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Antisocial media in archaeology?

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Abstract

An increasing number of individual archaeologists, archaeological organizations and institutions are using social media platforms for professional discussion and networking, research, public outreach and community archaeology. Proponents of social media have particularly pointed towards their potential for transforming the means of networking and communication in archaeology, and challenging traditional disciplinary expertise as archaeologists engage with more diverse and active online publics. This article provides a theoretically informed critical discussion, pointing towards the complex barriers to equal Internet access and usage, which challenge the ability of archaeologists to use social media as a tool to democratize the discipline. It concludes that, in many cases, social media appear to have reinforced archaeological authority at the expense of genuinely decentred engagement or collaboration. The article acts as a challenge to encourage further debate and empirically informed research in this emerging area of archaeological practice.

Keywords

archaeology; inequality; Internet studies; public archaeology; social media

The advent of the Internet saw many commentators espousing its potential for harbouring true participatory democracies (e.g. Rheingold 1994). Although such utopian thinking eventually faded towards more synoptic visions of online participatory spaces, the recent popularization of social media has prompted something of a revival of techno-utopianism (e.g. Shirky 2008). Commentators have considered social media sites (running on Web 2.0 technologies) to be fundamentally different from the preceding Web 1.0 websites as the former elicit Internet users' participation in producing and disseminating online content, whereas the latter merely push information to recipients. In this way social media may be vehicles for fostering a more democratic society since they challenge the control over information held by existing sociopolitical elites (e.g. Bruns 2008; Jenkins 2006). However, Internet theorists are increasingly recognizing the various barriers to equality

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of Internet access and usage; the Internet is not a utopian space as it cannot transcend existing offline contexts of inequality (e.g. Selwyn 2006; Van Deursen and Van Dijk 2011).

Prior to the emergence of social media, a few archaeologists experimented with the Internet as a tool by which postprocessual tenets, such as multivocality and improved public engagement, could be realized (e.g. Biehl 2004; Hodder 1999; Holtorf 2004; Joyce and Tringham 2007; McDavid 2004). In many ways, their claims anticipated the assertion that social media can foster equal participation in society. Social media usage has not achieved ubiquity in archaeology but an ever-increasing number of individual archaeologists, archaeological organizations and institutions are using various social media as tools for professional discussion and networking, research, public outreach and community archaeology (see Bonacchi 2012a; Kansa, Kansa and Watrall 2011; Lake 2012). Proponents of social media have particularly pointed towards their potential for transforming the means of networking and communication in archaeology, and challenging traditional disciplinary expertise as archaeologists engage with more diverse and active online publics. All of these claims are consonant with those of more utopian-thinking commentators. However, these positive discourses have tended to prevail at the expense of sustained critical and empirical analyses of the effective impact of social media on the discipline of archaeology and its various publics.[1] This article surveys the social media currently used by archaeologists and offers an analysis of some of the posited benefits of their use informed by perspectives on social media that have emerged from new media studies and relevant theorization about the nature of the archaeological discipline advanced by public archaeologists. My intention is to point towards some fruitful avenues of future research in this much-discussed but under-studied area of archaeological practice.

Social media for archaeology and its publics

Social media usage in archaeology can be broadly categorized as internally or externally focused, although these are rarely exclusive categories as particular platforms can be used in either or both ways (Table 1). The former tends towards communication within the archaeological discipline, whereas the latter tends towards engaging or collaborating with extra-disciplinary publics. Both categories of use raise a number of common concerns, including how traditional regimes of knowledge production and dissemination in archaeology are impacted, how the advancement of professional careers is affected, whether or not archaeology can further its own standing in society, the extent to which archaeology could include wider and potentially more diverse audiences, and the degree to which the inclusion of extra-disciplinary voices in the interpretation of archaeology is enabled.

Social media for archaeology It is difficult to estimate how many archaeologists use social media for professional purposes, although this is likely to be several thousand and increasing.[2] Furthermore, it is unclear what 'kind' of archaeologist is most likely to actively use social networking sites. In archaeology, it has been suggested that students or early-career researchers

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Table 1 Platforms and characteristics of social media in archaeology.

