

Understanding Archaeological Authority in a Digital Context

Lorna-Jane Richardson

[0000-0001-8848-4182](https://doi.org/10.1000-0001-8848-4182)

UCL Centre for Digital Humanities, Department of Information Studies, Gower Street London WC1E 6BT. Email: l.richardson@ucl.ac.uk

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Summary

"...with the increasing spread of social media and mobile communication, the social networks of knowledge construction are becoming not only vastly bigger and quicker and less limited by space and time constraints than they have been before, but also more of a threat to established authorities." (Hofheinz [2011](#), 1426)

This article considers the issues of archaeological authority, expertise and organisational reputation in the UK from an online perspective, and questions whether the participatory promise of social media technologies can, and should, challenge archaeological authority. It explores how these issues are approached and mediated online, the issues of digital literacy for audience reception, and the approaches used by archaeological organisations to address the challenges of undertaking digital public archaeology projects whilst maintaining archaeological rigour and the visible performance of expertise. It discusses how the concepts of archaeological authority and expertise are demonstrated and practised online, using data from my doctoral research, undertaken from 2011 to 2013. This article questions if the presence of websites dedicated to the promulgation of alternative archaeologies on the Internet can present challenges for the performance of archaeological expertise online, and how organisations monitor and respond to alternative archaeological interpretations and news stories.

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Features

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1. Introduction

The debate on archaeological authority and the nature of public participation in both the production and consumption of culture can be summarised by two questions. Firstly, is traditional expertise obsolete in the era of participatory technologies? Secondly, how do professional archaeologists and archaeological organisations exercise their archaeological expertise in an online context? This article will examine the issues of authority, organisational reputation, ownership and trust within archaeological organisations in the UK, which relate to the practice of public archaeology through the use of digital technologies. It will explore how these issues are addressed from within these organisations using data gathered for my doctoral research.

I will argue that archaeological organisations in the UK have transferred their institutional authority to the digital realm successfully, and that there is little evidence that archaeologists are threatened by the existence of alternative voices online, or by the opportunities for sharing multiple perspectives on the past that are provided by participatory media. I will demonstrate that the impact of social media is less about public engagement, and more about public broadcast. What we can see in archaeological communications is the performance of openness to debate and discussion, which is more immediately relevant to public archaeology practice in the UK than the concepts of multiple voices and the co-creation of archaeological data, projects or debate. I will argue that professional archaeology remains trapped in an epistemic loop of 'top-down' public archaeology, even with the augmentation of participatory media and greater opportunities for democratic participation in creating and sharing information about the past online.

2. What is 'Authority'? What is Archaeological Authority?

The complex cultural and social concept of authority and expertise is, within the context of archaeology as much as anywhere else, central to the assignment of intellectual authority through expertise to an entity or person (Bevan [2012](#), 2). The literature regarding the definition of what constitutes expertise is vast and varied, and encompasses skills, processes, decision-making or knowledge (Glaser and Chi [1988](#); Hartelius [2011](#)). The concept of expertise and authority is ineradicably linked to the development of the process of professionalisation within occupations, which has been analysed systematically within the sociological literature since the 1930s (Jacobs and Bosanac [2006](#)). Opportunities for collaborative relationships with public audiences who are interested in archaeology are not always taken on board within the archaeological profession, and the impact of the professional/amateur split on the discipline of archaeology is further emphasised by membership of professional organisations such as the [Institute for Archaeologists](#) or the [Society of Antiquaries](#), possession of advanced degrees in archaeological subjects, and expert understanding of archaeological protocols, policies and procedures. One of the roles of the professional archaeologist is to construct, interrogate and interpret the past through the evidence of material culture. The subsequent interpretations are made through epistemic dependence (Blais [1987](#), 369), the application of rigorous scientific techniques, the execution of carefully constructed methodologies and an intimate understanding of the rules and procedures of archaeological practice (Rassool [2010](#), 83). We can see, then, that the role of the professional, expert archaeologist undertaking public archaeology is to facilitate public access to archaeological information, using their archaeological skills and subject-specific knowledge — a two-way interaction that involves trust on

behalf of the public and, within the discipline, public deference to the archaeologist's accumulated knowledge base and skill-set, the public performance of the professional's archaeological experience, and the public acceptance of institutional affiliation as an embodiment of that expertise (Pruitt [2011](#); Rassool [2010](#)). As Hodder argues:

"Subordinate groups who wish to be involved in archaeological interpretation need to be provided with the means and mechanisms for interacting with the archaeological past in different ways. This is not a matter of popularising the past, but of transforming the relations of production of archaeological knowledge into more democratic structures." (Hodder [1992](#), 186)

The archaeological and historical narratives created by archaeologists and historians, whether independently or through co-creation and a multi-vocal stance, cannot be extricated from the diverse contemporary and historical social, political and economic contexts in which archaeology is practised. The creation of a historical narrative is an intrinsically political act, and become "tools of social control" (Kojan [2008](#), 77). Most professional, practising archaeologists are elite, trained practitioners, fundamentally involved in the creation and commodification of their professional hegemony (Pyburn [2009](#), 167). According to Waterton ([2010](#), 113) it is heritage organisations who decide who, when and how members of the public can access the education and knowledge required to appreciate the expert's self-defined common understanding of heritage issues. Although, as Baxter ([2012](#), 193) rightly critiques, this is difficult to see in practical terms within the heritage policy-making process that governs the work of most regional and national heritage agencies which are "now focused on the management of change within the built environment and land use planning systems".

The practice of archaeology in areas of political, ethnic or economic dispute, such as Israel, Nepal or Bolivia, is part of the performance of government policy, power or subordination; brokerage of knowledge between expert and non-expert; recognition of forgotten histories, or the public negation of subaltern heritage (Kojan [2008](#)). The creation and maintenance of a professional monopoly over a "specialist body of knowledge and skills" allows authoritative control over knowledge that is both controlled by policy, publicly beneficial and seen to be in the hands of the most adept curators and performers of these expert skills and knowledge (Soffer [1982](#), 801). It is through the development of a public appreciation for their education, knowledge, expertise and authority over many years that the professional archaeologist will find a supportive audience for the presentation of their expert knowledge.

The central question for this article is whether or not the impact of Internet technologies as a communication medium for archaeology can override or challenge these "traditional models of expertise by disrupting established information routines and cultivating multiperspectivalism" (Pfister [2011](#), 218). I would argue that, despite being able to access archaeological information in ever-increasing quantities, especially with the advent of access to online material through Internet technologies, and a growing amount of archaeological data freely available to download, this empowerment will always derive from a subordinate relationship between the public and the professional archaeologist.

The role of the gatekeeper to archaeological information is privileged, supported in the UK financially by a variety of policies, stakeholders, statutory bodies and regulations, and grant funding, as well as public money and public confidence and value that draws authoritative strength from the

public perception of its stability and longevity (Bevan [2012](#), 3). As Kojan ([2008](#), 70) has noted, there are many stakeholders in any society who have diverse understandings of the past as it exists in the contemporary social world, and acknowledging that these multitudes of experiences and opinions about the past exist and are valid for those people, has to become a key component of the practice of public archaeology. There will always be subtly contested understandings of the past at archaeological sites and monuments, which may arise from a wide variety of sources; orally transmitted knowledge and histories; legends and mythologies; religious and spiritual associations; disputed ownership or subaltern and hidden heritage. Fisher and Adair ([2011](#), 50) state that "many people can have a valid response to and perspective on any subject, and that a rich and meaningful conversation can emerge by linking those that do have true expertise with those alternative perspectives and new voices".

Understandings of perspective, agency, personal meaning, and individual experience and community concerns are vital tools for the establishment of an equitable public archaeology. These multiple understandings of the past and the actions of humans in the past, and the reactions to these in the present will always exist "regardless of how archaeologists or any other party feel about it" (Kojan [2008](#), 75). Yet, how relevant the concept of multi-vocality is to the UK archaeology audience remains difficult to gauge. Certainly, the UK has to acknowledge its historic role as a former Empire, a former colonial power, and one with a tangible class structure. As a result there is a diversity of population, and diverse experiences of interactions with the past. The discussions of British identities within popular media and academic archaeology and history are, as Johnson ([2008](#), 45) argues "implicit and inflected rather than overtly stated" and linked politically and culturally to concerns relating to contemporary issues of multi-culturalism and social inclusion. The kinds of relationships we, as professional archaeologists, want to foster between archaeological material culture and data, and the narratives of subaltern heritage, local archaeologies, the wider public understanding of the past in the present, through national narratives and, more subtly, the populist public interest in the more obscure and mysterious aspects of archaeology, must be considered.

As Trigger wrote ([1984](#), 369), we need to seek to understand how archaeologists behave not just as 'individuals but as researchers working within the context of social and political groups'. The fundamental issue, in my opinion, is the need for an acknowledgement within the profession that multiple interpretations of historic and archaeological information may occur. The associated problem is rather more methodological — in terms of how to comfortably embrace an acceptance of (not necessarily agreement with) the existence of multiple reactions to experiences of landscape, the urban environment or material culture in museum displays, alternative spiritual or folklore beliefs, or even multi-vocality, as a reaction to the fruits of professional archaeological research — rather than an issue of expecting the public to wholeheartedly embrace the correct expert archaeological interpretation.

