

Diversity in Archaeology

Proceedings of the Cambridge Annual Student Archaeology Conference 2020/2021

Edited by

Elifgül Doğan, Mariana Pinto Leitão Pereira,
Oliver Antczak, Min Lin, Phoebe Thompson
and Camila Alday



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Diversity in Archaeology

Elifgül Doğan¹, Mariana Pinto Leitão Pereira² and Oliver Antczak³

Introduction

This year's theme, Diversity in Archaeology, was first proposed in February 2020, in the early days of the coronavirus crisis when we all still hoped that 'this was a temporary situation'. We still naively planned to hold the conference in September of that same year, so we eagerly discussed possible themes for CASA 4. This year's committee, which is made up of a diverse group of students (5 PhDs and 1 MPhil) from Chile, Macau, the US, the UK, Venezuela, Poland and Turkey, hoped the theme of the conference would reflect the nature of the committee and engage - in an inclusive way - with a broad range of researchers and research topics in archaeology. The theme, *Diversity in Archaeology*, quickly resonated with everyone on the committee, not only because we are a diverse group ourselves but also because we had all shared the feeling that, historically, archaeology lacked diversity, and part of improving our discipline was highlighting diversity in all its different meanings.

Archaeology is an inherently controversial field; its roots lie deep within a history of violent colonisation, looting, genocide and the erasure of Indigenous cultures and histories (see e.g; Carruthers *et al.* 2021; Al Quntar 2017; Lane 2011; Moro-Abadía 2006; Mourad 2016; O'Donnabhain and Lozada 2018; Sillar 2005; Trigger 1989). The colonial legacy of archaeology in various parts of the world, as well as the current academic and social implications of this legacy, have received considerable scholarly attention in recent decades (see Abadía and Diaz-Andreu 2011; Coelho 2020; Díaz-Andreu 2007; Pagán-Jiménez 2004). Researchers around the world have not only begun to interrogate the issue of cultural authority with regard to the archaeological objects stripped from the colonised worlds (Hicks 2020; Lonetree 2012; Mihsuah 2000), but also called for an extensive reformation of the ongoing archaeological and heritage practises that continue to echo, if not promote, the colonial mentality (Atalay 2006; Bruchac *et al.* 2010; Habu *et al.* 2008; Gnecco 2012; Gosden 2001; Gosden 2012; Noelli and Ferreira 2007: 1258). Proponents of this plea emphasise that Archaeology, as a field, remains intrinsically linked with the perspectives of where it was developed into the discipline it is today: the Western hemisphere (Liebmann 2008: 6) (also see Chapter 2 and 4 in this volume).

As a result of this origin, the type of professional practices, methods and theories that dominate the field today continue to predominantly reverberate Western viewpoints, continually failing to equitably recognise local and regional perspectives or academias in different languages. According to Schneider and Hayes (2020), neither the ways in which excavations are currently conducted in formerly colonised countries, nor the narratives written about the history of these places are reflective of entirely equitable and inclusive archaeological practices. For example, the relationships between foreign excavation teams, and local archaeologists and labour force, which was governed by the colonial dynamics at the time, hardly rely on balanced power dynamics today. The social segregation of foreign and local teams at excavation sites, unfair payment of the local labour force, as well as the failure of Western teams in sufficiently involving or crediting local archaeologists in academic publications, are all indicative of these continuing unbalanced relationships (cf. archaeology as a tool for social transformation and decolonisation in Coelho 2020: 28; Liebmann 2008: 7; Heffron 2021; Mickel 2021).

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Particularly, the exclusion or limited involvement of local researchers in the process of archaeological knowledge production, undermines archaeological practice perhaps the most, not only because of its ethical implications, but also because it deprives the discipline of diverse regional perspectives (Atalay 2006). Chapters 2 and 4 in this volume address the above-mentioned challenges resulting from the historical baggage of Archaeology, and present diverse case studies, offering inclusive and innovative solutions to tackle this complicated legacy.

The aim of achieving diversity within archaeology, although mostly obstructed by modern manifestations of colonialist practices, is perhaps equally hindered by another factor: the expert oriented and solely data-extraction oriented approach in Archaeology. Archaeologists working all around the world are too often tested by scarce resources and time limitations when conducting their research, which generally result in the prioritisation of a fast and effective data extraction over anything else. In search of tangible traces of the past, archaeologists might tend to overly occupy themselves with the material culture, while completely neglecting 'the present' and intangible aspects of the heritage they deal with. The negligence towards community engagement within archaeology is one such example. Despite the increasing trend of incorporating public/community archaeology practises in archaeological work in recent decades (Atalay 2012; Moser *et al.* 2002; Moshenska 2017; Schmidt and Pkirayi 2016), many archaeological projects still insufficiently engage with the communities living around the sites and fail to address how their work affects these communities - some public/community efforts are only seen as a box-ticking exercise. Although time and resource constraints can easily be blamed for not having time for these engagements, personal choices and professional biases also play a vital role in this result. A general lack of training, resulting inability and even disinterest in engaging with the communities also contribute and can result, in some cases, from an inherent elitism that has afflicted academia at large - and archaeology more specifically - for a long time. This elitist stance, which prioritises expert knowledge above anything else, disregards the potential value of 'non-expert' knowledge, such as Indigenous perspectives and oral histories (Atalay 2006; Gosden 2012; Smoth and Wobst 2005). People who live around sites, or the stories they tell about them can offer archaeologists invaluable insights, if not about the experiences of those who lived there in the past, at least about how the past they study is perceived and interpreted today (Hamilakis and Anagnostopoulos 2009; Waterton and Smith 2010; also see Chapter 4 and 6 in this volume). These insights, driven from diverse backgrounds, can subsequently inform archaeological knowledge production, and diversify heritage narratives written about the past.

Finally, despite the gloomy picture drawn above, diversity in Archaeology has been achieved by various branches of Archaeology in multifarious ways and to promising degrees. Archaeological science and Archaeology of Death have been at the forefront of introducing and implementing many of the diverse theories and multi-disciplinary methodologies used within the field. From the days when past societies were classified in cultural groups based on their material culture (Childe 1946; Johnson 2010), to the days in which scientific methodologies (Binford 1965; Clark 1982) and then post processual understandings gained importance (Hodder 1985, 2012; Shanks 2008), archaeological theory has undergone a roller-coaster of a journey. Particularly, in the last few decades, archaeologists have increasingly begun to understand the value of borrowing ideas and methods practised in other disciplines to better understand the past. The surge in the implementation of various archaeometric, ethnographic and computational methodologies in archaeological research, have allowed archaeologists to draw relatively more accurate and multi-faceted pictures of ancient societies (Torres and Killick 2016). In this volume, Chapters 3, 5 and 7 delve into the new horizons archaeological research began to explore thanks to archaeological science, and present case studies from various parts of the world exemplifying successful incorporation of diverse methodologies into Archaeology.

Diversity at the Conference

Coming from distant and disparate parts of the world, each subjected to these difficult histories to different extents, we, the committee, felt impelled to overturn the predominantly one-sided interpretations of archaeology. CASA, as a student conference, was in the perfect position to build a platform that is more inclusive within our field and that can have long and far-reaching consequences for young scholars. We have followed the call to ‘share mutually from our respective spaces (with our respective languages), the divergent forms in which we live, act, think in the world and practice archaeology’ (Pagán-Jiménez 2004: 209). In this sense, we considered that the theme, *Diversity in Archaeology*, allowed for broader sessions that accommodated a wider variety of students speaking on their chosen topics and from perspectives that challenge those that have dominated the field for so long.

Our call for papers, circulated in June 2020, received tremendous appreciation and attention from our audience owing to the interesting session themes proposed by our eleven session organisers, coming from various departments (Autonomous University of Madrid, Cambridge University, the Cyprus Institute, Durham University, Oxford University, Stockholm University, Universidad Complutense de Madrid, Universidad de Málaga, University of Aberdeen, and the University of York). Additionally, we had two external organisers who helped the CASA committee members put together the panel discussion. The session organisers aimed to engage the issues we have outlined above in a multidimensional way without imposing too many restrictions on presenters - allowing room for creativity, and a broad range of topics, methods, and interpretations.

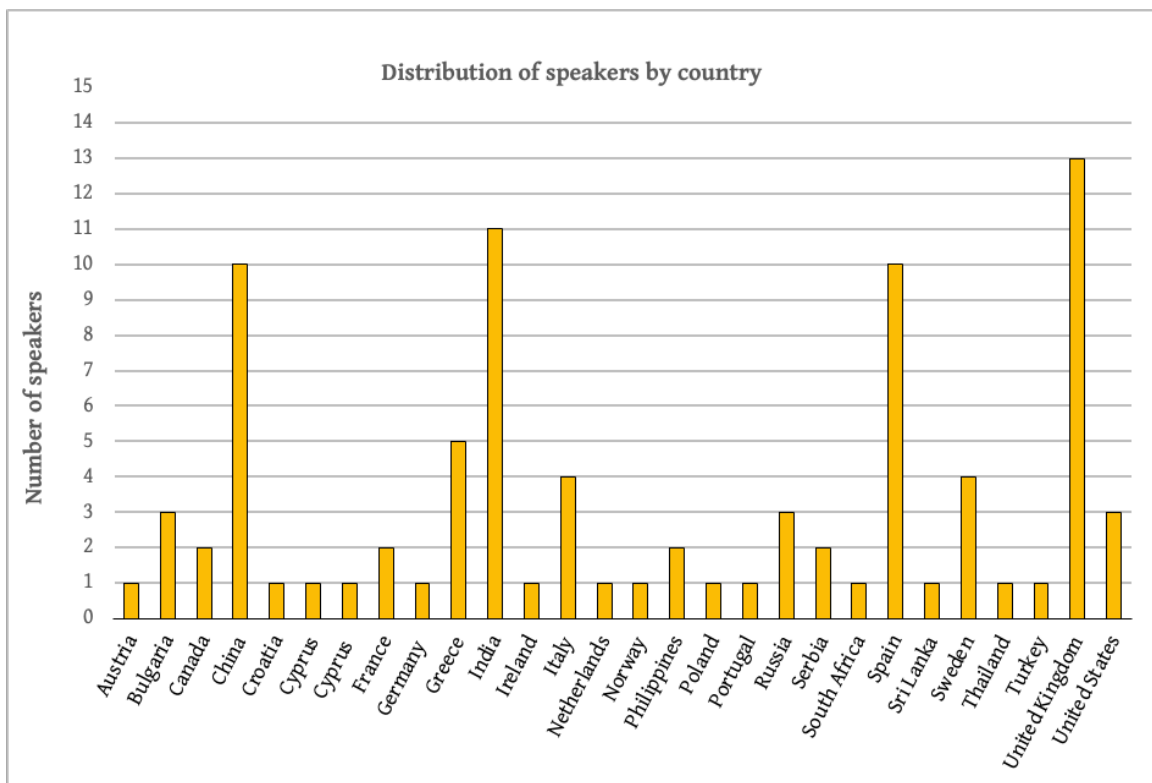


Figure 1. Distribution of speakers by country.

While our liberal use of the term ‘diversity’ in all of its meanings can be criticised as vague, we purposefully used it broadly with the consideration that such a use opened our conference to multiple interpretations, varied presentations and sundry perspectives, as outlined below in the description of the sessions. Originally, we were planning to accept around 40 papers. The online nature of the conference, however, convinced us to invite as many speakers as possible from various parts of the world, and hear more diverse voices. We received 102 paper submissions (triple the number we received last year) and accepted 82 papers. These papers came from 25 countries and 56 Universities, Colleges, and Institutes (see Figure 1).

Conference Sessions

Our presenters interrogated the theme of diversity from their own unique academic perspectives and voiced their authentic regional and personal viewpoints. These discussions took place in eight thought-provoking sessions: Beating Androcentric Narratives: Women’s Voices in Archaeological Discourse; Race and Ethnicity Across Time; Archaeological Science: Using Diversified Science Methods in Archaeology; Interpreting the Past Through Others’ Eyes: Critically Approaching Ethnographic Analogies; Diversity in the Archaeology of Death; Diversity, Dissemination and Disclosure of Heritage; and Archaeology of ‘Scapes’: Diversity in Environment and Perspective, the Keynote Panel Discussion and the Poster Session. As we briefly discuss the sessions and their participants below, the CASA 4 Organising Committee hereby notes that the chapter introductions and articles published under each chapter in this volume ultimately reflect the sole view of their authors.

The first session, ‘Beating Androcentric Narratives: Women’s Voices in Archaeological Discourse’, led by Camila Alday (University of Cambridge) hosted twelve papers, five of which are published in this volume. This session aimed to create a space to discuss the role of female and non-binary archaeologists in our discipline, as well as to analyse the gender ratio in Academia (e.g. publication, institutions). Papers in this session questioned androcentric representation of the people in the past and presented experiences of women and non-binary people in the field, revisiting feminist & queer theory and their applications to the study of the people from the past, ultimately contributing to the diversification of archaeological practices with a gender perspective.

‘Race and Ethnicity Across Time’, led by Eleanor Newman (University of Oxford), hosted ten papers, four of which are published in this volume. The session provided a space for the discussion of understudied racial and ethnic groups within archaeology and the critique of racist narratives that have historically dominated the field. Whilst encouraging a diverse group of individuals to talk about their research, the session highlighted the importance of modern and historic non-white voices within the archaeological discourse, which has long been dominated white people. The papers in this session highlighted not only the urgent need for making Archaeology more inclusive of previously ostracised groups, but also addressed the problematic use of archaeology as an ideological tool within nationalist heritage discourses throughout its history.

‘Archaeological Science: Using Diversified Science Methods in Archaeology’ led by Meghna Desai and Mahmoud Mardini (the Cyprus Institute), hosted twelve papers, three of which are published in this volume. The session aimed to promote multi-faceted applications and methods pertaining to the archaeological sciences, especially in the context of international collaborations. The papers presented in this session addressed the use of various scientific methods including lithic and ceramic analysis, archaeometallurgy, geoarchaeology, zooarchaeology, human osteoarchaeology and archaeobotany. By emphasising the significance of incorporating these methods in archaeology, the presenters not only provided the audience with a glimpse of the multidisciplinary nature of modern archaeology, but also

demonstrated how these methods assist archaeologists in exploration of the human past, and in formulating new archaeological narratives about it.

'Interpreting the Past Through Others' Eyes: Critically Approaching Ethnographic Analogies', led by Erica Priestley and Erik Solfeldt (Stockholm University), hosted six papers, three of which are published in this volume. The session aimed to spark conversation regarding the use of Indigenous knowledge in combination with Western critical relational theories and ethnographies. The session chairs and speakers examined the biases resulting from the dominance of the Western school of thought in ethnographic research, and inspired by recent postmodern/posthuman critiques, argued in favour of more diverse and varied Indigenous ways of knowing to be applied to archaeological interpretations.

'Echoes from Beyond: Diversity in the Archaeology of Death' led by Alberto Abello Moreno-Cid (Universidad Complutense de Madrid) and José Santiago Rodríguez Gutiérrez (Universidad de Málaga), hosted twelve papers, four of which are published in this volume. The speakers of this session, working in the Archeology of Death field, presented a broad range of research shedding light on the diverse lives and deaths of humans through their funerary practices. Key fieldwork methodologies and theories incorporated within Archaeology of Death, issues such as handling of human remains, as well as the challenges surrounding the interpretation of funerary contexts were discussed in this session.

'The 3Ds: Diversity, Dissemination and Disclosure of Heritage', led by Aida Loy Madrid (Leiden University), Belén Martínez Pérez (Instituto de Estudios Riojanos) and Isaac Martínez Espinosa (Universidad Autónoma de Madrid), involved ten papers, five of which are published in this volume. The session explored various key challenges and opportunities facing the interpretation and dissemination of heritage. Papers presented in this session problematised the limited communication between archaeologists and the public and highlighted the role of heritage practitioners in bridging this gap between archaeology and larger society. By promoting an inclusion of diverse voices into archaeological practice and the process of heritage interpretation, the speakers aimed to dismantle the conception of archaeology as a standalone discipline, making archaeological knowledge production and dissemination accessible to non-expert groups.

'Archaeology of 'Scapes': Diversity in Environment and Perspective', led by Caitlin Jacobson (University of Aberdeen) and Isaac Martínez Pérez (Universidad Autónoma de Madrid), had eight papers, four of which are published within this volume. The aim of this session was to conduct a review of diversity in archaeological 'scape' research. Papers presented in this session highlighted the role of studying environments and various 'scapes' – such as landscapes, seascapes, spirit-scapes, knowledge-scapes, soundscapes, eco-scapes, or virtual-scapes – in decoding archaeological contexts. The speakers discussed the archaeological research taking place in many of these 'scapes' across the world, incorporating a variety of techniques and methods to their studies, and exploring the extent to which this way of thinking propelled archaeological research forward.

The Poster Session, chaired by Kyra Kaercher, showcased four student papers that were in their preliminary stages, yet offered promising insights on how the concept of diversity can be examined in archaeology. These poster presentations explored the diversity theme predominantly from the angle of gender and funerary expressions in ancient societies. Adela Duclos Bernal investigated the role of elderly women in Roman society, whereas Kaloyan Petrov discussed women warriors by using data from Iron Age funerary contexts. Meghan Schankler's research provided the audience with bioarchaeological insights into intimate partner violence in Roman Britain. Lastly, Goran Đurđević discussed 'gendering reflection' by making a comparative analysis of mirror use in Roman and Qin Empires.

The 'Diversity in Archaeology Panel', organised by Isobel Fisher (Durham University) and Taryn Bell (University of York), and chaired by Mariana Pinto Leitão Pereira (University of Cambridge) and Oliver Antczak (University of Cambridge), brought together five keynote speakers to engage in intersectional conversations on (re)thinking diversity: Dr. Shadreck Chirikure, British Academy Global Professor at the University of Oxford; Dr. Laura Heath-Stout a postdoctoral researcher at Emory University; Sophie RJorgensen-Rideout, a PhD Researcher at Mon Repos; Alex Fitzpatrick, a PhD researcher from the University of Bradford; and lastly, Dr. William White, from the University of California Berkeley. The aim was to inspire the audience to take action on diversity, a diversity that is inextricable from inclusion and the multiplicity of thought, identities and outlooks. In the process of (re)constructing archaeology as a practice and an approach that can improve people's lives in the present, it remains adamant to address disability in archaeological spaces, to actively challenge the forms and structures of oppression enmeshed in Archaeology and to engage with decolonial approaches in archaeological practice and thought.

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Session 1

Beating Androcentric Narratives: Women's Voices in Archaeological Discourse

Camila Alday¹

Introduction

In the book 'Towards an Anthropology of Women' (Reiter 1975), Sally Slocum and Lila Leibowitz discuss how biological differences between 'male' and 'female' bodies can be employed to structure and limit the social roles and positions men and particularly women inhabited in the past. According to this view, the invisibility of past women in archaeological narratives usually reflects a false notion of objectivity which relies on supposedly 'universal' gender paradigms (Conkey and Spector 1984). 'Man, the hunter model' (see Jochim 1988; Lee and DeVore 1968), for instance, epitomises the problem of androcentrism in Archaeology, which proposes a limited view of labour divisions in hunter-gatherer groups based on a rigid understanding of gender roles (see Gurven and Hill 2009).

The uncritical use of gender stereotypes in scholarship has long perpetuated and supported sexism and generated a gender asymmetry in archaeological research - and surely it still does. Yet, the phenomenon of gender bias is not unique to Archaeology (Conkey and Spector 1984). Feminists working in the field of humanities and social science in the 1980s and 1990s highlighted the limited representation of women's experiences and accomplishments in academia and identified the source of this problem in mechanisms by which patriarchal ideology replicated itself by privileging male experience (Voss 2000). For example, Helen Longino's 1987 essay, 'Can there be a feminist science?' particularly advocated for a feminist science and examined the models of scientific reasoning that expose androcentrism and gender bias in science. Similarly, 'The Egg and the Sperm' by Emily Martin (1991: 501) points out how science is far away from (gender) neutral endeavours and urges researchers to 'wake up [to]...[sexists] metaphors in science ...' and realise how they '...are projecting cultural imagery onto...' what they study.

Feminist perspectives took over Archaeology in the 1980s quite strongly. At Cambridge, for instance, the Archaeological Review of Cambridge (ARC) published a volume, titled 'Women in Archaeology' (Arnold *et al.* 1988), which became one of the earliest volumes that examined archaeological research from female researchers' perspective. In this volume, authors investigated topics relating to equity in Archaeology. Some analyses published in this volume demonstrated the limited representation of female students compared to male students at Cambridge, and patterns of gender segregation in areas of research in which women typically specialised. This volume also became a seminal work for many archaeologists who later dedicated their efforts to developing research programs on gender archaeology, women archaeology, and feminism in archaeology. Similarly, 'Women and Production in Prehistory' conference in 1988 provided a space for researchers to interrogate the notion of androcentrism in archaeological discourse from diverse perspectives. This discussion later induced the birth of new concepts such as personal agency, sexuality, and the social control of the human body (reproduction) in Archaeology. By the early 1990s, researchers turned their attention to examining the ways in which 'gender archaeology' and a feminist agenda could better address questions about women and gender in the archaeological research (Sørensen 2000; Wylie 2007).

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Feminist Critique and Male Bias in Archaeology

Gilchrist (1991:497) contended that ‘... studies of women in the past can only be sensitively conducted by female archaeologists in response to their own subjectivity...’. Yet this view also brings its own question: Is it possible to exclude others that are not recognised as women from ‘an archaeology of past women’?

It was undeniable that Archaeology was dominated by (white, cis, middle class-) men, whose biased and limited views of the past, made them mostly unaware of the roles women might have played in the past. Thus, the interpretations produced at the time involved a rather distorted picture of women’s position in ancient societies (Damm 1986). For example, many studies on hunter-gatherers’ division of labour and subsistence strategies depicted women as being tied to their home bases because they were ‘responsible for most of the dietary intake of their family and community’ (Jochim 1988; Randsborg in Damm 1986). Similarly, women’s material culture and the tasks women carried out, were portrayed as peripheral to the ‘men’s activities’. Activities related to women such as plant gathering, child rearing, cooking, and weaving, for instance, were seen as ‘secondary’ contributions to the past economy and not as central to social life. Past women’s lives, for the most part, were described in terms of their relationship to men, as sisters, wives, and mothers. Therefore, most things that were recognised as female at the time, somehow were trivialised, stereotyped, or simply ignored, perpetuating stereotypes of male and female traditional behaviours as understood in modern western societies (Conkey and Spector 1984).

In the context of the ‘second wave of feminism(s)’, female archaeologists encouraged the development of a discipline which should categorically refute androcentrism (Conkey and Gero 1997; Wylie 2007). According to Conkey and Spector (1984), Archaeology has played a role in setting a set of culture-specific beliefs concerning 1. the meaning of masculine and feminine, 2. the capabilities of men and women, and 3. their power relations, and roles in society. Therefore, by relying on their personal interpretation of gender, some archaeologists have wrongly propagated culturally motivated ideas about gender and undermined the plausibility of an accurate reconstruction of the past, in addition to posing serious political and educational implications. These ideas have been ‘popularised’ not only in our discipline but also in social media, school booklets and films (Colofean – Arizancu *et al.* 2021; Gilchrist 1991).

As part of the ‘third wave of feminism(s)’, female and non-binary archaeologists have claimed that traditionally marginalised individuals also needed space in archaeological discourses. By addressing questions that are relevant to the experience of past women and those marginalised by conventional sex/gender structures (Wylie 2007), Archaeology has moved from *essentialism* towards *intersectionality* since differences between men and women, sexualities, ethnicities, and/or social classes significantly varied. Therefore, interrogating these categories enables archaeologists to consider social dynamics and lifeways from seemingly invisible yet critical dimensions (Conkey 2003). Gender as a concept, whether it signifies ‘becoming men and women’ (or any other gender), suggests that social identities are not homogenous categories (Sørensen 2009). Keeping this in mind, researchers now investigate lifecycle and the materialisation of gender through social performance and different stages of life (see Butler 1988). By looking at past identities as complex, fluid, and negotiable aspects of a person (Sørensen 2013), these studies foster new ways of understanding a diverse range of past social identities and present a history that is inclusive of not only females but also other ‘marginalised’ individuals.

What was the 'Beating Androcentric Narratives' Session on?

In 1997 (:80) Alison Wylie states that

Most empirically sophisticated archaeological practice has reproduced [...] sexist and androcentric understanding of the cultural past.

The beginning point of this session was to ask: how much has the statement given above changed since 1997? The session's aim was to discuss how female archaeologists and other under-represented groups, if so, have written alternative narratives and inspired innovative theoretical and methodological approaches in our discipline. It was an invitation to openly discuss the spaces in academia where female researchers defy the androcentric accounts of the past that continue to prevail in our discipline. The session brought together early career researchers and archaeology students who research concepts of gender, visual art, feminism, and women's material culture, moving beyond conventional narratives and opening the space for multivocality in archaeological interpretation.

Papers in This Session

The article by Kira Kupfersberger explores the interconnected expressions of fertility in female electrum pendant/plaques from the Late Bronze age. Kupfersberger, by the study of this jewellery, questions the hetero-masculine tone of the archaeological discourse on 'mistresses' and, sensuality attributed to women. The paper highlighted the concept of female power in the 15th to 13th centuries BCE in the Mediterranean region and criticised the sexualisation and classification of female figures as erotica, an idea which dominated the archaeological literature for a long time.

The article by Maria Teresa Deluque Morales examines the concept of free women in Roman times. In this study, the author used historic records, such as the Aurelia Hermia records, and epigraphs to analyse how women were perceived, defined, and described by men. The paper highlighted the ways in which noble women manoeuvred societal restrictions in Roman society. The analysis focused on Aurelia as a wife, who signified modesty, poise, moral rectitude, and loyalty, and managed to socially promote herself via her status in Roman society.

The article by Xiaoying Zhao uses mirrors as proxy data to gender and discusses visual representations of the 'ideal woman' in Song dynasty. Through the visual analysis of 12 mirrors, the author suggests that mirrors are artefacts that represent femininity, and symbols of love and eroticism. The paper focuses particularly on the funerary context where women were depicted in domestic places associated with material culture that conveys social values of beauty, eroticism and womanly appearance.

The article by Alina Naqvi examines the mechanisms that women used to negotiate social status and identities around the disintegration of the Mughal Empire in the 18th and 19th centuries in India. Through the analysis of three paintings of Begum Samru, a catholic converted noblewoman, the author analyses Samru's political power. In this analysis, the author emphasises the negotiation of female identity through visual material culture in a period when women were largely denied visibility and social agency. The study provides insights on why some women seemed to obtain rank equal to men in a society which, according to written sources, was male dominated.

Women's Space, Identities, and Archetypes

A brief analysis of the topics discussed in the articles shows that there are three general themes presented throughout the papers of this chapter: the spaces, identities, and archetypes of past women (Figure 1).

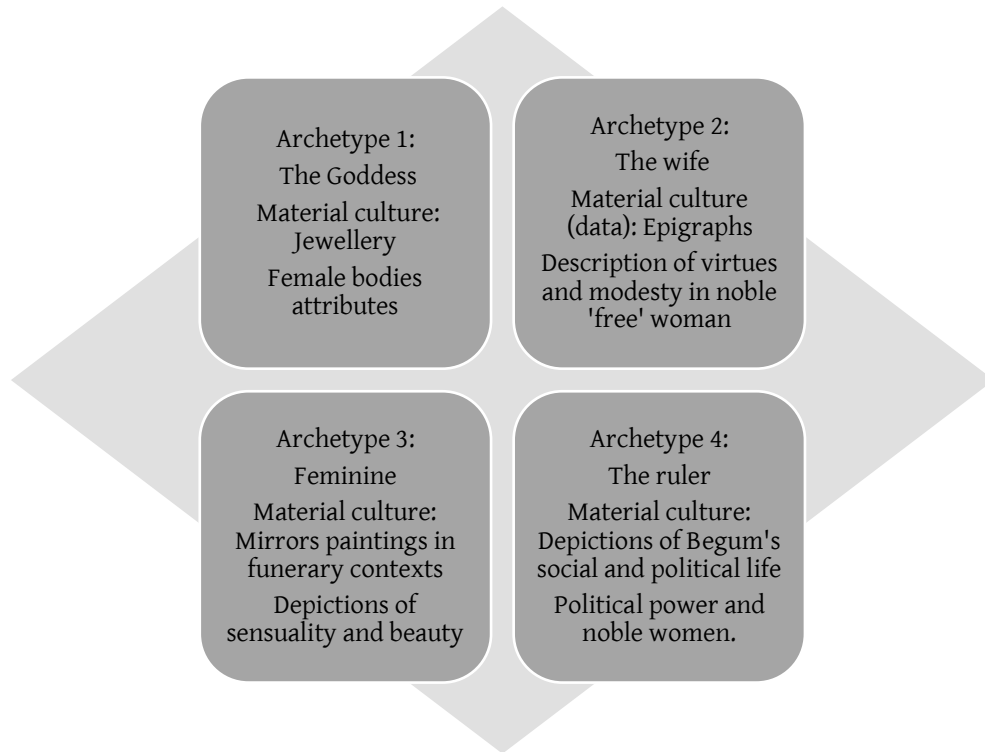


Figure 1. *Illustration of the core topics discussed in this chapter.*

The articles explore the representation of women in public and private spaces. For example, depiction of nudity in confined spaces in Zhao's paper illustrates how women were represented in private spheres in the Chinese Dynasty, while Navi's work is on representation of Begum in public spaces between late 18th and early 19th centuries in India.

Another dimension of past women in this chapter is the representation of women in material culture. The authors used jewellery, epigraphs, mirrors (depictions) and paintings in their analyses of gender identities. These artefacts convey 'social values' pertaining to the cultural and historic contexts of 'supernatural powers' in Mediterranean societies (Kupfersberger), 'ideal women' in Roman society (Deluque Morales), 'femininity' in Chinese society (Zhao), and 'political power' in Indian society (Navi).

Finally, there are four women archetypes recognisable in the papers of this chapter: 1. the 'goddess', as women ('female-like' bodies) converted into jewellery (and plaques) and their supernatural power; 2. the 'wife', as represented in patriarchal Roman society; 3. the 'feminine' as naked individuals with artefacts that embellish them and 4. the 'ruler' with political power who defies certain attributes associated with men in Indian society of the 18th-19th centuries.

Final Remarks

To 'engender' the past and archaeological thinking, we undoubtedly need to change the way Archaeology is practised. Thus, it is the archaeologist's duty to expose 'false' dichotomies in archaeological narratives, critically investigate gender as multivalent beyond fixed categories and produce intricate but more accurate understandings of human experience in the past (Conkey 2003). If anything, this view contributes to democratising and diversifying archaeological theories and practices, by not only providing female perspectives but also by encouraging inclusion of diverse perspectives (Hays – Gilpin 2000). Feminist studies are also spaces where other voices can be visualised and brought into archaeological discourses. In doing so, they diversify the views on who queer, women, children, elderly individuals were and what their material culture looked like, turning Archaeology into a more pluralist enterprise.

Acknowledgments

A special thanks goes to Elifgül Dogan, the co-organiser of CASA 4 for running the conference smoothly, believing in this session, and for her patience and leadership. I also thank the other collaborators and editors of this volume. Equally thanks to the speakers who presented at CASA 4 conference:

- Kalangi Rodrigo, University of Ruhuna, Sri Lanka
The Five Hundred Damsels of Sigiriya: As an Erotic Visuals Among Men from the 8th-9th Centuries in Sri Lanka
- Afonso Leão, NOVA School of Social Science and Humanities
Women, Whoees and Waste: An Archaeological Vision of Female Roles in the late 19th Century Lisbon
- Ana Velickovic, University of Belgrade
Women in Roman Archaeology – Old Problems and New Perspectives
- Jocelyn Ponce*, Luisa Fernanda Escobar**, and Adriana Maria de Leo**, *Tulane University, **Universidad de Valle de Guatemala
Evaluating Gender Equity in Guatemalan Archaeology
- Lan (coco) Shi, University of Oxford
Research into the Representation of Cross – Dressed women in Tang Dynasty China
- Melody Li, University of Oxford
The Archaeology of Contraception in the Greco-Roman World (University of Oxford)
- Raquel San Quirico, Universidad de Alicante
Social Organisation in the Southeast of the Iberian Peninsula during the Iron age (7th – 2nd Century BC): Female Empowerment and Social Relevance of Women
- Polymnia Sydodinou, University of Crete
Female Voices in Greek Archaeology: from the 20th to Present.

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The Mistress of Animals in the Mediterranean: Interpreting Female Divinity in Archaeological Discourse

Kira Kupfersberger¹

Abstract

The enigmatic identity of the Mistress of Animals on Late Bronze Age electrum pendant/plaques from Minet el-Beida has resulted in much scholarly disagreement. This paper attempts to parse out and analyse contemporary scholarly interpretations, which tend toward sexualizing the nude female figure in any context. While the nude Mistress of Animals was initially interpreted as a fertility goddess, more recent scholarship asserts her to be related to sex, alone, and her character more pornographic than divine. Using a theoretical lens which incorporates gender and the visual arts, we interrogate the hetero-masculine tone of the archaeological discourse related to these objects.

