archaeology is represented in the different services, 2) who is representing and communicating archaeological topics, and estimating 3) possible motivations of the particular types of representation. The analysis and the construction of categories were based on the constant comparative method of Glaser and Strauss (1967). The iterations were carried out until the a new round of analysis did not result in revisions in the categorisation or the motivations. The results were verified by gathering and analysing a second set of data gathered a week later. The two sets of observations were compared. The analysis lead to minor modifications in the characterisations of the services, but in general, the major observations on the two data sets were close to identical. The results were verified by gathering and analysing a second set of data gathered a week later. The two sets of observations were compared. The analysis lead to minor modifications in the characterisations of the services, but in general, the major observations on the two data sets were close to identical.

It is essential to note that the sampling technique has its limitations and the analysed dataset is not comprehensive. Especially in

Pinterest and Twitter, the popularity of specific links or images can be related to the rise and fall of momentary memes. On Facebook, it is difficult to cover individual archaeology related status updates and the ongoing discussion, and in Second Life, the environment contains only sporadic traces of how individuals engage with archaeological content in the virtual world. The material gathered from the different services is also very different by its nature. Partly, the bulk of the content is not similarly open for harvesting in all services. Even if all of the services have functions for private communication, Pinterest and Twitter may be argued to be more public than Facebook and Second Life. In Facebook, the bulk of the communication is directed to the 'friends' and the 'network' of the individual users. Second Life places a lot of emphasis on synchronous voice and chat communication between users. Both are obviously impossible to capture using the data collection approach applied in the present study.

The differences in the prevalent types of media (text, images, 3D models) used in the services have also influence to how the services compare to each other. There are also content related differences between the services with implications for the presented analysis. In Pinterest and Twitter, the analysis focused on individual images and posts and their authors, while Facebook and Second Life tended to provide a richer context of interpretation in the form of groups, fan pages or three-dimensional milieus. There are also obvious technical and cultural differences between the four platforms. Facebook is a social networking service, Twitter is a micro-blogging platform, Second Life is a three dimensional virtual world and Pinterest a 'pinning' service.

In spite of these reservations, it is argued that the dataset provides useful evidence of the broad patterns of how archaeology is represented in these services. Even if the analysis revealed a number of features that were distinct to the platforms, the representations and the broad approaches to communicating archaeology had similarities beyond what can be explained by mere coincidence.

Analysis

The analysis confirmed the assumption that both archaeologists and amateurs engage actively in discussing and communicating archaeology in all of the four platforms. The presentation of archaeological subjects and representation

	Organisation	Context	Archaeology (defined by/within)	Open/Closed
Facebook	Groups, Pages, Events	Network	Communities (individuals within communities)	Closed
Twitter	Hashtags (e.g. #archaeology), Users	Followers, Random users	Individuals (influential users)	Open
Second Life	Geographical (in 3D space)	Groups, Random users	Creators and active exploiters of the virtual world	Open and Closed
Pinterest	Collections, users	Followers, Random users	Individuals (influential users)	Open

Table 1 Comparison of archaeology on Facebook, Twitter, Second Life and Pinterest.

of archaeology as a whole is focused on finds, artefacts, notable findings and news items (e.g., “Ancient treasures under fire” by National Geographic in Twitter on Aug 21, 2012, or the images pinned in Pinterest). At the same time, a part of the communication that focuses on the work of archaeologists is a more mundane and practical exchange of links and short observations (e.g., a Twitter user tweeting a link to an article on how C-14 dating works on Aug 21, 2012).

In spite of the broad similarities, there were, however, several notable differences between the individual platforms. The major observations of the analysis on the characteristics of the individual services are summarised in **Table 1**.