3. Multi-Vocality and Opening the Field of Discourse

As Kojan (2008) has argued, diverse understandings of the past exist, even with archaeological 'truths' widely disseminated within societies. Whatever archaeologists feel about these alternative viewpoints, they will continue to exist and be shared, regardless of archaeological understandings of the past. As an example, debate on the existence of smugglers tunnels throughout the UK on the Britarch Forum clearly demonstrates the invisibility among professional archaeologists and archaeological data of a strong trope in British folklore and local history of the archaeological 'uncanny' (Moshenska 2006).

Acknowledging the existence of these many alternative narratives while exploring approaches to multi-vocality should be a "key component of the practice of all archaeology rather than a methodology to be adopted or rejected according to the predilections of individual archaeologists" (Kojan 2008, 70). An understanding and appreciation of the many possibilities and significance of encounters with archaeological material or landscapes, allows archaeologists to maintain their "scientific study of the past and an axiology of place and past, examining the broader values of distinct cultural and social groups" (Colwell-Chanthaphonh and Ferguson 2006, 150). Hodder has argued that archaeologists interested in democratising archaeological enquiry should pay attention to the beliefs and concerns of those most at risk from dispossession by dominant archaeological narratives and enquiries (Hodder 2008, 210), and has also written on the moral and ethical responsibility of archaeologists to facilitate the participation of non-professionals in archaeological interpretations (Hodder 1999).

The appearance of post-processual theory in archaeology during the 1980s was heavily influenced by the growing influence of post-modernism within academia. The practice of archaeology has been, and continues to be shaped and negotiated within historical, political, cultural and socio-economic contexts and cannot realistically be extracted from these (Habu and Fawcett 2008, 91). That is not to say that multi-vocality presents competing narratives, and the importance of archaeological work disappears in epistemological relativist pluralism where no single narrative has authority over another (Wylie 2008, 202). As Kojan (2008, 70) and Silberman (2008, 138) have noted, the compromises within community archaeology projects and heritage tourism that elicit community and visitor participation, with the semblance of community involvement, often serve the archaeologist's expertise and local economic activity rather than supporting and empowering the non-professional participant, which subtly undermines any oppositional practice of multi-vocality. However, within a UK context, where the public appreciation of the archaeological expertise of the professional is fundamentally embedded in public consciousness, and there are relatively few alternative perspectives to embrace, the concept of multi-vocality is perhaps difficult to locate within archaeological practice, unless it is seen as the need to understand the social phenomena situated around archaeological place, both in the present and in the past (Colwell-Chanthaphonh and Ferguson 2006; Hodder 2003).

Archaeology as a professional discipline seeks to maintain a professional, expert status. The [Institute for Archaeologists](#) was awarded Royal Chartership in February 2014, which emphasises further its professional status and recognition of the technical skills and knowledge of its members. Bodies such as the IfA, [English Heritage](#), or [The Royal Commission on Ancient and Historical Monuments of Scotland](#), seek to protect knowledge and standards through policy and management guidelines, which includes for example, English Heritage's [Management of Research Projects in the Historic Environment](#) or [Caring for Historic Graveyard and Cemetery Monuments](#). Yet, the shifting nature of

the participatory Internet could bring with it an innate threat to the representation of archaeological knowledge in the public realm and the use of the Internet for alternative archaeology. As McDavid noted in 1997, during the earliest days of the use of websites in archaeology, Internet technology could open the field of discourse that defines archaeological truths to those outside archaeology — those who make claims that are not supported by professionally-produced archaeological data, and to those who may wish to appropriate this data for their own purposes ([1997](#)). It is perhaps then unsurprising that many archaeological projects actively using social media choose not to engage in dialogue and discussion with the public. However, in the realms of 'community' archaeology, archaeological outreach and other forms of public engagement with archaeological practice and process, we might reasonably expect to find evidence of shared appreciation or discussion, through an online presence, on a par with the aspirations of such projects in the non-digital sphere, for inclusivity, openness and participation. This resonates with Hodder's insistence that multi-vocality is "an oppositional practice, capable of critically transforming archaeology" and encourages belief that the use of participatory technology can democratise enquiry ([2008](#), 210). Understanding the impact of these possibilities must lead to an exploration of the issues of information retrieval and digital literacy — how is archaeological information found in the first place and how can Internet users ascertain its veracity?

4. Information Literacy and Information-Seeking Behaviour

"The implications of a shift from the library as a physical space to the library as a virtual digital environment are immense and truly disruptive. Library users demand 24/7 access, instant gratification at a click, and are increasingly looking for "the answer" rather than for a particular format: a research monograph or a journal article for instance. So they scan, flick and "power browse" their way through digital content, developing new forms of online reading on the way that we do not yet fully understand (or, in many cases, even recognise)" (Rowlands *et al.* [2008](#), 293).

The evolution of the Internet has reconfigured the way in which people discover, understand, use, share and create information, and consequently there is a wide variety of quality of information available online (Miller and Bartlett [2012](#)). The information landscape of the Internet, especially when explored via search engines, can privilege popularity over the 'low-circulation-high-quality' archaeological information that heritage professionals provide (Stein [2012](#)). Internet users have to accept information at face value, depending on the expertise of the author or the institutional affiliations with which it is associated, what Hardwig ([1991](#)) has called the 'novice/expert problem'. Discrimination between authentic, credible archaeological information, and populist, inaccurate and misleading archaeological sensationalism, or even pseudo-archaeology, requires an ability to apply critical thought to information retrieved online — digital and information literacy. Information literacy has been a key concept within Library and Information Studies for 40 years, with the concept of computer literacy growing with the development of computer technologies during the 1980s and 1990s (Andretta [2007](#)).

Digital literacy was recognised by the UNESCO *Prague Declaration* as a key skill for "for participation in the knowledge economy and in civil society"(UNESCO [2003](#)), and was described in the [International Federation of Library Associations and Institutions Alexandria Proclamation](#) of 2005 as 'essential for individuals to achieve personal, social, occupational and educational goals'. The concept of digital and information literacy has been described in a variety of ways; 'multimedia

literacy' (Lanham [1995](#)); the ability to use and understand ideas rather than technologies, and from a wide variety of digital sources; an ability to understand information via hypertext, critical understanding, awareness of networks as information sources and the ability to create and publish one's own material online (Dutton and Shepard [2006](#)). For the purposes of this article, the definition of digital literacy proposed by Catts and Lau ([2008](#)) has been used. This defines information literacy as the ability to: recognise information needs; locate and evaluate the quality of information; store and retrieve information; make effective and ethical use of information and apply information to create and communicate knowledge.

One of the central issues with archaeological material found online — as with all other academic subjects — is that information and disinformation can be difficult to unpick without an element of digital literacy (Miller and Bartlett [2012](#)). Offline strategies for verifying archaeological information, through an ability to examine relevant peer-reviewed books, journal articles or archaeological data, may not always be applicable in an online context. Access to this sort of material may be difficult and expensive owing to distance, expense or the lack of academic institutional affiliation, and means missing out on up-to-date archaeological literature, especially for those working outside the academy, such as community archaeology group members or commercial-sector archaeologists.

Miller and Bartlett's collation of issues with digital literacy and 'truth claims' is especially useful to consider in the light of an understanding of archaeological authority and expertise (Miller and Bartlett [2012](#), 37). Their discussion of the key issues of information literacy is an especially useful overview of the main issues that relate to the retrieval of authoritative archaeological information. The complexity of information provided online, and the lack of specialisms or expertise means that judgements about truth claims are difficult, especially when "much of the discussion on the Internet occurs under the cloak of anonymity, or where identity (and therefore authority) can be easily faked" (Miller and Bartlett [2012](#), 37). The growth of participatory media, user-generated content and access to an unprecedented level of information means that, as a society, we do not always have the equivalent of newspaper editors, academic textbooks and peer-review before content is made public, so "we sometimes create social epistemological structures and processes to order and categorise information according to its value and 'truth'" (Miller and Bartlett [2012](#), 37). Many websites do not contain accurate information, although they may be designed to appear authoritative and truthful. The appearance of websites is often a consideration when considering the accuracy of information held within these sites, and misinformation can be professionally presented and well designed and illustrated. Uses of Internet search engines, as well as many sites with targeted advertising such as Facebook, are underpinned by algorithms that tailor personalised online experiences based on our previous interests, so we work and research within echo chambers. Information consumption online does not reflect "critical, deep, single-source reading" (Miller and Bartlett [2012](#), 37). Instead, information seekers tend to jump through a handful of web pages supported by search engines, and 'skitter' across these pages, viewing information rather than actively reading and absorbing the content. According to Miller and Bartlett an online article is viewed "for around five minutes, and summaries are read much more than the full content" ([2012](#), 37).