Feature	Description	Purpose	Examples
Blogs	A blog (a contraction of the words 'web' and 'log') is a webpage usually displaying short opinion pieces about a particular topic or journal-style updates on a research project. Commenting functions are included on many blogs, allowing readers to respond to the blog author.	• More accessible, timely manner of disseminating research (Caraher 2008; Kansa and Deblauwe 2011). • Allows for two-way communication channels with audiences, including academics, professionals and other publics (Caharer 2008). • Raises awareness of international issues in archaeology (*AP. Online journal in archaeology*, n.d.; Schreg n.d.; Yates n.d.). • Promotes collaborative research and interdisciplinary conversations (Caraher 2008; Day of Digital Humanities n.d.). • Raises support for and encourages participation in archaeology (e.g. Day of Archaeology n.d.). • Reveals authorial voice and contingency of interpretations (Brock 2013). • Allows online publics to compete with existing elites as little technical knowledge is required to publish a blog (Bruns 2008; Kahn and Kellner 2004).	• Individual blogs (e.g. Archaeologik, Doug's Archaeology, Anonymous Swiss Collector). • Institutional blogs (e.g. UCL Museums and Collections Blog, University of Southampton Archaeology Blogs). • Collective blogs (e.g. Day of Archaeology, Day of Digital Humanities, Trowelblazers).

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Table 1 Continued.

Feature	Description	Purpose	Examples
Crowdfunding	Accumulating small or large donations from many individuals via an online funding platform.	• Secures funding for archaeological activities, including research trips and excavations (Piscitelli 2013). • Offers tangible returns for contributions, such as places on training excavations (DigVentures n.d.).	• DigVentures. • Bamburgh Research Project.
Crowdsourcing	The solicitation of user-generated content from groups of online individuals ('crowds') (see Brabham 2013). Specific aims vary by project but the aggregated result of contributions tends to form a body of knowledge acting as a solution to a particular defined problem. Projects usually demand that users complete a sort task (e.g. correcting errors in digital content, transcription, categorizing or tagging content) or in some cases submit rich content (e.g. videos, oral histories).	• Aids the production of datasets in research projects, and in a more efficient manner than a small research group would be able to achieve (Gura 2013). • Engages wider audiences in interpretation, thus serving to decentre the traditional authority of archaeologists and museums (Cairns 2013). • Provides enjoyment to motivated members of the public (Owens 2013; Ridge 2013). • The data produced may make online resources more accessible to the online public (Dunn and Hedges 2012, 37–40; Trant 2009).	• Atlas of Hillforts. • Ur Crowdsource. • Your Paintings. • Old Weather. • Galaxy Zoo.

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Table 1 Continued.

Feature	Description	Purpose	Examples
Open access	Making data and publications freely accessible online, often with limited copyright restrictions (see Suber 2012).	• Enables accountability and transparency (Kansa 2012; Lake 2012). • Accepts the contingent nature of archaeological interpretations (Neylon 2013). • Improves quality and quantity of resources surrounding archaeological data or museum collections (Baltussen *et al.* 2013). • Offers wider access to literature and participation in archaeology and heritage (Kansa, Kansa and Goldstein 2013). • Secures personal advantage through increased circulation of research (Suber 2012, 15).	• Open-access journals (e.g. *Internet archaeology*, *AP. Online journal in public archaeology*). • Open data repositories (e.g. Open Context). • Open museum content (e.g. Getty Open Content, Rijksmuseum).

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Table 1 Continued.

Feature	Description	Purpose	Examples
Social networking sites	Websites that encourage the maintenance or extension of existing social networks and the creation of new relationships. Networks may be variously composed of acquaintances, colleagues, family, friends and strangers. Facebook and Twitter are the most popular general social networking sites. Some are designed to support communities around particular interests (e.g. Flickr for photography, last.fm for music). Users tend to be required to create a profile page, on which content can be posted by the page proprietor or by others.	• Supports discussion around particular topics. • May be used to garner support or awareness for pressing issues in archaeology, and raise awareness of international issues (Schreg 2013). • Promotion of own or others' research and projects (Terras 2012). • Sharing news, calls for papers, job opportunities. • Supports professional collaboration as well as personal support networks (Lowe 2014). • Reporting on papers and discussions at conferences (usually known as 'live-tweeting' on Twitter, and taking the form of short notes or summaries). • Creation of pages as support for community archaeology projects (Florida Public Archaeology Network n.d.). • Improves the interpretation of archaeology or museum collections by encouraging contributions from various audiences (Brock 2013; Kelly and Russo 2010). • Extends reach of archaeology and museums to non-visiting or non-traditional audiences (Russo, Watkins and Groundwater-Smith 2009).	• Florida Public Archaeology Network (Facebook, Twitter). • Burgage Earthworks (Facebook, Twitter). • All Of Us Would Walk Together (Twitter). • Academia.edu social network. • Zoobook social network. • Discussion of public archaeology using the '#pubarch' hashtag (a Twitter convention which allows users to search for comments and engage in discussion on a particular topic).