Keywords: mistress of animals, Minet El-Beida, jewellery, sex, gender, fertility, goddess

Introduction

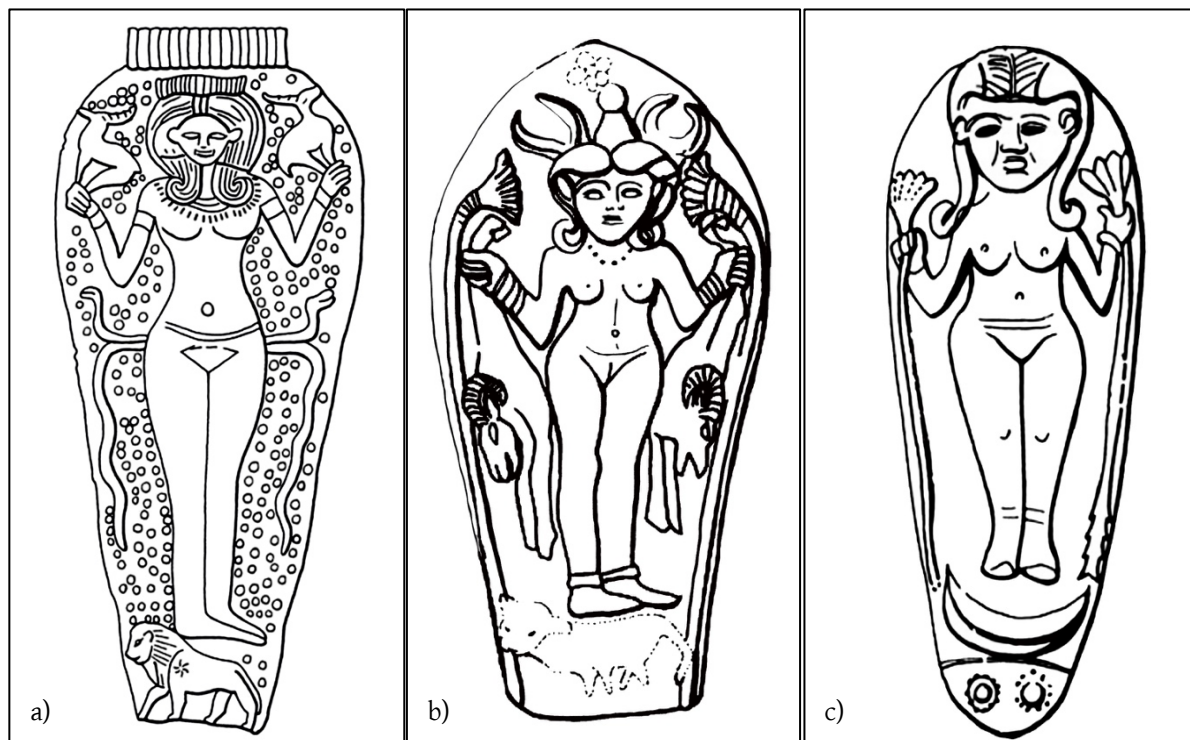
Gold or electrum piriform plaques dated to the 15th to 13th centuries BCE, with imagery of a frontal, nude, animal and/or plant-grasping female figure were unearthed in excavations at *Minet el-Beida* on the Syrian coast in 1929 (Schaeffer 1932) (Figures 1a-c), with a similar pendant (Figure 2) also recovered from the Uluburun shipwreck off the coast of Turkey 65 years later (Bass and Pulak 1989: 3-4). The enigmatic figure on these plaques is often referred to as the Mistress of Animals ('MoA'), an appellation which highlights her obscure identity: in the absence of inscriptions explicitly identifying who or what is being represented here, scholars have come to various conclusions as to her name and significance.

In the course of researching this iconography, some problematic interpretations of female nudity, divinity, and sexuality or eroticism came to light. Otherwise, cautious authors can unwittingly stray into the realm of assumptions when it comes to discussing sexuality, sexual attractiveness, and gender roles in ancient societies. The inclusion of sex and gender as a theoretical lens through which to interpret archaeological evidence is extremely valuable, but it is dangerous to assume that simply because we are all personally familiar with the *concept* of sex, no further explanation is necessary. With David Clarke's (1973) adjustment to practice critical self-consciousness ever in our minds, we will zoom in on the specific language choices and interpretations in several recent scholarly works I encountered and relied on for my master's dissertation on these objects.

The aim of this review is to examine some of the assumptions underlying these interpretations, especially relating to concepts of eroticism, fertility, sex, and mothers or motherliness, which are frequently applied to the nude MoA, but rarely defined. Using these terms as if they are universal underscores the assumption that all people, in all times and places, define what is sexy or erotic in the same way. Since the way we interpret the iconography of these pendants depends largely on how we perceive and interpret images of female nudity, this study makes use of theoretical approaches relating to gender and the gaze to interrogate basic assumptions about the female body and its entailments, as well as how those assumptions can colour archaeological interpretation. Current interpretations of the meaning and content of these pendants focus on the sexual appeal of the MoA; using iconographic and

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textual evidence, this paper will critically examine this assertion and suggest other potential layers of significance.



Figures 1a-c. LBA electrum pictorial piriform pendants from Minet el-Beida deposit 213 bis, c. 14th-13th cent. (After Negbi 1976, edited by the author).



Figure 2. Electrum plaque discovered with the Uluburun Shipwreck, c.1320 BCE.

Object Descriptions

Figures 1a-c. a) The most detailed and best preserved of the plaques: a crowned, nude woman grasps two small gazelles, two snakes float behind her waist, and she stands on a lion which bears an astral or solar symbol, 6.5cm/2.84cm; b) poorly preserved plaquette, with an image of a nude frontal woman grasping plants which connect with a crescent and two stars beneath her feet, 9.2cm/3.7cm; c) loop missing, electrum plaquette of a nude, crowned woman grasping rams by their hind legs while standing on a lion, framed by lotus flowers.

Figure 2. Dimensions 9.1cm/4.7cm/2cm, wt. 9.46 g. This pendant is very similar to Figure 1a, especially the manner in which the MoA grasps gazelles, but this example is in higher relief and with fewer animal elements. The MoA on this plaque wears a crown and an Egyptian hairdo rather than the Hathoric locks on the Minet el-Beida example. A golden chalice and a small statue of a nude goddess with gold foil covering her face indicate that this was part of a set of ritual items related to that deity (with the permission of the Bergbau Museum).

Theory and Critical Framework

Examining these plaques through the lens of sexuality is certainly a valid approach, but it requires extra vigilance regarding assumptions based on socially ingrained gender norms and prevalent androcentric narratives, especially concerning squishy notions like eroticism and sexiness. Pamela Geller (2009: 66) asserted that:

Inattention to feminist scholarship that has ebbed and flowed over several waves... makes for a deficient study of the lives of past peoples, as well as an archaeological practice that increasingly has less relevance in our modern world.

Geller (2009) was building on the seminal work, 'Archaeology and the Study of Gender' by Conkey and Spector (1984), which first addressed the problem of pervasive androcentric narratives in archaeology. One of the most insidious aspects of this adoption of the hetero-masculine perspective as the default is that it is not easy to put down such a monolithic lens and pick up another way of seeing. While Geller (2009) cautions against overly binary or gynocentric responses to heteronormative tendencies in archaeology, the issues of female sexuality and nudity as well as how we see and understand the female body are front and centre when discussing the iconography on these plaques.

The concept of the gaze, rooted in Sartre (1943) and Lacan (1964), was rebooted by John Berger *et al.* (1972) and taken up by Laura Mulvey (1975: 33) in her essay 'Visual Pleasure and Narrative Cinema' to discuss the act of looking as an act of power:

In a world ordered by sexual imbalance, pleasure in looking has been split between active/male and passive/female. The determining male gaze projects its fantasy onto the female figure, which is styled accordingly.

This idea of the male gaze has been seminal in feminist criticism and refers not only to the individual men typically directing and filming movie scenes, but also to the overall way of perceiving images of women through the dominant lens of a patriarchal society (one in which women are not traditionally granted the same rights as men). In terms of the male gaze in cinema and other visual arts, the nude female is seen primarily as an object of (male) sexual desire. However, if we consider women as a social group, this is a glaringly etic perspective which prevents us from asking: how might ancient *women* have perceived the nude MoA? What significance does her nudity contain if we make her the subject rather than the object of our analysis?

First, a few questions: What do we mean by 'sexual' and 'erotic'? Are these universal concepts which do not require further explanation? When is a naked woman *not* a sexual object? Could there be explanations for female nudity which do not directly relate to copulation? And finally, does it matter whether a deity is depicted on these plaques?

To explore these issues, we first review the initial interpretations of these plaques and define some key terms. We then use those definitions to examine some of the scholarship related to the MoA in the LBA Levant. It must be stated clearly that the point of this review is not to undermine the value of the scholarship or to call out any of the authors discussed. Instead, the idea is to bring to light some basic assumptions that are so pervasive as to be considered 'common sense' and to interrogate the beliefs upon which they are founded.

Discovery and Early Interpretation

Schaeffer (1932: 8-10) refers to the figure on these plaques as a *déesse féconde* and mentions her *coiffure hathorienne* as well as her resemblance to goddesses Qadesh and Astarte, but he refrains from making any positive identification due to the plethora of goddesses referred to in mythological texts from Ras-Shamra.

The Minet plaques were found in hoards containing jewellery, decorative vessels, and other valuable and beautiful items (Figure 3) (Table 1); these were intentionally hidden deposits dated to the 15th-13th centuries BCE, coincident with the destruction and abandonment of Ugarit (Schaeffer 1932).

These plaques have been much discussed since their discovery, and recently the preferred interpretation has veered from their depicting a fertility goddess like Astarte (Budin 2002; Schaeffer 1932) to Qedeshet (Cornelius 2004) or some other, potentially human, erotic intermediary representative of sexual desire first and foremost (Benzel 2013; Moorey 2003).



Figure 3. A selection of the pendants, necklaces and other items from deposit 213/bis (originally published by Schaeffer (1932, Pl. IX), with the permission of Syria - Archéologie, Art, Histoire MSH Mondes).

Table 1. Inventoried finds from deposit 213 bis, excavated in 1931 (After Sauvage 2006, 6).

Type of find	Number
Glass	1
Gold pendant	11
Beads	2
Silver pendant	3
Bilbils	1
Necklace	2
Total	20

Terminology in Context

In her paper 'Creating a Goddess of Sex', Stephanie Budin (2002: 316) attempts to differentiate between fertility, sexuality, and 'mother goddess' designations related to Cypriot figurines of nude bird-faced females, stating that the figures on these plaques are clearly sexual rather than related to motherhood or 'making the grass grow' cyclically. But Budin (2002) fails to define the terms she uses, leaving much room for interpretive error, especially since sexual fertility and motherhood are clearly not unrelated concepts. If we are to employ the terms fertility, sexual, erotic, and motherly to describe the figures on these pendants, how do we define those terms and their relation to each other? In Figure 4, we have attempted to depict how these concepts relate to each other: while both eroticism and fertility relate to sexuality, motherhood is not typically equated with eroticism or sexuality.

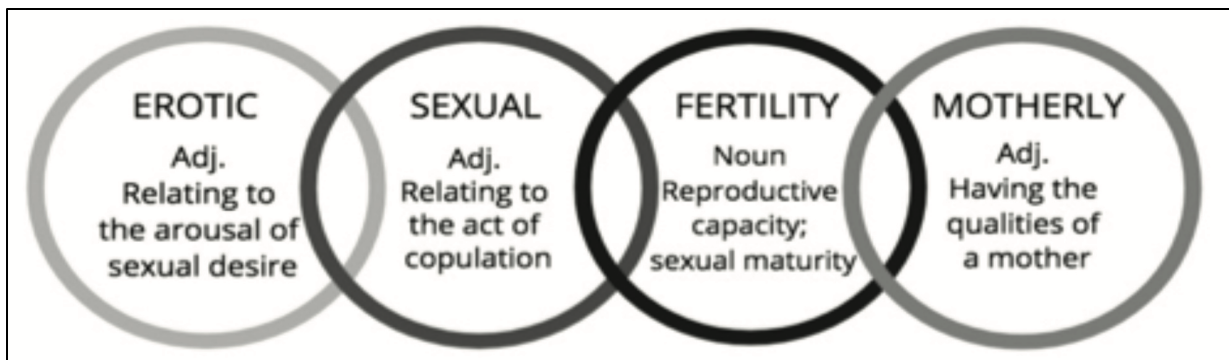


Figure 4. Diagram defining some key terms and illustrating their relation to each other.

Fertility has two senses: one which pertains to the fecundity of the earth and the other which pertains to the capacity for sexual reproduction. These definitions are rarely distinguished when the term is used, though such a distinction would clarify what is meant. In the case of this set of plaques, fertility in both senses of the word bears potential relevance: her breasts and pubic hair indicate that this is a sexually mature woman while her youth indicates that she is within the age range to bear children; plants sprout and bloom in her grasp and on the earlier schematic pendants a plant sprouts directly from her abdomen (Figure 5). Therefore, an association with both reproductive fertility and the fertility of the earth seems possible based on the iconography.

Object Descriptions

These pendants are from *deposit 213/bis*. Some of them are completely abstract while others feature abstracted female forms and faces with stylized plants, sprouting from the abdomen and detailed vulvas.



Figure 5. A variety of electrum pendants from Minet el Beida, *deposit 213 bis* (Louvre Museum, Inventory number: AO 14718).

Sex in this context signifies the act of copulation and sexual is defined as relating to the instincts, processes, and activities connected with physical attraction or intimate physical contact. Sex relates to fertility because it is the manner in which offspring are produced, but of course not all sexual acts are engaged in for the purposes of procreation. In relation to our pendants, the actions indicated are grasping wild animals, sometimes while standing on a lion. Otherwise, the MoA appears static and stiff; her sexual attributes are clearly delineated, which has the effect of making it obvious that the figure is female rather than male (see Figure. 1a-c in Introduction). The MoA's sex - as in genitalia - is on display, but the vulva is an organ of elimination, birth, and menstruation as well as sexual intercourse, so there are other potential layers of meaning to consider.

The word erotic relates to the arousal of sexual desire. An erotic image is typically one which depicts some stage of sexual intercourse, but the sex might be implied rather than explicit, as is the case with pinups or magazines like Playboy, wherein a lone nude or semi-nude female poses seductively for a male viewer/consumer. Eroticism relates to sexual arousal. But what is erotic is not universally so in all cultures. More importantly, projecting modern concepts of mass-produced pornography onto LBA societies is problematic for several reasons, one of which is the fact that pornography is a modern industry dependent on modern technologies. Here we do have a lone female nude frontally posed identically in every pendant: the figure on our plaques holds her arms out to grasp plants and animals, with no attempts at concealment or coyness nor gestures of come hither. She emanates power, perfection, beauty, and effortless control of dangerous forces. But erotic? Her pose is stiff and formal. She grasps symbolically small gazelles in her hands and stands on a striding lion. If anything, she seems to be altogether too busy for sex at the present moment.

Finally, mother is defined as the female parent of a child while motherly describes a person who has the qualities of an ideal mother, such as kindness, caring, and nurturing. Motherhood relates to fertility in that offspring are not possible without it. Thus, the concept of motherliness also relates to sexual reproduction, but is not typically connected to eroticism. In relation to our pendants, there is nothing to indicate that the MoA is a mother, though her sexual maturity suggests it is a possibility. However, the MoA might be read as motherly in that she is holding, nurturing, and possibly protecting the plants and animals she grasps. Armed with these basic definitions and interpretations, we can now examine our sources.

Objectifying the Goddess: The Mistress of Sex?

For Budin (2002: 315), the distinction between these definitions allows us to conceive of a goddess of sexual desire, specifically:

While goddesses might be "sexy" or "alluring" or "beautiful," these traits are inevitably interpreted as indications of fertility, and female deities become generically defined as "Earth Mothers" or "fertility goddesses" regardless of their unique and individual aspects.

The question of 'sexy' or 'alluring' to whom is not taken into consideration, but her sexual power is described in terms of her 'manipulation of sexuality and desire' (Budin 2002: 322), not in terms of her own sexual expression or pleasure. In fact, the idea of a nude goddess who wields sexuality as a divine power, independent from fertility and maternity, is as old as Aphrodite, as Budin (2002) herself points out. We know Aphrodite from Greek mythology, but her worship originated in Cyprus, therefore the myths were written down by those likely more familiar with her iconography than her liturgy, and with an interest in minimising her power and importance. It might also be argued that the word fertility, similar to the word love, was always a euphemistic way of referring to sex like talking about the birds

and the bees or where babies come from. Budin (2002) relates these plaques to Astarte and Ishtar to amplify the erotic nature of the Cypriot goddess and does not discuss the animal attributes or how they relate to a purely erotic interpretation. Calling these deities 'sex goddesses' rather than 'fertility goddesses' is certainly more explicit but hardly less reductive. In the mythic cycle of Ishtar, her disappearance causes animals and humans alike to lose interest in procreating, which is a clear link to cyclical fertility, since animals such as the ox and donkey, mentioned specifically, mate seasonally; Budin (2002: 319) acknowledges this association with fertility, but insists that it is the sex, not the procreation that is important.

In her article 'Objects of Interaction' Kim Benzel (2013: 265), writes of these MoA plaques:

Visually, the most immediate and consistent elements are the pubic area, breasts, face, and, in most cases, jewellery worn by the images themselves. While the pubic area and breasts certainly relate directly to fertility, a prominent face and jewellery do not. In combination, these features seem far better suited to a reading of female eroticism than the less controversial interpretation of fertility alone.

Here, again, all other imagery on these plaques is forgotten in favor of eroticism: the crown worn by the MoA is just another piece of jewelry worn to accentuate her sexual allure; her decidedly non-sexual pose and the presence of lions and other animals and plants are also relegated to the background. Benzel (2013: 265) goes on to say that 'these ornaments represented personal, private, and highly animated expressions of sexual allure, or *kuzbu*', an Assyrian term discussed by Irene Winter (1996: 13-14) in her essay on the stele of Naram-Sîn of Agade. We will return to that essay later, and to the idea of *kuzbu*, but here it is the words personal and private that stick out because they indicate that these items were personal belongings, an assertion not necessarily supported by the fact that these pendants were found in an intentionally hidden deposit with no associated burial remains (Schaeffer 1932). Benzel (2013) also suggests that the gold material and sexy imagery of these pendants was a way to advertise one's own sexual allure. How, one wonders, can an item be both private and intended as an eye-catching device? Indeed, the words personal and private sound as if they might come from a modern advertisement for feminine hygiene products or lady's undergarments. But ultimately, it is the term erotic which allows for the most insidious assumptions to occur: the very anatomical attributes which define femaleness are also apparently indistinguishable from those which make her image erotic. Thus, with this eroticized reading of the MoA plaques, we are exhibiting the inherent adoption of the hetero-male gaze and assuming the viewer and the creator of these objects to have been male while we allot the passive role of private possessor/wearer to the female. Benzel (2013: 265) makes sure to stress the fact that many other interpretations of these plaques are possible, including that they represent a deity or votive object, but her ultimate thesis hinges on the eroticism interpretation, which in turn hinges on the male gaze. Our perception of the predominance and power of the male gaze in modern society should not lead us to assume that it is the only lens through which to see the world, especially the female body, and especially more than 3000 years removed from our present.

Disempowering the Goddess

Zainab Bahrani (1996) discusses the phenomenon of the Hellenization of Ishtar in her work by that name, comparing Western Asian depictions of naked females (Figure 6) with later Greek nudes (Figure 7): she notes that the Greek sculptors glossed over Aphrodite's anatomy, despite insisting on realism in every other aspect, while the vulvas in Western Asian art were detailed and emphasised.



Figure 6. *Syrian style ivory figure.*



Figure 7. *Aphrodite of Knidos.*

Object Descriptions

Figure 6. The figure is possibly representative of a deity. As with our plaques, identification of this nude female is tenuous, though she is sometimes equated with Astarte (Iraq Museum, originally published in 'Ivorys of Nimrod' by Fouad Safar).

Figure 7. Demonstrating the anatomically incorrect female nude favoured in ancient Greece and Rome. Her pose is intended to further conceal her absent vulva and demonstrate her shyness (by Privatarchiv Foto von MrArifnajafov fotografiert, under CC BY-SA 3.0, via Wikimedia Commons).

Disappointingly, Bahrani (1996: 10) also concludes that sex is the main message of this imagery, describing even the rigid, ivory figure (Figure 6) as a seductress:

The main purpose of these images appears to be the display of the sexual attributes in a way that seems to say, 'desire me'. This pinup approach to the representation of nude females again emphasizes sexual allure...The seductress tempts the viewer. Her body is provocatively displayed, and she offers him her breasts by lifting them in her hands...

Here we must ask: who is the 'him' in this sentence? We soon find out when Bahrani (1996: 10) writes: 'the presentation of the female body is a presentation of an object of desire of the male gaze.' So here we have the crux of the issue: with or without a vulva, the nude female is the object of male desire. With or without explicitly sexual context, the nude female is always intended to be sexy to a man. Without a male image, a male is still implied simply by his anticipated arousal upon seeing the nude female. Though Bahrani (1996) is herself a woman, she analyses the nude female body as if the male perspective is the default, without pausing to discuss how these representations might have been perceived by women. The pinup analogy further alienates the imagery from the interpretation by using a thoroughly modern concept to explain iconography which predates pinups by thousands of years.

Concerned with the question of the identity of the Mistress of Animals in the LBA Levant, Izak Cornelius (2004) conducted an iconographic and epigraphic investigation and determined that Qedeshtet - translated as the Holy One - was the likeliest candidate for this nude, frontal deity. As for why she should be identified as Qedeshtet, a name not found in Ugaritic texts, instead of Asherah - the supreme goddess of the Ugaritic pantheon - Cornelius (2004: 100) writes: 'The 'Qedeshtet' iconography of a *young(er) goddess* is not what one would expect for such a senior goddess' (my italics). It is in part the offhand nature of this remark which indicates an assumption is being made that a nubile young woman universally lacks power and authority. A young female CEO in 2021 might hear the same politely surprised remark from an older male colleague. Why should that be the case? Perhaps because in current western society, young women are automatically objectified, and nude young women even more so. But was that necessarily the case in the Bronze Age Levant?

Most students of myth in the west were introduced to the idea of a nude goddess of sex by way of Aphrodite or her Roman counterpart, Venus, a deity who is derided and blamed for various catastrophes in mythology, and whose beauty seems to be matched only by her vanity. In bilingual Phoenician/Greek inscriptions from 2nd century BCE Rhodes, Astarte is equated with Aphrodite, who originated on the island of Cyprus as the principal deity, nudity and all (Budin 2004; Fraser 1970). But she was never only a goddess of male pleasure: she was also related to war, copper-mining, childbirth, and the sea (Demetriou 2010). According to the Pyrgi tablets, the Phoenicians, when dealing with the Etruscans, equated Astarte with the Etruscan Uni, from whom the Roman Juno descended (Budin 2004) she is not a goddess of sex and is not depicted nude, but what she has in common with Astarte is an association with women, fertility, and golden necklaces - as well as a supreme position in the pantheon.

The Metaphorical Body

Ulrike Steinert (2017) discusses gynaecological terminology in ancient Mesopotamia in her article 'Concepts of the Female Body in Mesopotamian Gynaecological Texts'. In Figure 8a, we have the cuneiform pictogram for woman, which, when combined with that for basket or box (Figure 8b), signifies 'womb'; this arrangement very much resembles the abstract piriform pendants found among the *Minet el-Beida* hoard, whereon the central female figure is abstracted into head, breasts, and vulva (see Figure 5 in section Terminology in Context).

The association between the pictogram for womb and the imagery on our plaques indicates that the nude female body did indeed represent more than an object of male lust among BA Western Asian societies. Steinert (2017) also discusses the many metaphors for female anatomy, including mouth, house, container, canal, portal, oven, etc., which demonstrate the various additional metaphorical possibilities of the female body and genitalia.

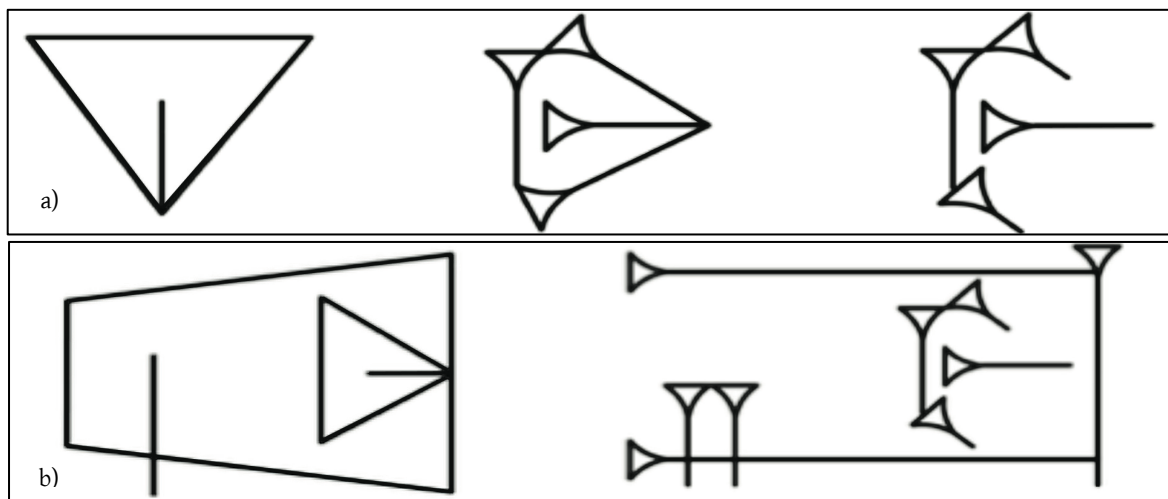


Figure 8a-b. a) Archaic and Neo-Assyrian signs for SAL or MUNUS meaning ‘woman’ or ‘pubic area’ and b) the 3rd millennium BCE and Neo-Assyrian symbols for ARHUŠ, meaning ‘womb’ - which places the symbol for ‘woman’ inside the symbol for ‘basket’ or ‘box’ (After Steinert 2017: 289-302, edited by the author).

One frequently used metaphor for the vulva was a boat (Steinert 2017: 323), and Ugaritic seafarers had a special association with the goddess Asherah, whose epithet was ‘of the sea’ (Rich 2012: 19). In the mythic cycle of *Baal and Anat*, Asherah is accompanied by a fisherman and at one point, she ritually disrobes and ‘casts her vestments into the sea’ in an act of ‘special significance’ (Shedletsky and Levine 1999: 326). In Ugaritic myths, this is not sexual and does not involve copulation, but is followed by magical propitiations.

Kim Benzel (2012) calls these plaques metapictures, because they themselves resemble vulvas while also containing images of vulvas. Iconographic similarities make it worth noting that Hathor, the Egyptian goddess of childbirth, love, and fertility, translates to ‘House of Horus’ meaning, in some sense, the womb from which the god Horus emerged (Hollis 2009, 1). Hathor is also associated with the menat, a necklace which doubled as a rattle for ceremonial and magical purposes, and which very much resembles the necklace worn by our MoA as well as the Egyptian hieroglyph for gold (Muller and Thiem 1999). Thus, we might read this image as the words, ‘gold’ and ‘woman’ (Kupfersberger 2020: 38). The Golden Goddess was another epithet for Hathor, as was Mistress of the Vulva, based on a myth wherein she reset the cosmic order by uncovering her nakedness before the ailing sun god, causing him to laugh (Budin 2016: 172-173).

Another clue to the relevance of the nude, face goddess outside of the realm of sex, is that she also appears on armour and horse equipment, mainly in northern Syria, but also in Cyprus (Kantor 1962) (Figure 9). These items are typically bronze or ivory - bright, precious materials - and depict one or more nude frontal females. This is evidence that far from being a solely a personal, private expression of sexual allure, this imagery held the power to protect its wearer in dangerous situations.

Instead of seeing her nudity as showcasing her sex-appeal to the male gaze, we might consider that her youth, beauty, and especially her nudity are her attributes, or essential defining qualities. Her personal desirability is part of her perfection and perhaps reflective of her role of inciting sexual desire, which is just one of her many roles.



Figure 9. Assyrian carved ivory horse frontlet, c. 900-800 BCE, featuring the nude MoA crowned by a winged sun-disc, grasping two lions and framed by lotus flowers (Metropolitan Museum, Public Domain).

Which brings us back to *kuzbu*. Discussing the sexual appeal of the male body in her paper ‘Sex, Rhetoric, And The Public Monument: The Alluring Body Of Naram-Sîn Of Agade’ Winter (1996, 14) subverts the typical arrangement, using the female gaze to objectify Naram-Sîn: ‘Not only is his body beautifully proportioned and lithe, but his girdle is tied seductively over his right hip, the masterfully executed pleats and knot pulled to reveal the outline of his perfectly rounded buttocks’. Winter (1996: 13-14) discusses the Akkadian concept of *kuzbu* as referring to sexual allure, but also to voluptuousness, charm, and the emanation of power; it can be applied not only to powerful or divine bodies, but also to architecture, sculpture, and cultic paraphernalia. *Kuzbu* is one of four attributes of authority and dominance along with good form, auspiciousness, and vitality (Winter 1996: 11) and the idea is that, in order to express his perfection and dominance, Naram-Sîn must be shown to embody these god-like traits.

Conclusions

The difference between Naram-Sîn and the nude MoA is that *his* sexual allure is considered to be merely one aspect of his power, while for the nude female, it represents the totality of her potency. Even when she is surrounded by or holding myriad animal symbols, wearing a crown or headdress, etc., many interpretations focus on the sexual nature of these images, specifically for the male viewer. Additionally, Naram-Sîn has made sure his name is preserved for the ages, while the identity of the Mistress of Animals is still so uncertain as to make even her divinity questionable, not to mention her name. If we want to search for the cognitive prototype for this iconography, it seems prudent to look at the female form from more than just the hetero-masculine perspective.

To review the assumptions embedded in these analyses: Budin (2002) and Benzel (2013) assume objects which depict the nude female body are automatically sexual in nature and assert that eroticism is the main message of these images, despite iconographic elements which contradict this interpretation including her animal attributes, headdresses, and pose. Whereas Budin (2002) does not question the divinity of the MoA, identifying her with Astarte, Benzel (2013) prefers to disregard matters of divinity and focus on the cognitive prototype behind the imagery. Cornelius (2004, 100) supposes that a powerful goddess *should be* depicted as an older woman, and perhaps more appropriately attired. In Iron Age Greek, Roman, and Anatolian societies, with which most Western scholars are more familiar, female deities like Demeter, Juno, and Cybele are typically portrayed as mature and fully clothed, often seated regally and veiled to demonstrate modesty and respectability. These pendants not only predate the Iron Age but are the product of a different society; one which, unlike Greek and Roman cultures, did not shy away from depicting the nude female body in all its detail. Ingrained ideas that all religions should be organised like the Greek pantheon, with similar modes of representation, overlook the fact that theirs was not the first mythology, just the one with which we are most familiar.

The absence of female genitals in Greek sculpture tells us as much about Hellenistic discomfort with female sexuality as the emphasis on female genitals in the LBA Levant tells us about Syrio-Ugaritic comfort with the same. While Classical Aphrodite hides her featureless mons in surprised embarrassment and modesty, LBA and IA Syrian depictions conceal nothing and gestures emphasise rather than hide, but as with our plaques, eroticism is lacking in the pose. In fact, it seems to be the partial concealment and getting caught unawares which makes the statues of Aphrodite and Venus erotic, despite absent genitalia, where the Syrian ivory is all business: fully aware of her nakedness but absolutely unabashed, she invites the gaze through her frontal pose and symmetry as well as through her own direct gaze.

The association of female power with female genitalia offers an opportunity to reconsider how we think about the female body, sexual pleasure, and specifically female sexual pleasure. If the pendants are indeed metapictures as Benzel (2013) asserts, the primary identification seems to be between a female deity representative of beauty and power on the one hand, and sexual traits on the other. The metaphor of beauty and power therefore seems to apply to both goddess and female anatomy. In fact, if looked at anatomically, the face of the goddess on these plaques is located where the clitoris would be, indicating that the pleasure referred to here is female pleasure and not that of an implied male gaze or anticipated liaison. In myths and poems, Inanna's body and sexual desire are celebrated:

When she leaned back against the apple tree, her vulva was wondrous to behold.
Rejoicing at her wondrous vulva, the young woman Inanna applauded herself
(Wolkstein and Kramer 1983: 12).

To an ancient female viewer or wearer of these objects, would not they identify with this figure, rather than desiring her? Perhaps they would associate her 'wondrous vulva' with their own and take pride in sharing something with such a revered figure. The MoA's nudity might function both narratively and as a way of showcasing both her femaleness and her perfection, just as it was imperative to display Naram-Sîn's well-formed body (Winter 1996: 12-13).

Yet there is more to this story than erotica. Textual evidence indicates that in Bronze Age Mesopotamia, the female body carried many metaphorical implications (Steinert 2017). The prophylactic power of this iconography of a nude, bejeweled woman is evident outside of private or sexual contexts, in the realms of battle, sea travel, and especially relating to horses. Whether looked at as a cognitive construct or a deity, it seems that her salience was pluralistic, and her aid might be appealed to on various occasions.

In conclusion, talking about gender should not automatically mean talking about sex. Often, it consists of de-sexualizing imagery which may have been wrongly classified as erotica due to a lack of context. Additional self-awareness is required in dealing with topics of sex and sexual appeal; thus, it seems not only prudent but essential to employ critical self-consciousness when describing female nudity and its entailments, lest we fall prey to assumptions. After all, is not the female body, like the body of Naram-Sîn, capable of containing and emanating power through a combination of forces, only one of which is sex appeal?

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The Freedwomen and Their Social Promotion in the Cities of the Roman *Baetica* through the Epigraphic Documentation

María Teresa De Luque Morales¹

Abstract

The aim of this study is to analyse the existing documentation that makes visible freedwomen and the mechanisms used by them to promote themselves and their descendants in the cities of Roman *Baetica* (Iberian Peninsula). By analysing a series of inscriptions, this paper establishes three categories of freedwomen: imperial, public and private, and investigates how and to what extent processes of promotion took place.

Freedmen could also perform the *Augustalidat* and obtain municipal honours. Although they were blocked from political activities, freedmen were conscious that they could fund costly municipal life through *munera* (obligations, loads) in exchange of improving their personal and familial status. Freedwomen, on the other hand, could acquire economic resources and use them, through processes such as the *evergetismo*, to improve both their social position and that of their descendants. Based on direct primary sources, this study will investigate how freedwomen were also involved in Roman society.

Keywords: *Baetica*, freedwoman, patron, marriage, evergetism, *ornamenta decurionalia*

Introduction: How Men Defined Women in the Greco-Roman World?

Greco-Roman women lived in a world dominated by men and formulated by and for the elite. According to men, women were a means to an end. The end was a family unit that provided heirs and thus the transmission of property. Women did not participate in the classic elements of public life as they could not hold political positions. They were excluded from higher education, did not have a legal position nor could they vote. Although there was the possibility that she would engage in some secondary activities, any woman who could and chose one of them as her main purpose in life was undoubtedly a *rara avis* (Knapp 2011: 69).