The concept of 'information behaviour' describes "the many ways in which human beings interact with information, in particular, the ways in which people seek and utilize information" (Bates [2010](#)). There has been very little research into the phenomena of information-seeking behaviour for archaeological information — only a handful of examples of research exist, from the UK, India and

Sweden, which look at the user behaviour of professionals working in the field archaeology sub-discipline and archaeological academia (Corkill and Mann [1981](#); Stone [1982](#); Huvila [2006](#); [2008a](#); [2008b](#); Ahmad [2009](#)) and none of these focus on the consumers of archaeological information.

5. Alternative Archaeologies and the Internet

Schadla-Hall wrote that "the vast majority of the public has no interest or direct contact with what members of the archaeological profession consider to be their subject" ([2004](#), 255). The apparent lack of concern at this proposition among the profession, as noted by Schadla-Hall, and Kojan in [2008](#), perhaps reflects an underestimation of the impact of access to the Internet and the accompanying vast quantities of badly written, badly researched, dubious or downright false websites containing 'archaeological' information and archaeological conspiracy theories available online (Fitzpatrick-Matthews and Doeser [2014](#)).

'Alternative', 'fringe', 'pseudo-scientific' or 'cult' archaeologies are a thorny issue for mainstream archaeologists, with shifting barriers between conventional archaeological interpretations and alternative explanations, clouded by the evolution of academic archaeological thought and post-modernist approaches to archaeological evidence (Fagan [2006](#); Feder *et al.* [2011](#); Anderson *et al.* [2013](#)). While there is not space in this article to explore the full academic literature and many studies and refutations of alternative archaeologies by professional archaeologists, there has been a huge growth in the production and popularity of alternative archaeological information and conspiracy theories in the media in recent decades (Brittain and Clack [2007](#); Holtorf [2007](#); García-Raso [2011](#)). While there are notable differences in the relationship between archaeology and the media in the UK and the United States (Henson [2006](#); Kulik [2006](#); Bonacchi *et al.* [2012](#); Anderson *et al.* [2013](#)), and the realms of alternative archaeology in the UK are definitely not mainstream enough to induce most TV producers to commission alternative archaeology programmes on the scale found in North America, there is a British market for misinformation through digital media, illustrated in the findings of Doeser and Fitzpatrick-Matthews ([2014](#)) and the more esoteric content of the [Megalithic Portal](#), for example. The two-pronged approach described by Anderson *et al.* ([2013](#)) is one of the best arguments for the importance of online public archaeology; the "intellectual 'whack-a-mole'" (Anderson *et al.* [2013](#)) of refutation and challenge by professional archaeologists on social media and organisational websites after the fact, or for the discipline to acknowledge the risks outlined in Miller and Bartlett's challenges for information literacy discussed previously (Miller and Bartlett [2012](#)), and proactively adopt the potential of the Internet and address genuine archaeological narratives in an absorbing, stimulating, multi-mediated and jargon-free manner that engages and educates. While the 'top-down' approach of Holtorf's 'education model' ([2007](#)), or Matsuda and Okamura's 'outreach' model ([2011](#)) seem at first most appropriate for the management of archaeological authority online in the face of alternative archaeologies, it is perhaps only within a framework of the media presentation of an archaeological discipline that is willing to engage with, discuss and refute where necessary, multiple understandings of the past, that public archaeology online can survive the demand for archaeological 'commodities' (Moshenska [2009](#)). As a discipline, we need to present and discuss narratives that venture beyond the world of Time Team, and into the real world of archaeological mystery, the morbid, life and death in the past, present-day detective work and painstaking science, in order to counter the UK archaeological fictions that perpetuate online, of ley lines, direct descent from prehistoric populations, or the geo-centricity of the earth explained through Stonehenge.

6. Data Collection Methods

Understanding information-seeking behaviour is essential to evaluate the impact of digital media in online public archaeology. To address these questions, nine online surveys were undertaken as part of my doctoral research, outlined in Table 1.

Table 1: Online surveys

Survey No.	Survey Title	Dates Open	Questions	Responses	100% Completed
1	Archaeology & Twitter 2011	01/04/11-15/04/11	27	167	85
2	Archaeology & Social Media Policy	06/10/11-31/01/12	15	293	189
3	Archaeology & Twitter 2012	01/02/12-15/02/12	22	331	191
4	Preserving Public Archaeology Content Created Online	22/07/12-29/08/12	17	104	62
5	Measuring the Success of Your Digital Project	12/11/12-12/01/13	12	287	136
6	Understanding Barriers to Public Engagement with Archaeology Online	02/10/12-31/01/13	19	248	123
7	Live-tweeting at Archaeology Conferences	21/01/13-28/01/13	11	187	142
8	Archaeology & Twitter 2013	11/04/13-24/04/13	22	155	111
9	Using the Internet for Archaeology	07/02/13-07/04/13	24	577	428

Data were gathered for this research through a number of methods: online survey, email questionnaire and online ethnography, and the results from a number of these have been included in this article. These surveys and questionnaires were specifically created to gather data on the *qualitative* experiences of consumers of archaeological information online. The use of online surveys for data collection has many advantages, not least convenience and cost: once a survey has been created in the requisite survey software, further expenses such as postage, printing, recording equipment and interviewer salary and travel costs are eliminated. Analysis from the data collected from surveys 1, 3, 8 and 9 are included in this article, and the results from these surveys can be found through [Figshare](#).

7. Using the Internet for Archaeology

The findings from the ninth survey undertaken for my doctoral research, titled '[Using the Internet for Archaeology](#)', are especially interesting to consider alongside issues of information literacy and an understanding of information-seeking behaviour in archaeology, as well as the many issues of digital inequalities. The [full results](#) from this survey are available online. This survey was especially targeted at members of the public active in the UK voluntary archaeology sector, through posting links on the Britarch Forum, inclusion in [British Archaeology](#) magazine, and by directly emailing an invitation (with the survey's URL) to community archaeology groups. Professional archaeologists and organisations were also invited to take part and also responded through the call for participation made through my own blog and Twitter account and on various archaeology-related Facebook pages. One in five responses came from professional archaeologists (21.9%), members of local, regional history or archaeology groups or societies (16.35%), postgraduate archaeology students (14.76%), 'other' (10.95%), volunteers (10.16%), undergraduate archaeology students (8.25%), those 'interested in the subject but not active' (8.25%), those working in academia above postgraduate level (5.71%), and museum professionals (3.65%). The age range was weighted towards the 25-54 year old group, as 310 respondents (53.72%) fell into this category, although 69 responses (16.04%) were from the 55-74 age range. The most significant findings relevant to this article are found in the responses to questions about the use of archaeological websites, which archaeological websites are visited, and the use (or not) of social media platforms to access information about archaeological topics. The majority of people who responded to the survey declared that they access archaeological websites on a daily or weekly basis — 44% and 26% respectively. The types of websites that the participants reported visiting regularly range from large archaeological organisations such as the [Archaeological Data Service](#), [RCAHMS Canmore](#), the [Council for British Archaeology](#), [Heritage Gateway](#) and [Current Archaeology](#), to smaller organisations like [Past Horizons](#), the [BAJR](#) website and discussion forum, the [Day of Archaeology](#), as well as blogs, Facebook pages and Twitter.

Of those responding, 64% had used some form of social networking platform such as Facebook, Twitter or YouTube to find out more about archaeology, although 14% had not. The most popular platform used for archaeological information was Facebook, followed by Twitter. Other forms of social media were mentioned as useful places to find archaeological information, but these were not as popular as Facebook or Twitter. These platforms include (in descending order of popularity in the survey) YouTube for information on excavations, demonstrations of experimental archaeology or interviews; platforms such as blogs, including Blogger, Tumblr and WordPress, valued for their space for comments and discussion; Academia.edu, which was found to be a useful platform to read academic papers without accessing pay-walled journals or needing an affiliation to an academic library; and LinkedIn for work-related social networking. Email lists, Google+, Instagram, online forums, Pinterest, and Scoop.it were also mentioned by a handful of respondents.

Responses indicated that the survey participants had a reasonable awareness of the need for an information-literate approach to archaeological information shared through social media: the respondents comments included an acknowledgement that Facebook page moderators need to be vigilant regarding the quality of content posted; that the quality of archaeological information varies depending on the Facebook page moderation, source material and interpretation, and is prone to spam. The participants were sometimes confused about the source of information found on Facebook pages, and felt the ability to discriminate was a fundamental requirement to judge the

worth of the archaeological content; it was noted that archaeological content found on YouTube was of varied quality and offered little participatory interaction between content-producers and the audience; information shared via social media platforms is only as good as the quality of the author and the sources; survey participants noted that they built relationships with reliable archaeological sources on Twitter, and checked links before accepting the veracity of the information provided. Participation in discussions on archaeology forums or social media platforms appears to depend on the users' perception of having confidence, valid knowledge, qualifications and disciplinary authority to comment on archaeological content; survey respondents expressed a fear of "making a fool of themselves" in participating in discussion — anonymous participation was seen as a beneficial method of encouraging more dialogue. The responses also noted the appearance of "trolls" and vitriolic comments, which was found to be offensive and prevented participation by some participants. Responses suggest that users do not have a lot of time to spend on commenting on social media platforms, and there is the perception that commenting on archaeological information can be a waste of time: "There is literally no point in commenting or joining in. Nothing ever changes..." (anonymous survey responses).

