1 On maps and mapping

Abstract

In this introductory chapter the key tenets of critical mapping are introduced and its reception within archaeology is critically assessed. Attention is drawn to the relative dearth of sustained theoretical investigations within archaeology into the frameworks and practices of mapping, despite the key role maps have traditionally played (and still continue to be afforded) in our explications of the past. A number of key themes within recent critical cartographic thought are introduced where we feel archaeology has a particularly valuable role to play. The chapter concludes with a manifesto that is designed to encourage archaeology to not only contribute to ongoing debates that are currently taking place across the Humanities and Social Sciences, but also to begin to shape those agendas.

Key words: archaeological maps, critical cartography, performance, alternative mappings, post-representational cartography

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On maps and mapping

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Introduction

> "It is remarkable, given the necessity of maps for the work of archaeology, that so little has been written on what it is they *actually do* in the context of archaeological knowledge production."
>
> (Witmore 2013, 128; emphasis in original)

> "In what ways and with what effects have projection as a form of representation, accuracy as a measure of value, and correspondence as a yardstick of truth, come into being?"
>
> (Pickles 2004, 13)

This is a book about how archaeologists map, what they map and why they seek to map it. It is about the theoretical frameworks and craft traditions that underpin our established cartographic practices and the emergent assemblages of technologies, performances, desires and ways-of-doing that are giving rise to wholly new modes of mapping. From the very beginning of archaeological practice, maps (and plans) have been one of the discipline's most fundamental

tools. The number, variety and prominence of maps in archaeology have been increasing further since the beginning of the 1990s due to the availability of a growing range of digital technologies used to collect, visualise, query, manipulate and analyse spatial data. This book was prompted by a nagging sense that despite such a fundamental reliance upon various forms of maps and mapping, and enthusiastic reception of ongoing digital transitions in cartographic practice, Archaeology has tended to feed off broader disciplinary critiques instead of helping to shape them. It has certainly taken a back seat in recent developments that have occurred within the Humanities and Social Sciences which, since the late 1980s, have prompted the emergence of an explicitly critical cartography within many disciplines, in particular Geography (cf. Crampton & Krygier 2006; Kitchin et al. 2009, 2011; Wood & Krygier 2009). Whilst much earlier critiques of mapping undoubtedly exist (Dodge et al. 2011, 2–7; Wood & Krygier 2009), “critical cartography” (or “critical mapping”) distinguishes itself from these earlier approaches through its concentrated and ‘self-conscious engagement with the fundamentals of cartographic thinking and behaviour’ (Wood & Krygier 2009, 340), as well as the critical reception of maps themselves.

Among the major research interests that have shaped the multi-disciplinary field of critical mapping are cognitive mapping and cartographic aesthetics (e.g. Brewer et al. 1997; Lloyd 2000; Monmonier 1990; Nivala et al. 2008), the profound effects of new digital media and technologies on cartographic practices (e.g. Jensen and Cowen 1999; Pickles 1995a; Silver & Balmori 2003) and, perhaps most fundamentally, investigations into maps and power. In the late 1980s and early 1990s, studies within the last of these themes – which might be termed the “power of maps critique” – attempted to deconstruct Western mapping and lay bare its assumptions (e.g. Harley 1988, 1989, 1991; Wood 1992; Wood & Fels 1986). Later, this line of critique expanded in order to examine Western cartography’s historical role in advancing

colonialist, nationalist, militaristic and capitalist interests (e.g., Bassett 1994; Biggs 1999; Ramaswamy 2001; Winichakul 1994). Preoccupation with maps' power has also recently given way to practice-based re-conceptualisations of maps, referred to as "post-representational cartography" (cf. Caquard 2015; Kitchin 2010; 2014; Kitchin et al. 2009, 10–23; Rossetto 2015), and, more particularly, "performative and embodied mapping" (cf. Crampton 2009, 840–842; della Dora 2009; Perkins 2009).