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Table 1 Continued.

Feature	Description	Purpose	Examples
Targeted collaborative projects	Collaborative projects between archaeologists (often based in museums) and extra-disciplinary communities (usually descendant or source communities). The digitization of museum collections and the establishment of interactive databases usually enable these projects.	• Provides communities with digital access to their cultural heritage and aids cultural revival within communities (Christen 2011). • Enables research collaborations and conversations amongst various communities – including disciplinary communities – and individuals (Hennessy, Wallace and Jakobsen 2012; Rowley *et al.* 2010). • Integrates more diverse knowledge systems in museum catalogues than those usually represented (Srinivasan *et al.* 2010). • Helps to redress colonial histories of museums by 'virtually repatriating' heritage (Boast and Enote 2013).	• Reciprocal Research Network. • Murkurtu Wumpurrarni-kari Archive. • Inuvialuit Pitqusiit Inuuniarutiat: Inuvialuit Living History Project.

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Table 1 Continued.

Feature	Description	Purpose	Examples
Wikis	Wikis comprise numerous editable and linked pages. They often take the form of a freely accessible encyclopedia – Wikipedia most famously.	• A means of disseminating open content. • Supports collaboration between organizations and individuals, including special-interest groups that improve pages on a certain topic (e.g. WikiProject Archaeology 2013). • Supports the co-construction of knowledge between traditional experts and other communities who may be able to contribute knowledge (Phillips 2013).	• WikiProject Archaeology. • GLAM-Wiki. • Academic Jobs Wiki. • WikiArc. • WikiLoot.
Other social media tools	Numerous other social media tools are used in archaeology.	• To upload documents and other content, which may be linked to from other social media sites. • To meet various professional needs (e.g. bookmarking useful information, scheduling, discussions). • To support research collaborations. • To engage academic, professional and other communities.	• RSS readers and social bookmarking. • Doodle. • Google Docs. • Slideshare.

are more likely to use social networking sites than senior scholars (Kansa and Deblauwe 2011; Lowe 2014). This is broadly supported by a larger-scale study of academic social media usage, which indicated that academics over the age of 45 were much less likely to use all kinds of social media (Rowlands *et al.* 2011). It has been further asserted that early-career researchers are more likely to benefit from social networking sites in particular since senior scholars, already embedded within professional networks, are afforded greater access to news and information regardless of social media usage, which might even be considered an unwelcome distraction (Kansa and Deblauwe 2011).

Social networking sites are seemingly useful for resources such as calls for papers and identifying new or emerging research in various fields of study. This may not appear altogether divergent from earlier technologies, such as email lists or department bulletin boards, but the primary differences are seemingly the greater scale and the potential for diversity. For example, the blogs of numerous professionals, non-professionals and academics (within and without archaeology) may be referenced. Archaeologists may not usually encounter these more informal and perhaps multi- or transdisciplinary sources of information. Thus there is at least the potential for disciplinary boundaries to be revised. Many social media users may also contribute to a heightened awareness of archaeological issues from around the world (e.g. *AP. Online journal in archaeology* n.d.; Schreg n.d.; Yates n.d.). A further identified benefit of social media usage is the ability to promote one's own research to a much larger audience than exists in traditional channels of dissemination (Dunleavy and Gilson 2012; Terras 2012). The act of 'following' (i.e. by creating a list of contacts) individual or organizational accounts on social networking sites also enables researchers to be recipients of information from other selected researchers. In this way, social networking sites may function in a similar manner to traditional journals in their role of filtering academic information, thus acting as a kind of quality check (Daniels 2013; Fenner 2012).