From these results, age does not seem related to digital literacy, as all responses indicated a level of consideration of sources and authoritative affiliation when searching for information, especially on social media platforms. Educated people made the responses to the survey — the minimum level of educational qualification attained is GCSE — 105 of the participants have first-degree level education, while 56 are studying for, or possess, a PhD. The academic literature has noted that education and technical familiarity has positive effects on the ability to use the Internet efficiently (Hargittai [2004](#); Hargittai and Hinnant [2008](#); Case [2012](#)). Data from the [Using the Internet for Archaeology](#) survey show that the audience makes the ultimate judgement about the value of these media and the information shared on these platforms. Building a relationship with the users of these sites ascribes authority and authenticity to the archaeological information and the interactions between the professional archaeologist and members of the public.

8. Megalithic Portal

The [Megalithic Portal](#), a website created and run by volunteer non-archaeologists, was reported in the [Using the Internet for Archaeology](#) survey to be a popular website for broad coverage of archaeological information, maps and location details, the ability for the public to contribute to the site, the range of quality photographs of the archaeological sites, and what one participant called a 'balance between accepted science and possible science'. This website is an interesting presentation of mixed approaches to archaeological expertise within the realm of digital public archaeology. It contains a vast catalogue of information about various archaeological sites, including descriptions, maps, geolocation, access information and a wealth of photographs, many of which have been crowdsourced from website visitors. The site also shares archaeological news stories, and data downloads for promotional material, audio, e-books and newsletters, and is professionally built and maintained. It also contains a large and well-used online forum that supports discussions on a wide range of topics. In the light of the discussion of information literacy outlined [earlier](#), certain areas of the website forum could be seen to provide a platform for misleading information for the uninitiated, who may not be willing or able to differentiate between the variety of information and discussion contained within. This site is an interesting example of the presentation of multiple voices and their approaches to archaeological information and the realms of the archaeological fantasy.

The site forum includes a series of eight forum threads. Five of these are dedicated to site administration, instructions on how to use the site, or for the exchange and sale of books and other items. Three threads are dedicated to discussion topics. One is for the discussion of 'mainstream' archaeological matters relating to megaliths and prehistory; one is for the discussion of topics relating to the Roman or 'Dark Age' periods, ancient crosses and other related historical or geographical topic; and one is titled 'Sacred Sites and Megalithic Mysteries'. This thread states clearly on the forum page that it is for "alternative ideas relating to ancient sites, theories involving earth energies, dowsing, ritual, or other such things" and it contains a large amount of fantastic and alternative archaeological discussions on subjects as diverse as; 'Evidence of Alien Visits to Earth, UFO?'; 'Relativism, political correctness and censorship' or 'The Principle: Stonehenge'. The forum thread with most visits and views is 'Sacred Sites and Megalithic Mysteries'.

As part of my doctoral research, I contacted the website creator with questions about the approaches and management of these alternative archaeologies found on the site, and how they managed the differences between mainstream information and remaining open and inclusive about people's different opinions on archaeological 'truth'. Two of the administrators of the site responded, and noted that there were differences in opinions between the administrators about the toleration of the 'Earth Mysteries' thread. There were geographical and political sensitivities inherent in some of the content that has been shared through the forum thread and that these were carefully monitored — including the removal of posts and the banning of forum members if they share unpleasant and unacceptable content (white supremacist material for example).

"Whilst most British people are quite relaxed about "alternative" archaeology (and some Americans positively revel in it), it can be a very sensitive issue in Germany as alternative theories historically had an association with the Third Reich. We have discovered that there is still one far right group in Germany propagating alternative theories for unpleasant purposes — we have of course distanced ourselves from them and not allowed them to post. There are also various groups/individuals such as Ancient Celtic New Zealand who need careful handling and we try to avoid propagating such 'white supremacist' type ideas." (Megalithic Forum administrator, 7 March 2014, pers. comm.).

The website itself had been set up originally

"...with the intention of being inclusive, but not intrusively so such that our main pages became full of unsubstantiated ideas ... That's how we set up our "Mysteries" Forum as a safe place for such ideas to be expressed, as a "relief valve" as it were for the rest of the site as we can direct people over there rather than get into such discussions on our main pages... Once we were up and running, the sorts of ideas and theories we were being sent rather decided that we would be inclusive. I wasn't inclined to delete and ignore all of the stuff that was coming in as I knew it would be of interest to our visitors, even if not always to myself." (Megalithic Forum administrator. 7 March 2014, pers. comm.).

The website administrator makes an interesting point, that the website was established as a method of sourcing information on obscure archaeological sites that had been written about in various alternative and mainstream magazines and books during the 1980s and 1990s, and was a direct response on behalf of the website administrator to the lack of publicly-available and reliably-visualised and located information, before the advent of online HERs and other archaeological databases made access to archaeological information faster and easier.

Runemage, one of the administrators, noted that the contents of these threads are moderated with a 'light touch' and forum members must sign up to terms and conditions of use, so only forum members are allowed to post. Abusive accounts are blocked, but there is freedom to post questions and discuss alternative archaeologies unchallenged, within the boundaries of decency. In their responses to my questions, Runemage made a very interesting point, which reflects the issues of dispositional differences to participation in online discussion:

"There are comparatively few forum posters compared to our membership. I've looked at other non-archaeology sites which provide a platform for different but still alternative views and it seems to be the way of things. Large membership, very small core of regular posters, a few newbies now and again. We even ran a couple of polls to see if there's anything we can do to encourage more people to join in on all of our fora, but there's only a very small take-up." (Runemage. 7 March 2014, pers. comm.).

9. Twitter and Archaeological Authority

Surveys 1, 3 and 8 were undertaken each year of my doctoral research from 2011-2013, and the [data from these surveys](#) can be found online. The research undertaken through the Twitter platform aimed in part to explore the subjects of credibility, reputation and trust regarding archaeological information shared on the social media platform. These are critical issues when dealing with the public dissemination of archaeological news and information online.

Credibility has been described as the perceived quality of information by the user, and consists of "two key elements: trustworthiness (well-intentioned) and expertise (knowledgeable)" (Lucassen and Schraagen [2011](#), 1233). Reputation is a "fluid, contingent, and precarious attribute generated entirely by the perception, attention and approval of others" (Hearn [2010](#), 423), and maintaining a positive reputation involves a continuous process and performance of image-management (Rodden [2006](#), 75). The active creation and management of personality and self-expression on social media platforms raises a number of issues around interpersonal perception, reputation management and controlled identity. No direct research has yet been undertaken into photographic or biographic representation on Twitter, and the image is only one small part of a very short biography. Unlike Facebook or blogs, the Twitter profile can carry only one picture (Twitter Help Center [2014](#)). Users can choose an image that they feel best represents their communicated self or opt for the default Twitter avatar, which is a white egg shape on a coloured background. The range and style of the profile images is vast: individuals or groups, close-ups, blurred images, symbols, organisational logos, cartoons, or avatars, and "self-presentation on Twitter takes place through ongoing "tweets" and conversations with others, rather than static profiles. It is primarily textual, not visual" (Marwick and Boyd [2010](#), 116). The importance of the process of evaluating authenticity can be observed during the decision to exercise reciprocity after being followed by another Twitter user. Twitter's account profile facility is limited and many account holders prefer to maintain a high degree of anonymity, using nicknames and impersonal avatars.

As evidenced from the three years of survey results, many people using and interacting on archaeological social media platforms are professional archaeologists or researchers; many users work in the academic field, and the authenticity of, and trust in, archaeological news can be an emotive subject. The evaluation of information credibility online is far less simple than in the pre-Internet era — the user is frequently left to judge the veracity of the information discovered online

themselves. However, recent studies have shown that there are discrepancies between what users consider relevant to ascertain information credibility, and that used by search engines such as Google and Bing (Schwarz and Morris [2011](#); Morris *et al.* [2012](#)). Those seeking credible information rely on their experience and expertise with the subject, information literacy and critical awareness, or experience of the information provider, in order to form a judgement on the accuracy and validity of the information retrieved (Lucassen and Schraagen [2011](#)). Research by Lucassen *et al.* ([2013](#)), unsurprisingly, showed that people with some knowledge of the topic evaluate the credibility of information found online differently from those with no prior experience or understanding.