When studying the world of ancient women, we should remember that their attitude, expressed in their own words, is practically absent from all the literary and archaeological sources available to us (Friedlander 1982). There is limited evidence on whether Greco-Roman women conceived of a different world from the one in which they were born, or an ideology that would allow them to consider a different organisation. However, epigraphic evidence may shed light on how women manoeuvred around the societal restrictions and help us develop a somewhat realistic picture of ordinary women in Roman society and their mentality. The preserved dialogue between the freedwoman Aurelia and her husband Aurelio is one of the most touching testimonies of Latin epigraphy. The husband says:

I am Lucius Aurelius Hermia, freed from Lucius, a butcher who works on Viminal Hill. This woman, Aurelia Philematio, freed from Lucius, who died before me, my only wife, of chaste body, faithful lover of her faithful husband, lived with devotion, without selfishness keeping her from her duties.²

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² All of the English translations in this article are made by the author from Spanish.

There is an image of Aurelia looking lovingly at Aurelio (Figure 1). She answers:

I am Aurelia Philematio, free from Lucius. In life I was called Aurelia Philematio, chaste, modest, unaware of the repugnant behaviour of the majority, faithful to my husband. He was my free companion, the same one who has now been taken from me. He was truly more than a father to me. He sat me on his lap when I was only seven years old; now, forty years later, I am dead. He triumphed among men in all his acts thanks to my faithful and firm devotion (CIL I, 01221 = CIL VI, 9499 = ILS 7472, Rome).

Aurelia Philematio exemplifies 'the ideal woman' who is praised for her modesty, poise, moral rectitude, and loyalty. Whether these were Aurelia's own words is not clear, yet since her husband survived and commissioned her tombstone, we assume that the feelings expressed in the inscription are those of her husband. Nevertheless, it is possible that the poignant emotion expressed in the epigraphy was mutual among this married couple.



Figure 1. CIL I, 1221 (Photo Credit: Marie-Lan Nguyen, under CC BY 2.5, via Wikimedia Commons).

Freedmen in Roman Society

Referring to the role of women in Roman society, we focus on freedwomen. Nevertheless, to introduce this subject, the general role of freedmen in society must be explained. When we talk about freedmen or freedwomen, we mean the group formed by slaves who were freed by their Roman citizen masters. If the manumission was carried out in accordance with the law, the slaves could become Roman citizens in turn. A master would free a slave as a favour and in recognition of a job well done. Likewise, the common logic was to choose a young, talented, and responsible slave for promotion and to entrust him with the management of some part of the master's business. When such a servant was freed, in many cases the master continued to benefit from his services as a freedman (Knapp 2011: 206). In fact, freedmen were present in the business world where they entered owing to the economic support of their masters, either by working as slaves or later as freedmen. The masters needed reliable people to

intervene on their behalf. As the jurist Gaius stated, 'A reasonable cause to free a slave is to make him your agent' (Gai. *Inst.* 1. 19). Thus, by using serfs and freedmen, who had obligations and ties to them, the masters made sure that the management would be good and reliable (Mangas Manjarrés 1971: 251).

After the manumission, the former slave master became a quasi-father figure. A freedman is compared to a son in legal texts. Thus, the *Digest* points out that 'the master or father must always be honoured and respected by the freedman or son' (Just. *Dig.* 27. 15. 9.) because, above all, both were trusted to extol and respect the father/boss as the creator of their being. The limitations, obligations and responsibilities of a son were very similar to those of a freedman, although in some respects he enjoyed more freedom than a son under his father's authority. Likewise, obedience was the most desired character in a former slave. The burial of freedmen with other members of the family shows the emotional bond that they maintained with their former masters. The freedmen had to contribute to the public dissemination of the importance of the master by being visible clients, helping him if he was in difficulty or, if so stipulated, working a few hours for the master or on his estate. If a freedman died without natural children, the employer would be entitled to receive half of the inheritance, which he would share with the wife of the deceased and his adopted children. If the deceased freedman had one or two natural children, the employer would share the inheritance with them in equal parts. Only if there were three or more children, the former master was out of the inheritance (Gai. *Inst.* 3. 41-42.).

It is known whether a person is a freedman when he reveals it to us, in most cases, using the epigraphic formula 'freedman or freedwoman + *praenomen* of the master', to indicate by whom he was manumitted. It is important to note that many people who had obtained their freedom sought to show this fact on their tombstones, proud to have obtained their freedom and to die as free men. Their numbers cannot be calculated, although it is believed that 15% of Roman society were slaves and of these only a small percentage were able to obtain freedom.³ On the one hand, evidence suggests that the commoners were not particularly concerned about whether a person was free or not as the marriage between a freedman and non-elite was not prevented. On the other hand, the ban on marriage between the freedmen and members of the senatorial class suggests that if there is 'shame', it would only exist in the eyes of the elite (Alföldy 2012; Knapp 2011).

One of the first actions a newly freed slave had to take was to seek the manumission of the woman he had lived with, as well as that of his children, if he had had any. Freedmen could marry any woman except those of senatorial rank. Traditionally, it is believed that freedmen lived with the stigma of having been former slaves, and that this stigma followed them for life (D'Ambra and Métraux 2006: 2). Freedmen could not hold public office in Rome or in the municipalities; they were prevented from joining certain priesthoods; they could not form part of the legions, although they did have the right to join other military units. However, as most male slaves were freed at around the age of 30, not many would have wanted to start a career in the army at that time. In the end, these legal restrictions did not harm the lives of the freedmen in any significant way.

Having introduced the general characteristics of freedmen in Roman society, we will now focus on the role played by the freedwomen. For this purpose, we have selected a series of inscriptions that provide

³ The *Fufia Caninia* Law of 2 B.C. limited the number of slaves that could be manumitted by will. Owners who had between 3 and 10 slaves could only manumit one half; those from 11 to 30, one third; those from 31 to 100, one quarter; and those from 101 to 500, one fifth. No one could manumit more than one hundred slaves (Gai. *Inst.* 1. 42-43). The *Aelia Sentia* Law of 4 A.D. established a minimum age for manumission, set at 20 years, and a maximum age for manumission, set at 30 years.

information on the different types of freedwomen and their possible social promotion. Three categories are imperial, public and private.

Imperial Freedwomen

Belonging to the *Familia Caesaris*, they were often given the title of *Augusti libertus/a*. These freedwomen have been slaves of the emperor or his very close relatives. Evidence suggests that they constituted a true *ordo libertorum et seruatorum principis*, exalted by their attachment to a *patronus*. This *patronus* was at the same time the head of the state (Alföldy 2012; Hernández Guerra 2013; Knapp 2011). In his *Naturalis Historia*, Pliny refers to an ex-slave of Marcellus Aeserninus who became an imperial freedman with the intention of increasing his power (Plin. Nat. 12. 5. 12).

Epigraphy allows us to study the most private and personal aspects of freedwomen, that is to say, the family and emotional relationships with other members of the community. A recurrent theme in the epigraphy data is the husband of the *Augusti liberta*, normally, *Augusti libertus*.⁴ According to the data, freedmen refer to their wives by showing the great affection they had for them. The expressions found are: *dulcissima* (CIL II, 486), *coniux carissima*, *coniux rarissima et sanctissima* (CIL II, 487). Furthermore, the expressions used by the imperial freedwomen to refer to their husbands are: *marito piissimo* or *marito optimo* (AE 1954, 87). The stability and longevity of the couple can be highlighted in some of the inscriptions studied: a 23-year marriage between Lucius Septimius and Cassia Antripatri (EE IX, 287), or the one of 21 years between Aurelius Faustinus and Statia Felicissima (CIL II, 6085). However, this data is rarely found.

Concerning offspring, to form a legal family was of great importance. Their descendance, *ingenui* children, would avoid the lack of recognition of family ties while being a slave (Hernández Guerra 2013: 111; Serrano Delgado 1988). The inscription CIL II²/7, 290 illustrates an imperial freedman's family directly related to the community from the *Baetica* province and, specifically, in *Corduba Colonia Patricia*. The Imperial freedman appears immersed in the socio-political dynamics of an urban community, participating in the habits and values of municipal life, linked to, and honoured by the *ordo decurionum* (Camacho Cruz 1997: 134). The son of this imperial freedmen family, T. Flavius Antoninus receives a series of funeral honours granted by the *ordo decurionum* of Corduba (Figure 2). The parents, grateful for the deference shown to their son, paid for the construction of the statue. His father, T. Flavius Speudon, held the position of *Tabularius Provinciae Baeticae*, therefore a high-ranking official. Since the son of the freed Imperial slave was *ingenuus*, he could have participated fully in the institutions and public life of the municipality. His servile stigma would have been less important because of the position held by his father.⁵

⁴ It is very common to identify them through their unions with other imperial freedmen, for whom there are many more testimonies (Serrano Delgado 1988: 53-54).

⁵ About his freedwoman mother, although unable to hold any office, may have been involved in the family's quest for social advancement.

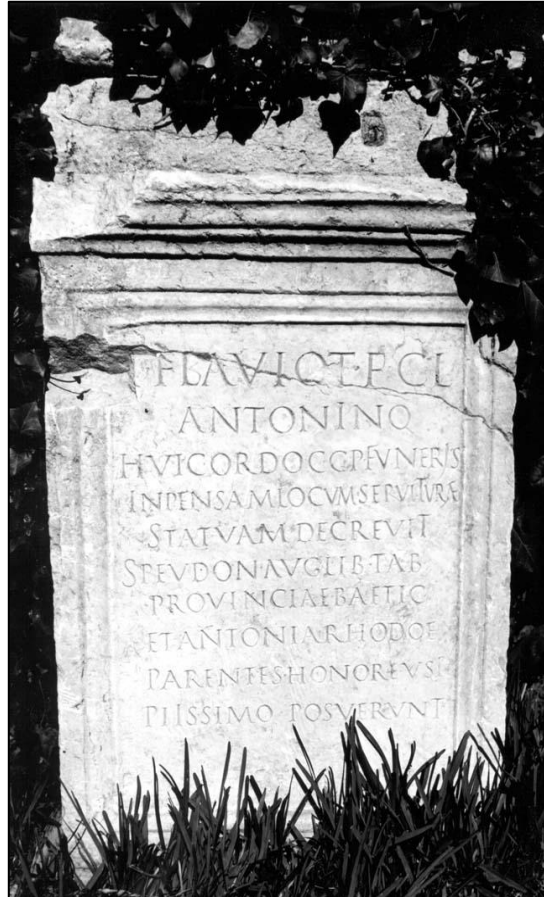


Figure 2. Titus Flavius Antoninus' inscription (© Centro CIL II, Universidad de Alcalá).

Public Freedwomen

The slaves freed by a collectivity are known as public freedwomen. This collectivity, which could be a city, *collegia*, province or religious centre, would become their *patronus* (Hernández Guerra 2013: 112; Rodríguez Cortés 1991: 86). Legal texts reveal the ability of these public freedmen to attain Roman citizenship and the access of their descendants to municipal offices, including the *ordo decurionum* (Just. *Dig.* 7. 9. 3).

Epigraphic evidence proves that it was usual for these public freedwomen to use the *nomen* 'Publicius' although other series of *nomina* can also be found. A distinctive part of their *nomen* was derived from the community's name, being the most common the name of the city where they served as slaves. We have attested in the *Baetica* province some public freedwomen: Publicia Fortunalis (*CIL* II, 3355), Publicia Laetina (*CIL* II²/5, 658), Publicia Unitita and M. Publicia Arbuscula (*CIL* II²/7, 11). The internal renewal of this public group was not so sought since the entrance of new public services was normally done by purchase; thus, in *Corduba* a colonial *servus*, A. Publicius Germanus, has reached this status by purchase (*CIL* II, 2229 = *CIL*, II²/7, 315). Regarding private life, little evidence indicates the establishment of marital ties within the same public family (*CIL* II, 5559, 3352, 4279). This could be due to the lower number of women in comparison to men, although the existence of freedwomen in the slave community is confirmed (*CIL* II, 6027 and *EE*, VIII, 266). Despite what has been explained in this section, in the *Baetica* province there is no further information about these public freedwomen beyond their names.

Private Freedwomen

Epigraphic sources show some cases of freedmen who achieved independence from their employer. In addition, there are freedwomen who became involved in activities outside the domestic sphere (Bradley 1994; Hernández Guerra 2013). The participation of these freedmen and freedwomen was restricted in certain groups. However, freedmen had access to some priesthoods, such as the Augustals. Moreover, if they had large fortunes, their entry into other social environments was facilitated. In regard to the relationship with their patrons, the maintenance of a close relationship between them is reflected in numerous epigraphic documents. The freedmen usually show their names along with those of their patrons (López Barja 1991: 164). The former master is the one who gives the *nomen* to the freedman and subsequently becomes his patron. The manumitted slaves used to stay in the master's house, maintaining a relationship similar to the one that existed before they were freed. This is reflected in the *lex municipii Flavii Irnitani* (D'Ors 1968: 147-243; Hernández Guerra 2013: 54).

Turning now to the relation between the *patroni* and the freedwomen, it must be pointed out that according to the epigraphic evidence there would have been marriages between them. Sexual relations can be confirmed, as this was one possible function of these slaves. These bonds often led to unions in the form of *contubernium*. The children born from this union were considered natural (*Dig.* 23. 2. 41. 1 and 23. 2. 29). In this way, marriage was one of the ways to introduce the freedwomen into society by making them free citizens, subsequently granting them personal liberation (Serrano Delgado 1988). Among the cases of private freedwomen preserved in *Baetica*, we could highlight the case of Valeria Acte (*CIL* II, 2099= *CIL* II²/5, 296), a freedwoman married with a person of high position, C. Valerius Valerianus, *duunvir* and *pontifex perpetuus*, who has been linked with the *Navicularii* of the *Baetica*. Valerianus financed the construction of the *forum* in Cisimbrium, five chapels with statues of gods and various statues of himself. This is shown by an epigraph of his granddaughter, Flavia Valeriana (*CIL* II²/5, 294). Flavia dedicated several statues that her grandfather had given to the *municipium* at the end of the 1st or beginning of the 2nd century AD with an *epulum* (Melchor Gil 2010: 231). Another example of a freedwomen's social promotion would be Sergia Saluia of Arva, who was *liberta et heres* of Saturnini Rufi filii, that built a *lacus et aeramenta* (*CIL* II, 1071).

Freedwomen and Social Promotion in Roman Baetica

The total integration of freedmen within the rank of free citizens was forbidden by law, as they could not become part of the *ordo decurionum* (Serrano Delgado 1988: 187; Alföldy 2011: 184-186). This prohibition is found, for example, in the *lex Visellia de libertinis* (24 AD), which penalises those *liberti* who seek to obtain the *honores et dignitates* set aside for the *ingenui*.⁶ However, we find other texts, such as chapter 105 of the *lex Ursonensis*, which indicated that a freedman could get access to the local senate.

We should understand the different decisions taken by Augustus in the light of his desire to preserve the traditional Roman values, which are observed in the *lex Visellia de libertinis*, eliminating any possible opportunity for freedmen to obtain municipal honours. This is confirmed in chapter 54 of the *Lex Malacitana*, where it is stipulated that in order to stand for magistrate one must be free by birth. This legislation led to an imbalance among some freedmen between the economic power that they reached and the few possibilities of social advancement available to them. It could be compensated in two ways: obtaining the *ornamenta decurionalia* or getting the position of *sevir Augustalis* (Delgado Delgado 1998: 125; Melchor Gil 2011: 269; Mouritsen 2011: 248). Firstly, the *ornamenta decurionalia* allowed the freedmen

⁶ *Cod. Iust.*, IX, 21, 1 (*ad legem Viselliam*) and 31. This law actually penalises access to honours, and the *ius anulli aurei* is mentioned instead as the exception that allows freedmen to overcome this limitation.

to share the advantages and honours enjoyed by the *duumvirs* even if they did not hold this office, such as privileged positions during spectacles. As for the *seviri Augustalis*, it was the only priesthood they could be part of, worshipping the *genius Augusti*. As far as we know, freedwomen could not aspire to any political position, not only because they were of servile origin, but also because they were women. However, this did not prevent them from seeking to help in the social promotion of their *gens* within their means. Thanks to civic munificence, they would in return receive honours decreed by the *ordo decurionum* and an increase in family honour (Dardaine 1992: 139-151; Melchor Gil 1993: 41; Castillo García *et al.* 2003: 73). This suggests that their *ingenui* sons would have a better chance of gaining access to the *ordo decurionum*. It would have been the case of T. Flavius Antoninus, mentioned above, had he not died prematurely (*CIL* II²/7, 290). Our study provides further evidence of freedwomen which should have certain relevance (Figure 3). Caecilia Trophime would only seek to be remembered as freed after her death (*CIL* II²/5, 1165; Melchor Gil 2003: 130-131). This freedwoman from Astigi ordered to dedicate ‘*ex testamento*’, in her name and in that of her husband, Caecilius Silo, a statue to *Pietas* of 100 pounds of silver, which could have been worth about eighty thousand or one hundred thousand sesterces (Duncan-Jones 1974: 126-127; Melchor Gil 1994: 172). This donation leads us to the conclusion that Trophime must have belonged to a very rich freedman family.



Figure 3. *Caecilia Trophime's* inscription (© Centro *CIL* II, Universidad de Alcalá).

The performance of *Acilia Plecusa* in *Singilia Barba* is noteworthy (*CIL* II, 2016-2020; 2029, 2031. *AE* 1978, 400; Mirón Pérez 2004: 304). This freedwoman, married to *M. Acilius Fronto*, a local *praefectus fabrum*, after being widowed and having an important heritage, was located in the necropolis of the rustic town of *Las Maravillas* (Figure 4). We must therefore assume that *Plecusa* was buried in a *fundus* which she may have inherited from her husband (located six kilometres from *Singilia Barba*) (Melchor Gil 2007: 440). She was responsible for keeping her family's prestige alive in the city and she even tried to increase it through her relations with members of the equestrian order. *Acilia Plecusa* paid with her fortune for the statues decreed by the *Ordo* of *Singilia* for her husband and daughter *Acilia Septumina* (*CIL* II²/5, 784). She also dedicated others to her freed son *M. Acilius Phlegon*, her grandchildren *M. Acilius Fronto* and *Acilia Sedata Septumina* (*CIL* II²/5, 795, 802 and 803). Finally, she managed to erect a public statuary group in honour of the *procurator provinciae Baeticae* *Publius Magnus Rufus Magonianus* and his wife

Carvilia Censonilla, whom she considered *amici optimi* (CIL II²/5, 780⁷, 781 and 782⁸). This was possibly to highlight the social status that the Acilia gens retained after the death of the *paterfamilias*. She was a friend of relevant members of the equestrian order who worked for the imperial administration in Baetica (Caballos Rufino 1998: 128, 134). Plecusa, despite being free, was forced to participate more actively in the public life of her city after becoming a widow, in order to preserve the projection of her gens in the *municipium*. This led her to get involved in making donations to the population or in the family's honorary commemoration. In this way, she would try to maintain her family's prestige and would be favouring the entry of her descendants into the local senate, as well as the performance of magistrates and priesthoods.



Figure 4. Tombstone of Acilia Plecusa, s. II d.C. (Photo Credit: Ángel M. Felicísimo, CC BY 2.0, Public Domain via Wikicommons).

⁷ P(ublio) Magnio Q(uinti) f(ilio) Quir(ina) Rufo / Magoniano tr(ibunus) mil(itum) IIII / proc(uratori) Aug(usti) XX her(editatium) per Hisp(aniam) Baet(icam) / et Lusitan(iam) item proc(uratori) Aug(usti) per Baetic(am) ad kal(endarium) Veget(ianum) / item proc(uratori) Aug(usti) prov(inciae) Baet(icae) ad / ducen(a) Acili(a) Plec(usa) amico optimo / et bene de provincia / semper merito d(ono) d(at)

⁸ Carviliae P(ubli) f(iliae) Censonill(ae) Magni / Rufi proc(uratoris) Aug(usti) XX her(editatium) per Hisp(aniam) / Baet(icam) et Lusitan(iam) item proc(uratoris) Aug(usti) / per Baet(icam) ad kal(endarium) Vegetian(um) item pr[o]c(uratoris) / Aug(usti) prov(inciae) Baet(icae) ad ducen(a) Ac[il]ia Plec(usa) / amicae op[timae] d(ono) d(at)

Conclusions

This study discussed the role of women in Greco-Roman society by analysing the position of freedwoman and their social promotion. Through this analysis, I suggest three following conclusions. First of all, imperial freedwomen should be considered as a part of the freedmen's elite because of their unique and close relationship with the *familia Caesaris*. We do not have much concrete information about them in the case of Baetica, but we do know about their prominent position. In the example of T. Flavius Antoninus, we see how the son of these imperial freedmen, *ingenui*, had a much easier time rising in status because of their fathers. Although of servile origin, they could be promoted easier and be part of the *ordo decurionum*. Secondly, public freedwomen were better integrated in the working of the municipality and had a better knowledge of the dynamics of their city. In Baetica, we have very little information about them. As discussed above, the inscriptions only inform us of their status. Thirdly, the private freedwomen are the ones for whom we have the most documentation. We can see the importance of their relationship with their master, who could normally end up being their husband. This relationship was very important for social promotion. They were also able to obtain their own money for greater autonomy, and we have presented most cases of the important role they played in their families. Finally, in terms of their search for promotion and social advancement, we could say that it was practically impossible for freedmen and any woman to effectively reach the rank of *decurion* (they could obtain the *ornamenta decurionalia* or occupy the office of *sevir Augustalis*). Their descendants, *ingenui*, could legally hold municipal office and become part of the *ordo*. We have seen that they utilised the importance of *amicitia* with the patrons and with the members of the aristocracy, as in the case of Acilia Plecusa.

Some of the most outstanding features of the freed slaves with regards to social life may be natural assimilation into municipal schemes, a desire for promotion and participation in civic life, and a broad social horizon after their manumission, which was easier in small municipalities, where social barriers were easier to overcome. Epigraphic sources are vitally important as they provide immense insights on the subject. In Roman Baetica, we find a large number of epigraphs regarding freedmen. However, we can clearly see how their number decreases when we focus on women. Even so, we have been able to bring some examples that show us how they operated within their society.

In summary, we have outlined the active presence and interest of the freedwomen, mainly wealthy people, into the socio-political dynamics of the cities. In the way they could, they revealed a municipal patriotism and the evident desire to rise in the citizen hierarchy by munificence activities or maintaining relationships with important members of the community.

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Abbreviation

AE *L'Année Epigraphique*

CIL *Corpus Inscriptionum Latinarum*. Berlin 1863-

Cod. Lust. *Codex Iustinianus*

EE *Ephemeris Epigraphica*

Gai. Inst. *The Institute of Gaius*.

ILS *Inscriptiones Latinae Selectae*, ed. H. Dessau. Berlin 1892-1916

Just. Dig. The Digest of Justinian

Plin. Pliny the Elder

Nat. The Natural History

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A Study of Mirror Depictions from Northern Song Dynasty Tomb Murals in Zhengzhou: Interpreting Mirror Depictions from a Gender Approach

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Abstract

This article seeks to explain the meanings of 12 mirror depictions from 19 Northern Song Dynasty mural tombs. It firstly introduces the uses of mirror motifs in ancient China and the gender ideology in the Song Dynasty, and then presents detailed observations on the 12 mirror depictions. All the mirror depictions in the murals are shown together with female figures or female belongings. By analysing the representations of mirrors in tomb murals, this paper suggests that mirror depictions in murals are a visual representation of the ideal women from a Confucian viewpoint. Additionally, mirrors are interpreted as symbolism of love and erotism in ancient China, associating mirrors with 'femininity'.

Keywords: mirror depiction, tomb murals, northern Song Dynasty, gender archaeology

Introduction

This paper considers the meanings of 12 mirror depictions in mural tombs and attempts to explore the relationship between these mirror representations and femininity. Woman-mirror motifs were one of the subjects of the paintings of beauty (*Shinü Hua*) during the Song Dynasty (AD 960- 1279) in China (Blanchard 2018; Chu 2012; Hu 2014; Su 2019). It is believed that some representations of women and mirrors together in poetry and paintings have symbolic meanings. For example, a dusty mirror is typically associated with an abandoned court lady, whereas a mirror is interpreted as an instrument that can promote the self-awareness of women (Rouzer 2001: 150-155). The depictions of mirrors in paintings symbolise many feelings and circumstances such as women's boredom, emptiness and vanity (Birrell 1985: 46-48). Furthermore, mirrors are also attributes of beautiful, courtly women and prostitutes in love poems and fictions. According to Wu (1996, 2019), mirrors exist in the feminine space together with objects such as fans, flowers and censers in paintings of beauty. Aside from paintings, mirrors also appear in other forms of visual art. Huo (2017) – who analysed materials such as stone reliefs, murals, figurines and paintings – provided an excellent overview of women-mirror depictions by examining the development and transformations of the women-mirror motif from the Han Dynasty (202 BC- AD 220) to the Qing Dynasty (AD 1644-1912). However, the meanings of the mirror depictions and the historical backgrounds that influenced changes in them were not illustrated in detail, and some important evidence was not included in Huo's essay.

The depictions of day-to-day life (including feasting, dressing up, cooking and entertaining) became prevalent in tomb murals during the 10th century (Yu 1996; Qin 2005; Li 2014). In these depictions, mirrors are represented either as a cosmetic implement in women's dressing-up scenes or a piece of domestic furniture on tomb murals. Over 100 Song Dynasty mural tombs have been excavated in China since the 1950s (Cheng 2015: 211), yielding valuable data which this paper utilises to conduct an in-depth investigation into how mirrors were represented and in what context they were used. Additionally, based on the reports on a large number of mural tombs, and the general observations of

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the author, an iconographic analysis of mirror depictions from 19 well-preserved mural tombs located in Zhengzhou, Henan Province will be presented. This article first begins by explaining the concept of gender in the Song Dynasty and introduces a theoretical framework on gender representations in visual art. After providing an iconographic analysis of 12 mirror depictions, the paper will interpret the meanings of the mirror depictions in funerary contexts and entangle how these representations reflect 'the ideal woman' of the Northern Song Dynasty (AD 960–1127). Finally, the paper will be concluded with a discussion of why mirrors are associated with females and femininity in a broader cultural context.

The Ideology of Gender in the Song Dynasty

Ending the chaos in AD 960, the Song Dynasty (AD 960-1279) reigned over China for three centuries. Over this period, a series of social changes occurred in different realms of life, including social structure, economy, and philosophy. Women's circumstances in society, on the other hand, significantly worsened during the Song Dynasty because of the restrictions imposed on women (Chen 1990; Ebrey 1993).

During the Song Dynasty, gender segregation became prominent in China. The following passage from the *Book of Rites* glaringly evidences this segregation:

The men should not speak of what belongs to the inside (of the house), nor the women of what belongs to the outside. ... Outside or inside, they should not go to the same well, nor to the same bathing-house. They should not share the same mat in lying down; they should not ask or borrow anything from one another; they should not wear similar upper or lower garments. Things spoken inside should not go out, words spoken outside should not come in [translation by Legge 1885: 454–455].

The emphasis of this text is that men and women should only concern themselves with their own business, and that the boundaries between genders should not be crossed. This notion of gender segregation was reinforced by the Cheng-Zhu school during the Song Dynasty. Both Cheng Yi (AD 1033–1107) and Zhu Xi (AD 1130–1200) used the theory of *yin* and *yang* to explain how men and women had different features, abilities, and duties (Pang-White 2013: 438–446). In this view, the outer sphere and public affairs were deemed as realms that should be handled by men, and women should concentrate on the inner sphere to manage domestic affairs, such as housework and raising children. Zhu Xi also warned his audience that it was dangerous to let women attend public events (Ebrey 1993; Gao 2003).

Such a concept likely had an influence on Chinese visual art, particularly in the manifestations of the interior space and exterior space in Chinese art. Wu (1996) suggests that Chinese paintings emphasise the depiction of differences in interior space (spaces that belong to women, which are private and enclosed) and exterior spaces (spaces that belong to men, which are public and open). In the words of Wu Hung, 'exterior space thus becomes synonymous with a man's social image and duty', and 'the females in the *interior* space were kept secret' (1996: 129). As such, by using framing devices to visualise gender separation, pictorial art made the separation of different genders recognisable (see section 4 in this paper). Pollock's (1988) analyses of the paintings of female artists', will be utilised here to highlight the association between femininity, space, and mirrors in tomb murals. Pollock proposes that by investigating the relationship between territory and gender in modernist paintings, one can gain insights into the dynamics of gender paradigms in society (1996: 211, 2019). She examines the depicted space from two perspectives: the location of the space (such as dining rooms, gardens, and parks) and spatial arrangement (e.g., by looking at whether there are boundaries imposed in these spaces using framing devices such as an embankment or balcony wall).

Going back to Wu's observations, the 'feminine space' in Chinese art emerges as an important concept, which Wu defined as 'a spatial entity – an artificial world comprised of landscape, vegetation, architecture, atmosphere, climate, colour, fragrance, light and sound, as well as selected human occupants and their activities' (1996: 211; 2019).

Another vital concept that is relevant to this paper is 'women's four virtues'. This concept was first proposed in a Confucianism classic, *Book of Rites*, compiled by Dai Sheng in the Han Dynasty (202 BC– AD 220) (Ko 1992) and gained prominence during the Song Dynasty. The four virtues included 'womanly virtue' (*fude*), 'womanly speech' (*fuyan*), 'womanly appearance' (*furong*) and 'womanly work' (*fugong*) (Ko 1992: 29).

Objects depicted in mural tombs particularly hints at the perception of 'womanly work' and its relation to Wu's notion of 'feminine space'. For example, Deng (2011) points out the potential symbolic meanings of objects such as scissors and irons in mural tombs. The scissors and irons appear in over 70 tombs from the period of the Five Dynasties (907–960 AD) to the Song Dynasty (Deng 2011: 16). These two objects are associated with silk preparation, which was one of the main tasks for women. According to Deng (2002), scissors were used to cut silk into the proper size, and irons were used to keep the textile silky. Silk production scenes are shown in the Hebei Shizhuang No.6 tomb, where one of the female figures is shown using an iron to steam a piece of cloth. The combination of scissors and irons are depicted on the opposite wall of the silk production scene, therefore, Deng proposed that this pattern of scissors and an iron symbolises silk preparing activities in the domestic sphere (2011: 22–23). In this context, scissors and iron patterns in tombs are connected with the practical meaning of silk preparation and symbolise women's virtue of 'womanly work' (*fugong*) (Deng 2011: 18–19). In the following section, we will find that some mirrors are shown accompanied by iron and scissors; Deng's analysis would help to explain the connections between these objects.

Mirror Depictions in Mural Tombs in Zhengzhou

The statistics suggest that most of the Song mural tombs are located in the Henan Province, as over 70 mural tombs (where reports have been published) have been excavated in Henan (Han 2006: 19). Within Henan Province, over 20 mural tombs have been excavated in Zhengzhou (Chen 2010: 9), making it the region with the largest number of Song Dynasty mural tombs in Henan (Zhu 2015: 1). In this paper, mural tombs excavated in Zhengzhou city and its six affiliated regions (Gongyi, Xingyang, Xinmi, Xinzheng, Dengfeng and Zhongmou) will be analysed. As Zhengzhou was close to the capital city of the Northern Song Dynasty – Kaifengfu (now known as Kaifeng City), the mural tombs found here can shed light on the funerary and social culture of the Northern Song Dynasty.

Since the 1950s, 26 mural tombs have gradually been excavated in Zhengzhou. But the murals of some tombs have been damaged by tomb robbers, water, and modern infrastructure construction. Due to the incomplete nature of seven tombs, in many cases, it is difficult to speculate whether there are mirror depictions shown in the tombs. Thus, only 19 mural tombs will be considered in this article. Most of the mural tombs comprise only one chamber, although the number of walls varies (four, six and eight walls). Each wall shows an independent scene which depicts decorative murals and/or brick reliefs, while the scenes are separated by framing devices (e.g., pillars, borders and lines) painted between walls. The well-decorated graves and the delicate structures of the tombs indicate that the tomb occupants might have lived a decent life and that their families were capable of paying for the costs of the tomb construction (Su 2002; Zhengzhou and Xinmi 1998; Zhengzhou and Xingyang 2008). Indeed, these tomb occupants might have been local elites, including wealthy merchants and landlords, who benefited from economic development during the Song Dynasty and accumulated wealth by trading (Li

2015). Within the 19 tombs, ten, over half of the tombs, contain mirror depictions (Figure 1) (for the full list and information about these 10 tombs, see Table 1).