In Facebook (**Fig. 1**), it is apparent that the organisation of the archaeology related content is

largely determined by the structure of Facebook that builds on links between individual users, individuals and organisations (or topics) in the context of the ‘Pages’, memberships in ‘Groups’ and participation in ‘Events’. In spite of the general recommendation of the service provider to create user accounts for individuals and groups, and pages for organisations, some organisations are still represented in Facebook as ‘users’. There is also some variation in whether organisations have chosen to create a Group or a Page. A Group suits better for discussions and peer-to-peer sharing whereas a Page is a more appropriate tool for informing and updating a larger group of individuals. The analysis showed that many different types of archaeological entities are represented in the service. Archaeological societies, contractors, archaeological museums

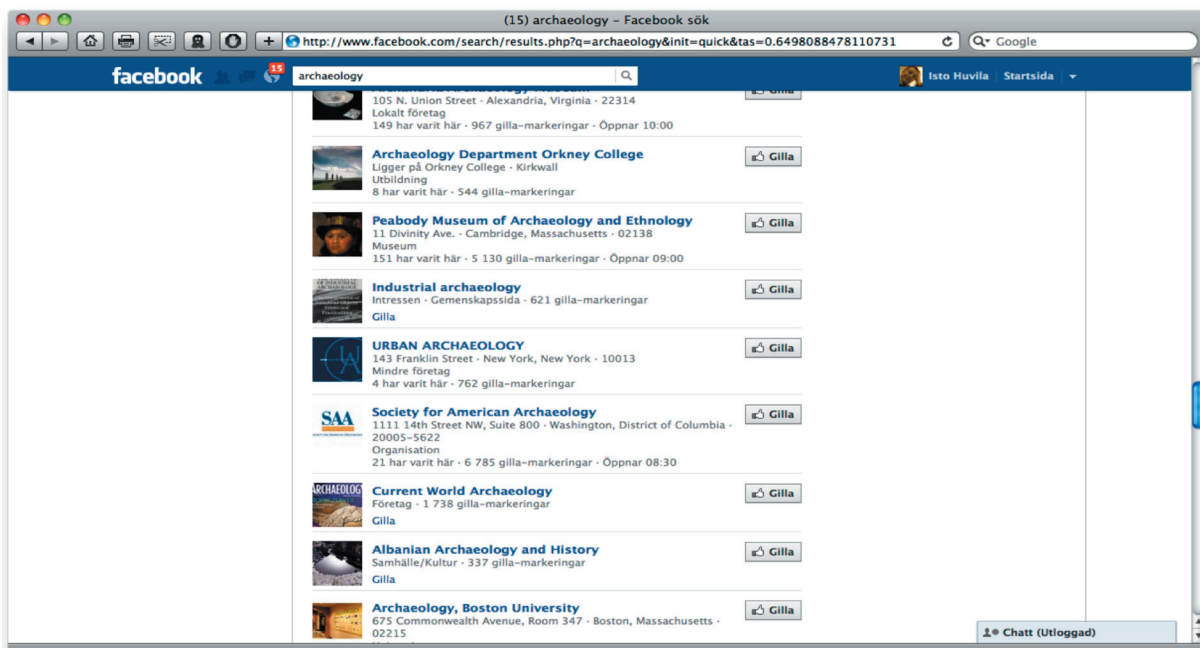


Figure 1 Archaeology related content in Facebook.



Figure 2 Archaeology related content in Twitter.

and university departments have their own groups and pages. There are groups and pages for university alumni and former and current employees of various organisations. There are also open groups for discussing particular areas or aspects of archaeology (e.g. South Asian Archaeology, Biblical Archaeology). There are also pages for particular areas of archaeology (e.g. Archaeology, Underwater archaeology) with an aim of providing individual Facebook users topics to 'Like' and relate to. It was apparent that most of the groups and pages had a limited (considering the total number of Facebook users) number of members or followers. Also the typical level of activity in groups and on pages was relatively low. The number of comments and contributions varied between zero and five in a large majority of the groups. Many of the most active venues seemed to belong to associations and societies. Conferences and events did also tend to attract comparable levels of activity around the event date. Instead of focussing on original creations and content, it seems that much of the documented activity relates to (links to) announcements of coming events, news briefs and links to various archaeology related web sites. Some groups and pages did, however, contain traces of individual to individual interactions in form of personal remarks, humour and discussions in comment

threads. It is plausible to assume that a more comprehensive analysis of the practices of individual Facebook users would undoubtedly reveal more of this type of engagement.