Twitter can rapidly update information and facilitate swift analysis and interpretation of events far faster even than traditional media websites (Castillo *et al.* [2011](#)). Yet, the speed and churn of the Twitter time-line, and the increasing use of mobile phone connections to update the platform (Twitter Advertising Blog [2013](#)), may facilitate the spread of misinformation, and the issue of ascertaining credibility within online micro-blogging is an important aspect to consider within the paradigm of asserting archaeological authority in an online context. The Twitter platform has also been the focus of research into information credibility (Kang *et al.* [2012](#); Ikegami *et al.* [2013](#); An *et al.* [2013](#)). The work of Castillo *et al.* ([2011](#)) suggested that Twitter users estimated the level of credibility of information exchanged via the website using several markers of believability; the emotional reactions and sentiments of users generated by certain topics; the level of questioning of topics by users sharing or retweeting information; the external sources cited, the existence and authenticity of an external source and URL; the numbers of followers, the number of Tweets sent, and the longevity of a Twitter account. The research concludes that credible news items "... tend to include URLs ... have deep propagation trees ... are propagated through authors that have previously written a large number of messages, originate at a single or a few users in the network, and have many re-posts..." (Castillo *et al.* [2011](#), 5). The asynchronous nature of the Twitter feed allows users time to consult external sources to verify information shared via Twitter (Schrock [2010](#), 2) and research the veracity of the information supplied: "Twitter feeds may be perceived as a stream of interesting titbits of information that are quickly evaluated and easily ignored..." (Schrock [2010](#), 17). While misinformation is not a new Internet phenomenon by any means, the use of a social media platform for political propaganda, marketing, spam and malicious behaviour could seriously damage the credibility of information publicised via Twitter. However, as Schrock ([2010](#), 17) points out, 'for the Twitter environment there may be few risks to being deceived, other than the occasional spurious status update'.

The responses to the three annual Twitter and Archaeology online surveys, which discussed the perception of archaeological authority and the need for accuracy when tweeting, are very interesting in the light of the literature on Twitter as a credible news source. Results from these surveys show that the limitations of the account profile mean that what users say on Twitter, how often and with whom they interact is of far greater importance to the perception of the authority and influence than the contents of the short biography and accompanying avatar or image. Personal and professional reputation and organisational affiliation, weak ties, the perception of reliability, the length of time the source has held a Twitter account, influence on the archaeological sector in 'real life', as well as biographical information found elsewhere online are all important factors in the perception of trustworthiness of both the information shared through Twitter and the individual source account.

For many of the Twitter and Archaeology survey respondents, a weak tie connection and the possession of social capital, as defined by Granovetter (1973; 1982) and Putnam (2000), including familiarity with the work of the connection, is central to the perception of authority, overriding the relative anonymity offered by the Twitter platform. Where Twitter users do not have personal acquaintanceship with the source, the data demonstrated that users will actively search for more information about a person or academic affiliation or professional status through the use of a search engine, in order to ascertain the reliability of the information provided. Archaeological tweeters are rigorous fact-checkers — checking sources of information, biographies and personal and institutional websites. Comments on this subject from the surveys include:

"I will assess the source of the information in terms of who the individual/organisation is and try to determine where the information for their tweets is coming from"

"...visiting the very source of news/links, checking what else people posted and wrote, whether they're acquainted with topic and/or where they work, for how long..."

"Follow-up search in search engines to check the veracity, as well as discussion with friends"

The extent that the potential reach and audience of a user's shared information Twitter can be vast, and is exercised through the simple act of receiving a retweet, has a number of implications for the use of social media platforms for dissemination of authoritative information and publicity. This is an important yet imperceptible example of why an appreciation of the requirements and abilities of the imagined audience around issues of information literacy and information credibility during the production of archaeological information online is essential. It is also fundamental that public archaeology projects consider how influence and reach affects the longevity of information circulation, since reused and recycled content can last longer than expected online.

10. Locating Archaeological Authority Online: Email Questionnaire Case Studies

This section contains the results and an analysis of the email questionnaires undertaken as part of my doctoral research, which were drawn from eight case studies of high profile and digitally active UK-based archaeological organisations (Richardson 2014). The eight case studies are:

☐ [Archaeosoup Productions](#), a privately owned educational enterprise;

☐ [Big Heritage](#), a social enterprise for heritage education;

☐ [British Archaeological Jobs and Resources](#), a privately run archaeological organisation providing information, advocacy and support services to the archaeological community and members of the public;

☐ [The Council for British Archaeology \(CBA\)](#), a long-established UK-based educational and advocacy charity that aims to "promote the appreciation and care of the historic environment for the benefit of present and future generations" (Council for British Archaeology 2014);

☐ [The English Heritage Archaeology section](#), part of English Heritage, the Historic Buildings and Monuments Commission for England, an executive non-departmental body funded through the Department of Culture, Media and Sport;

☐ [The Portable Antiquities Scheme](#), a national "partnership project which records archaeological objects found by the public in order to advance our understanding of the past" (Portable Antiquities Scheme website [2014](#));

☐ [RESCUE](#), the British Archaeological Trust, a small UK-based registered charitable organisation that exists to campaign for the protection and conservation of archaeological sites, artefacts and monuments;

☐ [The Royal Commission on Ancient and Historical Monuments of Scotland \(RCAHMS\)](#), a non-departmental body of the Scottish Government, responsible for strategic survey and recording of the historic and built environment of Scotland and the management and maintenance of a national collection of written records, manuscripts and photographs relating to Scotland's maritime history, industrial past, built environment and archaeology (RCAHMS [2014](#)).

The survey questions examined the relationship between these eight archaeological organisations and their experiences of propagating and maintaining their archaeological expertise and authority on the Internet, through their websites and presence on their various social media platforms. The aim was to draw out the common concerns, issues and mitigation strategies for the maintenance of audience trust, through the exercise of archaeological authority. Can the participatory nature of social media threaten or undermine these organisations' archaeological authority? Can the proliferation of websites devoted to 'cult', 'alternative' and 'fantastic' archaeology on the Internet threaten this archaeological authority, and is this something that archaeological organisations feel they need to address? The findings discussed below are the result of collating and coding the responses using a Grounded Theory approach. The data coding has revealed a series of shared approaches to the use of Internet technologies as a form of public archaeology and public engagement among these eight organisations, which reflect the results of the Twitter survey responses outlined in the [previous section](#). For ease of reference, the outcomes of the survey coding have been presented in Tables 2 and 3.

Table 2: Issues for Case-Study Organizations with Sharing News Items From Third-Party Sources

How to Determine the Authority of 3rd Party News Items?	What is the Importance of Transmitting Correct Information via Internet?	What are Mitigation Strategies for Accidental Presentation of Incorrect Information?
Filter information using organisations' expert understanding of material	Reputation of organisation very important	Use professional judgement before transmission
Carefully check news sources	Reliant on public interpretation of data	Take time to consider material before publishing
Check institutional affiliation of news source	Aware that the speed of the Internet allows for fast retractions/addendums	Editorial guidelines are in place

Use common sense

Be prepared for retraction/
addendum

Table 3: Issues for Case-Study Organizations with Sharing News Items From Third-Party Sources

How Organisational Authority is Presented through Internet & Social Media Platforms	Presentation of Organisational Expertise Online	Digital Communication as Commitment to Public Archaeology
Representation of authoritative affiliation (logos, branding)	Accentuate embodied knowledge & experience of organisation (staff, data)	Vital for public impact & dissemination
Content of information shared is professional, authoritative & trustworthy	Professional writing style	Embedded in organisational communications
Robust editorial policies in place	Branding	Perception of cost efficiency
Element of formality in presentation & discussion of information	Organisational values made clear and performed	Perception of wide public audience for archaeology online

So how does the archaeological expertise of these respected and recognisably authoritative organisations manifest itself online? Information shared is carefully vetted, filtered and the provenance checked before it is re-shared. These organisations are actively managing the appearance of their own archaeological authority within their digital practice, as the trust of their audiences and reputation of their affiliations are central concerns. However, there is awareness that the speed of information shared online allows for rapid retractions, corrections and comments, and the interpretation of the data sources mentioned once these stories leave the organisation will not always be that desired by the originating source, nor the archaeological organisation acting as a conduit for news. The results from the questionnaires show that these considerations affect the ability of these organisations to harness the speed of interactions in the digital realm, since the process of checking and ensuring accuracy and style of content will take time. However, this does not prevent the organisations from being willing to discuss archaeological issues through social media — all were very positive that the use of social media and Internet platforms were vital parts of the communication of archaeological information for their organisations, that using websites, blogs and social media were considered to be both effective and cheap communication tools for dissemination, and that digital media offered an effective means of presenting nuanced levels of detail for different audiences.

The presentation of institutional expertise online among the case study participants reveals common values; authority was represented through logos and branding, as well as highlighting and emphasising the embodiment of knowledge, expertise and professional skills through staff profiles, possession of experts within the organisation and the data value; professional content and a sense

of formality within the style of writing; and ensuring that the organisational values were clear within the content and method of delivery of information.

None of the organisations felt that the issue of alternative interpretations of any data or news stories were problematic, beyond the issue of trolling, which is especially difficult around the sensitive issues of metal detecting and portable antiquities. The organisations welcomed the use of Internet technologies as an opportunity to share knowledge and offer audiences the opportunity to respond, through open dialogue, and empowering the audience by providing descriptive, accurate information; "...taking a press release is a responsibility to research it, mould it, tailor it and present it along with supporting information you have gathered on the way. Then the reader is empowered to not just accept what is written, but to see what they discover" (Richardson [2014](#), 281).

11. Discussion

Studies of social network analysis models and 'weak tie' connections have suggested that online authority is, in part, derived from the density of ties to centrally located individuals — so these media facilitate collaboration as well as strengthen the sense of authority gained through network ties (O'Neil [2006](#)). This is reflected in the results of the [Twitter surveys](#) undertaken for my doctoral research to some extent, in that the popularity, length of membership and regular use of the platform weights followers in favour of the information shared by these Twitter accounts above those of new or less frequent posters.