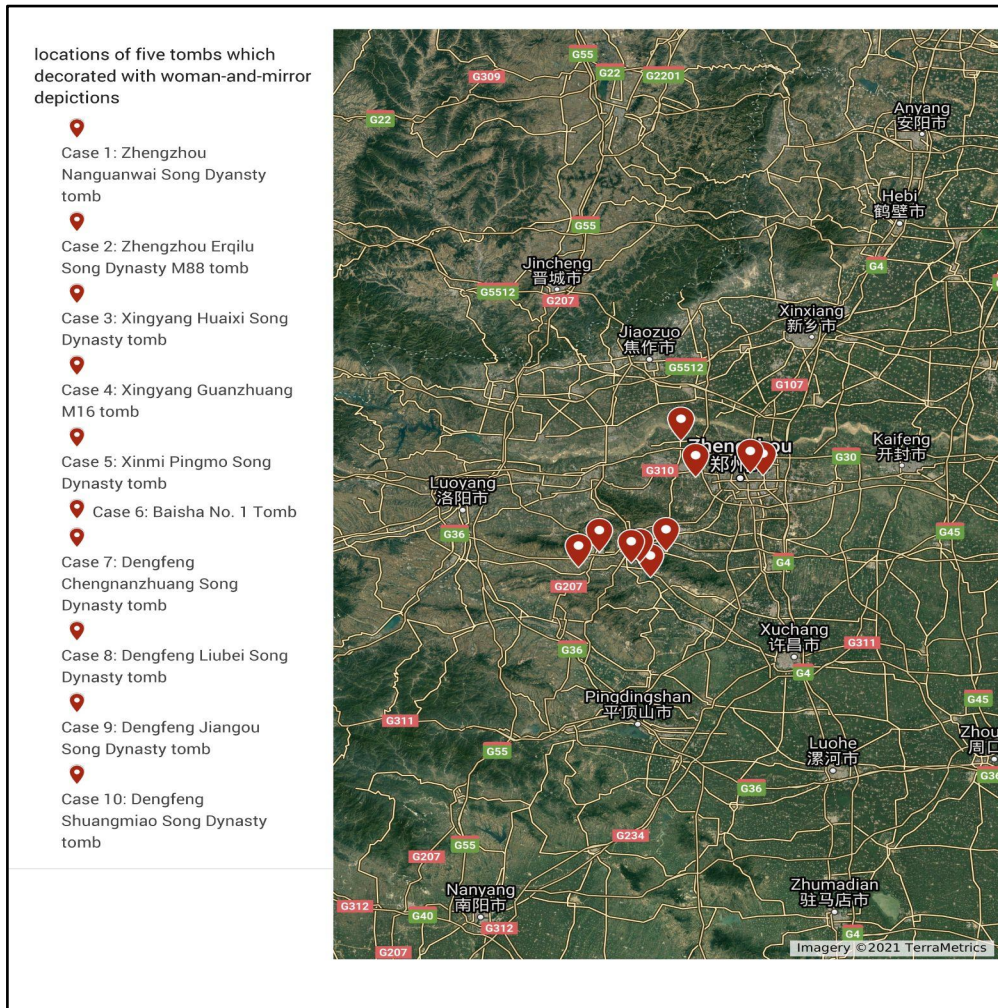


Figure 1. A map showing the distribution of the 19 mural tombs analysed in the essay. Red pins show the locations of tombs with mirror depictions (created by the author via Google Maps).

Of the ten mural tombs decorated with mirror depictions, the sex of occupants in three double tombs (Case 4, Case 6 and Case 9) are identified – these double burials consist of one male and one female. Also, depictions appear in both single burials and double burials, so it is hard to speculate about a relationship between mirror depictions and grave occupants.

When mirrors are depicted in murals, they typically have a close association with women. Twelve mirrors are depicted in ten mural tombs: seven of the mirrors are shown as being held or used by figures, all of which are female; four mirrors are displayed with other objects, and one mirror is shown individually on a wall. Mirrors are only one element of tomb murals; any exploration of the meanings of mirrors should also consider the relationship between the mirror and other elements in the murals. According to the contents of the mirror representations, these mirror depictions can be classified into three categories: firstly, mirrors used by women for makeup; secondly, mirrors held by female attendants; and thirdly, mirrors shown as interior furniture.

Three of the depictions (Cases 3, 5 and 6) show mirrors being used by women as a cosmetic implement. In these scenes, a woman is looking into a mirror while doing her hair. In Case 3, the group of objects includes a ruler, a pair of scissors, an iron, and a cloth stand, all of which are represented on the left side of the scene. On the right side, two women are standing and looking at the mirror placed between them. The woman on the left is doing her hair with the mirror. A mirror is on the southwestern wall of the burial chamber in the coiffuring scene: a woman is using a hairpin to arrange her hair before a mirror stand and her reflection is shown in the mirror. Another example is Case 6 where five women are depicted in the scene. The woman standing in the centre of the scene is placing her headwear on her head while looking into the mirror in front of her.

In Cases 8 and 9, mirrors are not in use by women, instead, they are held by female maids who are attending to their mistresses. These two cases show four maids, who are of smaller size, standing and holding a mirror. Additionally, the body language provides some clues: in both cases, the maids are shown as standing, while the mistresses are shown sitting on chairs. It seems that these maids may be holding ordinary implements for their mistresses, and once they need to use a mirror, the maids can offer it instantly.

Table 1. A list of mural tombs discussed in the article.

No.	Site	Date	Skeletal Remains	Structure	Mirror depiction and relevant visual elements
Case 1	Zhengzhou Nanguanwai Song Dynasty tomb	1056 AD	Two skeletons, sex unknown	One chamber with four walls	Twelve items are shown on the eastern wall, viewing from left to right, the items are: a set of calligraphy implements (an inkstone, a calligraphy brush holder, two calligraphy brushes) on a tall case; a clothes hanger with two irons, one ruler and one pair of scissors shown under the hanger; and a mirror stand (for the related image, see Henan 1958, 53).
Case 2	Zhengzhou Erqilu Song Dynasty M88 tomb	Northern Song Dynasty	One skull was found, sex unknown	One chamber with four walls	On the eastern wall of the chamber, a cloth hanger is shown on the left side of the scene. Under the clothes hanger, an iron, a ruler, a pair of scissors and another iron are shown. To the right of the clothes hanger, a mirror stand is shown placed on a table, this mirror (a round disk) is shown fixed to the top of the stand. Beside the mirror stand, a candle hanger is shown (for the image, see Zhengzhou 2012, 17)

Case 3	Xingyang Huaixi Song Dynasty tomb	Northern Song Dynasty	One skeleton remained, sex unknown	One chamber with four walls	On the eastern wall, the group of objects includes a ruler, a pair of scissors, an iron, and a cloth stand, these are represented on the left side of the scene. On the right side, two women are shown standing and looking at the mirror placed between them. One of the women is shown doing up her hair in the mirror (for the related image, see Zhengzhou and Xingyang 2008, 22).
Case 4	Xingyang Guanzhuang M16 tomb	Northern Song Dynasty	Two skulls were found, one male and one female	One chamber with four walls	On the eastern wall of the chamber, a mirror stand is shown between a clothes stand and a candle holder. Under the clothes stand, a pair of scissors and an iron are represented (for the related image, Zhengzhou and Zhengzhou 2013, 18).
Case 5	Xinmi Pingmo Song Dynasty tomb	1108 AD	Two skulls were found, sex unknown	One chamber with eight walls	A coiffuring scene that includes a mirror is shown on the southwestern wall of the burial chamber. A woman is using a hair stick to arrange her hair before a mirror stand. The woman's reflection is shown in the mirror (for the image, Zhengzhou and Xinmi 1998, 28)
Case 6	Baisha No. 1 Tomb	1099 AD	Two skulls were found, one male and one female	Two Chambers (four walls in the front chamber, six walls in the rear chamber)	The depiction of the mirror is shown on the south-western wall of the rear chamber. Five women are depicted in the scene, the woman standing in the centre of the scene is putting on her headwear while looking into the mirror in front of her. The central figure is surrounded by four other women who may be her attendants. A basin stand is displayed behind the two women on the right of the mural. On the top of the scene, the curtains are shown (for the image, see Su 2002, plate 6).

<p>Case 7</p>	<p>Dengfeng Chengnanzhuang Song Dynasty tomb</p>	<p>Northern Song Dynasty</p>	<p>Unknown</p>	<p>One chamber with eight walls</p>	<p>A mirror stand is shown separately on the north-eastern wall, next to the mirror stand, a wall showing a fake door (the northern wall) and a wall decorated with a clothes hanger (the eastern wall). On the south-eastern wall, a group of items, including a pair of scissors, an iron, and a candle holder, is depicted (for the related image, see Zhengzhou and Dengfeng 2005, 69)</p>
<p>Case 8</p>	<p>Dengfeng Liubei Song Dynasty tomb</p>	<p>Northern Song Dynasty</p>	<p>Unknown</p>	<p>One chamber with six walls</p>	<p>On the north-eastern wall of the tomb, a mirror is shown, held by a woman standing on the left-hand side. The smaller size of the figure signifies that the standing figure may be a servant of the seated woman. The maid is standing to the left of a table, she is depicted holding a mirror with a tassel knotted on its rear side. On the other side of the table, a woman is shown sitting on a chair. (for the related image, see Zhengzhou 2005, 58).</p>
<p>Case 9</p>	<p>Dengfeng Jiangou Song Dynasty tomb</p>	<p>Northern Song Dynasty</p>	<p>Two skeletons, one male and one female</p>	<p>One chamber with eight walls</p>	<p>Three woman-mirror depictions are represented in this tomb on the western wall, the north-western wall, and the south-eastern wall. Within these woman-mirror depictions, all the mirror holders are depicted as maids: one is attending to her mistress, while the other two are shown holding mirrors and waiting for orders. The female mirror holder on the western wall mural is shown standing beside her mistress. On the north-western wall, four maids are standing before a table. The mirror holder is standing on the left, while another maid is standing by the mirror holder, holding a set of teacups. On the south-eastern wall, two figures are depicted, the woman on the left is holding a mirror, while the other woman is holding a cloth. On the right of the scene, a basin stand is depicted (for the image, see Deng 2011, 290)</p>

Case 10	Dengfeng Shuangmiao Song Dynasty tomb	Northern Song Dynasty	Two skeletons, sex unknown	One chamber with eight walls	A mirror stand, a pair of scissors and an iron are shown on the north-eastern wall (Figure 2).
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In terms of the mirrors without figures, four are placed with other objects and furniture (Cases 1, 2, 4 and 10), and one mirror is shown individually on a wall (Case 10) (Figure 2). In these depictions, four mirrors are accompanied by scissors and an iron, three are accompanied by a clothes hanger and two are with a candle hanger. This combination of items reveals that not every ordinary implement would be represented on the wall. As suggested by Deng (2011), the combination of scissors and an iron is identified as a symbol of femininity and a sign for feminine space in Song Dynasty tombs. Here, mirrors are placed with women's belongings, such as scissors and an iron, which indicates that mirrors may also represent women's belongings.



Figure 2. Mural showing a mirror stand placed with other furniture and objects in Case Case 10: Dengfeng Shuangmiao Song Dynasty tomb (Song et al. 2012: 36, with the permission of the publisher).

Interestingly, furniture and women coiffuring scenes are depicted together on one wall in Case 3. To the left of the wall, a ruler, a pair of scissors, an iron and a clothes hanger are shown together. In this scene, the mirror stand is not shown with the other implements; it is depicted individually to the right and is being used by two women. This depiction clearly indicates that mirrors are a beautification tool for women.

Moreover, furniture and female figures are depicted within one scene without separation, indicating a certain association between the furniture and the two female figures in the same scene.

The clothes hanger is also depicted in the coiffuring scenes of Case 6. In this context, a clothes hanger is a common item found in women's boudoirs. Again, in Case 9, the mural on the south-eastern wall depicts women with the mirror and the clothes hanger: one maid is holding a mirror and she is walking to the right where a clothes hanger is depicted. Here, the clothes hanger is a multifunctional device which serves as a basin stand. Considering the function of the mirror, the clothes hanger, and the basin stand, it is possible to imagine that the space depicted in Case 9 was a place for women to put on makeup and get dressed.

The eight cases exemplify mirrors as the signs for femininity and feminine spaces in burial contexts. Cases 1, 2, 4, 7 and 10 are accompanied by scissors, irons, clothes hangers and other domestic implements which were considered to be female material culture at the time. In Cases 3, 6 and 9, mirrors and other domestic objects are shown being used by women during their beautification practises, which also provide evidence for the relationship between mirrors and femininity and feminine space. Case 3 shows that there is a relationship between certain objects, such as an iron, a pair of scissors, a clothes hanger, a mirror, and women. Case 6 not only represents how mirrors function in women's lives but also provides a clue about the context in which a clothes hanger is needed whereas the space in Case 9 is a boudoir for women to get dressed.

It is noteworthy that all mirror depictions are shown in interior space, which is signified by decorated draperies, furniture and beams, as well as the border of the mural (e.g., the red/black lines depicted around the scene) on ten occasions. To be specific, the murals of four tombs – Cases 5, 6, 7 and 9 – that depict mirrors also contain curtains. Additionally, there is domestic furniture in the scenes where the mirrors are represented: a dressing table is shown in Case 5, and a mirror stand and a tray are shown placed on the dressing table, and curtains are depicted on this furniture. The curtains on the furniture indicate that it is an indoor space.

Overall, the 12 woman-mirror depictions demonstrate that mirrors are associated with femininity, especially with elite women's beautification activities. Additionally, mirrors are shown together with other women's belongings, such as scissors, irons and clothes hangers, all of these items are housework tools which are used for sewing and clothes making. In this way, mirror motifs are also associated with women's lives in private or interior spaces.

Interpretations of Mirror Depictions in Funerary context

As concluded in the last section, all ten cases reveal the close relationship between mirrors and females. In addition to depicting female figures and mirrors in the same scene, as shown in Cases 1, 2, 4 and 10, mirror stands are depicted with other women's housework tools, including scissors, irons and clothes stands. The scissors and irons are exclusively associated with women's virtue of 'womanly work' (Deng 2011: 18-19). In this case, I suggest that mirrors symbolise women's virtues like the irons and scissors.

Some scholars have postulated that the scene in which women are applying makeup may be associated with women's virtues. For instance, Lee (2010: 107-108) suggests the woman-mirror scene depicted in the Xinmi Song tomb symbolises 'womanly appearance'. Applying makeup, doing coiffure, and wearing decent clothes were a means to meet the requirements of 'womanly appearance'. Among the ten cases, three mirrors are shown used by women to do coiffure or makeup. As a necessary tool for beautification practice, it can be assumed that the representation of a mirror may signify the 'ideal' appearance of women.

In fact, from grave goods and tomb inscriptions (*Muzhi*), murals are not the only way to represent women's virtues in funerary contexts. Mirror and scissors are found as grave goods in some Tang

Dynasty female tombs, and it is argued that the buried mirrors in these graves represented that the deceased was a virtuous wife and a good mother (Fan 2016). In the Song Dynasty, however, the funerary custom changed. Decorations in Song Dynasty tombs might function as a simulation of grave goods (Qin 2005). Furniture, such as tables, clothes hangers, candle holders, and mirror stands adorn the interior walls of graves, taking the place of real grave goods like miniature model furniture. In this vein, the murals and brick reliefs on walls, and even the tomb itself, become a 'spirit article' (Hong 2015: 185–188). Thus, mirror and mirror stand depictions on walls could also be regarded as grave gifts, and they might be endowed with similar symbolic meanings as the real buried mirrors in the Tang Dynasty.

Tomb inscriptions are biographical records of the deceased. They were inscribed on stone buried inside the grave (Shields 2007). Funerary inscriptions for women praised their contributions to their families, as well as their appropriate beautification regimens (Bossler 1998: 18). Womanly appearance was one of the appropriate regimens that would also be praised in tomb inscriptions in both the Tang and Song, where a woman's physical beauty was compared to 'jade' in tomb inscriptions (Bossler 1998: 18.). Out of 10 cases, three tombs (Case 4, 6 and 9) are double tombs in which one male and one female are buried. In this context, mirror motifs could be regarded as another means of representing and praising the womanly appearance of the female tomb occupants. As such, the appearance of mirror depictions in tombs is a visualised representation of the good virtue of 'womanly appearance'

Furthermore, mirror depictions within interior spaces may reflect the idea of gender separation. Wu provides an interesting example of how a framing device in painting distinguishes masculine space and feminine space (1996: 79). In the painting *Double Screens*, the space is divided into a public space and an interior space with which the public space is the masculine sphere where the men chat and play chess while a private sphere depicts a man being attended to by four women in his bedroom (1996: 79, 127–130.) (Figure 3).



Figure 3. A copy of *The Double Screen: Emperor Li Jing Watching his Brothers Play Weiqi*. Author unknown, after the original work by Zhou Wenju (active mid-10th century). 14th century. Dimensions: 31.3 x 50 cm. (Freer Gallery of Art and Arthur M. Sackler Gallery, licensed under CC0 1.0).

Wu's investigation of the screen as a framing device can be applied to the exploration of the relationship between women and private space in the 12 mirror depictions discussed in the previous section. All 12 depictions situate the mirrors and the female figures in an interior space, and the spatial arrangements of the murals are depicted using framing devices, with curtains being one of the important devices. While screens constitute the background of a painting, curtains form the foreground in Cases 5, 6, 7 and 9. In these four murals, the viewers' sight is led to the interior space under the curtains, signifying that the woman-mirror depictions are placed within an enclosed space, from which the spectator is separate. Screens and curtains are used as framing devices in visual art to express and reinforce gender separation and the spatial division caused by this separation. Additionally, as analysed above, a mirror is exclusively related to femininity (especially relevant to women's beautification practices and womanly appearance). Here, the separation of sex provides a potential explanation to mirror depictions in murals which are exclusively depicted with female figures and women's belongings.

The appearance of mirror depictions in tombs represent women's ordinary lives and symbolise women's virtues and the ideal mode of women in Confucian view. On the one hand, mirror depictions in murals represent women's beautification activities in interior spaces, symbolising womanly appearance. On the other hand, showing women's belongings indoors may imply womanly behaviour, which is based on gender separation. For women, the private space is where they apply make-up, get dressed up, participate in leisure activities, do housework, and wait for their absent lovers. In other words, the domestic sphere is the place where women spend most of their time.

In the 12 mirror depictions from the mural tombs in Zhengzhou, mirrors appear together with female figures and other women's belongings and framing devices, such as curtains, to construct a stage for women to live and work. In this context, the mirror can be regarded not only as a symbol of women and womanly appearance but also as an element used to construct feminine space.

Mirrors as Love Tokens and Erotic Symbols

As mirrors have a close relationship with women and femininity, and are chosen as feminine icons in murals, it is worthwhile to have a closer look at their functions and symbolism in relation to femininity in a broader cultural context.

The first aspect to consider is the role of the mirror in women's life. In addition to the practical function of mirrors, they play an important role in love and marriage (Liu 2004). Decorations on mirrors provide clues about their function as love tokens. Han-dynasty mirrors sometimes had pledges of love inscribed on the reverse side (Li 2012; Zhang 2015). For example, a bronze mirror dating back to the 2nd century BC is inscribed with a poem on the back:

Even though my fair qualities endure unchanged,
The false intrigues of others may yet win your favour.
By virtue of its intrinsic purity [this mirror] reflects the light;
Its radiance is like that of the sun and moon.
My heart aspires to prove its loyalty;
But it is thwarted and has no vent [translation by Yetts (1939: 23-24)].

The inscription perhaps reveals the soul of a lovesick person who wishes to use the poem and mirror to express their love, to swear that the love will never fade away and that they will always be loyal to their

lover. In addition to the example given above, 23 Han bronze mirrors with the inscription ‘may we forever not forget each other (*wu xiang wang*)’ are recorded in *The Mirror Collection of Hanmingzhai*. Six mirrors inscribed with the same text have also been recorded by Kalgren (Karlsgren 1934: 20–21; Zhang 2015: 53–54).

Furthermore, mirrors were necessary ritual implements for weddings in the Tang–Song period (AD 618–1279) (Liu 2004: 27–35). ‘A Record of Dreaming of Hua in the Eastern Capital’ (*Dongjing Meng Hua Lu*) by Meng Yuanlao records the customs and lives in the capital city of the Northern Song Dynasty, Kaifeng (West 1985: 63–64). In Chapter 5 of the book, the author describes how mirrors were used during wedding rituals: the bride needed to follow a person who was holding a mirror to enter her new bedroom, and she then needed to bow to a mirror the day after her wedding (Meng 2014). Murals of the Mogao Grottoes provide additional evidence for the use of mirrors for marriage rituals. Forty-six wedding scenes are identified at the Mogao Grottoes, and six Tang–Song murals show mirrors in wedding scenes (Qi 2015: 41–43). Take the depiction of a wedding at the Mogao No. 454 cave as an example. It captures the moment the new couple bow to the invited guests. The couple are standing to the left, facing rightward and bowing. To the right is a tent where guests are sitting around a table. Between the new couple and the guests, geese and a round mirror are shown (for the image, see Tan 1999: 109).

Another significant change in the meaning of mirrors is the development of the erotic symbolism of mirrors during the Sui–Tang period (AD 581–907). The Yuan Dynasty poet, Yang Tieya, describes the licentious activities that took place in the Hall of Mirrors (*Jingdian*):

In the clear spring, in the Hall of Mirrors,
Many a secret game is played,
The reflected images of the jade-like bodies,
Carefully imitate their every movement [translation by Van Gulik 2002: 191].

This poem is modified from an anecdote about Wu Zetian (AD 624–705), who is the only female emperor in Chinese history. Before ascending the throne, Emperor Wu was the wife of Emperor Taizong (AD 598–649) and his son, the emperor Gaozong (AD 628–683). The story about Wu Zetian was recorded in *Shaoshi Shanfang Bicong* by a Ming Dynasty scholar Hu Yinglin (AD 1551–1602) (Van Gulik 2002: 190–91). The story describes that Wu Zetian asked her then husband, Emperor Gaozong, to construct the Hall of Mirrors, in which all the walls were decorated with mirrors. The Hall of Mirrors then became the place for Empress Wu to entertain her lovers.

Mirrors were also a frequent medium for the depiction of erotic scenes. For instance, a Yuan Dynasty mirror preserved in the Cleveland Museum of Art is engraved with similar erotic scenes (four couples making love) on the back (Figure 4). Some scholars suggest that gothic mirror cases that are decorated with romantic scenarios would encourage viewers to imitate the behaviours engraved on the mirror cases (Reyes 2020; Smith 2017). Erotic patterns on bronze mirrors in ancient China might have also had the same function of stimulating viewers’ sexual desires when they looked at the scenes.



Figure 4. A Yuan Dynasty erotic mirror. Dimension: 7.2 cm; Overall: 1 cm; Rim: 1 cm. Yuan dynasty (Cleveland Museum of Art, licensed under CC0 1.0).

Conclusion

Throughout this study, I argue that mirrors are exclusively connected with feminine objects and female figures, as seen in the 12 mirror depictions discussed above. Mirror depictions that are shown together with female figures and women's belongings in interior spaces in the Northern Song Dynasty's tomb murals can be regarded as gendered objects. The mirror as a gendered object is based on the Confucian notion of gender segregation, an ideal model of the appropriate behaviours of different genders.

Putting on make-up and styling their hair are ways for women to keep a decent appearance and to show their 'womanly appearance'. In funerary contexts, a woman's beautiful appearance is praised in the tomb inscription but was also visualised in the murals by the representation of a woman putting on makeup with a mirror. By depicting women's belongings and female figures on murals, recording the good virtues of women in tomb inscriptions, a feminine space is constructed inside the graves. Additionally, the combination of the mirror and female figures or other feminine belongings, such as irons, scissors, and clothes hangers, may serve as a symbolism of femininity and women's good virtues in funerary contexts.

Finally, cultural meanings of mirrors might influence the representation of mirror motifs in tomb murals. Mirrors were love tokens for lovers and important ritual objects in Song Dynasty weddings. Moreover, the anecdote of the Hall of Mirror endows mirrors with erotic symbolism. It is the significant function of mirrors in women's love and marriages, and their association with erotism make them a feminine object. This way, mirrors were represented as an object belonging to private space, especially an object displayed in women's boudoir. Therefore, mirrors are depicted together with female figures and other women's belongings in tomb murals and paintings.

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Politics of Identity and Symbolism: Interpreting the Paintings of Begum Samru

Alina Naqvi¹

Abstract

The paper explores the virtual absence of women's voices in historical records and intends to 'retrieve' those voices from oblivion through an analysis of three paintings. During the disintegration period of the Mughal Empire between the 18th and the 19th centuries, women's presence in the political and cultural spaces became increasingly more discernible. They appeared at the forefront as both ruler-regents as well as commanders of battalions starting their careers as courtesans. One of the most prominent examples is a courtesan turned ruler-commander, called Begum Samru of Sardhana. However, her voice has been conspicuously absent from Indian history. A few problems involved in this scholarly reconstruction of the past is the inherent androcentrism underlying the historical sources, the nature of historical inquiry and epistemology. As a result of this, Begum has been largely rendered 'invisible'. This paper investigates the dynamics of identity formation and self-representation of women in paintings, especially those of Begum Samru. The three paintings analysed in the paper demonstrate how gendered spaces, symbolism and material culture was spaced for women to negotiate gender identities in 18th century North India.

Keywords: material culture, 18th century, gender archaeology, courtesans, androcentrism, symbolism

Introduction

Women have played an active and crucial part in the functioning of the Mughal Empire since its inception in the subcontinent (Balabanlilar 2010; Mukherjee 2001; Schofield 2012) (Figure 1). During the 18th and the early 19th centuries, with the disintegration of the Mughal Empire, there was an increasing presence of women in the political and cultural spaces (Dalal 2015; Lall 2012). They appeared in the forefront as both ruler-regents as well as commanders of troops participating in the intermittent wars and battles. Most of these women started their careers as courtesans and one of the most prominent examples of such courtesans turned ruler-commander was Begum Samru of Sardhana (Dalal 2015; Hingorani 2003; Lall 2012).

This paper aims to illustrate how gender archaeology frameworks can be employed to challenge androcentric narratives of the past (North Indian history) through examination of Begum's portraits. As stated by Joan Scott (1999: 42-50) gender is produced by cultures and societies of human relationships. The idea of gender is politically contested and is the means by which the world is ordered, and relations of power produced. Hence, it is implied that gender can be used as a tool to understand, contest, and contextualize how knowledge about sexual differences has been produced through time and space (Scott 1999). Additionally, gender archaeology, aims to trace and analyse cultural response to sexual difference and how it is resolved in a variety of gender arrangements (Sørensen 2013) which is an approach I take in this article.

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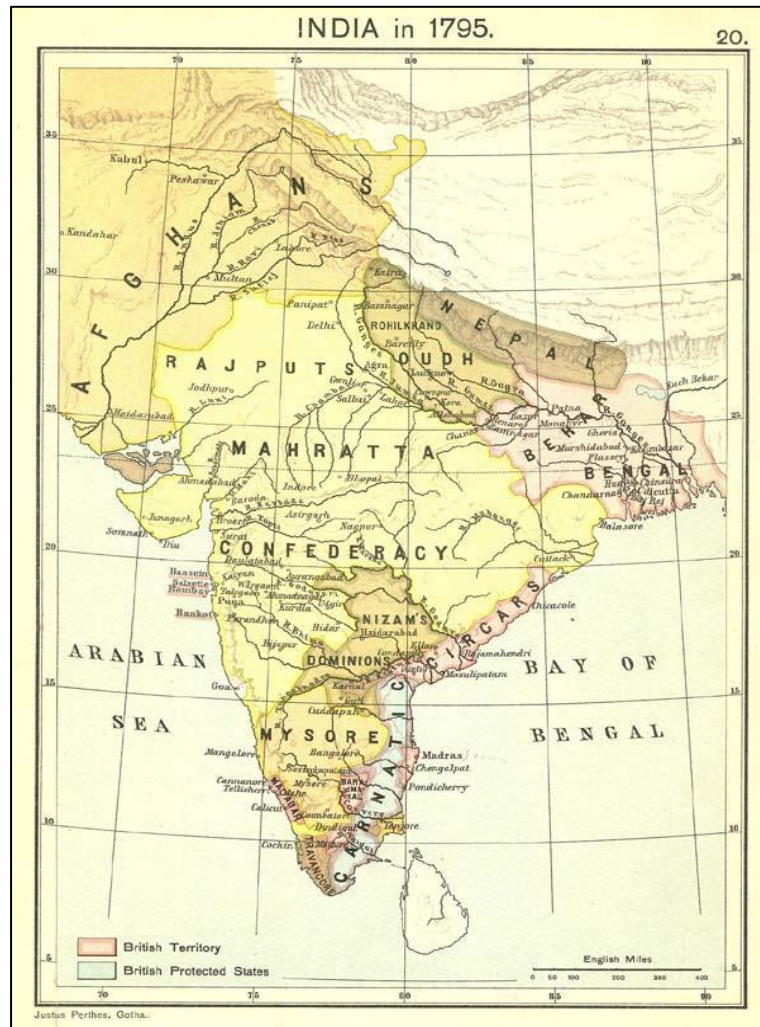


Figure 1. Political Map of the Indian Subcontinent, 1795 CE (after Joppens 1914, edited by the author).

However, androcentric biases both in historical sources as well as that of epistemology and the nature of historical inquiry overlook the gendered nature of social relations of power in the past and as a result, render gender relations, and by extension women 'invisible' (see Hays-Gillip *et al.* 1998; Skogstrand 2011).

The examination of dynamics of identity formation in paintings of Begum Samru (c. 1760-1836) is undertaken to adopt contextual and historical analysis of the paintings of Begum Samru to discuss how symbols serve as a metonymy for masculinity and/or femininity and hence act as a tool for negotiating gender identity in the larger framework of gender ideology. The increasing power of women during the 18th century was manifested in the expanding subject matter of the paintings during the 18th and 19th centuries (Dalal 2015). Although traditional themes such as courts and hunting scenes continued to be depicted, there was greater incorporation of women as subjects as well as who came to be depicted in quite diverse contexts (Dalal 2015). The three samples analysed in the paper depict Begum Samru in

three different contexts- portrait, the *darbar* or the court and the battlefield and show how spaces and contexts can be appropriated and engendered as areas for negotiating gender identities.²

Women and the Socio-Cultural Context of the 18th Century North India

The increasing visibility and direct participation of women in public affairs marks a shift in the 18th century social and political organisation in North India. Changes in the visibility of new 'social' groups can be seen in several examples of women participation such as Ahilya Bai, Shar-un-Nisa Begum, Hazrat Mahal and Quidsia Begum (Dalal 2015). Similarly, during this period leading women- most of whom were courtesans gradually rose to power as consorts of nawabs as well as in their own right partly due to their political and economic circumstances. Unlike the previous centuries women usually came from a noble or 'respectable' background, courtesans were essentially looked down upon as dishonourable because of their profession as dancers and singers, thus being subjected to the male gaze (Dalal 2015). These courtesans were, however, educated especially in literature and politics, and were considered to be sophisticated and witty with a sense of graceful dignity in all their actions (Hingorani 2003). While they were traditionally placed outside the respectable sphere of the society, they usually accompanied the *nawabs* and princes, as well as other men of means on their sojourns or important political missions, places which were otherwise inaccessible to the 'respectable women' who observed the codes of *pardah*³ or seclusion within the confines of the domestic sphere (Dalal 2015; Parkes *et al.* 2012). The place of courtesans in male dominated public sphere was both outside and within the highest echelons of the society and provided them with the opportunities to experiment, forge new identities and concentrate power in their hands, thus climbing up the social ladder and replacing the high-born, respectful, and lawful wives to become the chief partners and political advisors of important men (Dalal 2015; Hingorani 2003).

Nevertheless, during the 18th century an imminent shift in aesthetics in the northern half of the Indian subcontinent arrived along with new forms of poetry, arts and performances such as *khayal bandi* and *thumri* which were centred around the notions of beauty and sensual pleasures. In paintings, the nude female body and erotic depictions became popular themes (Dalal 2015). There was a similar emphasis on themes such as sentiments of the heart, love and longing, and erotic desires. This was a part of the development of the *Rekhta* and *Rekhti* literature which evolved along with Urdu language (Dalal 2015). Urdu was increasingly becoming important as the language of the poets and the court as compared to Persian, the language of the Mughal court since the reign of Akbar (r. 1556-1605) (Faruqi 2001). While the former was intrinsically associated with 'women' because of its emphasis on feelings and sensuality, the latter was considered to be more masculine in nature (Faruqi 2001). Regardless of these connotations, Urdu became widely popular as it provided space for newer expressions and art forms to develop, such as the *khayal bandi* in areas of sociability such as the *mehfils* and the *mushairas* (Dalal 2015). Amid the artistic and cultural expressions associated with womanhood and political instability, Begum Samru rose to prominence. She ultimately carved out a principality of her own, that is, Sardhana in

² A total number of ten samples were studied (including a sculptural representation), however, a major limitation faced during the course of the paper was a lack of physical access to the site of Sardhana and the inability to access two portraits in the Chester Beatty Library Collection owing to their unavailability on display.

³ *Purdah* is a custom practised in some Muslim and Hindu societies, in which women either remain in a special part of the house or cover their faces and bodies to avoid being seen by men who are not related to them. Source: COBUILD Advanced English Dictionary. Copyright © HarperCollins Publishers.

present-day Uttar Pradesh, manoeuvring through the political intrigues and shifting alliances of the 18th-century, also known as '*gardi ka waqt*' or the times of trouble (Lall 2012).

Begum Samru

Begum Samru was born as Farzana sometime during the 1750s (Lall 2012). Details about her birth and origins are obscure. She was the daughter of a nobleman from his second wife in the small village of Kotana near Meerut, 61.4km from Delhi. The family was either of Kashmiri descent or a Saiyad family of Arabian origin (Ghosh 2006; Lall 2012). After the death of her father, Farzana (then ten years old), her mother did not receive any support from her half-brother, hence decided to leave for the city of Shahjahanabad in search of better opportunities (Lall 2012). However, soon after their arrival, Farzana's mother passed away, leaving her alone in the city. It was during this time that a renowned *tawaif* or courtesan of Chawri Bazaar spotted her and took Farzana under her care. She consequently started her career as a courtesan, being trained in all that was expected from her profession- an accomplished dancer and singer with a lively wit. She regularly performed in *mehfils* which attracted several patrons- from noblemen to foreign travellers and mercenaries. It was during one such evening performance in the year 1765 that Walter Reinhardt, an Austrian mercenary who was working for the Jats at that time 'discovered' Farzana (Ghosh 2006; Lall 2012).

From then until the death of Reinhardt in 1778, Farzana, alias Begum Samru became his constant companion during diplomatic missions and in the battlefields, winning the trust and support of his troops (Lall 2012). Although it is not clear whether the two were formally married or not as the accounts differ, Farzana came to be known as Begum Samru (Ghosh 2006) in association with Reinhardt. The title '*begum*' was honorific and used to describe a woman of noble descent. Thus, by adopting this title, Begum Samru affirmed her status as a noblewoman and solidified her connection with Reinhardt, who, by then had become a formidable officer with a battalion of 2000 soldiers (Ghosh 2006).

In 1773, he joined the service of the Mughal emperor and was granted the *jagir* of Sardhana (85km northeast of Delhi) in the modern-day state of Uttar Pradesh to maintain his troops (Pillai 2019). She actively participated in managing the estate (Pillai 2019).