Within archaeology, the power of maps critique and more particularly examinations of the political agency of Western mapping seem to have been highly influential, taking place most clearly in the 1990s as part of a broader critique of the political tenets of modernity. To name but a few of their more overt failings as powerful media, in these debates maps (and mapping) were seen as tainted by surveillance and voyeurism; inherently objectivist and unashamedly Cartesian; ocular-centric technologies of representation; specular, detached and analytical; irrevocably gendered and tied to militaristic and colonial undertakings (Thomas 2004; cf. Wheatley 2014, 118–121). Although often emerging from critiques that were themselves strongly anti-essentialist, it was as if modernity itself had a tenacious essence that was indelibly bound into the fabric of the map. With maps positioned as modernity's fifth column, it became straightforward to extend the critique to any approaches that foregrounded mapping and the handling and interpretation of cartographic data. This became most obvious in the case of technologies such as Geographical Information Systems (GIS). Similar concerns in Geography gave rise to the 'GIS and Society' debate which addressed "a deep concern for the impacts of unmediated technical practices on the discipline of geography and other arenas of social life" (Pickles 1995b, x; cf. Harvey et al. 2005; O'Sullivan, 2006; Sheppard 2005). Echoing this criticism, in archaeology GIS was branded one of the worst media to engage with in order to create knowledge about past

human experiences (Tilley 2004, 218). A key consequence of this tendency to argue that the perceived failings of the map were even more concentrated and apparent in digital formats was that archaeological theorists largely excused themselves from key debates regarding digital cartography and the theoretical and practice-based consequences of the digital transition that were taking place elsewhere.

There was, however, an inherent tension in much of this power critique in archaeology, insofar as the most vocal proponents still found themselves relying extensively upon maps (e.g. Tilley 1994; Thomas 1996). Whilst this was evidently recognised and acknowledged (see for example Thomas 1994, 27, and the caption to his Figure 1.1), maps proved stubbornly difficult to excise. A further layer of complexity was introduced by the implicit suggestion that some forms of mapping were (again, in essence) more acceptable than others, such as counter-mapping (Brody 1981; Byrne 2008). This was presumably a consequence of the degree to which the concerns of modernity had been seen to shape them. Unfortunately, these broad generalisations about archaeological maps, so bent on rejecting them on the basis of their perceived oppressive power and relation to modernity, missed the point that maps are artefacts and as such have agential qualities that emerge only through contextual relations (Wood 2010a). Arguably, there is nothing inherently modernist about maps: maps are rendered as tools of modernity through their contingent entanglements with other things in particular contexts. Developing this further, maps, constituted as modern tools through a set of discursive practices, can also be constituted differently through alternative cartographic practices and emerging relations (Wood 2010a; see Butler 1988, 520). It may be argued that few disciplines other than archaeology could have made this point about context more strongly within critical cartography, given archaeology’s vast and multifaceted experience with the enactments of artefacts. That has served as a key prompt for the

current volume, which aims to rectify this situation by finally placing archaeology where it should have been for a very long time: right at the centre of the lively debates on the agency of maps and alternative mappings across the Humanities and Social Sciences.

Rethinking the archaeological map

> "maps come to life when people start using them in a particular setting for a particular purpose . . . maps are not considered as ever finished, but as 'continually re-made every time someone engages with them'"
>
> (Caquard 2015, 229)

> "as things, maps gather"
>
> (Witmore 2013, 131)

It is important to stress that whilst the stridency of much of the negative reception sketched above silenced any sustained critical reflection on mapping, some archaeologists did begin to actively engage, with key themes and currents emerging from the developing critical and post-representational cartographic movements. Take, for example, their focus on practice and performance, and the ontological shift away from an unquestioned assumption of the *map-as-spatial-truth* to focus instead upon the *map-as-process* (cf. Crampton 2009; Caquard 2015; Kitchin & Dodge 2007; Perkins 2009). Drawing upon Latourian notions of the immutable mobile (Latour 1987, 223–227), much of this work has taken as its point of departure a concern not with what maps depict but instead what maps *do* in the context of knowledge production. For example, Witmore has argued that we need to see the map less as a representation and more as a