Opportunities for self-representation using social media reflect Corner's ([1995](#)) idea of a 'strategy of representation', where there are distinct choices about which aspects of the self to choose to represent, and the methods by which to present these. As Wellman and Guila ([1999](#), 174) have argued "...before life on the Net, people didn't always go to experts...". This has some resonance today, since the distinction between archaeologist and non-archaeologist can be fluid online - the distinction between a professor and an undergraduate on Twitter for example, can only be seen in the context of a 160-character biography - the content of which is often obscure, and may not provide any links to identify the person tweeting as a member of a real-life institution. The content and quality of the communication is what seems to count. The presence of academic or institutional credentials is not what matters to techno-utopians such as [Clay Shirkey](#): mass peer production (crowdsourcing) - the public performance of competence - online is absolute (O'Neil [2009](#), 2).

Yet these institutional credentials impact how we understand and acknowledge the notion of the expert and the way in which expert knowledge is presented and performed is vital to establish authority. In his seminal work *The Presentation of Self in Everyday Life* ([1959](#)), Erving Goffman conceptualised identity as a continual performance, and theorised that individuals should be able to manage or control private/public boundaries by selectively revealing and concealing one's identities in a continual process of interaction with other people (Marwick and Boyd [2010](#)). So are these web-enabled changes simply a technologically-facilitated continuation of longer-term developments within archaeology as a whole? I would suggest perhaps that the online interaction between the non-archaeological, imagined audience and the professional archaeologist is the interface required to produce a Goffmanesque performance of archaeological expertise, and it is this conscious performance of identity, skill and knowledge that underlines the authoritative nature of being an authentic archaeologist, something that has also been explored by Rodden ([2006](#)) and Hearn ([2010](#)).

Based on the results of the online surveys discussed, and case studies presented in this article, we must seriously question whether new landscapes of participatory media can fundamentally change, open, or even threaten the authority of archaeological organisations and academic knowledge. The research presented here indicates that the ownership of online archaeological expertise and authority is robustly maintained and defended by archaeological organisations throughout the UK and that this is itself subtly stratified by institutional affiliation, real-life status, professional accomplishment and even the ability to leverage digital literacy and longevity on these platforms. The encouragement of audience participation in the production of archaeological knowledge by archaeological organisations seems to have gone only a small way towards supporting multiply-voiced, participatory approaches to heritage issues. Despite the considerable scale and intricacy of the many issues of information inequalities, and the nuanced variants in information literacy, and although the Internet is a repository of misleading information and advice on all topics, not least archaeology, the possibilities for mass-appeal 'bad archaeology' (Fitzpatrick-Matthews and Doeser [2014](#)) in the UK seems minimal.

The behaviours involved in the interactions between the non-professional layperson and archaeology and archaeologists online through social media ('nano-endorsements' such as citation indexing, favouriting blog posts or tweets, rating, liking or tagging images, posts or comments) are passive activities that do not necessarily present any challenge to archaeological authority (Morozov [2011](#), 99; Bevan [2012](#), 3). Equally, commenting on the content of blogs, creating posts on Facebook pages or exchanging ideas and comments through Twitter could raise challenges, present different ideas, question interpretations and extend arguments between the public and the professional archaeologist. However, organisations have to welcome and embrace these types of interactions, actively seek out and support these kinds of online dialogue and multiple perspectives, and be prepared for the variety of responses this is likely to elicit. Technology will absolutely "lower the barrier to entry" to historical and archaeological detective work (Fisher and Adair [2011](#), 55) but will it sustain interest, support multiple perspectives and encourage organisations to really listen to their partners in participatory engagement?

Perhaps the fundamental answer to the question of how we, as professional archaeologists in the UK, can recognise elements of epistemic unrest lies in how we can work with the interested and opinionated public, without trivialising multiple perspectives to absolute relativism or ignoring them completely. In the prevailing atmosphere of economic austerity, it is all too easy to view enquiry into cultural heritage and archaeology as reduced in importance and value to wider society, despite the dichotomy of the rise of volunteerism in the heritage sector (Steel [2013](#); VisitEngland [2013](#)), and increasing involvement of the public through the growth of community archaeology projects. Archaeologists need to demonstrate the value of their work on a consistent basis to a wide number of stakeholders, and the key to a successful approach in this carefully choreographed dance between archaeological expertise and public co-curation and creation is to incorporate participatory techniques into organisational public engagement strategies, online and offline, without fear of misinterpretation or misrepresentation (Simon [2011](#) 30).

As the results of the data explored in this article have demonstrated very clearly, this recognition of multiperspectivalism is not, on the whole, undertaken through a process of actively acknowledging shared authority or through accommodating polyvocal responses to archaeological information at all. Organisations are generally very strongly defended against participation in difficult conversations,

through the careful consideration and preparation of material to share online and the editorial process, and sometimes even through the implementation of organisational social media policies. Nor do most of the organisations or individuals responding to my research surveys attempt to facilitate digital self-directed exploration of archaeological data, without the exercise of 'top-down' expert knowledge and guidance. These trends provide a public archaeology model that sits firmly in the 'deficit', 'outreach', 'public relations', and 'educational' models of Merriman (2004) and Holtorf (2007). Exploring these models for public engagement with archaeology means we must confront "the structure of social relationships that we wish to foster" (Bevan 2012, 12).

I argue that we do not proactively support the interpretations and perspectives created and imagined by non-professionals within the framework of the participatory web (MacArthur 2011, 61), frequently because they simply do not exist, belong firmly in the realms of the uncanny or unreasonable, or are part of local history and folklore and therefore not part of professionally produced archaeological data or narratives. I would also argue that, these nuances aside, through the consideration of the types of social relationships we wish to create, guided by archaeologists and leading the public 'other', we remain trapped in an epistemic loop of 'top-down' public archaeology, even with the augmentation of participatory media. This creates a space for what I term 'participatory ventriloquism' where the top-down approach to public and community archaeology translates to the Internet, and we are at risk of performing our-self-defined roles as archaeologists in the digital realm, through advising non-archaeologists what to read, ask and contribute through Internet technologies and our social media platforms, rather than consider the needs and interests of the audience.

Bibliography

Ahmad, S. 2009 'Information seeking behaviour of archaeology and heritage management professionals of Delhi: a study', *Pearl: A Journal of Library and Information Science* **34**, 68-73.

An, J., Li, W.J., Ji, L.N. and Wang, F. 2013 'A survey on information credibility on Twitter', *Applied Mechanics and Materials* **401**, 1788-91. <http://dx.doi.org/10.4028/www.scientific.net/AMM.401-403.1788>

Anderson, D.S., Card, J.J. and Feder, K.L. 2013 'Speaking up and speaking out collective efforts in The Fight to Reclaim the Public Perception of Archaeology', *The SAA Archaeological Record*, **13(2)**, 24-28.

Andretta, S. (ed) 2007 *Change and Challenge: Information Literacy for the 21st Century*. Adelaide: Auslib Press.

Bates, M.J. 2010 *Information Behaviour*. [Online] Retrieved from: <http://pages.gseis.ucla.edu/faculty/bates/articles/information-behavior.html> [accessed 6 June 2014].

Baxter, I. 2012 'Politics, policy and the discourses of heritage in Britain', *Cultural Trends* **212**, 193-95. <http://dx.doi.org/10.1080/09548963.2012.674768>

Bevan, A. 2012 'Value, authority and the open society. Some implications for digital and online archaeology' in C. Bonacchi (ed) *Archaeology and Digital Communication: Towards Strategies of Public Engagement*. London: Archetype, 1-14.

Blais, M.J. 1987 'Epistemic tit for tat', *The Journal of Philosophy* **847**, 363-75.
<http://dx.doi.org/10.2307/2026823>

Bonacchi, C., Furneaux, C. and Pett, D. 2012 'Public engagement through online TV channels: a way forward for the audiovisual communication of archaeology' in C. Bonacchi (ed) *Archaeology and Digital Communication: Towards Strategies of Public Engagement*. London: Archetype, 50-65.

Brittain, M. and Clack, T. 2007 'Introduction' in T. Clack and M. Brittain (eds) *Archaeology and the Media*. Walnut Creek: Left Coast Press, 11-66.

Case, D.O. 2012 *Looking for Information: A Survey of Research on Information Seeking, Needs, and Behavior*. Bingley, West Yorkshire: Emerald Group Publishing.

Castillo, C., Mendoza, M. and Poblete, B. 2011 'Information credibility on Twitter' in *WWW '11: Proceedings of the 20th International Conference on World Wide Web*, [Online] Retrieved from: <http://dl.acm.org/citation.cfm?id=1963500> [accessed 6 June 2011].

Catts, R. and Lau, J. 2008 *Towards Information Literacy Indicators*. Paris: UNESCO. [Online] Retrieved from: http://www.uis.unesco.org/Library/Documents/wp08_InfoLit_en.pdf [accessed 6 June 2014].