Reinhardt had a son from his first wife, but, upon the former's death in 1778, with full support from the soldiers, she had the Mughal Emperor Shah Alam recognize her as the heir of her spouse's battalions and *jaidad* (rent-free land) in return of his services (Ghosh 2006). While it was quite common for courtesans to become chief consorts during the 18th century, what truly made Begum Samru exceptional was that she became the successor instead of a custodian of Reinhardt's property (Ghosh 2006). As a leader, she proved herself more than worthy of the favour by thrice coming to the rescue of the emperor throughout the 1780s. As a result of this service, she was given the title '*Zeb-un-Nissa*' (Ornament of her Sex), *Farzand i Azizi* (Beloved Daughter) and '*Umdat al Arakim*' (Pillar of the State), thus becoming a trusted advisor of the emperor (Pillai 2019). In 1781, three years after her husband's death, she had herself baptised and converted to Catholicism (Lall 2012). The precise reasons for this conversion are subject to debate, however, it has been widely understood as an attempt on her part to adopt multiple identities which allowed her to better negotiate and blend with the communities she interacted with (Ghosh 2006; Hingorani 2003). Therefore, although she changed her name to Joanna following her conversion, held Christmas parties, and commissioned the construction of churches, her lifestyle remained very much like that of a Mughal noblewoman. In the early years of the 19th century, the British power in the region was on the rise especially after the defeat of the Marathas in the Anglo-Maratha wars. As a result of the shifting balance of power in favour of the British, Begum Samru entered secret negotiations with the Company as early as 1803 and joined their side on the condition that she

be allowed to maintain her estate and troops which now consisted of six battalions and over 3000 soldiers (Hingorani 2003; Ghosh 2006). By the time of her death in 1836, Begum Samru was one of the richest and most influential women to have lived during her time (Ghosh 2006; Pillai 2019).

Despite her illustrious career, Begum left no accounts or records of her own. However, her name appears many times in official correspondence and the official records of her estate along with travelogues and journals of Company officials (Marshall 2018). There is also a biographical poem dedicated to her written in Persian by Lala Gokul Chand in the year 1823. The poem eulogises the Begum as ‘peerless one’, ‘appointed by God’, ‘blessed by the King’ and ‘loved by all’ (Marshall 2018).

The Paintings

Begum Samru’s paintings fall within the category of ‘Company Style’ paintings which can be described as a blend of eastern and western painting techniques and stylistic markers (Leach 1995; Marshall 2018). These paintings were produced by Indian artists for their new patrons, that is, the representatives and employees of the East India Company who appreciated western aesthetic of paintings, particularly portraits. The artists were trained to use transparent watercolours to shade in a western way and to calculate spatial recession (Leach 1995). Among the ‘Company Style’ artists, Raja Jiwan Ram, known for his naturalistic European manner of painting (Losty 2015) was particularly adept at painting portraits and was patronised by the Company officials and the Indian nobility, including Begum Samru (Losty 2015).

Begum, in fact, decorated her principal palace at Saradhanawith about twenty-five oil portraits of herself, members of her household and other notables (Keene 1907; Leach 1995). Paintings, like poems, were an important means of articulating political authority and forging an identity. Often imbued with symbolism, paintings were perceived as socio-culturally meaningful and political (Marshall 2018). It was a common practice to exchange portraits as gifts (as an act of diplomacy) as well as to commemorate important events (Hingorani 2003). The public display or the nature of the audience determined the kind of message which was being conveyed through these paintings (Marshall 2018).

Visual Analysis

Table 1 presents a descriptive initial analysis of the paintings of Begum Samru. This table shows Begum Samru in three different contexts- the portrait, the court, and the field. The table also shows the different techniques employed to represent her authority.

Table 1. *Descriptive Analysis of the three Paintings of Begum Samru cited in this article.*

Painting	Description
Figure 2	<p>Scene: Begum Samru (middle-aged) is wearing a bright yellow Kashmiri shawl with a white border with blue floral details. She is shown wearing a two-tiered turban or a cap at a slightly tilted angle beneath the shawl and a red scarf that is covering her hair. She is wearing a six-string pearl necklace and pearl bracelets on both hands. She is also shown holding a huqqah pipe in her right hand and her gaze is direct.</p> <p>Technique and composition of the painting: The portrait has a golden border. The limited background is fairly well defined. The immediate background is occupied by rich and heavy drapings with intricate golden details. In the more distant background are a light blue sky and blurred foliage above Begum's left elbow. The detailed immediate background and the more distant blurred background create a sense of distance and perspective in the portrait. The cool</p>

	<p>colours of the background are in contrast with the bright yellow shawl of the Begum, drawing the attention of the viewer to her. The choice of colours conveys a sense of power to the viewer.</p>
<p>Figure 3</p>	<p>Scene: Begum Samru is riding on an elephant in the centre-rear part of the painting, marching through the grassy plains with her army. She is clad in white and has an umbrella over her head, her decorated elephant is followed by three more elephants with empty palanquins. Her army comprises two columns of infantrymen wearing blue uniforms with red turbans positioned on either side towards the outer boundary of the army. The centre-rear position just below the Begum's elephants is occupied by the cavalry. The army is led by two European officers wearing blue and white uniforms in the front row followed by a file of camel troops forming a frontline of attack. Counterbalancing the rigid rows of infantry, in the centre of the painting is a more casually grouped unit of foot soldiers along with horses and palanquins. The artillery includes guns mounted on camels and cannons drawn by oxen. The army is also accompanied by oxen, water bearers and musicians.</p> <p>Technique and composition of the painting: The organisation of the army in the painting is neat and symmetrical. The contrast of cool (blue) and warm (orange) colours is used to draw the viewer's attention to the Begum in the centre-rear part of the painting as she is otherwise hard to locate. The umbrella along with gilded saddle cloth also attracts attention.</p>
<p>Figure 4</p>	<p>Scene: An elderly Begum Samru is seated on a gilt chair in the centre, holding a huqqah pipe in her right hand. She is shown wearing a turquoise shawl and a two-tiered turban beneath it. She is surrounded by two rows of people who form a semicircle around her. Attention has been paid to individual features and hierarchy- men are depicted according to their status and rank as either seated on a chair, on the ground or standing. Similarly, their clothes are also fashioned keeping their status in mind, and the principle of proximity is also followed, with the most important people sitting near the Begum. Seated on chairs next to Begum Samru are two Europeans- one in navy blue uniform towards her left and the other in a dark suit towards her right followed by an Anglo-Indian in native attire. The four prominent men from Delhi which include three nawabs and one bakshi (paymaster) are also seated in the centre of the painting.</p> <p>Technique and composition of the painting: There are a total number of 80 courtiers depicted which include officers, stewards and servants. The group is surrounded by members of Begum's army and bodyguards clad in blue uniforms with red turbans. In the background is a room with five doors in a neoclassical style of architecture. The white and relatively plain background is in contrast to the rich detailing and bright colours of the ensemble of people-centred around the bright red carpet, the layered arrangement and the windows with shading in the walls provide a sense of depth and perspective to the painting. Similarly, the Begum, though shown comparatively as a smaller figure is nonetheless emphasised by contrasting her bright blue shawl with the dark suits of the Europeans sitting next to her and by placing the central door with red and golden details right behind her. The long snake of the hookah placed in the centre also takes the viewers' attention directly to the begum. The painting is finished with a golden and black border.</p>

Theoretical and Methodological Framework

Gender archaeology can be traced back to the feminist movements of the 1960s and 1970s which criticized the androcentric nature of traditional approaches and aimed at making 'women visible' (Gilchrist 1999: 2-5). Unlike the feminist theory, in the theory of gender, 'gender' is recognized as a constitutive element of social relationships based on perceived differences between the sexes and as a primary way of signifying relationships of power (Scott 1999). These relationships of power can be observed in Begum's paintings.

Gender is performative, and thus, gender relations are not merely reproduced but continuously made through the negotiation of rights and obligations in gendered spaces (Gilchrist 1999; Sørensen 2013). This act of performance involves the usage of material culture as a medium through which gender contact can be both expressed and experienced: paintings (see Sørensen 2013). Symbols that serve as a metonymy for masculinity are invariably associated with power that can be acquired or lost (Gilchrist 1999) and can be taken up by women or be perceived in them by their communities (Gilchrist 1999). The visual and descriptive analysis of Begum's paintings adopted gender and contextual archaeology theoretical framework (see Hodder and Hutson 2003; Scott 1999).

The first approach involves an examination of symbols in the paintings. These symbols are the turban, the *huqqah*, the parasol or *chattr* along with an elaborately clad elephant. The second approach involves an examination of normative concepts and binary gender ideology (see Gilchrist 1999; Hodder and Hutson 2003; Scott 1999), primary and secondary sources are available for the period of study. Lastly, I employed the concept of 'operational meanings' which involves the juxtaposition of symbols employed in their specific contexts. That means that I analyse the gender ideology of Northern India of the 18th and 19th centuries in order to discuss women's identities. Identity formation can be defined as 'a process of identification with broader groups based on socially sanctioned differences' (Diaz-Andreu *et al.* 2005: 1). Thus, the method outlined above can inform us about the politics of gender identity formation and negotiation of Begum.

Finally, in the case of a relative absence of historical records written by women themselves, paintings, and material culture, in general, can be regarded as a text which encodes meanings (Barrett 1987). They can be studied along with the available literature to bring out the instances of variations and inconsistencies within the structure of normative practices in order to challenge gender biases.

Interpreting the Symbolism and Identity Formation

Identity

In the three paintings discussed above, the two stages of self-representation to forge an identity of Begum are discernible. The first stage of identity formation and negotiation which is manifested in the symbols used in paintings is the construction of the identity as a noblewoman (as opposed to a courtesan) both within the circles of the Mughal elites and the European nobility, which involved obscuring her background as a courtesan. The second stage involves forging her identity as a ruler in her own right. For the former, she started by adopting the title 'Begum' and following the norms and etiquettes prescribed for noblewomen, including the *pardah* (Hingorani 2003; Ghosh 2006). It was only much later in her career that she started coming out in public as seen in Figure 3 and Figure 4. Even then, only her hands and face are visible, the rest of her body and hair being covered under a shawl and the turban (See Figures 2 and 3). Coming out of the *pardah* was the next step she took in order to forge her identity as a ruler along with engaging in cross dressing, that is, wearing a turban and 'mannish costume' (Ghosh 2006; Hingorani 2003; Pillai 2019). Apart from serving the functional purpose of

covering her hair as demanded by the norms of *pardah*, the turban had been a muted symbol of power traditionally used by the royalty, that is, elite men and even the emperor (Hingorani 2003; Parkes and Dalrymple 2012). Thus, even though Begum Samru went out in the public spaces beyond the confines of the *zenana*, she had her hair covered, something which was not the case for courtesans. This might indicate that Begum Samru was conscious of her social status as a courtesan and attempted to hide her past by covering her hair like the *pardah* observing women. By incorporating and appropriating this symbol in her dressing style and paintings, she laid her claim to respectability and by extension, authority (Hingorani 2003). Begum Sumru's transvestism and her multiple identities as both a native and European noblewoman allowed her to carve out a niche for herself in the society which was beyond the neatly defined boundaries of traditional gender and cultural norms (Ghosh 2006).



Figure 2. Begum Samru. Attributed to Jivan Ram, 1825-1830 (©Victoria and Albert Museum, London). It is a Company Style, gouache on paper oval miniature portrait of Begum Samru painted by artist Jiwan Ram sometime between 1825-1830 CE. The portrait measures 10.5cm by 8.5cm.



Figure 3. *Begum Samru and Her Army*, c. 1805-1826 (©The Trustees of the Chester Beatty Library, Dublin). This is a Company Style gouache on paper folio painting showing Begum Samru with her army, dating to c. 1805-1826 CE. The painting measures 41.5cm by 63.5cm.

Political Power: Huqqah

As Hodder (1987: 9) states 'symbols of power and authority in durable material serve to make that power more enduring', among the symbols of political power appropriated by Begum in the paintings was the *huqqah*. In Figures 2 and 4, Begum can be seen holding the *huqqah* pipe in her right hand. The *huqqah* had been introduced in the Indian subcontinent in the course of the 17th century and became very popular among the elites (Hingorani 2003). It was often decorated with precious materials and stones and was an indicator of power and prestige. It is a tool of distinguishing the subjects on the basis of hierarchy and status. The absence or presence of *huqqah* or the nature of its embellishments (when multiple subjects have a *huqqah* in the painting) indicated the play of power dynamics among the subjects (Parkes and Dalrymple 2012).

As *huqqah* is signifier of social status and courtly pleasure, it is quite commonly found in portraits and paintings with public settings like the court of emperors, princes, and male aristocracy. Noblewomen were not depicted with the *huqqah* in such public settings; therefore, portraits of Begum with the *huqqah* in the portrait as well as her *darbar*, might indicate that Begum Samru is claiming a status at an equal footing with the male nobility, emphasising her status as a ruler (Hingorani 2003). Additionally, another strategy to show political power and influence was the use of oval portraits which were fairly common

among Europeans (Ghosh 2006; Leach 1995). By commissioning these oval portraits, Begum Samru also affirmed her cultural status as a European noblewoman which was the result of her marriage to Reinhardt.



Figure 4. *Begum Samru and Her Household*, c.1820-1825 by Muhammad Azam (© The Trustees of the Chester Beatty Library, Dublin). This is a gouache on paper folio painting of Begum Samru with her retainers, produced between 1820-1825 CE. The painting measures 45.5cm by 62.5cm.

Authority

Symbols of political authority appropriated by the Begum are the royal umbrella or the *chattr* and the elaborately clad elephant as illustrated in Figure 2. The *chattri* has long been the symbol of sovereignty and royalty in the Indian subcontinent (Hingorani 2003; Parkes and Dalrymple 2012). In this painting, Begum is hardly visible, but the umbrella and the elephants amply signify her royal presence when coupled with an elaborate army become one of the most powerful portrayals of Begum Samru.

Begum's portraits are starting points to defy androcentric narrative and political power which have been frequently portrayed by and for men. Fairly common 'masculinity' is reproduced through imagery constructed by scenes of military action, warfare, and weapons (Gilchrist 1999). These images, however, are not the exclusive reserve of men and can be employed by women too as in the case Begum Samru who is shown in a battlefield commanding her army which speaks of her status not just as a ruler, but also as a military commander. As illustrated in Figures 2 and 3 Begum takes part of spaces such as the *darbar* or the court and the battlefield which have traditionally been construed as 'masculine', thus women were seldom depicted in these arenas (Tandon 2015). These paintings not only make Begum Samru visible in the past but also demonstrate how she interacted with her larger surroundings. This interaction, I suggest, was a continuous process performed not only through individual actions but also

through creative expressions as the different portraits and paintings show (see *appendix I*, Table 3). In other words, Begum employed paintings as a strategy to subversively appropriate male-dominated these spaces and show and celebrate her authority.

Conclusion

The analysis of Begum's paintings by their historic structures of meaning has a special aspect of how noblewomen connect objects to symbols of femininity to values related to political power and social status. Therefore, Begum's paintings were 'places' with socially negotiated meanings (Sørensen 2000). The analysis of these paintings demonstrates a conflictive process of negotiation between the traditional binary oppositions of masculine/feminine and an attempt of Begum Samru to entangle 'her femininity to the masculine creating certain ambiguity. Such an ambiguity is part of her agency as a noblewoman and is the way she wanted herself to be depicted and remembered (Hingorani 2003). I suggest that Begum defied narratives of gender fixed identities, and studying her paintings brings noblewomen to Indian history.

In order to understand historical processes, it is of importance to understand the relationship between individuals and society and how they operate within it (Sørensen 2000). Begum's paintings are a valuable source for understanding the different strategies employed to negotiate her access to public spaces, military power, and authority (usually masculine) while retaining her status as a noblewoman. Her paintings serve as examples to discuss how women had forged female identity when prevalent gender ideologies restricted women to the *zenana* (construed as feminine) (see Parkes and Dalrymple 2012).

Gender is historically constituted, thus is instrumental in questioning the individual-society relationship (Sørensen 2000). The three paintings analysed in this study above show how Begum forged her identity as a ruler, a military commander, Mughal, and European noblewoman. The intricate multi-layered identities allowed Begum to interact with a diverse range of social groups in public settings during a period when women of rank could not have been subjected to the gaze of men (Parkes and Dalrymple l. 2012). By a contextual analysis of Begum's paintings from a gendered lens, this paper retrieved voices and agency of noblewomen in Indian history who have been marginalised due to androcentric biases.

In conclusion, study women as subjects in their own right to make them 'visible' and then proceed with analysing them as gendered beings, that is, as a part of the larger socio-economic structures of the society. Such an approach will give considerable insights into the manner in which material culture is used for structuring social relationships and how it then challenges androcentric narratives of the past. However, the biases and negligence meted out to the narratives of women as a result of the androcentric nature of inquiry also extend to their memory and material culture: paintings. As a result, the paintings of women (just like their literature) have been marginalised, under-represented and understudied while constructing a metanarrative for history (Dalal 2015; Pillai 2019). Hence, there is a pressing need to trace, examine and preserve these sources. The scope of such an approach is extensive and it is necessary to retrieve the conspicuously silent voices of women in history.

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Session 2

Race and Ethnicity Across Time: Introduction

Eleanor Newman¹

Introduction

Historically, the field of archaeology has been influenced by colonialism, racism, and xenophobia. The study of the archaeology of the ancient Mediterranean, to name but one particularly pertinent example, has been subject to centuries of modern whitewashing and Eurocentrism, leading directly to the adoption of the Classical world by white supremacists to further their extremist cause (for a succinct explanation of such an adoption, see Tanner 2010: 1-39). In the UK, such a colonialist mentality is reflected more broadly by museums which display looted objects from across the world and have traditionally used their displays to glorify white, British history and to create a hierarchy of superiority between races and ethnicities (Hicks 2020). Recently, however, calls to decolonise the teaching of history and related subjects (such as archaeology) in schools and universities and the displays of artefacts within museums and elsewhere (see, for instance, the Rhodes Must Fall movement) have become more common than ever in a recognition of the importance of diversity.

Papers in this Session

The proposal for a session based around race and ethnicity was inspired by this necessity to decolonise archaeological studies (and related fields), and to give a platform to groups that have traditionally been excluded from the teaching of world history, particularly in the UK. As highlighted by the following papers, the broadness of the session theme allowed for a wonderfully vast array of interpretations, which is itself key to a session on diversity. The papers included in these proceedings use a range of archaeological techniques to look at different cultures from across history.

‘The Ethnogenesis of Fiji: Examining the Crossroads of Oceania’ pulls together various methods previously used by scholars of Fiji to produce an intersectional view of the country in a search for an answer to the question: who are the Fijian? This study employs linguistic, anthropological, and archaeological analytical techniques, providing a comprehensive insight into the country of Fiji and its people.

An intersectional approach has also been taken in ‘Missing Women or Gender Construction? Representation of Hu peoples in Han Dynasty China’. This study provides an analysis of references to the Hu, a group defined by the people of Han Dynasty China as anyone of different ethnic descent to themselves. Looking through the lens of gender, this paper investigates the construction of ethnicity of the ‘Other’ in art and literature from the Han Dynasty.

‘Who’s at Home? Rethinking Ethnicity and Ethnic Identity in Etruria and Latium’ focuses specifically on material household remains of these regions in the seventh to fifth centuries BC. In an attempt to counteract the conflicting treatment by scholars of each region, this paper provides a balanced approach to the question of Etruscan and Latin ethnic identity from an archaeological perspective.

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A postcolonialist approach has been taken in 'The Role of Ethnicity in Greek Archaeology', which considers the use of archaeology and ancient artefacts in modern Greek politics. The paper takes a critical stance in its investigation into the idea of ethnic continuation from the ancient Macedonians.

Lastly, the speakers who presented at the CASA 4 Conference, but are not published in this volume are:

- Alejandro Gares-Molero, University of Valencia
Embodying the Eurymedon Vase: Modern Theories of Sex and Ethnicity and their Application to the Study of Archaeological Materials
- Alisa Santikarn, University of Cambridge
The Impact of Colonialism on the Formation of Thailand's National Heritage
- Devyani Doshi Kavad, Fergusson College, Pune
Orality as an Indicator of Ethnicity in the Case of Kavadiya Bhats
- Martin Makinson, University of Steasbourg
Negotiating Ethnicity via Costume, Script and Posture on Stelae of North Syria's Iron Age II

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The Ethnogenesis of Fiji

Examining the Crossroads of Oceania

Arturo Tablan¹

Abstract

The regions of Oceania have long been an interesting place of study for academics. Fiji, which is positioned at the centre of the Oceanic world, has been in a unique position and intrigued researchers from all fields. Although there is a substantial amount of literature that has been and continues to be done, there are not many cross-disciplinary conversations about the various studies being done. All too often the works of archaeologists' dip into historical linguistics, or that geneticists utilise archaeological materials to support their claims, but the level of interaction stops there. This paper will attempt to bridge this gap by involving many of the different studies being done on the Fijian islands. And by doing so, it will aim to uncover how the Fijian peoples came to be. By analysing the various linguistic, anthropological, ethnoarchaeological, archaeological, archaeobotanical, zooarchaeological, and genetic studies done in Fiji and the greater Oceanic region, we can begin to take steps in forming the holistic story of the Fijians.

Keywords: pacific archaeology, Fijian prehistory, Austronesian migration, historical linguistics, and genetic history

Introduction

The regions of Oceania have long been an interesting place of study for academics. Fiji, which is uniquely positioned at the centre of the Oceanic world, intrigued researchers from a diverse range of fields. Although a substantial amount of research has been and continues to be done on the islands of Fiji, there are not many cross-disciplinary conversations. All too often the works of archaeologists dip into historical linguistics, or geneticists utilise archaeological materials to support their claims, but the level of interaction stops there. This paper will attempt to bridge this by reviewing the various linguistic, anthropological, ethnoarchaeological, archaeological, paleoecological, zooarchaeological, and genetic studies done on Fiji and the surrounding Oceanic regions.

Historical Underpinnings of Oceania

Before delving into specific studies about Fiji, the Pacific stage must be set. Oceania has long been separated into the cultural/geographic regions of Melanesia, Polynesia, and Micronesia (MPM). This division was proposed by the French naturalist and naval commander Jules-Sébastien César Dumont d'Urville (Burley 2013; Cochrane and Hunt 2015; Shipley *et al.* 2016). Although it was based on racial characteristics of the regions' inhabitants, d'Urville's terminology for these regions and peoples has remained, though in diminishing frequency. The terminology remains useful in distinguishing cultural and genetic differences, and it has moved past its dark origins. Most have opted for an alternative naming convention of Near versus Remote Oceania (NRO). While there are many that advocate for the shift to the NRO, many of the genetic studies still rely heavily on the former MPM division. It is for this reason that the MPM scheme will be used in certain instances of this paper.

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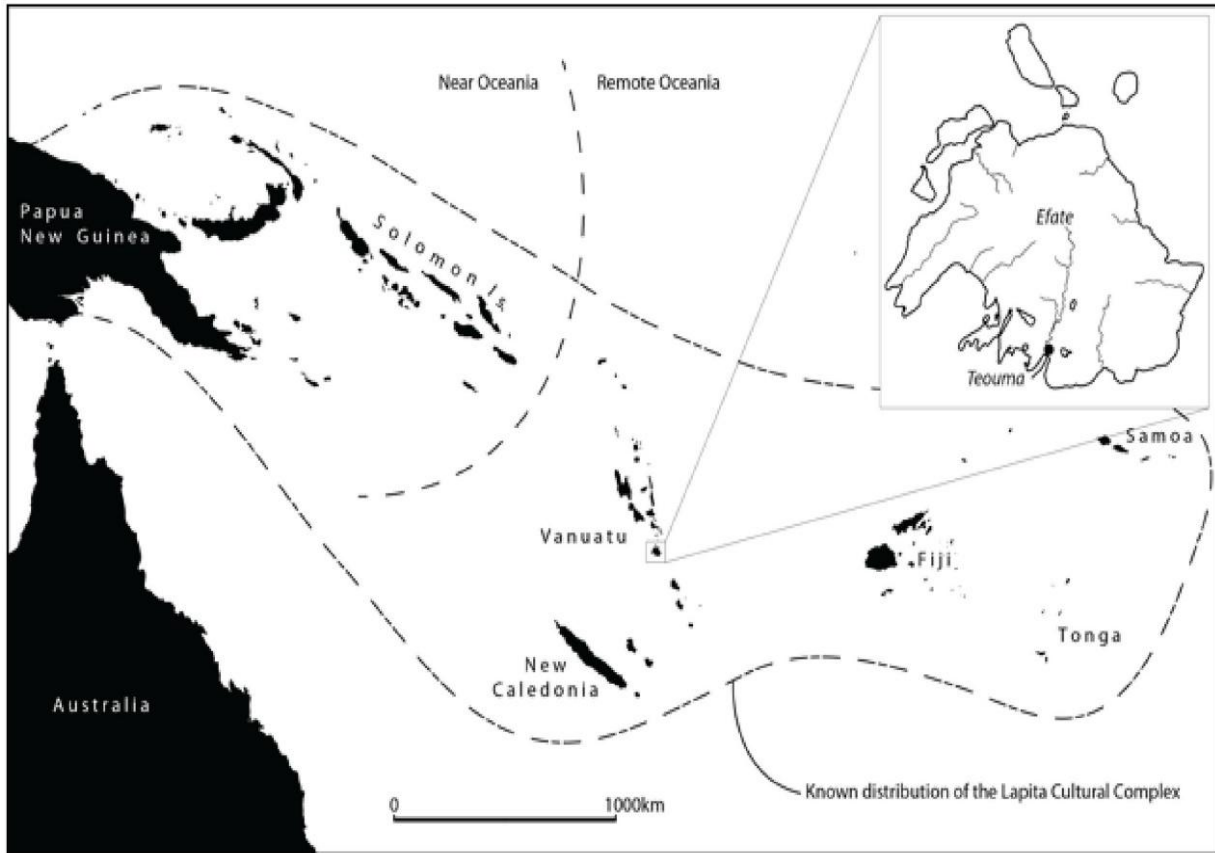


Figure 1. Map of Near and Remote Oceania (Image Credit: Rebecca Kinaston, Hallie Buckley, Frederique Valentin, Stuart Bedford, Matthew Spriggs, Stuart Hawkins, Estelle Herrscher, under CC BY 4.0, via Wikimedia Commons).

Fiji in Relation to Oceania

As stated before, the Fijian islands are located in a central position in the Oceanic region. The nation is composed of well over 300 islands that span over ~18,200km² of land, with Viti Levu and Vanua Levu being the largest (Anderson and Clark 2009). About 100 of these islands are permanently inhabited (Derrick 1951). Traditionally the archipelago has been divided into Western (western Viti Levu and western islands) and Eastern (east Viti Levu and the other islands of the Fijian archipelago). This article will further divide the region into the five biggest island or island groups for the purposes of reviewing the genetic studies of the Fijian peoples, as it was done in Shipley *et al.* (2015, 2016). The islands of Viti Levu, Vanua Levu, Kadavu, the Lau Group, and Rotuma have had distinct levels of interaction between one another, which will be further discussed.

In the greater central Oceanic region, the closest islands groups to the west are New Caledonia (c. 1400km), Vanuatu (c.1200km), and the Reef/Santa Cruz group (c.1500km) and to the east are Wallis and Futuna (c.550km), Tonga (c.600km) and Samoa (c.1200km). Additional investigations reveal that both western and eastern island groups played a significant role in the formation of the Fijian people. While there is evidence that these island groups retained some level of interconnection throughout history, it is believed that the Fijian isles were initially populated by migrants deriving from Island South-East Asia (ISEA) (Anderson and Clark 2009; Burley 2013). These migrants are believed to be Austronesian speakers who played an important role in the prehistory of Southeast Asia and Oceania (Bellwood 1984-1985; Denham 2014; Pawley and Ross 1995). With this established, a basic understanding of the Fijian

islands can be built upon and developed in relation to the findings and conclusions made by the breadth of research conducted on Fiji.



Figure 2. Map of Modern Fiji ('Fiji Map', Public Domain via Wikimedia Commons).

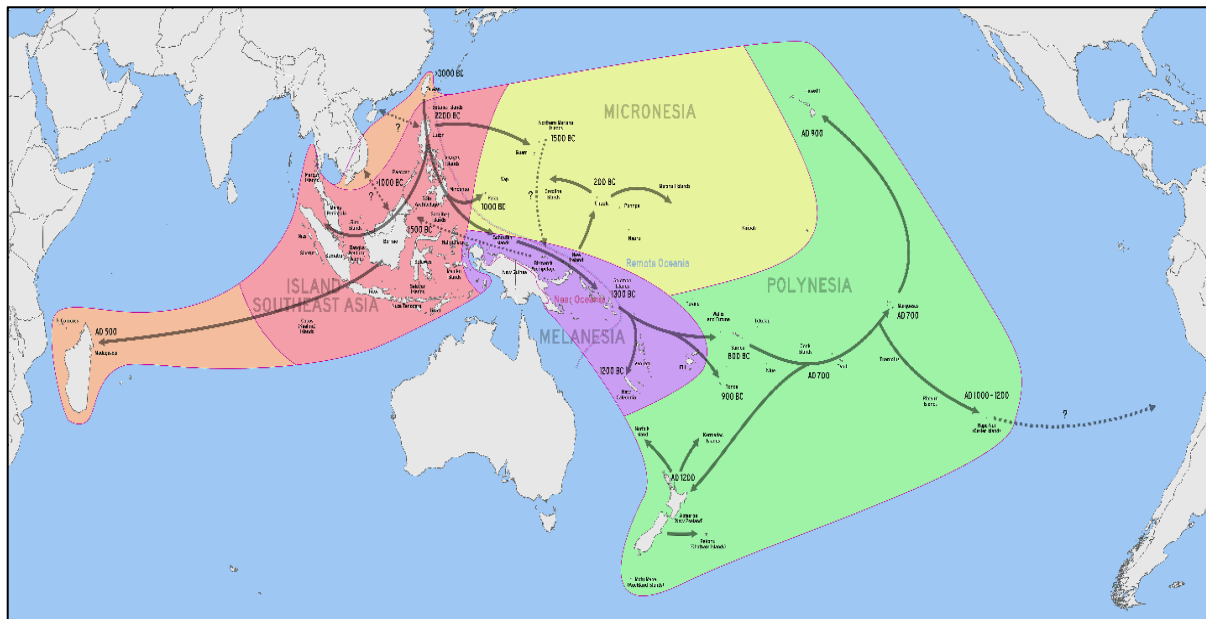


Figure 3. Map outlining migratory paths of Austronesian speaking populations, including estimated dates (based on Benton et al. 2012, edited by Pavljenko, under CC BY-SA 4.0, via Wikimedia Commons).

The Genetic History of the Isles

Genetic research is the most recently applied field in the study of the prehistory of Fiji. However, it can prove to be a useful method of inquiry if the use of ancient DNA sources is compared to modern samples. Many genetic studies have been done within the Oceanic regions focusing on specific haplogroups found in Y chromosomes and mitochondrial DNA (mtDNA) (See Duggan *et al.* 2014; Hage and Marck 2003; Kayser *et al.* 2000; Kayser *et al.* 2006; Kayser *et al.* 2008; Friedlaender *et al.* 2007; Friedlaender *et al.* 2008; Redd *et al.* 1995; Soares *et al.* 2011; Su *et al.* 2000; Van Oven and Kayser 2009; Wollstein *et al.* 2010). These two lines of evidence are of particular interest, as matrilocality was a traditional model of residence for people in the Pacific (Hage and Marck 2003; Kinaston *et al.* 2014; Pawley 2007). Both the matrilineal and patrilineal affinities could trace movements of peoples within Oceania and have been used to discuss the origins of the Fijians. Prior genetic studies treated Fiji as a single genetic group and assumed a genetic hegemony for the entire island nation (Shiple *et al.* 2015, 2016). Using these studies as both templates and sources of data, Gerhard Shipley conducted a deeper analysis of the genetic history of the Fijian people. Using Slatkin's (1995) formula for calculating genetic diversity distances, he was able to identify specific kinds of genetic relatedness between the regions of Viti Levu, Vanua Levu, Kadavu, the Lau Islands, and Rotuma, in addition to generalised haplotypes found within Melanesian and Polynesian populations, as described by Delfin *et al.* (2012), Friedlaender *et al.* (2007), Kayser *et al.* (2006), Van Oven and Kayser (2009), and Shipley *et al.* (2015, 2016) were able to confirm a general trend among the Fijian populations. Matrilineal lines had closer Polynesian affinities, while patrilineal lines had closer Melanesian affinities. However, the degrees of relatedness varied significantly from one another. The samples from Kadavu showed the strongest link with Melanesian populations. They noted that Kadavu had the highest frequency of the mtDNA haplogroup M28a (a haplogroup that originated in Melanesia), the highest Y chromosome short tandem repeats (Y-STR) similarity to Melanesia, lowest mtDNA hypervariable segment 1 (HVS1) similarity to Polynesians. The Lau group and Rotuma presented a close affiliation with Polynesian HVS1 but were equivalent in Y-STR relatedness with other Fijian populations. The Rotumans were the most varied in all aspects of genetic analysis, which once again points to their particular geographic relationship with Fiji (as the most distant island from the other Fijian islands).

Although Shipley *et al.*'s (2015, 2016) sample sizes were relatively small, this study provides the groundwork to further investigate the genetic relatedness of the island populations and the populations of Fiji's island neighbours. In particular, Table 4 of Shipley *et al.*'s 2016 article (Figure 4) outlines the Y chromosome and mtDNA affiliation of each population group and shows vastly different stories. The mtDNA affiliation of all Fijian populations were closer to Polynesian haplogroups while Y chromosome affiliation presented Viti Levu as being closest to Polynesian haplogroups in comparison to the rest of the Fiji Islands, which trended closer to Melanesian haplogroups. This deviation by Viti Levu could be attributed to the size and historical division of East and West Viti Levu or because the island played a prestigious role in relation to the other islands. Shipley *et al.* (2016) uses these findings to reconfigure the rather ambiguous nature of Melanesian/Polynesian affinities found within Fiji. The evidence still shows a relatively strong cohesion of Fijian populations while also highlighting the Melanesian and Polynesian genetic blending in Fiji.