Of potentially greatest disruption to current regimes of research and publishing is the 'open' approach to academic research (Kansa 2012; Lake 2012). Open-access publishing may secure a degree of personal advantage through the increased circulation of research but what is arguably of most importance is the open 'state of mind' (Neylon 2013; also see Suber 2012). This refers to an acceptance that one's research can be unpredictably reused and as such may provide crucial insights about data. Moreover, the open approach appears to complement many postprocessualist tenets in its acceptance of the contingent and provisional nature of understandings of data. Social media can enhance this approach by encouraging feedback from other individuals at all stages of research: from the initial formulation of work to its publication and beyond (see Mollett, Moran and Dunleavy 2011).

Social media for archaeology's publics Externally focused uses of social media in archaeology are often accompanied by claims that the authority of archaeologists can be decentred, alongside the various benefits that accrue through participation in archaeology, although such claims are more explicit within the broader heritage and museum studies literature (e.g. Adair, Filene and Koloski, 2011; Bonacchi 2012b; Brock 2013; Lake 2012; Morgan and

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Eve 2012; Phillips 2013). A number of projects have been initiated to engage wider audiences with archaeology whilst others have attempted to subvert disciplinary or institutional authority to various democratic ends by encouraging the participation of particular communities or the general public in interpreting cultural heritage (e.g. Brock 2013; Phillips 2013). A number of targeted collaborations established between museums (often university museums) and descendant or source communities have particularly recognized the importance of pre-existing sociopolitical contexts and have more fundamentally questioned the primacy of traditional archaeological interpretations (e.g. Christen 2011; Rowley *et al.* 2010; Srinivasan *et al.* 2009).

Antisocial media? Impact, inequality and authority in social media usage

Despite the prevalence of discourses about social media reforming the ways in which archaeological research is conducted and disseminated, the permanent effects of social media on archaeology and its publics are unclear. This is likely due to a lack of empirical impact studies and a failure to fully engage with the significant research emerging from the field of new media studies, in addition to theorization about the nature of the archaeological discipline that has particularly emerged from collaborative and indigenous archaeology. In fact, a lack of engagement with pre-existing sociopolitical and sociodemographic contexts and disciplinary cultures may have resulted in the privileging of traditional authorial elites and processes of conducting archaeology. Here, three points of primary concern are raised: (1) the factors that prevent equitable access to and use of the Internet, (2) the transference of pre-existing structures of authority and expertise to online spaces, (3) the disparity in the accrual of resources between disciplinary centres and archaeology's publics.

Throughout all these points of analysis, it should be borne in mind that one of the primary issues with determining the actual impact of social media is a lack of empirical research. This kind of research would, for example, assess the impact of social media on archaeologists' careers and implicated communities in at least the short and medium term.[3] In public archaeology, there is a particular need to define measures of online engagement (Bonacchi 2012b). Engagement and impact cannot be easily measured, since many actions on social media sites (e.g. 'liking' or 'retweeting') rarely have self-evident meanings (Boyd, Golder and Totan, 2010). Furthermore, most online activity may not be visible, as non-contribution (e.g. not writing comments) is the overriding norm (Crawford 2009). There are many online research methods available (see Dicks 2012), the use of which would aid a shift away from speculation and reliance on anecdotal evidence and towards empirically informed conclusions about the effects of social media.

Access, skills and motivation Internet theorists have in recent years begun to put greater emphasis on the importance of situational factors in the extent to which the democratic and participatory potentials of the Internet may be realized (e.g. Gil de Zúñiga, Puig-i-Abril and Rojas, 2009; Van Dijk 2012). It is simplest to point to sociodemographic predictors of Internet access and usage: lower educational attainment, greater age, lower income and living with a disability are related to lower levels of access (Van Dijk 2009; White

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and Selwyn 2013; also see Dutton and Blank 2013; ONS 2012; 2013; Zickuhr and Smith 2012). However, the 'digital divide' is better understood as a series of digital divides as Internet 'access' should refer not only to physical access to the Internet but also to the kinds of motivation and skill that determine how effectively individuals use the Internet (Correa 2010; Hargittai 2002; Selwyn 2006). One study conducted in the Netherlands indicated that older people are less skilled in navigating the Internet, although they are better at evaluating and benefiting from information encountered online. Additionally, people with lower levels of educational attainment are excluded from actual and effective Internet usage (Van Deursen and Van Dijk 2011). Such statistics will affect not only which researchers tend to use social media, but also which individuals are likely to be encountered in online public archaeology projects. Thus these inequalities could limit the effectiveness of social media as tools to transform how archaeology is conducted.