Colwell-Chanthaphonh, C. and Ferguson, T.J. 2006 'Memory pieces and footprints: multivocality and the meanings of ancient times and ancestral places among the Zuni and Hopi', *American Anthropologist* **1081**, 148-62. <http://dx.doi.org/10.1525/aa.2006.108.1.148>

Corkill, C. and Mann, M. 1981 *Doctoral Students in Humanities: A small-scale panel study of information needs and uses 1976-79*. Centre for Research on User Studies Occasional Papers 5. Sheffield: University of Sheffield, Department of Information Studies.

Corner, J. 1995 *Television Form and Public Address*. London: Edward Arnold.

Council for British Archaeology. 2014 'A Brief History of the CBA'[Online] Retrieved from: <http://www.archaeologyuk.org/cba/history> Date accessed: 19 February 2014.

Dutton, W. and Shepard, A. 2006 'Trust in the Internet as an experience technology', *Information, Communication and Society* **94**, 433-51. <http://dx.doi.org/10.1080/13691180600858606>

Fagan, G.G. 2006 'Diagnosing pseudoarchaeology' in G.G. Fagan (ed) *Archaeological Fantasies: How Pseudoarchaeology Misrepresents the Past and Misleads the Public*. London: Routledge, 23-46.

Feder, K.L., Lepper, B.T., Barnhart, T.A. and Bolnick, D. 2011 'Civilizations lost and found: fabricating history; part one: an alternate reality', *Skeptical Inquirer* **355**, 38-45.

Fisher, M. and Adair, B. 2011 'Online dialogue and cultural practice: a conversation' in B. Adair, B. Filene and L. Colossi (eds) *Letting Go? Sharing Historical Authority in a User-Generated World*. Walnut Creek: Left Coast Press, 44-55.

- Fitzpatrick-Matthews, K. and Doeser, J. 2014 'Bad archaeology' [Online]. Retrieved from: <http://www.badarchaeology.net/> [accessed 6 June 2014].
- García-Raso, D. 2011 'Watching video games: Playing with archaeology and prehistory', *AP: Online Journal in Public Archaeology* **1**, 73-92. Retrieved from: <http://www.arqueologiapublica.es/descargas/1300786325.pdf> Date accessed: 24 October 2014.
- Glaser, R. and Chi, M. 1988 'Overview' in M. Chi, R. Glaser and M. Farr (eds) *The Nature of Expertise*. New Jersey: Lawrence Erlbaum, xv-xxxvi.
- Goffman, E. 1959 *The Presentation of Self in Everyday Life*. New York: Anchor Books.
- Granovetter, M. 1973 'The strength of weak ties', *American Journal of Sociology* **786**, 1360-80. <http://dx.doi.org/10.1086/225469>
- Granovetter, M. 1982 'The strength of weak ties: a network theory revisited' in P. Marsden and N. Lin (eds) *Social Structure and Network Analysis*. New York: John Wiley and Sons, 105-30.
- Habu, J. and Fawcett, C. 2008 'Science or narratives? Multiple interpretations of the Sannai Maruyama site, Japan' in J. Habu, C. Fawcett and J.M. Matsunaga (eds) *Evaluating Multiple Narratives: Beyond Nationalist, Colonialist, Imperialist Archaeologies*. New York: Springer, 91-117. http://dx.doi.org/10.1007/978-0-387-71825-5_7
- Hardwig, J. 1991 'The role of trust in knowledge', *Journal of Philosophy* **8812**, 693-708. <http://dx.doi.org/10.2307/2027007>
- Hargittai, E. 2004 'Internet access and use in context', *New Media and Society* **61**, 137-43. <http://dx.doi.org/10.1177/1461444804042310>
- Hargittai, E. and Hinnant, A. 2008 'Digital inequality: differences in young adults' use of the Internet', *Communication Research* **355**, 602-21. <http://dx.doi.org/10.1177/0093650208321782>
- Hartelius, J. 2011 *The Rhetoric of Expertise*. Lanham, MD: Lexington Books.
- Hearn, A. 2010 'Structuring feeling: Web 2.0, online ranking and rating, and the digital "reputation" economy', *Ephemera: Theory and Politics in Organization* **103/4**, 421-38.
- Henson, D. 2006 *Television archaeology: education or entertainment?* Retrieved from: http://www.academia.edu/352779/Television_archaeology_education_or_entertainment [accessed 6 October 2014].
- Hodder, I. 1992 *Theory and Practice in Archaeology*. London: Routledge.
- Hodder, I. 1999 *The Archaeological Process: An Introduction*. Oxford: Blackwell.
- Hodder, I. 2003 'Archaeological reflexivity and the "local" voice', *Anthropological Quarterly* **761**, 55-69. <http://dx.doi.org/10.1353/anq.2003.0010>

Hodder, I. 2008 'Multivocality and social archaeology' in J. Habu, C. Fawcett and J.M. Matsunaga (eds) *Evaluating Multiple Narratives: Beyond Nationalist, Colonialist, Imperialist Archaeologies*. New York: Springer, 196-212. http://dx.doi.org/10.1007/978-0-387-71825-5_13

Hofheinz, A. 2011 'Nextopia? Beyond revolution 2.0', *International Journal of Communication* 5, 1417-34.

Holtorf, C. 2007 *Archaeology is a Brand! The Meaning of Archaeology in Contemporary Popular Culture*. Oxford: Archaeopress.

Huvila, I. 2006 *The Ecology of Information Work - A Case Study of Bridging Archaeological Work and Virtual Reality Based Knowledge Organization*. Åbo, Finland: Åbo Akademi University Press. Retrieved from: <http://www.doria.fi/bitstream/handle/10024/4153/TMP.objres.83.pdf> [accessed 6 June 2014].

Huvila, I. 2008a 'Information work analysis: an approach to research on information interactions and information behaviour in context', *Information Research* 133, Paper 349. Retrieved from: <http://informationr.net/ir/13-3/paper349.html> [accessed 6 June 2014].

Huvila, I. 2008b 'The information condition: Information use by archaeologists in labour, work and action', *Information Research* 134, Paper 369. Retrieved from: <http://informationr.net/ir/13-4/paper369.html> [accessed 6 June 2014].

Ikegami, Y., Kawai, K., Namihira, Y. and Tsuruta, S. 2013 'Topic and opinion classification based information credibility analysis on Twitter' in *2013 IEEE International Conference on Systems, Man, and Cybernetics*, 4676-81. Retrieved from: <http://ieeexplore.ieee.org/iel7/6689802/6721750/06722551.pdf?arnumber=6722551> [accessed 6 October 2014].

Jacobs, M. and Bosanac, S.E. 2006 *The Professionalization of Work*. Whitby, ON: De Sitter Publications.

Johnson, M. 2008 'Making a home: archaeologies of the medieval English village' in J. Habu, C. Fawcett and J.M. Matsunaga (eds) *Evaluating Multiple Narratives: Beyond Nationalist, Colonialist, Imperialist Archaeologies*. New York: Springer, 45-55. http://dx.doi.org/10.1007/978-0-387-71825-5_4

Kang, B., O'Donovan, J. and Höllerer, T. 2012 'Modelling topic specific credibility in Twitter' in *IUI '12: Proceedings of The 2012 ACM International Conference On Intelligent User Interfaces*, 179-188. [Online] Retrieved from: <http://www.cs.ucsb.edu/~holl/pubs/Kang-2012-IUI.pdf> [accessed 6 June 2014].

Kojan, D. 2008 'Paths of power and politics: historical narratives at the Bolivian site of Tiwanaku' in J. Habu, C. Fawcett and J.M. Matsunaga (eds) *Evaluating Multiple Narratives: Beyond Nationalist, Colonialist, Imperialist Archaeologies*. New York: Springer, 69-85. http://dx.doi.org/10.1007/978-0-387-71825-5_6

Kulik, K. 2006 'Archaeology and British Television', *Public Archaeology* 52, 75-90. <http://dx.doi.org/10.1179/pua.2006.5.2.75>