thing, bound in a network of relations; a heterogeneous assemblage (Witmore 2013, 126–127). Proposing use of the term *mapwork* as a creative weaving together of the abstraction of the map with subject-centred perception, Webmoor has highlighted the way that maps have traditionally served as a powerful (and authoritative) medium through which an inevitably limited range of interpretations are negotiated. Instead, he proposes that we unsettle their assumed stability by treating them not as authoritative representations but instead as *mediations* (Webmoor 2005, 77). Building upon this notion of mediation, Lucas has stressed the value of treating maps first and foremost as “mediating devices” for bringing together and revealing assemblages that would be otherwise invisible to us (2012, 202). Shanks and Webmoor have gone on to stress the hybrid, prosthetic qualities of the map. Through the notion of a cyborg-ontology, they have drawn critical attention to the way that the map and map-user become woven together (and inseparable from one another) in the practices of navigation and way-finding (Shanks & Webmoor 2013, 104). Wickstead (2009), in turn, has examined how powerful political cartographic performances can take place within archaeological contexts, recounting how artist Janet Hodgson mapped the bodies of four male archaeologists leading a project at Stonehenge in order to create a hybrid monster using their virtual body parts. She named the monster Uber Archaeologist in a film based on the plot of the *Curse of Frankenstein*. The artist’s creation and interactions with the Uber Archaeologist, a map of body parts, served to critically perform meanings in an archaeological context that in turn highlighted and laid bare the prevailing gender-related power relations in the discipline.

A second strand of cartographic research in archaeology has turned to the notion of the *deep map* (Heat Moon 1991), an engagement with place that draws simultaneously, and productively, upon the chorographic traditions of the 16th and 17th centuries (Mendyk 1986,

1989). A deep map is inherently post-representational insofar as it seeks to capture the essence of a place through what might best be thought of as a conversation or dialogue, and stands in stark opposition to the static representation of a traditional *thin map* (Harris 2015). Deep maps are creative and fluid, weaving together past and present, imagined and experienced, provocative and comforting, complementary and tensioned. “Reflecting eighteenth century antiquarian approaches to place, which included history, folklore, natural history and hearsay, the deep map attempts to record and represent the grain and patina of place through juxtapositions and interpenetrations of the historical and the contemporary, the political and the poetic, the discursive and the sensual; the conflation of oral testimony, anthology, memoir, biography, natural history and everything you might ever want to say about a place” (Pearson & Shanks 2001, 64–65). With its emphasis on unearthing and revealing unforeseen linkages between gobbets of information in order to weave together unexpected stories and spatial narratives, deep mapping is often associated with emergent multimedia developments in the digital humanities and GIScience (Bodenhamer et al. 2015; Roberts 2016; see below). That a technological basis for deep mapping is not essential, however, has been demonstrated by Pearson (2006), who has used performance to draw out the multi-scalar connections that exist between the scales of village, neighbourhood and region. His very title, *In Comes I*, trumpets the situated subjectivity of his approach rather than the detached objectivism of academia – “taking up the challenge to develop a non-representational style, in which there is no last word . . . meandering through time and across land, drawn to particular historical moments and topographic details as much by personal proclivity as academic obligation” (Pearson, 2006, 16).

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A final, and more recent, strand takes the form of vigorous experimentation with the basic form of the map itself, allied to the first hints of a renewed theoretical dialogue with digital

technologies, such as GIS. Take, for example, the important work of Fowler (2013) in seeking to develop wholly new ways of mapping complex relational assemblages (e.g. 2013, Figure 2.2). In a more playful, yet undeniably effective mode, Cooper has re-rendered historical maps of the Nile and its Delta using the design language of Harry Beck's iconic London Underground map in order to frame an investigation into the navigational landscape of the river (Cooper 2014, Appendix 1 Figures A1.1.–A1.7) (Figure 1.1). While co-ordinate systems provide the quantitative basis for GIS, our own biological and cultural navigation is more based on qualitative relationships, such as 'to the right of', 'in front of' and 'a little way past' the supermarket. This more relative approach to representing space and spatial relationships is illustrated by the complexities and opportunities of map making provided by the Parish Mapping Project of the environmental group Common Ground (www.commonground.org.uk; Crouch & Matless 1996; Clifford & King 1996). The importance of these maps in understanding place is based on the notion of 'local distinctiveness' and of what is important to people who live there and what they encounter in their daily lives that is important to them. Daniel Lee (2016) has experimented with such local archaeological knowledge within the Map Orkney Month project. Participants were asked to map their day and more specifically "sites" that they encounter using handheld GPS equipment as they carried out their everyday journeys, following their favourite paths as well as paths chosen specifically to reveal aspects of Orkney that were important to them. The focus of the project was not the maps per se, but the mapping processes through which people's local knowledge and their encounter with archaeological places and things were cherished. These mappings were clearly performances that not only challenged archaeological power structures by giving the power to map to non-specialist local people. By inclusion of imaginative sites in the project, these performances also successfully challenged well-established

dichotomies within archaeology, such as objectivity and subjectivity, and fact and fiction (Lee 2016, 1–2).