There may also be effects caused by differing levels of motivation to participate (e.g. Correa 2010; Livingstone and Helsper 2007). One way to approach this issue is to consider the extent to which participants genuinely welcome contributions by others. For instance, the 'spiral of silence' may be evident in some social media spaces, meaning that if an individual perceives her- or himself to be part of the majority, she or he will be more likely to express an opinion. Conversely, individuals considering themselves to harbour minority viewpoints may not contribute owing to fears of social isolation (Yun and Park 2011; see Noelle-Nuemann 1993). Additionally, researchers have indicated that pre-existing interest in a subject is an important predictor of whether or not individuals engage with online museum resources (Owens 2013). The claims of broadening access become problematic when these motivational factors are taken into account. Failing to engage with these issues may lead to archaeologists supporting structural inequality, which occurs when individuals with already inequitable positions in society are prevented from benefiting in another sphere of society (e.g. online public spheres), whilst elites reinforce their position (Van Dijk 2012, 205).

Online authority and expertise There are less immediately apparent ways in which pre-existing structures of disciplinary authority and expertise are maintained. For example, there are currently few incentives in archaeology to adopt an open approach to archaeological research and publication (Limp 2011). The currently prevailing disciplinary mindset may be difficult to overcome. This means that, for example, whilst data may be made open for divergent interpretations, not all interpretations may be valued by archaeologists, who refer to a disciplinary canon that defines what counts as 'expert' knowledge (Holtorf 2009; Smith 2004). As a result, the online contributions of various publics may have only a temporary impact, if any, upon the discipline. This has been observed in museum contexts, where user-generated content is rarely incorporated into museum catalogues despite the claims of shared interpretive authority between museums and their publics (Cameron 2008; Srinivasan *et al.* 2010).[4] Catalogues or archives embody what is actually valued by a discipline; the information included forms an authorized canon, whilst anything excluded is considered not to be valuable

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(Povinelli 2011; see Bowker and Star 1999). As a result, well-intentioned projects may result in little change in institutional or disciplinary centres, which define the legitimately archaeological.

The influence of pre-existing structures of authority has been evident on various social media sites. Wikipedia, for example, is based upon the notion of the 'wisdom of crowds', a tenet that assigns equal reliability and integrity to the knowledge produced by masses of people compared to that provided by traditional experts (Surowiecki 2005). However, disciplinary authority appears to remain a reference point of expertise, as it seems that only by reference to some external source of authority can information on Wikipedia actually be considered 'expert' (Sanger 2009). Moreover, Wikipedia may reproduce other societal inequalities which determine which knowledge is considered valuable. For instance, some have argued that feminist viewpoints are dismissed or undervalued on Wikipedia (e.g. Wadewitz 2013). Disciplinary structures may in fact influence the people whom archaeologists choose to engage with, and the content that is read and ultimately valued. For instance, museums have seemingly ignored questions about repatriation or illegal antiquities on social networking sites (Rocks-Macqueen 2013). Such instances indicate that offline disciplinary structures may well be replicated in digital environments, and cannot be transcended simply by using social media with an assumption of its inherent democratizing nature. Instead, an active willingness to enact change is required.

Inequitable accrual of resources Although archaeologists are becoming more aware of the value of using social media, in terms of their own accrual of benefits, less attention has been given to the inequity that may result from this. It should be borne in mind that Web 2.0 technologies were originally lauded in terms of their value to businesses (O'Reilly 2005). Social media sites indeed continue to make commercial gains from users' actions, which has recently led some to theorize about the issues involved in 'digital labour' (e.g. Fuchs 2014; Scholz 2013). Similarly, it should be considered that the resources gained by archaeologists, particularly in online collaborative or crowdsourcing projects, may be disproportionally greater than those gained by others.