- Lanham, R.A. 1995 'Digital literacy', *Scientific American* **2733**, 198-200.
- Lucassen, T. and Schraagen, J.M. 2011 'Factual accuracy and trust in information: the role of expertise', *Journal of the American Society for Information Science and Technology* **627**, 1232-42. <http://dx.doi.org/10.1002/asi.21545>
- Lucassen, T., Muilwijk, R., Noordzij, M.L. and Schraagen, J.M. 2013 'Topic familiarity and information skills in online credibility evaluation', *Journal of the American Society for Information Science and Technology* **642**, 254-64. <http://dx.doi.org/10.1002/asi.22743>
- MacArthur, M. 2011 'Get real! The role of objects in the digital age' in B.Adair, B. Filene and L. Colossi (eds) *Letting Go? Sharing Historical Authority in a User-Generated World*. Walnut Creek: Left Coast Press, 56-67.
- Marwick, A.E. and Boyd, D. 2010 'I tweet honesty, I tweet passionately: Twitter users, context collapse, and the imagined audience', *New Media and Society* **131**, 114-33.
- Matsuda, A. and Okamura, K. 2011 'Introduction: new perspectives in global public archaeology' in A. Matsuda and K. Okamura (eds) *New Perspectives in Global Public Archaeology*. London: Springer, 1-18. http://dx.doi.org/10.1007/978-1-4614-0341-8_1
- McDavid, C. 1997 *Archaeology as Cultural Critique: A Pragmatic Framework for Community Collaboration in the Public Interpretation of the Archaeology of a Southern Plantation*. Paper read at Annual Meetings of the American Anthropology Association, at Washington, DC.
- Merriman, N. 2004 'Introduction: diversity and dissonance in public archaeology' in N. Merriman (ed) *Public Archaeology*. London: Routledge, 1-17.
- Miller, C. and Bartlett, J. 2012 "'Digital fluency": towards young people's critical use of the Internet', *Journal of Information Literacy* **62**, 35-55. Retrieved from: <http://ojs.lboro.ac.uk/ojs/index.php/JIL/article/view/PRA-V6-I2-2012-3> [accessed 6 June 2014].
- Morozov, E. 2011 *The Net Delusion: The Dark Side of Internet Freedom*. New York: Public Affairs Books.
- Morris, M., Counts, S., Roseway, A., Hoff, A. and Schwarz, J.m 2012 'Tweeting is believing? Understanding microblog credibility perceptions', *CSCW '12: Proceedings of the ACM 2012 conference on Computer Supported Cooperative Work*. New York: ACM, 441-50.
- Moshenska, G. 2006 'The archaeological uncanny', *Public Archaeology* **52**, 91-99. <http://dx.doi.org/10.1179/pua.2006.5.2.91>
- Moshenska, G. 2008 'Community archaeology from below: a response to Tully', *Public Archaeology* **71**, 52-53.
- Moshenska, G. 2009 'Beyond the viewing platform: Excavations and audiences', *Archaeological Review from Cambridge*, 24(1), 39-53.
- O'Neil, M. 2006 *Weblogs and Authority*. Refereed paper presented to Blogtalk Downunder, University of Technology, Sydney. 19-22 May 2006. [Online] Retrieved from:

http://works.bepress.com/cgi/viewcontent.cgi?article=1024&context=mathieu_oneil [accessed 6 June 2014].

O'Neil, M. 2009 *Cyberchiefs. Autonomy and Authority in Online Tribes*. London: Pluto.

Pfister, D.S. 2011 'Networked expertise in the era of many-to-many communication: on Wikipedia and invention', *Social Epistemology* **253**, 217-31. <http://dx.doi.org/10.1080/02691728.2011.578306>

Portable Antiquities Scheme, 2014. Homepage. [Online] Retrieved from: <http://finds.org.uk> [accessed 6 October 2014].

Pruitt, T.C. 2011 *Authority and the Production of Knowledge in Archaeology*. PhD Thesis: University Of Cambridge. [Online]. Retrieved from: <http://www.dspace.cam.ac.uk/handle/1810/241365> [accessed 6 October 2014].

Putnam, R.D. 2000 *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon and Schuster.

Pyburn, K.A. 2009 'Practising archaeology - as if it really matters', *Public Archaeology* **82-3**, 161-75. <http://dx.doi.org/10.1179/175355309X457204>

Rassool, C. 2010 'Power, knowledge and the politics of public pasts', *African Studies* **691**, 79-101. <http://dx.doi.org/10.1080/00020181003647215>

Richardson, L-J. 2014 *Public Archaeology in a Digital Age*. PhD Thesis: University College London.

Richardson, L-J. 2014 *Archaeology & Social Media Policy*, figshare <http://dx.doi.org/10.6084/m9.figshare.1194881>

Richardson, L-J. 2014 *Archaeology & Twitter Survey 2011*, figshare <http://dx.doi.org/10.6084/m9.figshare.1122528>

Richardson, L-J. 2014 *Archaeology & Twitter Survey 2012*, figshare <http://dx.doi.org/10.6084/m9.figshare.1122529>

Richardson, L-J. 2014 *Archaeology & Twitter Survey 2013*, figshare <http://dx.doi.org/10.6084/m9.figshare.1122530>

Richardson, L-J. 2014 *Using the Internet for Archaeology*, figshare <http://dx.doi.org/10.6084/m9.figshare.1194133>

Rodden, J. 2006 'Reputation and its vicissitudes', *Society* **433**, 75-80. <http://dx.doi.org/10.1007/BF02687599>

Rowlands, I., Nicholas, D., Williams, P., Huntington, P., Fieldhouse, M., Gunter, B., Withey, R., Jamali, H.R., Dobrowolski, T. and Tenopir, C. 2008 'The Google generation: the information behaviour of the researcher of the future', *Aslib Proceedings* **604**, 290-310. <http://dx.doi.org/10.1108/00012530810887953>

Royal Commission on Ancient and Historical Monuments of Scotland 2014 *About Us*. [Online] Retrieved from: <http://www.rcahms.gov.uk/about-us/about-us> [accessed 6 October 2014].

Schadla-Hall, T. 2004 'The comforts of unreason' in N. Merriman (ed) *Public Archaeology*, London: Routledge, 255-71.

Schrock, A. 2010 *Are you what you tweet? Warranting trustworthiness on Twitter*. Paper presented at The Annual Meeting of the Association for Education in Journalism and Mass Communication, Denver, Colorado, August 4, 2010. Retrieved from: http://www.academia.edu/256180/Are_You_What_You_Tweet_Warranting_Trustworthiness_on_Twitter [accessed 6 June 2014].

Schwarz, J. and Morris, M.R. 2011 'Augmenting Web pages and search results to support credibility assessment', *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, CHI '11*. New York: ACM Press, 1245-54.

Silberman, N.A. 2008 'Virtual viewpoints: multivocality in the marketed past?' in J. Habu, C. Fawcett and J.M. Matsunaga (eds) *Evaluating Multiple Narratives: Beyond Nationalist, Colonialist, Imperialist Archaeologies*. New York: Springer, 138-43. http://dx.doi.org/10.1007/978-0-387-71825-5_9

Simon, N. 2011 'Participatory design and the future of museums' in B. Adair, B. Filene and L. Colossi (eds) *Letting Go? Sharing Historical Authority in a User-Generated World*. Walnut Creek: Left Coast Press, 18-33.

Soffer, R.N. 1982 'Why do disciplines fail? The strange case of British sociology', *The English Historical Review* **97(385)**, 767-802. <http://dx.doi.org/10.1093/ehr/XCVII.CCCLXXXV.767>

Steel, P. 2013 *Cuts Survey 2013: Paid jobs lost to volunteers*. Museums Association. [Online] 30 September 2013. Retrieved from: <http://www.museumsassociation.org/news/30092013-cuts-survey-2013-paid-jobs-in-museums-lost-to-volunteers> [accessed 6 October 2014].

Stein, R. 2012 *Is Your Community Better Off because it has a Museum? Final Thoughts about Participatory Culture part III*. Indianapolis Museum of Art. [Online] 3 November 2011. Retrieved from: <http://www.imamuseum.org/blog/2011/11/03/is-your-community-better-off-because-it-has-a-museum-final-thoughts-about-participatory-culture-part-iii/> [accessed 6 June 2014].

Stone, S. 1982 'Humanities scholars: information needs and uses', *Journal of Documentation* **384**, 292-313. <http://dx.doi.org/10.1108/eb026734>

Trigger, B.G. 1984 'Alternative archaeologies: nationalist, colonialist, imperialist', *Man* **193**, 355-70. <http://dx.doi.org/10.2307/2802176>

Twitter Advertising Blog, 2013 *New Compete Study: Primary Mobile Users on Twitter*. [Online] 11 February 2013. Retrieved from <https://blog.twitter.com/2013/new-compete-study-primary-mobile-users-on-twitter> [accessed 6 June 2014].

Twitter Help Centre, 2014 *Editing Your Profile*. [Online] Retrieved from <https://support.twitter.com/groups/51-me/topics/206-profile-settings/articles/127871-editing-your-profile#> [accessed 6 June 2014].

UNESCO, 2003 'The Prague Declaration. "Towards an information literate society."' [Online]
Retrieved from:
<http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/PragueDeclaration.pdf>
[accessed 6 June 2014].

VisitEngland, 2013 *Visitor Attraction Trends in England 2012*. London: English Heritage.

Waterton, E. 2010 *Politics, Policy and the Discourses of Heritage in Britain*. Basingstoke, Hampshire:
Palgrave Macmillan. <http://dx.doi.org/10.1057/9780230292383>

Wellman, B. and Gulia, M. 1999 'Virtual communities as communities: net surfers don't ride alone' in
M.A. Smith and P. Kollock (eds) *Communities in Cyberspace*. London: Routledge, 163-90.

Wylie, A. 2008 'The integrity of narratives: deliberative practice, pluralism and multivocality' in J.
Habu, C. Fawcett and J.M. Matsunaga (eds) *Evaluating Multiple Narratives: Beyond Nationalist,
Colonialist, Imperialist Archaeologies*. New York: Springer, 201-12. http://dx.doi.org/10.1007/978-0-387-71825-5_14

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