The material retrieved from Twitter (Fig. 2) formed a significantly different type of a corpus of archaeology related information. The primarily 140 character long tweets tend to focus on links to archaeological news items and web pages and short comments on various topics. Many archaeology related tweets are being posted by similar types of organisations as in Facebook, but on Twitter the individual users and their contributors are more visible for the general public. Whereas Facebook can be characterised as being centred on (social) networks, Twitter is used by many participants as a forum for posting news and publicity rather than as a venue for extensive discussion. The contextuality of participation is also less clearly defined in Twitter than on Facebook. The possibility to follow individual Twitter users and to use hashtags provide a technique for structuring interaction with specific individuals and discourses, but the engagement in Twitter is *per se* is less rigidly structured in predetermined contexts than in Facebook.



Figure 3 Archaeology related content in Second Life.

Second Life (Fig. 3) and other virtual worlds represent a radically different type of social media for engaging with and representing archaeology than Facebook or Twitter. As noted earlier, the applied data gathering method fails to capture synchronous communication. At the same time, the way that archaeology is being represented in three-dimensional Second Life milieus is not entirely unrelated to how archaeology is portrayed in the other three services analysed in the context of this study. Many of the archaeological environments can be traced back to same or related associations, interest groups, museums and academic institutions as the content in the other services investigated as a part of this study. An obvious function of the milieus is to function as showcases and to provide spaces for interaction and engagement. The archaeology related sites in Second Life are characterised by a breed of aesthetics that reminds us of the earlier observations made on the representation of natural environments in the same virtual world (CLARK 2011). The dominant form of the representation of archaeological entities resembles the appreciation of archaeological finds that was typical of the earlier antiquarian researches (SHANKS & TILLEY 1992).

The fourth analysed social media service Pinterest (Fig. 4) presents itself as a virtual pinboard (HALL

& ZARRO 2012). The focus is on photographs and on a superficial level Pinterest gives a significantly more heterogeneous idea of the domain of archaeology than the other three services. Archaeology related pins range from books to travel photography and pins to the most popular area of interest of Pinterest users, shopping. In comparison to Facebook, Twitter and Second Life, the archaeology related pins were more peripherally related to professional and academic archaeological sectors. A notable feature in Pinterest is collections that contain archaeology related photographs. Whereas 'archaeology' (as a topic) or an archaeology related organisation appears to provide the principal context for the most of the content in Facebook, Twitter and Second Life, archaeology related pins are commonly included in collections such as "Style" and "Things I love".

Discussion and Conclusions

The present small empirical analysis of the representations of archaeology in four popular social media services does not provide opportunities for making comprehensive claims about the use of social media in archaeology. It does, however, provide evidence for the variety and patterns of how archaeology is represented