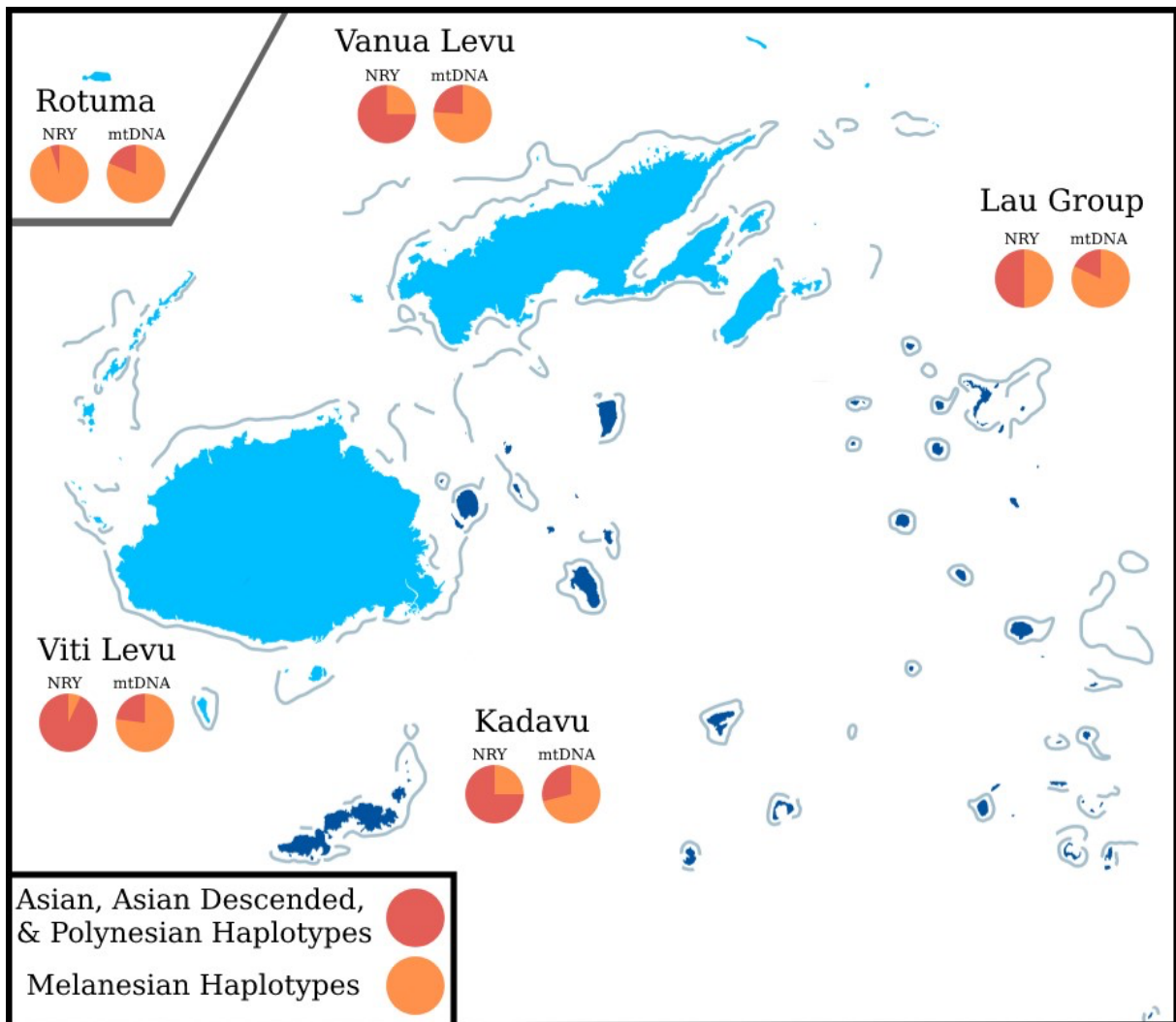


Figure 4. Genetic affiliations of island population based on mother's (right pie chart) and father's (left pie chart) genetic affiliation (based on Shipley et al. 2016, recreated by the author using a Wikimedia Commons base map', 'The 2014 Fijian general election by territorial division' by FelipeRev, CCBY-SA 4.0).

The Historical Linguistics of the Isles

The indigenous languages of Fiji belong to the linguistic family known as the Oceanic subgroup, which finds itself within the larger Austronesian language family. The Oceanic branch is made of subcategories such as Polynesian and Micronesian groups as well as most of the ~400 Austronesian languages of Melanesia. The divergence of Proto Oceanic from the rest of the Austronesian family can be associated with the spread of peoples, associated with the Lapita archaeological culture, from the Bismarck Archipelago into Remote Oceania at around 3000 BP. These Lapita bearers, who would have spoken a language slightly different from Proto Oceanic, were the first to settle many of the island groups east of the Solomon Islands. Moving swiftly into island groups such as the Reefs-Santa Cruz, Vanuatu, etc. and ending at the Central Pacific islands of Tonga and Samoa at around 2800 BP. Current research places the initial settlement in Fiji no later than 2950 BP.

The linguistic diversity of local Fijian languages is roughly comparable to that of the Romance or Germanic subgroups of the Indo-European language family, or to the diversity found within the

Polynesian group. There are perhaps 200 Fijian communalects found throughout the isles. A communalect is a regionally homogeneous variety of a language, usually found within a single or a few villages. All of these communalects, with the exception of those found in Rotuma, belong to a well-defined sub-category of Oceanic.

Schütz's (1962) study of the distribution of isoglosses, which demarcated dialectic differences and linguistic features, in 60 communalects spoken in Viti Levu and the work of Pawley and Sayaba (1971) distinguished two primary subgroups of Fijian. The Western Fijian group contains the communalects spoken west of the mountain ranges of inland Viti Levu and islands off the western coast of Viti Levu (Vatulele, the Mamanucas, the Yasawas). Western Fijian is defined by a number of uniquely shared phonological, lexical, and grammatical innovations. The rest of the communalects found within Viti Levu and other regions of Fiji belong to the Eastern Fijian groups, with the possible exception of Western Kadavu.

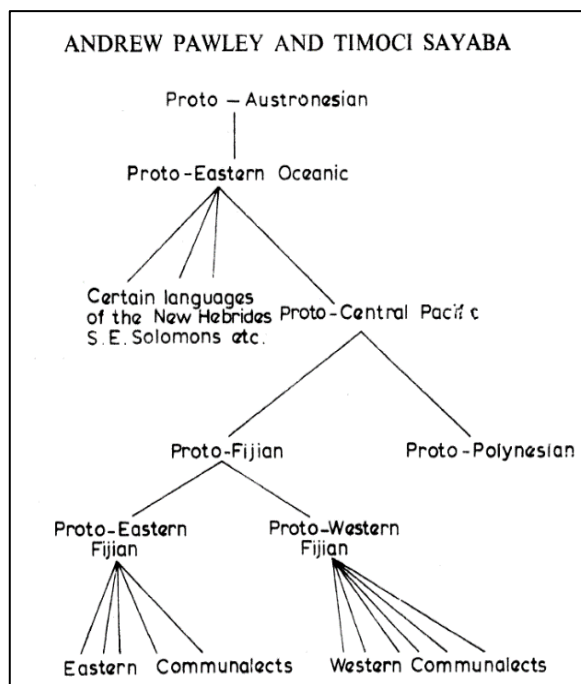


Figure 5. Pawley and Sayaba's Austronesian language family tree (Pawley and Sayaba 1971: 431, with the permission of the authors).

The Eastern Fijian group shares a number of definitive innovations but is more varied compared to the Western Fijian group. This divergence was probably caused by a build-up of substantial inland populations along the main rivers of Viti Levu. Initial settlements on Viti Levu have been primarily found in coastal areas.

Schütz's (1972) noted that the percentage of cognate basic vocabulary items shared by Eastern and Western communalects on Viti Levu in a 200-item list is roughly 58-68%. This percentage is comparable to that between English and German (58%) and is greater than between French and Italian (73%) and Spanish (79%) (Dyen *et al.* 1992). The most widely separated Western communalects score about 70 percent with each other and the same is probably true of pairs of Eastern communalects.

Grace (1959, 1967) posited a family tree in which the closest relatives of Fijian are the Polynesian group and Rotuman, forming a weakly defined subgroup which he termed Central Pacific. However, in an

exceptionally intensive and fine-grained study Geraghty (1983) demonstrated that the relationships of the Fijian languages to each other and to Polynesian cannot be straightforwardly represented by an orthodox family tree diagram, in which each language belongs to only a single subgroup. On the one hand there is overwhelming evidence for a Fijian subgroup excluding Polynesian and Rotuman. On the other hand, Geraghty found considerable evidence for a contradictory subgrouping consisting of Polynesian and certain Eastern Fijian communalects, which he calls Tokelau Fijian, located in eastern Vanua Levu and the Lau group. Although Tokelau Fijian communalects are clearly Fijian they share many lexical and grammatical items with Polynesian exclusively of Western Fijian and the rest of Eastern Fijian, including items which cannot be attributed to recent borrowing from Polynesian.

The complications do not end there. Rotuman shares a few innovations with Fijian communalects of western Viti Levu and western Vanua Levu apart from most other Fijian communalects and Polynesian (Pawley 1996). In the last few centuries Rotuman has also undergone extensive borrowing from Tongan and one other Polynesian language (Biggs 1965; Howard and Rensel 2007).

Geraghty explains these complications as follows. As Oceanic speakers spread across the Fijian archipelago and into western Polynesia, they developed a dialect chain, Proto Central Pacific, that extended from Fiji to Tonga and probably Samoa. Within a few centuries regional differences became quite marked. Communalects spoken in western Viti Levu and western Vanua Levu were closely affiliated, whereas those of eastern Fiji were closer to Tonga. Rotuman stemmed from a dialect of Central Pacific in western Vanua Levu or western Viti Levu.

As the population of Fiji built up, the importance of contacts between Tokalau Fiji and Tonga diminished, and their speech diverged. There was a partial resynthesis of Tokelau Fijian with other Central Pacific dialects spoken in Fiji, without obliterating traces of the earlier close relationship between Tokalau Fijian and Polynesian or of other early dialect divisions within Fiji.

The Biogeography of the Isles

The paleontological evidence found within the islands are important to outline the specific timeline of events during the initial phases of human arrival. Fitzpatrick and Erlandson (2018) noted that islands are model ecosystems, as they are self-contained entities that could be used as examples for initial human interaction with their environment. The Fijian archipelago is a perfect example for this due to its geographic distance from large continental land bodies and other Pacific islands. The paleontological record presented an extinction event roughly coinciding with human arrival and the introduction of invasive species to the island, by both intentional and unintentional means, act as proxies for the initial phases of human settlement of Fiji (Green and Weisler 2004).

The ecosystem of Fiji was typical of Pacific Pleistocene Island environments, with a number of highly specialised species adapted to the island landscape (Duncan *et al.* 2013). Endemic reptilian, amphibian, mammalian, and avian species lived on these islands prior to human arrival, including several megafaunal species of each class, with the exception of megafaunal mammals (Green and Weisler 2004; Steadman 1995; Worthy and Anderson 2009). Megafaunal species are key to archaeological studies in Oceania due to adaptations that are usually associated within the late stages of taxon evolutionary cycles (Duncan *et al.* 2013). Megafauna are characterised as apex species that have low population sizes, low reproductive rates, and are highly adapted to their local ecosystems, meaning the slightest changes will greatly jeopardise the survival of the species. The arrival of humans brought about a drastic change in both floral and faunal populations. Local species had to quickly acclimate to the stresses brought by human activity and the colonisation of their ecosystem by foreign plants and animals. Many did not survive this first contact and any remains of their existence are found within the archaeological record.

Of the invasive animals introduced to the Fijian isles, the most dangerous to native species were rodents. The vast oceans separating the Pacific islands acted as barriers that prevented a natural dispersion of rats. However, they succeeded in populating the Pacific by hitching a ride with human migrants. Their abundance over the distant islands and archaeological evidence points to their deliberate inclusion into Austronesian cargo, possibly as a source of food (Steadman, Casanova, Ferrando 1994). In Oceania, the Polynesian rat (*Rattus exulans*) (Figure 6) is intermittently linked with Austronesian movements and investigations of rat mtDNA confirm this (West *et al.* 2017). In Fiji, additional rodent species (*Rattus rattus*, *Rattus norvegicus*, *Rattus praetor*, and *Mus musculus*) can be found in specific contexts associated with another non-native fauna, the barn owl (*Tyto alba*) (Figure 7). While the bones of barn owls were present, what was more evident in the archaeological record were midden deposits containing the bones of rodents and small endemic birds. These middens are usually found in close proximity to human occupied sites, and none have been dated to a time prior to human arrival. This led researchers to conclude that commensal rat species, brought by humans, allowed barn owls to self-colonise the islands of Fiji (Worthy and Anderson 2009). These specialised predators would have followed the human migrants along their Pacific voyage and found new territories to thrive in.



Figure 6. and 7. *Rattus exulans* (Polynesian Rat) and *Tyto alba* (Barn Owl) (Image credits: Cliff, and Peter Trimming, CC 2.0, via Wikimedia Commons).

The Subsistence Practices of Ancient Fijians

Archaeobotanical and paleoenvironmental research throughout the Pacific faced many challenges due to evolving landscapes and the fluctuation of sea levels (Dickinson *et al* 1998). While conventional means of paleoecological analysis were conducted within Fiji (analysis of phytoliths, charcoals, and core samples), other more recent and innovative methods of analysis have posed some interesting questions. Researchers analysed isotopes found in skeletal remains and microfossil and starch grain remains with the aim to reconstruct the subsistence practice of ancient Fijians. These studies supplemented the reconstruction of ancient environments with an anthropocentric focus, which would then determine the types of environments that were under stress due to human activity.

A study by Field *et al.* (2009) observed the diets of ancient Fijian, which were used to reconstruct the subsistence patterns and land-use practises. Their analysis consisted of observing mean stable carbon

($\delta^{13}\text{C}$) and nitrogen ($\delta^{15}\text{N}$) isotope values found in bone collagen in fish, pig, and human samples. The human skeletal samples originated from sites on the island of Waya (a coastal site located to the north-west of Viti Levu) and the Sigatoka sand dunes (located in the coastal region of South-West Viti Levu). The ratios of $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ allowed them to identify if their diet consisted primarily of terrestrial resources or marine resources, with pigs and fish samples acting as controls for terrestrial and marine diets, respectively (Field 2009). The results were quite different based on their locations. Samples from the island of Waya showed a strong reliance on marine sources, with a gradual shift towards a balance of marine and terrestrial diets, while Sigatoka diets show a steady reliance of terrestrial diets over time (Field 2009). This demonstrates that even in the past, a wide range of subsistence practises were employed by ancient Fijians. The introduction of domesticates might have caused a shift in the dietary practises within Fiji, but it would have been supplemented by the local terrestrial and marine sources.

The discovery of *Dioscorea esculenta* (lesser yam) and *Colocasia esculenta* (taro) microfossil and starch grains at the coastal South-Western Viti Levu site of Bourewa, the oldest site to date in Fiji, further supported this shift in diet (Horrocks and Nunn 2007; Nunn 2009). Both plant species were introduced to these islands and have no endemic relatives. Horrocks and Nunn (2007) reported that domesticates, both plant and animal, are present as early as the second phase of the site, Bourewa II (2800 – 2550 cal. BP). Although the crops would have been a part of the assemblages brought by the early migrants, their lack in Bourewa I (3050 - 2800 BP) raised some questions. The authors theorised that the sea levels within the site were unfavourable for horticultural practises during Bourewa I and only after Bourewa II were coastal lands fit for cultivation. They speculated that the Bourewa I settlement was only a habitation site, with a possible horticultural site deeper inland, but no such evidence has been found to date (Horrocks and Nunn 2007). Another hypothesis proposes that subsequent migration events brought the domesticates. A growing population and shortage of marine sources would have caused this shift in primary subsistence practises (Nunn 2009).

These varied lines of evidence all point to a similar endpoint, the gradual shift of primary substance from locally available resources to horticultural practises. Although this shift occurred over various lengths and points of time, depending on the location, proto-Fijians became familiar with the natural environments of Fiji before transforming the local ecosystems. Further investigations are needed to determine the motivations behind this shift, but with the information that is present it seems that shifts in subsistence strategies were dependent on resource abundance, lands suitable for cultivation, further migrations into the isles, or any combination of the three.

The Archaeology of the Isles

The archaeological excavations done within Fiji have provided a clear picture of the initial settlement and continued occupation of the isles. Studies done on Lapita ceramics have highlighted many of the same patterns and inter-relatedness of the foundation settlements of the islands of Remote Oceania (Leblanc 2016). While there have been varying degrees of occupational episodes in the different parts of Fiji, several distinct ceramic traditions were identified within the isles. These began as traditional Lapita ceramics and then developed into local Fijian traditions: Sigatoka Phase, 2650-2050 BP; Navatu Phase, 2050-850 BP; Vuda Phase, 850-100 BP; Rā Phase, 100 BP-Present (Cochrane 2017).

While the typological analysis situated ceramic pieces across time, other forms of analysis could map out their provenance. An analysis of the compositional makeup of pottery samples found at Bourewa determined that ~70% were sourced from local clay deposits and ~30% were imported, which aligned with the finds of a previous study done in Moturiki, an island off the eastern coast of Viti Levu (Nunn 2007; Rutherford *et al.* 2012). This evidence supports the theory of an inter-connected Fiji, that was

sustained after the initial settlement of the isles. This Fijian network of inter-island trade can be observed on a grander central Pacific scale through the sourcing of obsidian and lithic artefacts and occupations of the outer territories of Fiji, notably the Lau Island group and Rotuma.

Obsidian artefacts are found in some Lapita assemblages and point towards an external trade network. Obsidian sources are found within a few key regions in the Pacific, Fiji not being one of them. The analysis of Fijian obsidian samples identified two points of origin, one associated with its Western neighbours and another of its Eastern neighbours. The Talasea obsidian samples, found at Bourewa and Naigani (an island north-east of Viti Levu), originated from the Bismarck archipelago but most likely arrived from Vanuatu (Burley 2013). Another source of obsidian that the Fijians used is the Tongan source of *Niuatoputaupu*. These two sources are important since these imported obsidian artefacts were found in layers in later occupational periods, displaying some sustained interaction. As mentioned beforehand, the Lau Island group had been under Tongan influence and the material records reflect this reality (Burley, Sheppard and Simonin 2011). Excavations on the island of Rotuma have not uncovered any obsidian, however other lithic materials that have Tongan influence have been found (Clark *et al.* 2014).

Looking at these networks of influence, it seemed that Fiji played a central role in movements originating in both the East and the West. Local development was not impeded by a flow of materials and people post-initial settlement. As seen with all peoples of the Pacific, the space in between islands is key to the development of separate cultures, societies, languages, and peoples (Denham 2014). Distance decay effects within the isles of Fiji are most prominently seen when examining the spheres of influence between the central islands (Viti Levu, Vanua Levu, Kadavu) and the Lau Group and Rotuma.



Figure 8. Lapita ceramic complex sherd from Bourewa's (2009) excavation (Image credit: Patrick Nunn, under CC BY-SA 4.0, via Wikimedia Commons).

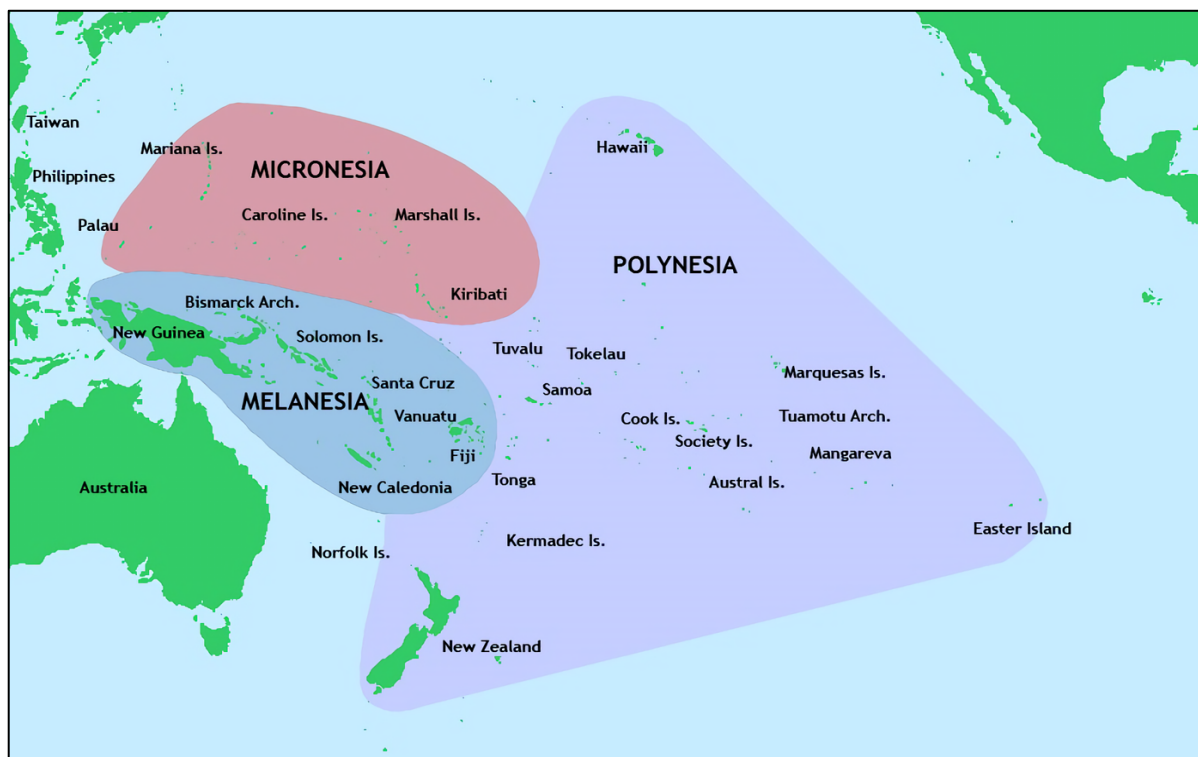


Figure 9. Map of the MPM Scheme (Micronesia/Polynesia/Melanesia) (Image credit: Pavljenko, CC BY-SA 4.0, via Wikimedia Commons).

The Ethnoarchaeology of the Isles

The past sections paid close attention to Fijian identity from an outside perspective, but these last two sections will pay attention to the living descendants and their relationship with their ancestors. Although forms of ethnoarchaeology are often conducted side by side with archaeological excavation, there is a growing movement focusing primarily on ethnoarchaeological research. Messersmith (2012) and Jones (2015) focused their attention on food preparation and food consumption, respectively, as an expression of Fijian identity and culture. Although the Christianization of the isles has disrupted many of the local traditions and ritualistic practises, the food culture of the isles remains distinctly Fijian (Jones 2015; Messersmith 2012).

Social identity is greatly expressed as food preparation methods are highly gendered and the consumption of food displays the relational hierarchy of individuals and communities (Jones 2015). Ethnoarchaeology and its use of analogy can provide insight into archaeological investigations, as they can bridge gaps in knowledge otherwise lost to the archaeological record. The similarities that Fiji shares with its Oceanic cousins can also be highlighted as elements such as the use of stone ovens are found within the archaeological record and their modern use can act as analogues for the past (Messersmith 2012).

The Cultural Anthropology of the Isles

Cultural anthropology plays the same supplementary role to ethnoarchaeology in addition to allowing researchers to navigate the social and cultural landscapes of Fiji. The Fijian communities still retain some traditional cultural and political institutions, and cultural anthropologists have written about their intricacies. The concept of *vanua*, which has played a role in relating spirits, places, and people in

Fijian pre-colonial cosmology, is still intricately tied to political affiliations and group identity (Parke 2014). Keeping in mind the pitfalls in the use of correlates in archaeology, cultural anthropology still benefits archaeologists in other ways.

Academics who wish to conduct research on Fijian peoples, languages, or archaeology must navigate this unique network of modern and ancestral ties, throughout the entirety of their research project (Howard and Rensel 2007; Parke 2014). This concern meshes well with ethical weight nowadays attributed to the production of knowledge. Early archaeological projects often neglected the valuable contribution of native participants, but modern projects include the voices of local populations as they themselves provided perspectives that are otherwise unknown (Howard and Spriggs 2019).

Who Are the Fijian?

As seen through the archaeological record, the Fijians have a long and complex history. As a 'nation' that finds itself in between powerful currents of history, the peoples and cultures within the isles have been studied with significant interest. The first human arrivals at Bourewa (c. 3000 BP), came bearing the cultural, linguistic, and genetic heritage of the Lapita migrants travelling through ISEA. This migration set the stage for the development of a separate and unique identity within the islands of the Central Pacific, as the islands found to its West and East did the same. The Fijian islands interacted with one another through various networks.

The eventual rise of the Tongan empire was felt throughout Fiji, most especially in the Lau Group and Rotuma. While the Tongan influence eventually weakened, Fiji still participated in trade networks and interactions with its Western and Eastern neighbours. By the time of European contact, the islands were structured as individual polities with locally developed dialects and cultural practises but were similar enough to one another to be considered as a 'pan-Fijian identity' (Burley 2013).

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Missing Women or Gender Construction?

Representation of Hu Peoples in Han Dynasty China

Xiaobei Jia¹

Abstract

The term 'Hu' was used by ancient Han Chinese to describe anyone who is not of ethnic Han Chinese descent. The representation of Hu peoples in Han Dynasty art is of great significance to the study of ethnic relations and cultural and artistic exchanges during the Han Dynasty. In response to the lack of gender perspective in related research, this study inspected gender expression of Hu peoples in the materials from Han Dynasty tombs and texts. It is found that clear representation of female Hu peoples was missing in Han Dynasty art, which was caused by neglected expression of gender difference. Gender construction of Hu peoples' representation in Han Dynasty art was mainly built up by the form and function of Han Dynasty tomb art, as well as cultural differences that affected gender cognition. Gender perspective provides an alternative way to understand how the Hu was recognized by the Han in context during the Han Dynasty.

Keywords: Han Dynasty, tomb art, text record, Hu peoples, gender

Introduction

The term 'Hu' was frequently used in the Han Dynasty to describe anyone who is not of ethnic Han Chinese (the Han, or *Huaxia*) descent, and the concept changed throughout history. In the earlier times, people outside of the Central Plains were further divided according to the cardinal directions into the *Di* (northern), *Man* (southern), *Rong* (western) and *Yi* (eastern), which implied the meaning of savages or barbarians (Joniak-Lüthi 2015: 27). Gradually, the character Hu replaced others, and had become a term widely used in sources, especially from the Han to the Tang Dynasty, to refer to the non-Han (Li 2016: 91). In a broad sense, Hu peoples can refer to a variety of different races and ethnic groups, including the non-Han living in the east, west, south, north, and further beyond. The term 'barbarian' (Yü 1986: 381), which was used to categorise the Hu peoples as uncultured and peripheral, is not repeated in this study, as it reflects a Sino-centric standpoint.

During the Han Dynasty, a large number of Hu peoples came to the Han regions due to warfare, political missions, business and other reasons, and left extensive influence on the Han. It was through the interaction and conflicts with the Hu peoples that the Han Chinese shaped their identity and officially established the name 'Han people' or 'Han Chinese'. Dating back to the Han Dynasty, one might wonder, what did the Hu peoples look like? How were the Hu peoples perceived by Han Chinese? Furthermore, was there any difference in the artistic representation of Hu peoples compared with the Han back then?

Much research about the Hu peoples in Han Dynasty China has been done, and mainly could be summarised as the following three perspectives. First, scholars have identified the characteristics and ethnic origins of the Hu peoples according to pictorial representations (Huang 2017; Huo and Zhao 2007; Liu 2005; Xing 2011). Second, based on visual and textual information, they have discussed ethnic relationship between the Hu and the Han (Liu 2019; Zhang and Liu 2011). And third, scholars have

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analysed possible functions and cultural meanings behind the images of Hu peoples in tombs (Luo 1999; Zheng 1999; Zhu 2012). Much light has been shed on the characteristics and special roles of Hu peoples depicted in the Han Chinese tombs and literature during the Han Dynasty, however, little notice was given to gender representations of the group.

Therefore, this study will address gender representation of Hu peoples through surveying Han Dynasty tomb relics and literature. From a gender perspective, this paper will first survey visual representation of Hu peoples in the Han Dynasty and compare with that of the Han Chinese. Next, the study will try to analyse text records mentioning Hu peoples in the Han Dynasty, and finally discuss how Hu peoples' gender representation was constructed by the Han Chinese.

Visual Representation of Hu Peoples: Missing Female

Since archaeological relics from tombs are almost the only material we can relate to as visual representation from the Han Dynasty, we will adopt the relics excavated from tombs as representative of the Han Dynasty art. This is valid, to a certain degree, because the tradition of making extremely elaborate tombs and funerals, and treating the dead as the living, were prevalent among Han Chinese during that period. Therefore, tomb art can reflect the artistic tastes, skills, contents, and ideology of visual art in the Han Dynasty.



Figure 1. *Hu peoples riding horses. Han Dynasty pictorial slab, Sichuan Provincial Museum, China (Photo credit: Gary Todd, Public Domain via Flickr).*

As a common motif in the Han Dynasty tombs, representation of Hu peoples often appeared on stone-carvings, pictorial slabs, pottery figurines, bronze mirrors, lamp holders, as well as other funerary objects. It has been stated (Xing 2011: 233) that, among all the characteristics depicting Hu peoples, the

most significant parts are as follows: 1) High nose, which is usually shown from side angle, 2) Deep eye sockets or big eyes, 3) Heavy beard, and 4) pointed hat (Figure 1). Besides, these are also the major criteria to identify if a visual figure belongs to the Hu peoples as well.

It is worth noting that the above characteristics show a strong masculine tendency, and as a result, there are hardly any female Hu figures among the visual representations. Furthermore, even though some images emphasise feminine characteristics such as breasts and swollen belly, they come with masculine characteristics at the same time (Figure 2). Thus, there is a lack of clear female representation.



Figure 2. *The Hu lamp holder. Han Dynasty pottery figurine, Guangzhou Southern Han Tombs Museum, China (Photo credit: Author).*

On the contrary, such gendered characteristics are obvious and could be easily recognized as male or female in representations of Han Chinese. For instance, the story of Qihu molesting his wife, also a common motif in Han Dynasty tomb decorations, depicted typical male and female figures of Han Chinese. According to the image (Figure 3), we can see a clear difference between man and woman in terms of hair style, dress, and posture. The wife on the left is wearing a traditional long dress and picking mulberry with a basket. She is cautious and looking back at the man, a posture highlighting her slim and curvy body shape to reveal feminine beauty. On the other hand, the man is strong and aggressive, holding a sword and reaching out the other arm towards the woman.



Figure 3. *The scene of Qiuhu molesting his wife. Han Dynasty pictorial slab, Sichuan University Museum, China*
(Photo credit: Gary Todd, Public Domain via Flickr).

Compared with significant gender differences in depictions of Han Chinese figures, clear representation of female Hu peoples was missing in Han Dynasty art. However, female Hu people used to come and live in Han Dynasty China in various identities, such as tributes, prisoners of war, merchants, and so on. Why did they disappear in visual materials? Such inconsistency between pictorial representation and historical facts is by no means accidental. Since the above-mentioned tomb relics with representation of Hu peoples belonged to the Han Chinese, knowing how they think of the Hu will help to elaborate. Therefore, a close examination of the literature in the Han Dynasty is necessary.

Text Records of Hu Peoples: Ignoring Gender

Under the background of unification, the Han Dynasty was a golden period for artistic and cultural development and facilitated active foreign exchanges. There are abundant literary records of Hu peoples in different forms, including historical documents, rhymed proses, and poems. To find out how Hu peoples were depicted in written records during the Han Dynasty, analysis of typical pieces will be conducted as follows.

Han Shu (Book of Han) is one of the most influential historical sources regarding the Han Dynasty. This biography-styled history book was composed by court officials in the Eastern Han Dynasty, covering the history of the Western Han dynasty. The chapter 'Dayuan State' (Yan 1962: 3896) introduced the Hu peoples from the western region, through describing their languages, customs, and particularly detailed appearances:

Although the states from Dayuan west to Anxi speak rather different languages, their customs are generally similar and their languages mutually intelligible. The men all have deep-set eyes and profuse beards and whiskers.

Another popular form of literature in the Han Dynasty, *Han Fu* (Rhymed Prose in the Han Dynasty), also mentions Hu peoples, especially in a piece titled *San Hu Fu* (Fu on Three Hu Groups) (Yan 1958, 1953). It noticed that Hu peoples did not look all the same among different groups:

Hu people from Shaju, with yellow eyeballs and deep-set eyes, their ears are round, and faces are narrow.

Hu people from Kangju have curly hairs, with high cheekbones, deep-set eyes, and hollow cheeks.

Hu people from Jibin have beards as hard as hedgehog's, with pocket-like head cloth, deep-set eyes, and high noses.

The above two pieces, as most text records in the Han Dynasty, focus on Hu peoples' appearances which are different from the Han. Characteristics including deep-set eyes, heavy beard, high noses, and narrow faces are frequently mentioned. Likewise, they are also fully reflected in the visual art of the Han Dynasty. Although some texts, for example the *Fu on Three Hu Groups*, elaborate the different appearances within Hu peoples, not any gender depiction was touched upon. It seems that the Han Chinese were more intrigued and impressed by the unique facial features of the Hu peoples, rather than their gender differences.

In addition, text records of female Hu peoples in the Han Dynasty are scarce, but one exception is the character *Hu Ji* (Hu beauty), which was first seen in *Han Yuefu* (Poems in Folk Song Style), and later became widespread in Tang Dynasty poems. The earliest reference made to Hu beauty, as far as we know, is in the *Han Yuefu* titled *Yu Lin Lang* (Armed Escort) (Shen 1963: 60). The overall story tells about a man who came across a Hu beauty and showed his love to her in a disrespectful manner. Being loyal to her husband, the Hu beauty refused him without doubt:

The General Huo's family had a guard, named Feng Zidu.

Relying on the power of the General, he ogled a Hu beauty serving in a tavern.

This girl just turned fifteen, was alone in the tavern one spring day.

In a long gown with a double girdle, and a jacket with wide sleeves and floral design.