Crowdsourcing in archaeology has received particularly sparse attention, although an increasing number of museums are utilizing it for various projects. It has been identified as primarily being valuable for completing resource-intensive tasks related to creating or improving content, particularly involving unresearched or undigitized material (Ridge 2013). Although it has been argued that crowdsourcing allows audiences to benefit by developing their own interests or hobbies, as noted above, these audiences seem to be motivated by pre-existing interests. Claiming broader public value is more difficult. The gains for disciplinary and institutional centres are far clearer, including resources that are incorporated into research projects or permanent catalogues, and which may provide employment and career possibilities for researchers. This inequity requires significant attention in order for archaeology to avoid charges of exploiting the altruism of interested publics,

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and, in some cases, reinforcing appropriative and colonial histories (see Boast 2011; Brown and Nicholas 2012).

A view from public archaeology Alongside the observations emerging from new media studies, the experiences of researchers within our own discipline should help to inform our use of social media, particularly the externally focused projects. Public archaeologists, working under labels such as 'community', 'collaborative' and 'indigenous archaeology', have attempted to fundamentally challenge the authority traditionally held by archaeology (e.g. Colwell-Chanthaphonh and Ferguson 2008). This has involved centring concerns that have previously been marginal to archaeology, including various sociopolitical and epistemological issues (Conkey 2005; Wylie 2008). In this way, depending upon the context, archaeology may be conducted with, for or by a community (Nicholas 2010). This may be difficult work, demanding awareness of sociopolitical situations, ethics and disciplinary norms, and of how they may be shifted (Nicholas *et al.* 2011). These practices should serve as a reminder that people and context are of primary importance, not the technology itself. In fact, in many cases as much offline work may be demanded as online work.

Conclusions

Social media have not been problematized in archaeology to the extent that their complexity demands. There are a number of key barriers to equal Internet access and usage, which include less obvious structures of authority. It is unclear what benefits accrue for archaeologists using social media compared to those who do not. Furthermore, in many cases social media seem to have bolstered archaeological authority at the expense of genuinely decentered engagement or collaboration, resulting in disciplinary centres accruing benefits to an extent greater than other participants. Empirical research is particularly necessary to elucidate these problems. Social media should not be used complacently and it should not be assumed that archaeological practice is being fundamentally altered. Social media may be useful tools in many contexts, but they should not be considered harbingers of techno-utopia. This viewpoint can be avoided by an active engagement with the barriers to equitable Internet access and use as well as with the disciplinary and sociopolitical structures of authority that limit the extent to which social media can help to change how research is conducted in archaeology. Failing to do so means we become actively or complicity involved in supporting ineffective and exclusive practices – antisocial by all accounts.

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Notes

[1] Sustained critical discussion has seemingly been confined to a small body of museum-studies scholars who have examined the ethical and epistemological issues encountered in

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collaborations between archaeologists and descendant or indigenous communities (e.g. Brown and Nicholas 2012; Christen 2011; Srinivasan *et al.* 2010; also see Richardson 2013; Smith and Waterton 2009, 119–37).

[2] As of mid-October 2013, the Society for American Archaeology had around 1,500 followers on Twitter and 8,700 'likes' on Facebook; the Council for British Archaeology had 5,600 Twitter followers and 2,700 Facebook 'likes'; the journals *Internet archaeology*, *Archaeological review from Cambridge* and *Antiquity* had 4,000, 1,800 and 500 followers on Twitter respectively. Individual archaeologists using Twitter have follower counts ranging from single digits to many thousands. For a number of reasons, these figures do not serve as accurate measures of the number of archaeologists using these social networking sites (e.g. many followers will likely be non-archaeologists, and figures will be inflated as a result of spam, or abandoned or duplicate accounts). Overall, scholars may be using social media tools geared towards specific tasks (e.g. collaborative authoring platforms, scheduling or conference tools) more than social networking sites (Rowlands *et al.* 2011).

[3] Important factors may include the duration of membership and the quality of use of a social networking site (e.g. whether or not an individual engages with others' posts or only broadcasts), the quality of posts (i.e. content that is interesting to others) and personal and social factors (e.g. Internet skills, quality of Internet access, time available for online activities, and an individual's position of authority in offline social and professional networks).

[4] User-generated content refers to the various types of media that individuals may post on the Internet, including text (e.g. comments), images, audio and videos.

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