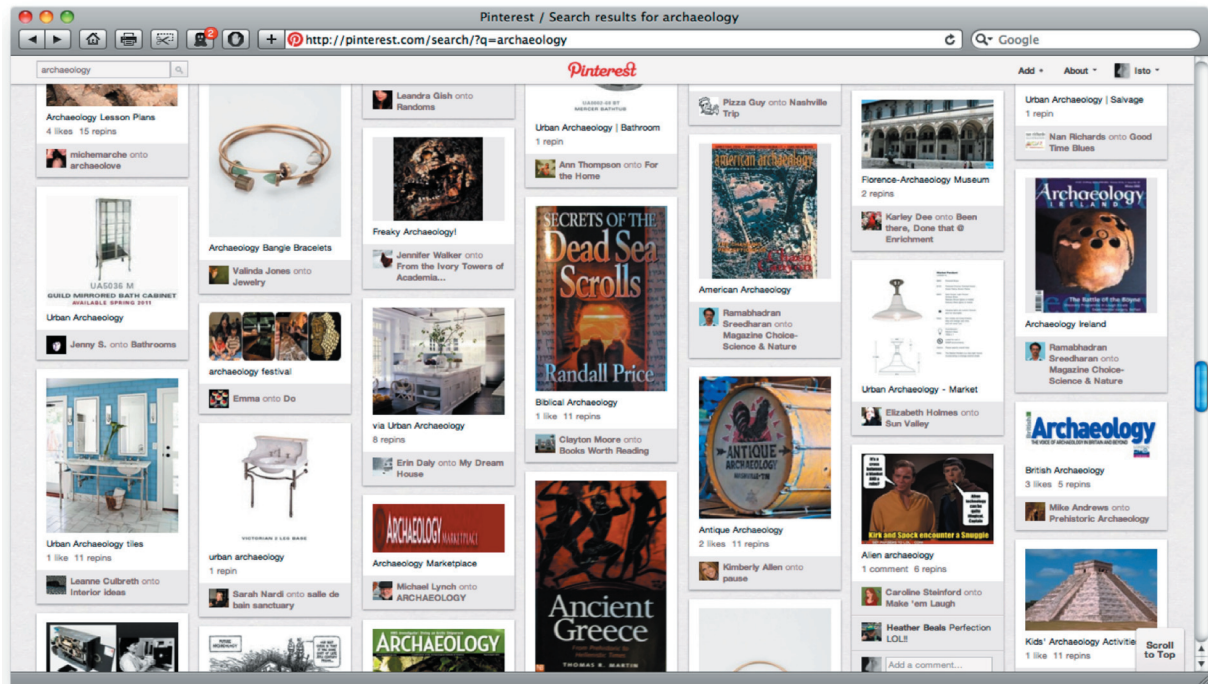


Figure 4 Archaeology related content in Pinterest.

in the different services and on the emerging patterns of how the use of social media can affect not only the popular and professional ideas of archaeology, but also archaeological work and knowledge and the contexts of their relevance.

In somewhat simplistic terms, it may be argued that as a whole, Facebook is heavily colonised by representations of professional and academic archaeology. The most visible actors tend to be well-known organisations and communities, and the most popular topics tend similarly to be the ones, for instance, new publications, exhibitions and degree programmes, with a direct or semi-direct connection to agenda of traditional authorities such as publishers, museums and universities. In contrast to the relatively clear structure of Facebook, Twitter presents a cacophony of professional and non-professional voices of individuals and organisations. The possibility to follow specific individuals and organisational accounts provides a means to filter the hotchpotch of voices, but does not eliminate the broadcast oriented nature of communication in the service that pertains even to one-to-one discussions between individual users. In contrast to the relatively flat basic structure of Facebook and Twitter, Second Life places emphasis on the individuals who create the three-dimensional content of the world and the content itself.

Archaeology is not represented as a discussion but rather as an assemblage of largely unrelated oeuvres authored by often relatively anonymous professionals and amateurs. Similarly to Second Life, Pinterest is also much more author, or more precisely in Pinterest, collector centric than the two other services. Similarly to Second Life, the visual nature of Pinterest highlights the significance of imagery and impressions of the spectator.

On a somewhat more profound level, the similarities and dissimilarities of the studied social media services may be explained by a convergence of multiple systems of knowing and representing knowledge. The forms of representing archaeology in the analysed social media services are closely related to the general forms of representation and production of knowledge in social media. The technical premises provided in Facebook, Twitter, Second Life and Pinterest dictate how archaeology can be present in these environments and what types of Gibsonian affordances and constraints are embedded in the technologies. Archaeology itself is a social practice (HERZFELD 1992) similarly to the production of archaeological information and knowledge. The practices of using social media for representing and 'doing' archaeology are also social practices and as the analysis shows, they are distinct but not decoupled from other archaeological practices. The technical and

social frame of social media services influence how the practices are evolving in these particular environments.

In spite of the novelty of the technological platforms, it is possible to draw parallels between the social practices that relate to earlier forms of representing, producing and reproducing archaeological knowledge. Adkins and Adkins (1989) discuss the premises, conventions and consequences of archaeological illustration in different times, and note that the underlying assumptions and paradigmatic choices of illustrators have a major impact in how the illustrations are capable of informing (and how they in practice do inform) their spectators. Watkins (2006) discuss the consequentiality of the choice of words and how different audiences can understand them differently. For instance, the word abandon can be a very technical term for an archaeologist whereas for a member of a local community, the technical 'abandoning' of a house (moving away) does not necessarily imply that the site would have been abandoned for good. Uotila and Huvila (2011) have made similar remarks on how digital three-dimensional models can be interpreted in different ways by different individuals and communities. In virtual worlds, it seems that the practical necessity to (re)construct environments within a particular virtual world, the associated social practices of three-dimensional modelling and the technical impossibility to directly relay (forward or share) existing information can be a factor that increases the likelihood of hyper-realistic perfection both in the representation of, for instance, natural (as in CLARK 2011) and archaeological contexts. The similarities between the four analysed social media services in what archaeological information is being communicated leads to the assumption, however, that this tendency is not entirely technical, but may be a broader question of the emergence of preferences as a part of particular types of contexts and social practices.