In her hair wore jade from Lantian, on her ears were pearls from the Roman Empire.

[...]

Men always like to find new love, but women value their husband the most.

[...]

Thank you, captain of the guard, but your love for me is in vain!

According to the above excerpt, there is no detailed description of *Hu Ji*'s appearance or skills, but rather praise for her loyal character. Even her clothes are in traditional Han cultural style, only the jewelleries from western regions could be associated with her Hu origin. It seems that even if *Hu Ji* is replaced by a Han Chinese lady, it will not change the meaning of the poem too much. In fact, there is another poem from the same period, titled *Mo Shang Sang* (Mulberry by the Road), which revolves around a similar story, only the female character is Han Chinese. Clearly, the intention of such poems is to advocate women's moral code which was respected in the Han Dynasty (Zou 2013: 120).

Given the textual analysis in this section, it can be found that writings by the Han Chinese focus on the differentiated appearances between the Hu and the Han, rarely involving attention to different gender characteristics of Hu peoples. In addition, the Hu peoples in the writings of the Han Dynasty are more of a cultural symbol, adding exoticism as well as carrying the authors' main ideas. Although the Hu beauty appears in Han Dynasty poems, they are used as poetic imagery to convey the ideas advocated by Han Confucianism, rather than gendered representation of female Hu peoples.

As Prof. Xing Yitian (2011: 313) pointed out, visual and textual representation of Hu peoples in the Han Dynasty are simplified and stereotypical. Literature records created a general image of Hu peoples, which merely emphasised characteristics different from the Han Chinese, ignoring their gender differences. As the creators of Han Dynasty visual art, painters and craftsmen were often directly or indirectly affected by the writings that were widely circulated back then. Consequently, lacking gender representation for Hu peoples was reinforced in visual material.

Mirror Reflection or Gender Construction?

Gender perspective is not only concerned with the different sexuality of men and women at a biological level, but also, and perhaps more with the concept of gender at social level. Gender identity is the difference in aspects including roles, behaviours, thoughts, and feelings between individuals, developed through the influence of social practice. Gender perspective indicates that people may be affected by factors such as times, regions, cultures, ethnicities, ages, etc., resulting in different gender cognition and self-gender awareness (Conkey and Spector 1984). Although the concept of gender is certainly affected by biological factors, it is also constructed by social and cultural factors.

To understand the biased gender representation of Hu peoples in the Han Dynasty, it is necessary to first figure out whether the issue is a result of direct reflection or gender construction by the Han Chinese. The above sections are from the perspective of Han Chinese, concluding that gendered representation of Hu peoples, especially female, are neglected both in visual and textual materials. However, it is reasonable to ask whether there were clear expressions of gender by the Hu peoples themselves. According to excavation records (Shan 2009) of Hu peoples' tombs in the Han Dynasty, though few figural images were unearthed, it is found that funerary objects differed between male and female burials. Taking tombs of the Xiongnu as an example, men are generally buried with horse gear and weapons, while women are often buried with labour tools, indicating that there is a gender difference in social division of labour. Furthermore, it has been discovered (Zhao 2017) that in the murals of the Kizil Grottoes in Xinjiang, there are clearly identifiable images of female Hu people, and certain forms of earrings are only worn by women, whether Buddhist figures or secular donors.

Therefore, gender expressions by Hu peoples themselves are clearly different between male and female. Since visual images of Hu peoples are found in tombs of Han Chinese, and the literatures are written by the Han, they reflected how the Hu were recognized by Han Chinese back in the Han Dynasty. It is the Han people's gender construction towards the Hu peoples that caused this biased representation.

Representation of Hu Peoples in Context: Tomb Arts

As the visual representations of Hu peoples in the Han Dynasty that we can see today come from tombs, it is necessary to situate them in the original context and understand the form and function of tomb art. According to Wu (2010), tombs in the Han Dynasty were designed as space-oriented, and the chamber grave architecture, pictorial images, and funerary objects all together created the symbolic space for the posthumous soul. As a self-sufficient space, the underground chambers could function as a 'happy home' (Wu 2010: 38) for the deceased, a microcosm of the universe, and paradise in the afterlife. Therefore, visual representation in the tomb was neither a direct reflection nor a literal description of reality, but naturally carried symbolic meaning. In terms of interpreting such visual elements, ideology is sometimes even more important than their relation to the physical world.

To construct the symbolic space, certain decorations are usually applied on specific locations of the grave architecture. For instance, cosmological images are often painted on the upper ceiling to mimic the sky. Each wall is usually painted with the deceased in the afterlife sitting in elaborate halls, having delicious food while watching performances. Therefore, connecting locations with the content of the decorations would help to understand the symbolic meaning and function of the pictorial program.



Figure 4. *Procession of Hu peoples. Han Dynasty pictorial slab, Shandong Provincial Museum, China (Photo credit: Gary Todd, Public Domain via Flickr).*



Figure 5. *Fighting and hunting scenes. Han Dynasty pictorial slab, Shandong Provincial Museum, China (Photo credit: Gary Todd, Public Domain via Flickr).*

For the visual representations of Hu peoples in tombs, most of them are located on the lintel of the door and corridor leading to the entrance of the grave chambers. To be specific, on the lintels there are usually images of Hu peoples marching in procession on horses, followed by scenes of fighting and hunting (Figure 4, Figure 5). Such locations in tomb space are often decorated with images of the Queen Mother of the West and auspicious omens, which function as spatial transformation and symbolise the entrance toward paradise. Representation of the procession here could be interpreted as the protectors and guides providing escort for the tomb owner's soul on a safe journey to the immortal lands (Wang 2012).

Another example is figurines of Hu peoples playing the pipe (Figure 6) in *Bashu* area, near the present-day Sichuan basin. The majority of Hu Piper figurines in Han Dynasty tombs are found in the corridors or the front part of the chamber, together with other musician and dancer figurines forming a banquet scene (Zhang 2014: 32). In contrast with the quiet and solemn atmosphere in the tomb, the scene of singing and dancing seems like a joyous celebration. As Jiang (2016) pointed out, this is actually a ceremony of the immortals, celebrating the tomb owner entering the next world where the Queen Mother of the West presided.

Furthermore, there are also Hu peoples portrayed as feathered people, lotus holders, and Buddha worshippers in the tomb (Figure 7). Under such circumstances, Hu peoples themselves already become members of the sacred realm, and those images of Hu peoples in tombs are usually signs of paradise. Therefore, such visual elements in Han Dynasty tombs are not necessarily faithful reflection of the real

life of the deceased, but rather express their hope to arrive at the paradise in the afterlife through the special functions performed by the depiction of Hu peoples.



Figure 6. *The piping Hu. Han Dynasty pottery figurine, Sichuan Pengshan Tomb, China (Photo credit: Gary Todd, Public Domain via Flickr).*



Figure 7. *The Hu in western paradise. Han Dynasty pictorial slab, Sichuan University Museum, China (Photo credit: Gary Todd, Public Domain via Flickr).*

In line with the concept of ideational style (Rowley 1974: 27), which believes that merely expressing essential shape of the objects is enough to let viewers understand, representations of Hu peoples in Han Dynasty tombs just focus on characteristics that are different from the Han. It seems that there is no need for viewers to know whether the Hu figure is male or female, so lacking further elaboration on gendered details. In tombs of the Han Dynasty, what designers and craftsmen need, is to create a safe and comfortable afterlife for the deceased to help them ascend to paradise. Representation of Hu peoples, as a strange image from afar, becomes a character with the function of immortalising, and is used to symbolise the scene of the world after death. Therefore, when crafting the representations, only the main characteristics including high nose, deep eyes, heavy beards, and pointed hats that are in line with the collective memory of the society are needed. Without being in full compliance with the actual details, viewers can understand the intention and function of the image at a glance.

Besides, painters and craftsmen mostly relied on motifs in *fenben* (copybook for painting) to decorate the tombs in the Han Dynasty (Xing 2011: 212), so they did not need to meet the Hu peoples in person to know their appearance. For the motifs on *fenben*, the need to only highlight distinguishing characteristics of the Hu peoples made it more convenient for painters and craftsmen to implement and disseminate, and also easier for viewers to recognize the figures.

Gender Cognition Deviation: Cultural Difference

During the Han Dynasty, Confucianism was adopted as the government's state doctrine, and a core idea of it is *li* (proper rite). As a set of ritual norms and guidelines, *li* prescribed conduct that would be met with approval in all ranks of society (Yü 1986: 706). A gender order emphasising the strict differences regarding social roles, responsibilities, and division of labour between men and women was thus established. With wide implementation of such gender order, apart from immortals, visual representation of females usually appeared as outstanding moral models in Confucianism. Therefore, most female images in Han Dynasty art were depicted as faithful wives, virtuous mothers, or filial daughters.

While for the Hu peoples, especially in the northern and western regions, they live a nomadic lifestyle, one that emphasises power and movement. Research (Xing 2011: 293) has shown that the pointed hat appearing repeatedly in the representation of Hu peoples originated from the Eurasian steppe Scythian culture, where women are adept in riding and shooting, and even participate in wars. Such cultural norms and behaviours were so different from those of Han Chinese women and did not conform to the Confucian ethics.

As previously mentioned, the concept of gender is closely related to a particular social stage, and people's perception of gender is affected by factors including the spirit of the times, regional culture, and customs. The dramatically different cultural norms and behaviours regarding females might cause gender cognition deviation of Hu peoples by Han Chinese. Therefore, in the representation of Hu peoples in the Han Dynasty, perhaps painters and craftsmen did not think that such figures were female, leading to the issue of lacking female representation of Hu peoples.

Conclusion

This article surveyed representation of Hu peoples in the visual and textual materials in the Han Dynasty from a gender perspective. It is found that clear representation of female Hu peoples was missing. Based on the characteristics of arts and culture during the Han Dynasty, such a phenomenon is not an objective reflection of reality, but the result of social shaping, neglecting gender differences

of the Hu. On the one hand, from the perspective of the function of Han Dynasty tombs, where mostly visual representation of Hu peoples was found, tomb space was used to create an immortal paradise in the afterlife. Painters and craftsmen only applied the conceptual idea of Hu peoples to symbolise an immortal environment, so there was no need to express details of gender differences for Hu peoples as in reality. On the other hand, cultural differences between the Hu and the Han might have also affected gender cognition. Nomad women were often good at riding, shooting, and fighting, which did not conform to the Confucian ethics for females in the Han Dynasty, possibly leading to deviation in the gender cognition of Hu peoples by the Han.

The representation of Hu peoples in Han Dynasty art is of great significance to the study of ethnic relations and cultural and artistic exchanges. Gender perspective provides an alternative way to analyze how the Hu peoples were imagined, recognized, and understood by the Han. Frequent border conflicts between the Hu and Han led to constantly changing ethnic relationships. Therefore, Han Chinese developed a contradictory psychological attitude of fear, conquest, and curiosity towards Hu people during the Han Dynasty. Naturally, a sense of 'otherness' was formed. In the presence of the 'other', the Han saw more in common with each other, and more differences with the Hu peoples. Compared with the significant difference between the Hu and the Han, gender differences within the Hu peoples group appear relatively small and tend to be neglected by the Han when constructing visual and textual materials.

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Who's at Home? Rethinking Ethnicity and Ethnic Identity in Etruria and Latium (c. 650 – 480 BC)

Ellen Siljedahl¹

Abstract

This paper presents a study of Etruscan and Latin settlements, focusing on the material remains of households and expressions of ethnic identity within these contexts. The Etruscans are the most well-known of the people inhabiting the Italic peninsula in the pre-Roman era. The ancient Greek and Roman historians constantly highlighted the otherness of the Etruscans stating that their language and customs were different from all other contemporary societies. Today, despite the vast material remains found, the Etruscans are still often described as mysterious and elusive.

By comparison, their neighbours the Latin people are seldom defined by their ethnic belonging, neither by the ancient historians nor modern scholars. When their ethnicity is discussed, it is often in an uncritical manner, especially in comparison with Etruscan ethnicity. The archaeological record has traditionally been interpreted in line with the literary sources, treating the Latins and the Etruscans as two distinctly separated material cultures. The examination focuses on the built environment and activities related to storing, preparation and consumption of food and drink at the Etruscan settlement San Giovenale and the Latin settlement Borgo Le Ferriere (Satricum). By comparing two household contexts, it is possible to examine the role of ethnicity as well as other forms of identities in everyday life at these settlements.

Keywords: Etruria, Latium, ethnicity, San Giovenale, Borgo Le Ferriere

Introduction

This comparative study focuses on two excavated residential areas at two ancient settlements in the region Lazio in Italy: Borgo Le Ferriere and San Giovenale, in the period between c. 650-480 BC, the Late Orientalizing Age and Archaic Age. The archaeological contexts that will be compared have both been defined as dwellings of the social elite, but as Borgo Le Ferriere is located in ancient Latium and San Giovenale in ancient Etruria, the residents at the two sites would traditionally be described as members of two different ethnic groups.

The aim of this paper is to examine ethnic identity set in relation to social status within the household contexts by studying the built environment as well as activities related to food production and consumption. This will make it possible to re-examine and challenge the traditional narrative about the ethnicity in pre-Roman Italy.

The choice to focus on the domestic environment comes from the fact that the household structure might contain especially distinctive markers of ethnicity because of its close and meaningful relationship to daily life (Emberling 1997). The built environment of the household can be used to mark personal status or membership to a certain group, like ethnic identity. Aspects such as labour

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investment, the use of exclusive materials, the size and placement of the buildings can manifest the social status or power of the inhabitants (Nevett 1999; Steadman 2015).

Furthermore, diet and foodways are among the most powerful media for expressing and negotiating identity: ethnicity, gender, status, and religion are all created and challenged through food and foodways. The way in which we produce, cook, and consume food announces to the world that we belong to a certain group, it signals who we wish to be associated with or not associated with (Twiss 2019).

This paper is a summary of the results of the study conducted in my master dissertation and I refer the reader to this work for an in-depth description of the methodological and theoretical perspective, forming the basis for the results presented here (Siljedahl 2019).

Etruscan and Latin Ethnicity and Origin

Among the ancient people inhabiting pre-Roman Italy, the Etruscans are the most well-known and the most discussed, both in ancient and modern times. This comes from the fact that the ancient historians debated their origin and set the Etruscans apart from all other groups. The ancient texts either argue that the Etruscans were of foreign origin and migrated to the Italic peninsula or that the Etruscans were the *only* indigenous people, while all other groups were migrants. Another curiosity that was noted already in ancient time is that Etruscan is different from the other Italic languages, it is not an Indo-European language and does not share the common grammatical structures that most European languages share (Smith 2014).

The accounts from the ancient historians also contain various statements about the habits of the Etruscans that can only be described as ethnocentric. The writers indicate that their own mores were the only correct system of behaviour, emphasising specific differences in the lifestyle of the Etruscans. The focus on the origin of the Etruscans linked differences in behaviour with (believed) biological differences (equating culture with 'race'), not only implying that the Etruscans were outsiders but of 'lesser origin' (Becker 2016: 181; Meyers 2016: 305). These statements are coloured by the fact that the Etruscans under a long period were the most powerful and affluent group in the region and the main opponent to both the Greeks colonies and the Romans (Barker and Rasmussen 1998).

About the Latin people, the literary sources tell us that they originated from migrating Greeks and refugees from the Trojan war under the leadership of Aeneas. This made them essentially Greek, which was only flattering to the Latins as the Greek culture was considered to be the highest standing in the ancient world (Briquel 2013).

Relying heavily on the ancient written sources, modern scholars were for a long time mainly interested in examining the origin of the Etruscans, while the interest in their ethnic identity or way of life has only been awakened recently (Smith 2014). As a contrast, very little has been written about either the origin of the Latins or their ethnic identity in general.

However, since the 1990s, several anthologies have examined different aspects of ethnic identities in the ancient Mediterranean world; these contain several articles about the ethnic identity of the Latins and Etruscans. These studies emphasise that ethnicity, like other forms of identities, is socially constructed, highly subjective and constantly renegotiated (Cifani *et al.* 2012; Cornell and Lomas 1997; Herring and Lomas 2000; Stoddart and Popa 2014).

The Sites

Borgo Le Ferriere

Borgo Le Ferriere is located c. 60km south of Rome, the site is spread out over three hills by the river Astura. The ancient settlement was clustered around a temple on the larger Acropolis hill, dedicated to *Mater Matuta*, the mother goddess (Bouma *et al.* 1995: 184–185; Maaskant-Kleibrink 1987: 5, 23).

According to the ancient written sources, a *Mater Matuta* temple was located in the Latin town Satricum, hence the settlement at Borgo Le Ferriere has traditionally been identified as Satricum (Bouma *et al.* 1995; Maaskant-Kleibrink 1987).

In the time period that this study examines, the temple and the whole settlement were reconstructed; houses with stone foundations and roofs decorated with terracotta ornaments were erected on the hills, replacing the earlier huts and timber structures (Maaskant-Kleibrink 1992). This paper focuses on a building located to the east of the temple; a large-scale house consisting of two wings flanking an open court (Courtyard building A) (see Figure 1).

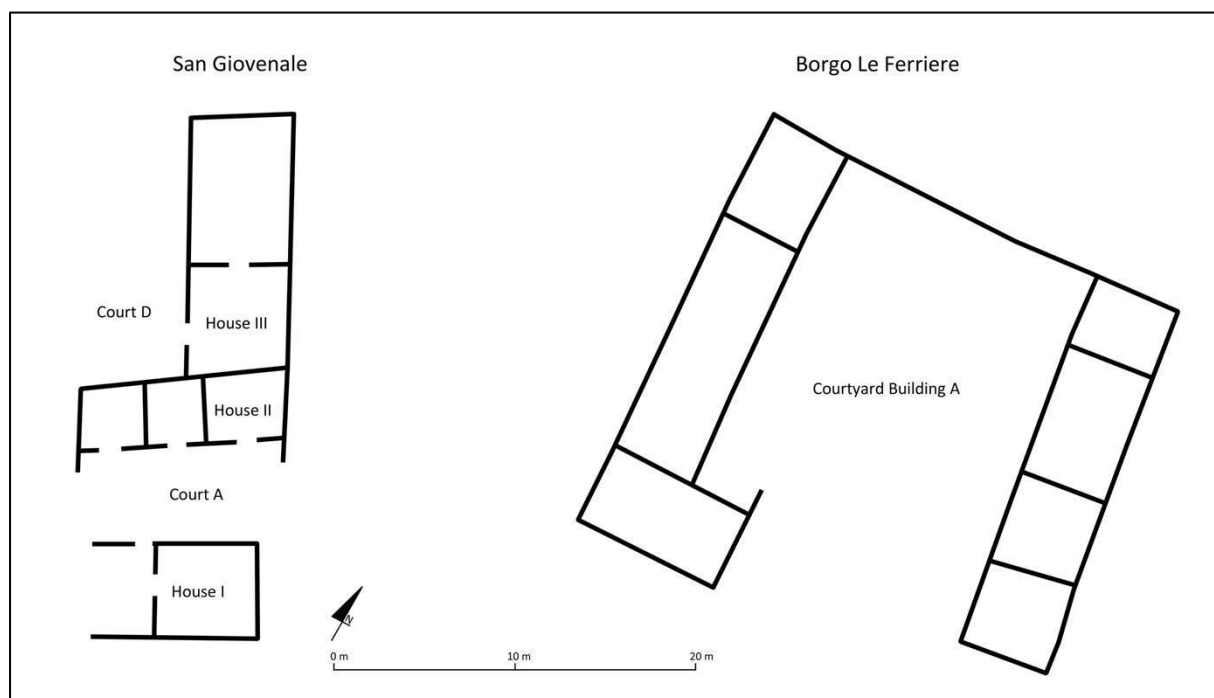


Figure 1. Reconstructed plan of Area F at San Giovenale and Courtyard Building A at Borgo Le Ferriere. Drawing by E. Siljedahl and Henrik Boman, based on Karlsson *et al.* (2006: Fold-out plan 1) and Maaskant-Kleibrink (1992 fig. XLVII).

San Giovenale

The site San Giovenale is found in northern Lazio, c. 20km east of Tarquinia and c. 27km south-west of Cerveteri. The settlement is spread out on two hills, the smaller Borgo and the larger Acropolis, divided by a shallow ravine and surrounded by rivers Fammelume to the north and Vesca and Pietrisco in the south (Karlsson *et al.* 2006).

Just as at Borgo Le Ferriere, the first houses with stone foundations and terracotta roof tiles were built at San Giovenale in the late 7th to early 6th century BC. These houses were equipped with paved courts and wells or cisterns for water storage. The case study in this paper focuses on three houses (Houses I, II and III) and the areas surrounding them (Courts A and D), located in the eastern part of excavation Area F on the Acropolis, see Figure 1 (Karlsson *et al.* 2006; Nylander *et al.* 2013).

Comparing Architecture and Layout

At Borgo Le Ferriere, Courtyard building A consists of two wings, connected by a wall to the north, flanking an open area, the complex has the dimensions of c. 25.2 x 25.2m when measured from wall axis to wall axis (Maaskant-Kleibrink 1992). The foundations are constructed of a soft brownish-yellow tufa stone, none of them are preserved in their entire length. Traces of partition walls have been identified within both wings. A row of single blocks found east of the western wing indicate that the structure might have been equipped with a portico, held up by wooden columns. It is also possible that a well was situated in the north-eastern corner of the courtyard (Maaskant-Kleibrink 1987). Based on the preserved partition walls, the excavators have suggested that two wings of Courtyard building A were subdivided into four rooms each and that all the rooms were entered via doors facing the courtyard (Maaskant-Kleibrink 1992). However, no traces of thresholds have been preserved in the building, and as the excavators have not marked the proposed doors in their report, no doors are shown in Figure 1.

At San Giovenale, the architectural remains of Houses I, II and III consist of foundation walls of cut ashlar blocks, for some walls two courses are preserved. House I covers an area of c. 11 x 5.8m divided into two rooms and House II an area of c. 12 x 3.9m divided into three rooms. The northern outer wall of House II is also the southern outer wall of House III, which measures c. 6 x 15m and is divided into two rooms (Karlsson *et al.* 2006: 31-40).

The open area between House I and II forms a courtyard (Court A), scattered flagstones suggest that it was paved in the Archaic period. It is also possible that the south side of House II was equipped with a portico held up by wooden columns standing on a stone foundation south of the house. Two wells are located in Court A, one of them was also equipped with two water conduits of which one leads into the middle room of House II (Karlsson *et al.* 2006: 35-38). A third well is found in the paved area west of House III and forth at the southwestern corner of House I (Karlsson *et al.* 2006: 31, 44).

No thresholds or doorways have been identified, except a stone with a hole in it, found in the western wall of House III, that might have been part of a door construction (Karlsson *et al.* 2006: 159). In the publication of the excavation, it is suggested that Houses I and III had doors facing west towards the public space outside. House I has a second door facing Court A and in House II, each room has a door opening onto Court A. (Karlsson *et al.* 2006). The doors shown in Figure 1 are based on the descriptions by Karlsson *et al.* (2006).

At first glance, the architectural layout of the two areas compared here might seem very different, the main distinction is the size of the buildings. Still, Courtyard building A and Area F share several characteristics that can also be found in other contemporary buildings in Latium and Etruria. In Latium several buildings from the Archaic period have the same elongated plans ('wings') with multiple rooms often facing an inner courtyard. The buildings consist of one wing or several wings forming a larger complex, they are 'variations on a theme' where the wings and the courtyard remain a constant factor (van't Lindenhout 2014: 133-136).

The same type of winged structures has been found in Archaic Etruria: Courtyard building A is often compared with similar buildings, like a three-winged structure at Acquarossa (Maaskant-Kleibrink 1992). Another comparable Etruscan building is a four four-winged complex at Poggio Civitate (Murlo). The buildings at Acquarossa and Poggio Civitate were both equipped with porticos facing open courtyard areas (Östenberg *et al.* 1972; Tuck 2017).

The open courtyard forms the central area in a structure like Courtyard building A: an enclosed but still open space where the inhabitants could gather, eat and converse. At the same time, it was possible to keep the household under observation from the court, oversee and monitor which individuals that were given access to the different rooms in the building (van't Lindenhout 2014).

The layout of Area F to a certain part mirrors that of Courtyard Building A but in a smaller scale, for example House I and II also centre around a court, creating an open but enclosed space. The courtyard provided the household with an extended living area where household activities could be conducted, the surrounding walls and their porticos would provide shade during hot weather but also shield the area from wind (Siljedahl 2019).

Studies of household organisation and layout in Etruria during the 6th century BC indicate that the Etruscan household was characterised by openness to communal areas and easy access to the centre of the home. The main entrance to houses at sites like Veii, Vetulonia, San Giovenale and Marzabotto fronted a communal area, a street or open courtyard, the line of sight from the entrance led directly into the house's interior arrangement (Dvorsky Rohner 1996). The same type of openness in my opinion characterises the layout of Courtyard Building A. The differences in the layout between the two residential areas compared here are therefore not necessarily related to ethnicity as we see such a large variation in the organisation of household space within both regions (Siljedahl 2019).

Comparing Building Material

At Borgo Le Ferriere, the foundation walls of tufa probably formed the base for walls constructed with wattle-and-daub technique, a large amount of daub was found during the excavations of Courtyard building A (Maaskant-Kleibrink 1992). The foundation walls in Area F at San Giovenale might have held up several different types of wall constructions; the authors of the excavation report seem to favour the interpretation that all the houses in Area F were built with walls of ashlar cut stones. This reconstruction is based on the better-preserved walls from the contemporary houses on the Borgo (Karlsson *et al.* 2006: 159). The archaeological record suggests that a mixture of different building techniques was used: chunks of daub as well as holes in the upper courses of the walls of House III indicate that wattle-and-daub was used to construct some walls (Karlsson *et al.* 2006). Traces of decaying mud bricks have also been identified in Court D (Karlsson *et al.* 2006).

It is believed that all the structures examined in this study had roofs of terracotta tiles as various types of tiles have been recovered at both sites. The tiles are all made of impasto, at San Giovenale of red clay and at Borgo Le Ferriere of white or red clay (Karlsson *et al.* 2006; Maaskant-Kleibrink 1987). The materials used to construct the houses at San Giovenale and Borgo Le Ferriere were produced locally using raw material found in the area of the settlement (Backe-Forsberg 2005; Bouma *et al.* 1995; Maaskant-Kleibrink 1987).

Houses with larger ground plans, stone foundations, stone or mud brick walls and tiled roofs began to appear in the late 7th century BC in Etruria and Latium. The new building techniques are usually believed to have been introduced by the Greeks to the indigenous groups in Italy and are considered as

an important part in the urbanisation of Etruscan and Latin settlements. The new architectural design also became a medium for the ruling families to display their wealth and power (Haynes 2000).

The building material used to build the houses at Borgo Le Ferriere and San Giovenale were neither exotic nor expensive. However, in order to produce the building material and construct the houses the inhabitants would have needed to employ someone with special knowledge or skills. The building material from this point of view signals to the wider community that the inhabitants had the ability and courage to acquire something that was not available to everyone. This could be interpreted as a sign of the high social status of the inhabitants of the buildings at Borgo Le Ferriere and San Giovenale (Siljedahl 2019). It has been stated that the Etruscans culture was distinguished by the choice in materials favoured by artisans and craftsmen (Barker and Rasmussen 1998). This does, however, not seem to be the case when comparing the buildings within this study as the residents at the Latin site used the same type of material as those at the Etruscan settlement (Siljedahl 2019).

Comparing Pottery

Very few fixed features for preparing or storing food have been identified at either of the sites studied here. The exceptions are, apart from the wells, a pit in the western wing of Courtyard building A, described as a storeroom filled with fragments of saucers, jars and *dolia* (large storage vessels) (Maaskant-Kleibrink 1987: 72, 98-99). At San Giovenale, remains of *dolia* have been found *in situ* in one of the rooms in House II (Karlsson *et al.* 2006: 37-38).

The remains of organic material dated to the 6th century BC are also sparse; at Borgo Le Ferriere these consist of a few carbonated seeds from a rubbish pit by the western wing of Courtyard building A. These give an indication that cereals and beans formed part of the diet. The archaeozoological remains from the site are poorly conserved, the material from the Archaic layers is few and the fragments that have been preserved come from cattle and sheep or goat (Bouma *et al.* 1995: 187-188). No bones or soil samples dated to the Archaic period are mentioned in the publication on Area F but samples from other parts of the site indicate the same plants and animals as at Borgo Le Ferriere (Backe-Forsberg 2005).

We therefore have to rely on the preserved pottery from the sites to trace the activities related to production, storage and consumption of food. The pottery at both sites mainly consists of diverse types of impasto, depurated ware and *bucchero*. The impasto makes up the largest part of the pottery related to the Archaic period (Bouma *et al.* 1995; Karlsson *et al.* 2006). The *bucchero* and depurated ware generally consist of vessels for consuming food and drink: cups, bowls, jugs and plates. The impasto was usually used to produce 'utilitarian' vessels for storing and preparing food (Bouma *et al.* 1995).

The most commonly found vessels made of impasto are *dolia*, globular/cylindrical/ovoid jars and different bowls. At San Giovenale, impasto pottery with traces of secondary burning are called kitchenware, also among these the most common vessels are jars, bowls and *dolia*. Other types of vessels found at Borgo Le Ferriere are large heavy saucers, cooking stands, lids for jars and mugs while a decorated brazier was found at San Giovenale.

The *bucchero* and depurated ware make up a much smaller part of the recovered pottery and most of the identified sherds come from drinking vessels: mugs, *kantharoi* (cups for wine), chalices, *oinochoe* (wine jugs), jugs or bowls. At San Giovenale, the most common type of depurated ware is the plate but many of these sherds were found in the top stratum and are therefore not necessarily connected to the activities of the Archaic period (Karlsson *et al.* 2006; Maaskant-Kleibrink 1987; Maaskant-Kleibrink 1992).

The different impasto jars with rounded bottoms were used for household storing of liquids and could for example be used for cooking vegetables, grains, legumes, or meat-based stews on cooking stands (Maaskant-Kleibrink 1987; Pieraccini 2013). As so many jars of these sorts have been found at both sites, it is possible to assume that a large part of the consumed food was liquid based.

No hearths or cooking pits have been identified within Area F at San Giovenale or Courtyard building A at Borgo Le Ferriere. It has been assumed that indoor kitchens were unusual before the Roman period and that cooking was mainly done outside on stationary built hearths, cooking stands or braziers (Scheffer 1981). As sherds of braziers and cooking stands have been found, it is possible that the main part of the cooking was done outside the household space while smaller portions could be heated or cooked on these mobile heat sources.

Both *bucchero* and depurated ware are generally considered as luxury items. The presence of cups and jugs has been taken as an indication that the buildings were used for some sort of feasting: symposiums or banquets (Bouma *et al.* 1995; Karlsson *et al.* 2006; Maaskant-Kleibrink 1992). The custom of drinking wine and feasting using the appropriate containers and cups has generally been described as practice introduced by the Greeks to the indigenous inhabitants of the Italic peninsula. It is believed that the local elites adopted these customs and associated equipment partly because these new prestigious items could be used to reinforce social inequalities (Haynes 2000; Mühlenbock 2008).

In examining the distribution of pottery within the two residential areas it was possible to identify concentrations of pottery that could indicate the location of activity areas. For example, House II at San Giovenale and a certain part of Courtyard building A at Borgo Le Ferriere can be considered as spaces used for storage and preparation of food (Siljedahl 2019). However, it seems as if the household space at both sites was multifunctional as is the case for other examined household areas in the region (Dvorsky Rohner 1996).

It is difficult to identify any redundantly marked differences between the two sites that can be tied to ethnic identity, when comparing diet and food consumption. Both households seem to have consumed a largely liquid based diet and when feasting the residents used food and drink to signal that they belonged to a social elite rather than to a specific ethnic group (Siljedahl 2019).

Rethinking Ethnicity in Archaic Italy

Despite vast knowledge and research, the Etruscans are still often described as mysterious, especially in information directed towards non-specialists. This has prevented them from being integrated in the narrative of Classical history, even if they were one of the most influential groups in pre-Roman history (Smith 2014).

The study presented here is an attempt to move away from viewing the Etruscans as ‘the other’ by highlighting certain aspects of everyday life that the Etruscans had in common with their Latin neighbours. The persons living at San Giovenale and Borgo Le Ferriere constructed their houses using the same type of material and organised their household in a similar manner. They cooked and ate the same type of food and used similar cups and jugs when feasting and drinking.

This does not mean that ethnic identity was unimportant for these people. If we can learn anything from the ancient written sources, it is that the ancient writers had an idea of ethnic identity, and that ethnicity could be used as a rhetorical strategy of self-identification (Smith 2014). The results presented here highlights the fluidity of ethnic identity and underlines the necessity of examining ethnicity in

relation to other types of identities. Within the household spaces studied here, it seems as if social status was more important to manifest than ethnic identity.

In this context, we must also consider the fact that all the members of the household did not necessarily have the same social status or ethnic identity. A household in Archaic Latium and Etruria might include people with familial relations, but also servants, slaves, crafters, and other people working in the domestic space and contributing to the household. These individuals would have different social status and perhaps belong to different ethnic groups.

Grave inscriptions and epigraphic evidence indicate a level of mobility of people from different ethnic backgrounds within the Archaic society. For example, names of Greek, Latin and possibly Celtic origin have been found in burials at different Etruscan sites (Smith 2014). At San Giovenale a name of Faliscan origin has been found on a pottery sherd and a grave inscription refers to a person of possible Punic origin (Backe-Forsberg 2005). These examples indicate that the pre-Roman society was more diverse than traditional descriptions might admit. If we want to understand and re-evaluate ethnic identity in this society, a good place to start seems to be with the archaeological remains of the everyday practises of the household.