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Figure 1.1 Mind the Gap. "The Nile Delta, after al-Idrisi (1154)" (Cooper 2014, Figure A1.7, page 270)

Where might we go next?

> "This assumption of the transparency of the map – that it simply renders facts in graphic form – is significant and captures the tenacious assumption that maps should be regarded as scientific, rather than argumentative, documents"
>
> (Schulten 2011, 59)

We are fortunate to be writing at a time of particularly lively and productive theoretical debate in archaeology, as the impacts of the broader ontological turn, and emerging realist and new materialist agendas, begin to gain traction within the discipline (see Alberti et al. 2013; Olsen 2012; Thomas 2015; Witmore 2014). As a result, the time is ripe to revisit the archaeological map, both to respond more forcibly to the critiques of modernity that had served to stymie overt theoretical writing on mapping, as well as contribute productively to the momentum that had been generated by the innovative handful of critical studies that have taken place. As to the shape this might take, without wanting to be prescriptive, there are a number of themes that we feel could profitably be explored.

1 On maps and mapping

First, archaeological maps have an orthodox history, but is that their only history? If not, can we actively draw upon this hidden history; can it be subverted and/or co-opted, and what might the implications of such subversion be for archaeological mapping as practice and process? For example, how we map is shaped by careful rules and strictures – standards, guidelines and accepted ways-of-doing. Yet these techniques have a developmental history bound up with complex personal networks and agendas, what Bradley has characterised as 'craft traditions' (Bradley 1997), that can be unpacked and unpicked before being creatively refashioned. In this process of deconstruction and reconstruction, studying mapping ethnographies would prove to be a helpful approach where, as has happened in Geography (e.g. Brown & Laurier 2005; Del Casino & Hanna 2000), detailed accounts of what takes place during mapping practices may reveal the cartographic rules and strictures that otherwise lurk unseen.

Second, and linked closely to the above, our approach to mapping often seems wilfully oblivious to what it is that we are seeking to understand. For example, the self-same form of distribution map can be blithely used to encode the Iron Age 'Southwestern Culture' (Fox 1959, Figure 11), Roman Oxfordshire ware pottery (Jones & Mattingly 2002, Map 6:34), and fairies (Grinsell 1976, Figure 3). Looking in particular at the latter example, we can be confident that the stark black dots that litter the surface of the map do not mark the presence (or material traces) of these mythical beings. What they mark is stories, and rather than a simple spatial statement, they invite us to consider the host of relational capacities bound up in those stories: between people, animals, places, otherworldly entities, times, encounters, dreams, things, materials, memories etc. If that invitation is not readily apparent from the form of the distribution map, how could we map in order to make it so? That different approaches to annotating and coding our maps is possible is clear from projects such as the Psychogeographical Mark-up Language

(PML) proposed by the activist Wilfried Hou Je Bek (O'Rourke 2013: 204; Hou Je Bek 2010). Yet, as a discipline we have been strangely reluctant to experiment with our cartographic schema.

Third, can we begin to use maps to not only represent, but also to navigate terrains that are as much speculative and imaginative as they are physical, and not solely through the vehicle of metaphor? For example, as archaeologists grow increasingly interested in questions of ontological alterity might we find ourselves turning once again to maps in order to begin to think our way into the unfamiliar terrains that are revealed to us (Alberti & Marshall 2009; Alberti et al. 2011; Viveiros de Castro 1998)? Take, for example, the collection of maps by artists, 'creative cartographers' and explorers assembled by Harmon. Revelling in the unfamiliar and the imagination these demonstrate vividly their creators' "willingness to venture beyond the boundaries of geography or convention" (2004, frontispiece).

Fourth, and following the psychogeographic mapping experiments carried out by the Situationists, how might we rethink the very practices of survey and mapping to encourage more provocative and challenging ways-of-doing in order to de-familiarise and reconfigure our understandings of seemingly familiar spaces and places (Debord 1956; Pinder 1996; Wood 2010b)? Take, for example, the experiment described by O'Rourke whereby two groups of psychogeographers explored part of the new town of Leidsche Rijn in the Netherlands, using maps of Rome. "After agreeing to meet forty-five minutes later on the 'Ponte Garibaldi' they set out to 'rewire their perception' of Leidsche Rijn" (O'Rourke 2013, 11).