Even if the representational biases can be particularly easy to discern in the context of public archaeology, the bias is not inherent to popular or social media. Even established infrastructures of information, for instance, a relational database is not a neutral technology of representing and organising information (HUVILA 2012a). Manovich (2001) has discussed the implications of the adoption of database technologies and of the appropriation of new types of media and media technologies as an emergence of a new language of digital media. On a fundamental level, the

distinct 'languages' of different social media services function as systems of organising how ideas are communicated, reproduced and known. They are knowledge organisation systems similar to three-dimensional virtual environments (HUVILA 2006) or in terms of Bowker and Star (2000), they function as classification systems with unavoidable consequences for the information they are used to convey. In spite of their similarities, the 'archaeology according to Facebook' is inherently a different kind of archaeology from the archaeologies according to Twitter, Second Life and Pinterest, or the archaeology according to a scholarly monograph.

The present findings have also some indicative implications for the use of the four analysed services in the communication of archaeological knowledge. The novelty of social media services, the briefness of communication and the fact that the cultural conventions of using and communicating with them are emerging, rather than being deeply embedded in the mainstream, and this underlines the need to be careful in the choice of words and metaphors. Technically, Facebook is a useful tool for networking with colleagues, it offers possibilities for outreach and for engaging the general public in archaeology related matters. Twitter can be used as a channel for broadcasting and following news flows and engaging individual users for momentary interactions. The features and apparently successful examples of using Pinterest to promote various types of commercial and non-commercial services suggest that pinning can function as a useful method for increasing awareness of archaeological collections, sites and projects, and various aspects of archaeological work. Second Life differs from the three other services in that it is less oriented towards collecting, mashing up and relaying existing information. Second Life and other comparable virtual worlds provide a context for reproducing archaeological sites and simulating archaeological practices in an immersive milieu. Unlike Facebook, Twitter or Pinterest, the environment is unlikely to work especially well as an outlet for publicity and general outreach, but can work as a meaningful frame for a deeper engagement with specific groups of professionals and amateurs. The fact that all social media services are not quite separate and not quite directly connected to other social media services in the metaversal environment of the social web affects their usefulness as platforms for communicating archaeology (HUVILA & UOTILA 2012). The simultaneous linkage and the lack of it

can be exploited, but at the same time, it may create a doublebind that can be difficult to overcome. It is possible to *use* individual and multiple services to communicate archaeology, but at the same time, it is impossible to avoid the consequences of the existing and emerging implicit and indirect links *within* the spheres of social media and archaeology, and *between* social media and archaeology. A common aspect of Facebook, Twitter, Second Life and Pinterest is that the mechanisms of how 'archaeology' is constituted in the different services differs from the traditional outlets of communicating archaeological knowledge. A premiss of all social media is the lack of an intrinsic primacy of traditional hierarchies of authority. Archaeology is discussed in some sense on the different social media services with or without archaeologists. This does not imply that professional archaeologists need to engage in all conceivable forms of social media, but inherently limits the legitimacy of the critique from the part of non-users as Scherzler (2010) has remarked. At the same time, it puts pressure on being explicit and reflective about the forms and implications of engagement in terms of providing credible documentation or paradata of what is being communicated and how with a specific reference to the particular premises and limitations of the context of communication. Engagement in the social web is not only a question of using a set of digital services or even them being *of use* as Limp (2011) underlines, but also of considering how the media is using and influencing archaeology and archaeologists. Similarly to video games, various types of social media tools can be useful milieus for communicating archaeology, but as Gardner (2007) notes about games, their usefulness comes with a critical engagement. Critical engagement is about understanding and accepting that archaeology becomes a distinct entity in the different forms of social media, and about working with the tools *and* an explicit idea of archaeology (what archaeology is all about) as the premises of organising and communicating archaeological information.

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