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Finally, even though archaeologists have already carried out interesting work with deep maps as discussed above, on-going developments in digital cartography are beginning to open even more, as yet unexplored, avenues that echo many of archaeology's more recent theoretical

interests. Specifically, cartographic data visualisation in archaeology can be carried out with digital multimedia to fashion deep maps populated with narratives, videos, sound recordings, emotions, hopes, fears, pictures and personal and material biographies, as well as links to conventional archaeological databases and Big Datasets. Such “thick” (after Geertz 1973) cartographic presentations of archaeological sites would not only act as a continuous reminder that the identity of archaeological places, processes and pasts is not fixed, but is something that is in a continuous state of becoming. They would also provide unique possibilities for the querying, analysis and visualisation of archaeological Big Data (in real time), which can in turn inspire new questions and metaphors about archaeological processes and places as well as constructions and presentations of past realities. Examples of such archaeological Big Datasets would be continuous video recordings of locales where archaeological knowledge is produced, the output of self-recording digital devices (e.g. tablets) used during the archaeological process, the real-time logging of visitor routes through sensors, and social media postings about archaeological sites. Given that the core business of archaeological practice today still largely remains focused on seeking knowledge about the “archaeological past” – i.e. material things, concepts, beliefs, feelings, values etc. in use during the time period of interest – such digital deep archaeological maps would assist post-representational agendas in the discipline and serve to further destabilise ideas of, and hopes for, an independent past that can be known, understood and explained. After all, the past is not an existing code to be cracked or reality to be discovered. Rather, it is creatively constructed here and now through a set of relations presented together insofar as such presentations are found relevant and acceptable by consensus (see Rorty 1991). Deep archaeological maps in the digital era would serve to effect relatively recent aspirations in the discipline to creatively put forward new consensuses and metaphors to present and construct

pasts, and carry out archaeological practices in ethically justified ways in order to render the world of today a better place to dwell in (see Harrison 2011; Witmore 2014).

This volume

It was in the spirit of the above that a day conference entitled 'Archaeology and the Map: Critique and Practice' was organised at the University of Leicester on 23 May 2015. This was complemented in December of the same year by a dedicated session at the Theoretical Archaeology Group (TAG) conference at the University of Bradford. The chapters assembled here derive from the papers presented at these meetings, alongside a number of invited contributions from a range of archaeological researchers whose work on maps and mapping we had found inspirational when designing the original conference sessions.

The initial prompt for the conferences came from the dawning realisation that the tensions, contradictions and frustrations with regard to archaeological mapping that we had each encountered in our own work were far from unique to our specific research areas. We all share an active concern with theory, field practice, and the role of mapping and have actively sought to combine these interests through digital cartographic approaches, such as GIS. The ideas that not only are more theoretically informed applications of mapping technologies possible, but that emerging practices and engagements with such technology can also lead to the creation of new and stimulating theory, have been a leitmotif of our published work (e.g. Gillings 1998, 2012; Hacıgüzeller 2012; Lock 2000, 2010).

Through this volume we hope to expand and extend existing trends in archaeological mapping theory as well as to facilitate the emergence of new trends. Specifically, the book

invites archaeologists to experiment; whether through the fashioning of wholly new types of map (Lee, Lightfoot & Witmore, Scullin, Valdez-Tullett) or the deepening and inter-weaving of existing mapping and artistic practices (Kavanagh). It draws attention not only to the importance of practice (Poller, Fradley), but also the theoretical lenses that shape both the production, reception and consumption of our maps (Aldred and Lucas, Tomaskova). It stresses the importance of looking back at the complex histories that have shaped and fashioned our maps (Wickstead), as well as looking forward in order to encourage archaeologists to approach digital cartography both critically (Hacıgüzeller) and constructively (Green).

Conclusion

We would like to end this chapter with a challenge. Whether they are doggedly followed or roundly booed, manifestos offer a provocative and stimulating call to arms, so here is ours. Unashamedly non-/post-representational in nature (cf. Perkins 2009; Thrift 2008; Vannini 201~~0~~5), we hope that it will provide a baseline for reading and pondering the chapters that follow.

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1. **Maps are never stable and we continually need to question what a map is, as well as what the potential consequences are of its creation.**

Maps keep changing in relation to our encounters with them (Kitchin & Dodge 2007) and, therefore, there can be no "stable map". Leaving the security of treating maps as objective and accurate representations of reality for the sake of a continuous re-thinking of what a map is, may make us feel uncomfortable at first.

Yet, the effort may well be worth it as an appreciation of maps that deprives them of their authority to represent the mapped thing for once and for all, may be the only way to fully realise their archaeological potential. In this new way of thinking, making maps becomes an ephemeral rendering of reality rather than the securing of a truth. A new encounter with the map results in the emergence of a new map making instance/performance, where the categories of "map-user" and "map maker" mesh and, more importantly, an urge appears to continually question what each encounter with a map entails in terms of constituting cartographic realities.

2. Our maps have histories (and genealogies), and we need to understand these in all of their nuanced detail.

As discussed, maps do not come into being in a vacuum readily formed. Rather, they get constituted through practices, and their histories and genealogies play an important role in the process. That is, like any other human artefact, maps come into being contingently through practices embedded in historical contexts and intellectual soil that allows them to take place. Therefore, we need to know about these histories and genealogies in all of their nuanced detail in order to understand how maps become varied agents and how they render reality. Such studies are frequently carried out for the case of Western mapping (e.g. Bassett 1994; Biggs 1999; Turnbull 1996), but what of non-Western histories and genealogies of mapping practices?

3. How we map shapes what it is possible to do with the maps we create.

Maps facilitate action as much as they restrict it. This is to say that not every map will allow the same types of interaction to take place, and only certain types of engagement become possible, depending on the map's enacted qualities and content. For instance, a map that is argued to be strictly truthful to the mapped thing cannot be used as a media that facilitates multivocality. Rather, through its claim to be the mirror of the world out there, it silences any voice that may be considered to be challenging its trustworthiness. Therefore, we need to acknowledge that mapping is not simply putting lines on a piece of paper or screen that correspond to reality out there. Rather how, what, why and when we enact the map shapes what it is possible to do with the maps we create and what kind of actors and entities emerge as a result.

4. Our maps can act and should be encouraged to do so. We need to accept that our maps can be affective as well as effective and must embrace their performative character.

Cartographic realities are performative in the sense that they are real only to the extent that they are performed (see Butler 1988, 527). This does not only mean that cartographic realities are constituted by maps, but also that there is no pre-given quality to such realities. Instead, any part of cartographic reality is repetitively enacted through discursive practices entangled with maps. Therefore, we must embrace the idea that what we know about the spatiality of the world may be a

consequence of the meanings we give to maps while interacting with them, rather than an expression of a fixed cartographic reality. For instance, the spatiality of the world may not be as easily measurable and calculable, as Cartesian mapping practices make us believe. Rather, such a quality may be the consequence of the way in which we perform maps on the basis of a Western metaphysics. That is, if the surfaces of our maps were not reserved for Descartes's res extensa*, i.e. the measurable "material stuff out of which the world is supposed to be made" (November et al. 2010, 591), and if the Western map was not presented as truthful to the world, would we still take the spatiality of the world we live in as measurable and calculable?*

5. There is nothing wrong with maps that are argumentative, discordant, disruptive, playful, provocative or simply beautiful.

This is because we need to come to terms with the fact that the point of making/interacting with a map is asking new questions about the world and experimenting with the building of new relations. If novel connections and relations can only be built through argumentation, speculation, provocation or simple awe in front of beauty, then that is how it will have to be. Such a cartographic project definitely involves risks but if that is the price to be paid for thinking the previously unthought of in archaeology, then the risks are certainly well worth it (see also Bailey 2014).

6. There should be no limits on what is deemed mappable.

1 On maps and mapping

Following the previous point, as long as we are no longer obsessed with creating accurate and objective maps that mirror the world, there can be no limits on what is deemed mappable. Accuracy and objectivity in Western mapping is typically obtained by drawing Descartes's measurable material world, his physical and fundamental reality formed by res extensa*, on the map. Moving on from this preoccupation will open up a near-infinite set of possibilities for archaeological mapping. Maps then can become locales for presenting emotions, imaginations, ideas, arguments, suggestions and pleas.*

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Comment [AuQ11]: Please indicate where the in-text citation for [[Perkins, C. 2007. Community Mapping. The Cartographic Journal 44(2): 127–137.]] should appear in the text.

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