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The Role of Ethnicity in Greek Archaeology: A Postcolonialist Approach

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Abstract

After its establishment in 1830, the newly born Greek state was striving to redefine what being Greek meant. Ancient ruins, scattered all around the territory of the kingdom of Greece, provided a unique opportunity to serve a dual purpose: both to prove the ethnic continuation of the Greeks, while simultaneously capitalising on the philhellenic romantic sentiments cultivated in members of the European aristocracy. The aim of this paper is to examine the ways in which notions of continuity and ethnic identity influenced and were in turn influenced by archaeological research. More specifically, the region of Greek Macedonia will act as a case in point in exploring both the fiercely contested topic of the ethnic identity of the Ancient Macedonians and the modern political disputes surrounding it. Consequently, a combination of archival data, literary sources and archaeological evidence will be used to shed important new light on the intertwined paths of archaeology and politics. Moving beyond colonialist discourses of the classical past and the subsequent nationalist responses to them, the present paper will adopt a postcolonialist approach by arguing that a shift in the perspective of the archaeological research conducted in the area is of the utmost importance. Thus, an effort will be made to demonstrate that even though Greece was never colonised, the study of its past was deeply influenced by an emphasis disproportionately given on ethnicity as a means to accommodate colonial or nationalist agendas.

Keywords: ethnicity, postcolonialism, Macedonia, Vergina, Amphipolis

Introduction

If postprocessual archaeology has taught us anything, it is that archaeology and politics are inextricably linked with one another (Harris and Cipolla 2017: 24; Kohl and Fawcett 1995; Meskell 2002). This entanglement between these two fields is of course nothing new. As Trigger (2006) has shown, archaeology can be roughly subdivided into three approaches: imperialistic, nationalistic and colonialist. Despite the cautious reminder by Trigger himself and the critique by other researchers in different parts of the world including the Balkans, these approaches are still casting their shadow upon archaeological interpretations. As several scholars have shown, this is unfortunately still the case with several archaeological works conducted in Greece (e.g., Gimatzidis 2018; Hamilakis 2007; Tziouvas 2014; Tziouvas 2017). While most of the scholars tend to focus primarily on either the 19th or the early 20th centuries and on the archaeology of southern Greece, the present paper will focus on the late 20th and early 21st centuries and will examine two case studies from Northern Greece: Vergina and Amphipolis. By providing a comparative analysis between these two sites, I would argue that ethnicity, as formulated by modernity, is still dominating the way archaeology is being practised. I will subsequently advocate for a change in this approach by suggesting the adoption of a new, theoretically informed, direction.

Ethnicity, continuity and postcolonialism are still largely dominating the field of classical archaeology especially in the regions traditionally belonging in the 'periphery' of the classical world. Despite the danger of oversimplifying a complex social reality, three short definitions corresponding to these three

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terms should be given here before delving into the specificities of the case studies discussed in the present article.

As it is now widely accepted, ethnicity is related to notions of putative descent rather than simply consisting of a list of biological traits, it is actively constructed rather than naturally attributed (Diaz-Andreu *et al.* 2005; Mac Sweeney 2009; McInerney 2014; Siapkas 2003). Ethnicity is usually linked to notions of continuity. It appears that the early warnings – even by the proponents of culture-historical approaches – of not equating modern day ethnic identities to past ones have been forgotten (Harris and Cipolla 2017: 17). Ethnic continuity, that is the uninterrupted existence of the same ethnic group over the course of centuries or even millennia, still lies at the heart of Balkan archaeologies (Gimatidis 2018). These ancient nations are subsequently associated with modern nation-states providing the starting point, the ethnogenesis of contemporary populations, evident in the past by the adoption of a shared material culture (e.g., Pabst 2009). A diachronic continuity is thus assumed to be the default approach of state archaeologies in an attempt to justify their various political agendas.

Grounding such observations regarding Greek archaeology in postcolonialism may seem odd at first. However, as Herzfeld (2002: 900-901) has shown, Greece can indeed be described as a crypto-colony, that is a country that gained its territorial independence at the expense of its economic one. By extending this argument, Hamilakis (2008: 274) has suggested that this form of crypto-colonialism had the same impact on the material culture of Greece, shaping our perceptions of it in a similar way to places formally colonised. Building upon this methodological basis, this article will further argue that this phenomenon, largely evident in the archaeology of the early Greek state, is unfortunately not a relic of the past but a present and dominant model especially in the study of Greek Macedonia.

A Turbulent Century: From the Great War to Vergina

According to the London conference of 1832, Greece would be a kingdom and its first king would be the Bavarian Prince Otto. The capital city of Athens was quickly classicized and Europeanised with the construction of several buildings, all designed by German and Danish architects (Koliopoulos and Veremis 2009: 31). However, it quickly became clear that the new state was far too small and far too poor, lacked any sort of fertile land and its boundaries did not meet the expectations of neither the fighters nor the theorists of the Greek War of Independence (Kitromilides 2013). A series of political, military and diplomatic adventures saw the small Greek Kingdom expanding its territory over the next century and especially in 1913, when the territory of the Greek state was almost doubled (Gallant 2016: 99-116; Koliopoulos and Veremis 2009: 68-76). For reasons not necessarily connected to archaeology, research in the areas termed the ‘New Lands’ was limited up until the 1950s (Kotsakis 2017). While the foreign schools (French, German, American and British) which were established in Athens were slowly but gradually organising systematic excavations in all the major sites in Southern Greece, Macedonia remained largely underexplored. As no site comparable to Mycenae, Olympia, Delphi or Delos was known in Northern Greece, Macedonia progressively became the ‘Other’ of Southern Greece (Andreou, Fotiadis and Kotsakis 1996; Fotiadis 2001: 117, 129; Kotsakis 1998: 47). This ‘Otherness’ led to a stereotypical image of Macedonia as a culturally backward area since no evidence of a civilization equally worthy of that of the Myceneans was discovered there. The whole area was treated simply as a region in which sometime after the Mycenaean period settlers from Southern Greece colonised its shores and, on fewer occasions, its hinterland (Kotsakis 1998: 46-47).

There was, however, a notable exception; that of the Macedonian front during World War I (Kotsakis 2017; Shapland and Stefani 2017; Stefani, Merousis and Dimoula 2014). The excavations that took place during the War cast some doubts on this notion of ‘backwardness’, which unfortunately were forgotten

at least up until the 1970s. The two major expedition forces, the French and the British, followed completely different strategies, with the former organising a systematic excavation and the latter only periodically stumbling upon antiquities when digging up trenches and gun emplacements (Fotiadis 2001: 117-124; Shapland 2017: 88). Most of the finds included pottery sherds, which were transferred to the British Museum, except for two inscriptions also among the finds (Shapland 2017: 96). The inscriptions, written in Greek, were thought to be the first step towards establishing an approach best summarised as the tendency to discover evidence of 'Greekness' in Macedonia. This emphasis on inscriptions is hardly surprising, as it constitutes a recurring phenomenon first observed in the years immediately after the establishment of the Greek Kingdom (Voutsaki 2003). Greek Macedonia provides no exception to this as the archaeological finds were gradually ingrained into the collective consciousness, acting as unspoiled evidence used to support the 'Greekness' of the land (Hamilakis 2007: 130).

The Case of Vergina: Looking for Philip II

Soon after WWII, the leader of Yugoslavia Tito officially recognized the People's Republic of Macedonia (what is today known as North Macedonia) as a member of the Yugoslav federation. Apart from the initial reactions of the Greek state, this event rekindled a multi-decade dispute involving the former Yugoslav state and Greece's concerns about its possible territorial claims over the region of Greek Macedonia, as well as the appropriation of the legacy of the ancient Macedonian kingdom by contemporary North Macedonians (Danforth 1995; Gori 2014).

This was the political context in which, in 1977, occurred what can only be described as the most publicised archaeological discovery of the 20th century, comparable only to the 'great finds' of the late 19th and early 20th century such as Mycenae and Knossos (Hamilakis 2007: 131). The tomb of Alexander's father, Phillip II, was unearthed! The excavations at the Great Tumulus of Vergina revealed among other finds, an unlooted Macedonian Tomb, lavishly decorated with large amounts of burial goods. Perhaps the most important of these was a gold larnax, bearing the well-known 'star of Vergina' within which the deceased's cremated remains were discovered, carefully wrapped in a piece of cloth, while a gold wreath was placed upon them (Andronikos 1984). This discovery propelled Macedonia into the centerstage of World Archaeology, while the site's excavator, Manolis Andronikos, arguably one of the most influential Greek archaeologists, received an almost cult-like status (Hamilakis 2007: 125-167). However, here too, the omnipresent pressure of projecting modern identities to the past was inescapable. Even though Andronikos himself was initially hesitant to identify the deceased as Phillip II, the pressure was mounting on him to do so. The initial newspaper announcement in which he planned to address these rumours was cancelled and a press conference was organised by the Aristotle University of Thessaloniki. Andronikos, having consulted both the President of the Republic and the Prime Minister, was strongly encouraged to 'reveal the truth' setting aside his reservations (Andronikos 1997: 172-173; cf. Hamilakis 2007: 152). Subsequent excavations and the construction of the Museum were generously funded, while the whole of the archaeological site is now a UNESCO Heritage Site.

Unfortunately, it seems like the longest-lasting legacy of the site has been the political debate surrounding it. Scholarship is still largely focused on the debate around the deceased's identity. The identification of the human remains has been repeatedly questioned (e.g., Borza and Palagia 2007; Salminen 2017) and defended (e.g. Lane Fox 2011), while scepticism was even expressed regarding the identification of Vergina with the royal capital of Aegae (Faklaris 1994). 'Archaeological correctness', that is, adopting an acceptable line of argument subject to public and media scrutiny, has been described as the 'Vergina Syndrome' (cf. Hamilakis 2007: 125-167; Kotsakis 1998: 53-55; Plantzos 2017:

69-70; Zois 1990: 105-110). This entanglement of archaeology with politics, resulting in the over-politicisation of the former, has dominated the archaeology of Northern Greece ever since.

In the years after Andronikos's discovery, and especially since the collapse of Yugoslavia and the independence of North Macedonia in 1991, the archaeological discoveries of Northern Greece were frequently featured in news media as further evidence of the 'Greekness' of Macedonia. Modern identities were projected into the past to further solidify a present situation while archaeology itself was gradually transformed into a defence mechanism to tackle the threat from the North. One might have hoped that in our modern world, in which archaeology is trying to redefine itself by addressing its inherently colonialist and nationalist agendas, the 'Vergina syndrome' would have died out as a relic of past discourse. Unfortunately, the events in Amphipolis during 2012-2014 have proved to be a rude awakening to such hopes.

'Amphipolitics' or How NOT to Practice Archaeology!

Modern-day Amphipolis is a small town in East Greek Macedonia. Kasta Hill, where the monumental Macedonian tomb was discovered in 2012-2014, was interestingly enough already known to the local officials and residents of the nearby villages at least since the 1960s (Hamilakis 2016: 244). However, it was the excavations between 2012-2014 that produced the most impressive results. The burial mound featured an impressive perimeter wall with a circumference of 497m, two sphinxes, two female statues – the so-called Karyatids – and a mosaic (Hamilakis 2016: 244). It was the monumental wall, initially thought to have enclosed a wholly artificial mound, that sparked people's collective imagination, while the media kept using the word 'treasure' to describe the archaeological finds. In 2013, the chief excavator also suggested that the Lion of Amphipolis, a fourth century BC statue, was originally placed on the mound - a suggestion that continues to face scholarly doubts. The public's expectations soon started to grow, and it quickly became obvious that the situation was out of any kind of control, contrary to the cautious advice of many Greek and international scholars. The subsequent media frenzy, the public's imagination and the scholarly debates which frequently were miles away from any notion of academic ethos proved to be an explosive combination, aptly described as 'Amphipolitics' (Plantzos 2017).

What poured fuel on the fire was the visit of the then Prime Minister Antonis Samaras, leader of the conservative party, at the dig during the summer of 2014. In a televised interview in front of the sphinxes, Samaras not only described the monument in an extremely detailed manner but also promised the Greek people a huge discovery within days (Hamilakis 2016; Plantzos 2017). A Macedonian tomb that frequently requires months or even years to be fully unearthed was now being excavated within a few days with questionable methods (Gimatidis 2018: 42). Not only did Samaras make this promise to the Greek people but he also - and perhaps more importantly - dictated that the next big question in need of answering was the identity of the deceased buried there. It should also be noted that the excavation was generously financed with almost half a million euros of public funds, a huge budget compared to the usually meagre amount granted to other excavations taking place in Macedonia or indeed elsewhere in Greece (Hamilakis 2016: 245).

The public and the state's pressure was once again mounting on the archaeologists to deliver not just any archaeological discovery but one that would be directly comparable to that of Andronikos almost 40 years ago. Perhaps since Phillip's remains have been already unearthed, it was now time for the elusive remains of his son to be found. Soon journalists from all over the world flocked to Amphipolis and an official was appointed as the formal spokesperson who provided daily updates on the issue (Gimatidis 2018: 42). Unfortunately for the public's expectations and despite the eagerness of the mass

media up until November 2014, no skeleton was found. A sentiment of disappointment was soon starting to fly around, as the public felt that it had been deceived. Moreover, this setback fuelled numerous conspiracy theories surrounding Amphipolis, while the public almost demanded what had been promised to them (Hamilakis 2016). Then in late November, not one but five partly preserved skeletons were found (Ministry of Culture and Sports 2015). These belonged to a woman, two men, an infant and another individual, whose osteological remains were not sexed by the archaeologists due to their poor preservation. Despite the osteoarcheologist's reservations, an anonymous report by the Ministry of Culture argued that the most plausible scenario is that the tomb belonged to Olympias, Alexander's mother. Then, when it became clear that such claims were unsustainable, the tomb was linked to Hephaestion, a suggestion strongly debated in the 2016 *Annual Meeting for the Archaeological Work in Macedonia and Thrace*, held in Thessaloniki (Hamilakis 2016: 249). Eventually, the daily briefings halted, the public's interest gradually faded away, while the archaeological community is still waiting for the results of the still ongoing excavation. Finally, as of 2017, it was announced that the monument was going to receive a grant of 2.8 million Euros (1.5m from the Greek state) to render the tomb accessible to the public (Archaeology Wiki 2017).

Different Sites, Similar Problems

The two case studies, almost half a century apart, display a high degree of similarity in several themes. While their academic value for the archaeological study of the region is unquestionably immense, it is their symbolic capital (e.g., Hamilakis and Yalouri 1999; Lowenthal 1988) and its subsequent manipulation by the state that proved to be the common denominator. Both Vergina and Amphipolis were highly publicised archaeological excavations that capitalised upon their publicity in order to attract funding. The role of the media and the press was crucial, as it was through them that the archaeological works were first made known to the wider public and subsequently captured its collective imagination.

It is well known that archaeology in Greece is more than an academic discipline. It is part of the state apparatus affecting collective memory and identity. Ever since the 19th century archaeological sites have been crucial in the formation of nationhood in Greece (e.g., Damaskos and Plantzos 2008; cf. Karakasidou 1997; Voutsaki and Cartledge 2017; Yalouri 2001). As Kotsakis (1998: 54-55) rightly observes, there are two kinds of 'Hellenisms': one facing inwards focused on Byzantine heritage and one facing outwards focused on classical antiquity. The first kind provided the necessary basis for the assimilation of the orthodox populations inhabiting the area of Greek Macedonia, deliberately omitting the Ottoman monuments scattered across the region which have only recently started attracting academic interest (Bintliff 2014; Kolovos and Vionis 2019; Moudopoulos-Athanasidou 2020). The second focused on the promotion of the classical past, implying a sense of continuity between this and the early Greek state and contributing to 'Hellenomania', which is an obsession with classical Greece (Harloe, Momigliano and Farnoux 2018). In turn 'Hellenomania' played a key role in the perception of the classical past and its subsequent archaeological study. After all, archaeology is indeed a product of western modernity, one which has side-lined indigenous archaeologies in Greece, colonising it in an idiosyncratic way (Hamilakis 2009).

Greek Macedonia is peculiarly situated within this context, as both the perception of Macedonia (especially outside of Greece), and the ways in which studies on its archaeology and history are conducted, are unfortunately equally problematic. The dominance of 'Hellenomania' influencing Western European views of a classical purity evident primarily in Southern Greece, tied to the primordial places of importance such as Delphi, Olympia and Athens, is contributing to the

reproduction of the 'Otherness' of Northern Greece. This frequently results in the exclusion of Macedonia from the mainstream, historical and archaeological narratives especially about Archaic and Classical Greece (e.g., Raaflaub and van Wees 2009) while instead prompting the production of dedicated volumes treating it as a distinct subfield (Lane Fox 2011; Roisman and Worthington 2010). However, western modernity and its consequences are not the only ones responsible. A considerable section of archaeological works currently undertaken in Greek Macedonia is still frantically focused on proving its Hellenicity and in particular its links to Mycenaeans, making this aim the dominant research question posed to the study of the material (e.g., Despoini 2009; Karamitrou 2008). This nationalist approach, partly due to historical and political contingencies, and partly as a response to the treatment of Macedonia as a peripheral region by parts of international scholarship, still permeates the way archaeology is exercised. Consequently, Greek Macedonia remains a *terra incognita* for international projects since, with the exception of a few sites, namely Methone (Morris *et al.* 2020), Olynthos (Nevett *et al.* 2017; 2020) and Argilos (Rupp *et al.* 2019; 2021), most of the current excavations are still solely organised by the local branches of the Greek Archaeological Service (Ephorates).

In this period of great austerity in which the Archaeological Service saw its budget being cut by more than 40%, part of a downward trajectory since 2014 (Plantzos 2018), it seems only logical that international collaborative projects between foreign institutions and the local Ephorates could greatly enhance the academic profile of the region. This is by no means driven only by financial motives but also, and perhaps more importantly, by academic ones. It is through cooperation and interaction with one another that the two sides, the outward-facing influenced by Western modernity and colonialism, and the inward-facing politically charged by an emphasis on ethnicity and continuity, promulgated by the Greek state, will be able to reconcile their differences by adopting a post colonialist and post-nationalist approach. That is of course not to say that the foreign schools are only focused on well-known sites or that all of the works conducted by the local branches of the Greek Archaeological Service are following a nationalistic agenda (e.g., Chatzitoulousis *et al.* 2019). Rather than creating an oversimplified theoretical dipole between a methodologically advanced western-type archaeology and a local, somewhat backwards culture-historical archaeology, collaborations should be formed between foreign and local institutions. If Greek Macedonia is truly to become of age and dispose of any notions of 'Otherness', then this wealth of information generated both by international collaborative projects as well as rescue and systematic excavations organised by the local Ephorates should not be wasted. The challenge arising from this is for archaeologists working on this area to find a common ground, common channels of communication and dissemination of their work in order to establish the archaeological importance of the region.

Conclusion

Concepts and frameworks such as ethnicity, continuity, colonialism, and nationalism have long casted their shadows upon many parts of the world, and the Greek case abides by this rule. European fixation with the glory of classical Greece, their perception of classical Greek civilisation as something 'pure' that has to be maintained as unspoiled as possible, Greece's continuous emphasis on a racial continuity from the ancient times till the modern era and the manipulation of antiquities as means to accomplish political ends, have all contributed to the peculiarities of modern Greece. As for Greek Macedonia, a brief overview of the number of international projects conducted there as opposed to southern Greece is enough to prove the reproduction of this division between north and south, between an inward facing region in contrast to an outwards facing one. As a result, Greek Macedonia is still treated as a frontier zone, an area with far too much political importance to be left to mere archaeologists. It is therefore hoped that by situating archaeology within the wider discussion on postcolonialism the discipline will

finally break free of the shackles of nationalism and colonialism. As for Greek Macedonia, future international joint projects may pave the way in order to study this area both in its wider Balkan and Aegean context.

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Session 3

Archaeological Science: Using Diversified Science Methods in Archaeology

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Abstract

Recent years have witnessed increased contributions of the application of archaeological sciences in multi-disciplinary research projects, facilitating novel conversations across a broad range of topics. Extending beyond traditional archaeological narratives, such multi-disciplinary projects acknowledge that past human activities are inherently complex, thus they can only be comprehensively explored through the integration of multiple lines of evidence obtained from a variety of analyses associated with the archaeological sciences and other sources. In this session, we aimed to promote this collaborative model by welcoming topics and papers that build archaeological narratives through a multitude of approaches, including metallurgy, lithics, geoarchaeology, zooarchaeology, human osteoarchaeology, and archaeobotany, and highlight how these act synergistically with other sources to enhance our knowledge of the past. The utility of data from the archaeological sciences was demonstrated in refuting, adjusting, and generating new insights and syntheses about different archaeological themes.

Keywords: archaeological science, multi-disciplinary projects, multi-faceted approaches

Introduction

Diversified scientific perspectives and methods constantly transform our understanding of the past. Born and developed as a colonial discipline, archaeology has been regularly influenced by personal biases, financial profits, and cultural politics. Several modern-day archaeological narratives originated from a colonised world, where non-indigenous perspectives were implemented to study a foreign culture, and in some cases to establish a cultural superiority. The seminal paper by Atalay (2006) discusses the need to decolonise archaeology for better indigenous representation, accurate cultural context, and interpretation. Schneider and Hayes (2020) examine possibilities of decolonising archaeology and point out the necessities of changing institutional structure and heritage protection laws. While this may be time-consuming to achieve, it is encouraging to hear thoughts of speakers on standardisation of the archaeological domain (Michael D'Aprix in this session) along with formidable strides made by Chirikure (2020) in his book *Great Zimbabwe*.

Archaeometric methods go beyond typological assumptions to demonstrate the non-circumstantial nature of correlation. Although the analytical data generated using science-based tools is susceptible to incorrect interpretation, poor data quality, incomplete or irreproducible results, Martinon-Torres and Killick (2016) provide sufficient examples of productive interaction between archaeological theory and archaeological science and its rising importance. Unfortunately, the opportunities of using archaeometric tools are not equal for all. Many countries lack the interest, training and/or dedicated infrastructure, thus increasing dependency on international collaborations. As a drawback, scholars

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from facility-deficit countries remain without any training or learning experience. A fair collaboration should aim at empowering both parties equally.

Archaeological Sciences Bridging Gaps: The Example of Lebanese Bioarchaeology

Lebanon still constitutes a *terra incognita* for most archaeological periods from a bioarchaeological point of view. The Lebanese Civil War was one of the most catastrophic conflicts of the late 20th century in the Middle East. During 1975–1990 much of Lebanon’s infrastructure was shattered and the chaotic surge of turmoil attenuated the preservation of the Lebanese cultural heritage. This was a period defined by the absence of state authority coupled with premeditated economic stalemate. The Lebanese *turāth* or cultural heritage was threatened with complete destruction throughout the war years, as it was systematically subjected to severe abuses characterised by chaotic urbanisation, clandestine excavations, illicit construction, and widespread looting of artefacts (Sader 2001: 217). Wholesale reconstruction and large-scale initiatives were launched post-war and after the reunification of Beirut, acknowledging the importance of Lebanese cultural heritage (Perring 2009; Seeden 1994, 2003). In line with the post-war, large-scale initiatives to recognize the Lebanese *turāth*, excavation efforts and archaeological research were predominantly focused on monumental architecture and eccentric artefacts. The economic and social structure of Phoenician city-states for most time periods have been fairly addressed through historical and archaeological evidence, however, human bioarchaeological research initiatives are yet to be integrated into relevant discussions. Systematically designed research projects that integrate bioarchaeological evidence with historical sources and material culture have been fairly ignored in comparison with neighbouring countries, such as Jordan and Syria.

Figure 1 illustrates the progression of human bioarchaeological research in Lebanon, Jordan, and Syria over 10-year intervals starting from the 19th century onwards. The data for this figure come from Bi(bli)oArch (<https://www.biblioarch.com/>), an open-access, bibliographic database for bioarchaeological studies in the Eastern Mediterranean and Middle East (Nikita *et al.* 2021). Overall, Jordan has the highest number of published articles, with 229 papers, followed closely by Syria with 200 papers, and finally Lebanon with only 53 articles. From the 1980s onwards, Syria and Jordan show similar ascending trends in published articles, followed by a descending pattern in 2010–2021. It is worth noting that active archaeological research and scientific progress in Syria is impeded by the severe political and economic turmoil driven by the Civil War that began in 2011 (Casana and Laugier 2017). While it is unclear as to why Jordan displays a similar downward trend after 2010, it is perhaps affected directly or indirectly by the geo-political tendencies and instability in the Middle East. Contrarily, Lebanon shows a consistent and gradual increase in published articles after 2010. Despite the increasing trend attested in the 2011–2021 bracket, Lebanon only has 29 published bioarchaeological papers in comparison with Jordan (74 papers) and Syria (68 papers).

Two main reasons might explain the gradual upward trend in Lebanese bioarchaeological research after 2010: a) the training and development of local specialists and a growing interest among international teams in conducting long-term excavations at a number of key sites around Lebanon; b) mandatory publishing of research articles or preliminary results from all archaeological projects and activities taking place in Lebanon in the academic journal series ‘Bulletin d'Archéologie et d'Architecture Libanaises’ (BAAL). Indeed, an increase in articles related to or including Lebanese human bioarchaeology is attested in BAAL after 2010 (Bou Diwan *et al.* 2019; Elias *et al.* 2016; Fischer-Genz *et al.* 2018; Genz *et al.* 2010a, 2010b; Genz *et al.* 2018; Heinz *et al.* 2010; Nassar 2018; Nassar and Chanteau 2018). Despite this gradual but steady trend of publishing Lebanese skeletal material, the geographical area encompassing modern-day Lebanon is particularly large and geologically and culturally complex, so

the still limited number of human bioarchaeological publications indicates that we have a significant gap in our understanding of many archaeological processes in the country.

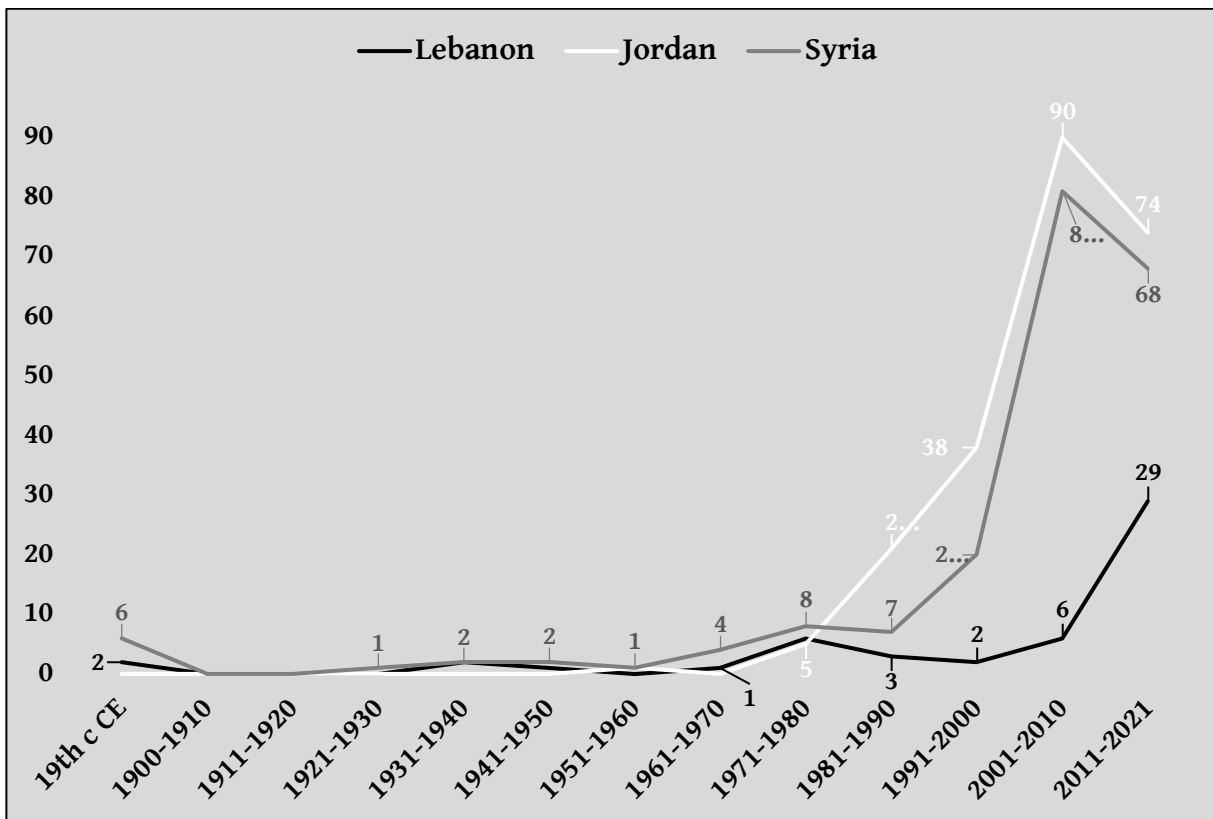


Figure 1. Line graph of 10-year intervals against number of published human bioarchaeological papers.

Session Structure and Papers

When discussing the future of archaeological sciences, fully integrated initiatives (including both archaeologists and scientists) in which the origin and technology of material culture are investigated within their general social and cultural contexts must be a priority. Over the last twenty years, archaeological science has considerably enhanced archaeological research, resulting in a multitude of new finds, and making many archaeological inferences more solid (Killick 2015). In this context, our session brought together early career researchers from different archaeological sub-disciplines to discuss topics including theoretical archaeology, archaeomaterials, environmental sciences, and bioarchaeology.

In this volume, Michael D'Aprix (University College London) approaches the standardisation of the archaeological domain theoretically and practically for better inclusivity in the discipline. D'Aprix suggests deconstructing archaeology back to its foundational structure in order to promote diversity, improve accessibility, and establish its research approach for better standard practice. He concludes by suggesting establishing a formal international institution that can support archaeology worldwide and provide better standardised methodologies and employment of the scientific methodology to archaeological practises.

Maria Elisavet Samoili from the Department of Environmental Biology at Sapienza University, Rome applied multiple qualitative scientific methods for analysis of a 1520s Isenbrant painting. Her work

shows a successful attempt of using archaeological science methods to describe works of art in the absence of strong literature data. The paper advocates the use of non-destructive methods in combination with micro-destructive analysis to identify the pigment provenance and use.

The current volume also includes the engaging investigations of Helen Ridout from the University of Cambridge. Helen examines the importance of minimally counterintuitive elements in the spread of folktales in Europe and Near East. Ridout uses psychological and cultural concepts and theories to explore the link between human memory and counter-intuitiveness. Statistical methods are incorporated to analyse the linkage between the two. The paper is engaging and a reminder of the importance of cognition in the study of archaeology.

Conclusion

In this session, our main aim was to provide a platform for early career researchers to present multifaceted approaches in archaeological sciences and shed light into areas that have been previously understudied or ignored in archaeological research. This session successfully attracted a diverse group of people from China, South Africa, Italy, Cyprus, Greece, Austria, United Kingdom, Lebanon, and India. We genuinely hope to maintain and promote this international dialogue by advocating for more diverse networking, connections, and discussions with scholars from different cultural and scientific settings.

Acknowledgments

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- Anna Karligkioti, The Cyprus Institute
Telling Stories of Bodies in Transition. The Biocultural Identity of the Byzantine Population of Amathus, Cyprus, on the Verge of the Arabic Invasions, 7th c. AD
- Elliot Elliott, University of Cambridge
What Goes Around Comes Around: Tracking Plague Epidemics and Changes in Climate, 400-1400 CE.
- Énio Tembe, University of Pretoria
A Techno-Typological Analysis of the Middle to Later Stone Age Transition at Daimane Rock Shelter, Maputo Province
- Kyriaki Tsirtsis, The Cyprus Institute
Exploring Foodstuffs from Classical/ Early Hellenistic Sikyon: The Study of Macro and Micro Remains
- Magdalena Srienc, Austrian Archaeological Institute-Austrian Academy of Sciences
The Lifeways of the Early Medieval Karawanken Slavs: State of Research

- Ruochen Ge, Northwest University (Beilin, Xi'an)
Investigating the Composition and Application of an Ancient Adhesive Material Discovered on the Qin Terracotta Army Statues
- Tom Maltas, University of Oxford
Agricultural Resilience and the Collapse of Bronze Age Citadels in Western Anatolia
- Thorsten Jakobitsch, University of Natural Resources and Life Sciences, Vienna
Maintenance or Cultivation? Woodland Management Strategies in the Late Neolithic Pile Dwellings of Lakes Mondsee and Attersee and in Surrounding Settlements.
- Vasiliki Anevlavi, University of Salzburg
Provenance and Diffusion of White Marble in the Area of Roman Thrace (Modern Bulgaria)

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The Importance of an Archaeological Domain to Archaeological Scientific Method

Michael D'Aprix¹

Abstract

Promoting standards as an effort to allow more diversity might seem counterintuitive, but providing a stable, yet dynamic, core for archaeological science will grant archaeologists better access to scientific methodologies, and, with it, a broader range of multi-disciplinary and diverse research. The argument I propose is composed of two major components which generally lie in the philosophy of science. The first is the domain: the body of knowledge that underlies archaeological practice, provides definition to the discipline, and establishes the discipline as a certain type of practice. Archaeologists have never fully established the basics of an 'archaeological domain' which has allowed the discipline to become fragmented and without strong definition, and with that fragmentation comes large variations in scientific methodology. Better establishing the foundational ideas of archaeology will support a stronger diversity in archaeological sciences. However, this cannot be done without the second major component, which is international institutional conventionality or an international organisation of collaboration that can support the standards of an entire discipline. The fragmented state of the discipline is most notable in the many national and quasi-international organisations that support archaeologists which are usually focused on specific aspects of archaeology rather than the discipline as a whole. Ultimately, introducing a basic archaeological domain and establishing that domain collaboratively on an international level would help prevent the goal posts from moving, so to speak, introducing standards of science while increasing accessibility and possibility of outreach, essentially levelling the playing field.

Keywords: archaeological science, archaeological theory, archaeological philosophy

Introduction

This paper is a look at how the lack of common definitions and a strong foundation within archaeology has left the field fragmented and without meaningful standards on an international scale. Archaeology is an international practice with practitioners working collaboratively around the globe but without much guidance, standards, or organisation to match the scale of practical work. This has ultimately left archaeologists to develop their own philosophies, theories, and methodologies within a feudal-like framework, leading to a restricted development of disciplinary knowledge that is tied to region, period, or organisational entities and within those groups primarily restricting that knowledge in a direct path from director to their staff or professors to their students. Such a structure has led to a restriction in accessibility to archaeology and a lack of diversity in both practitioners and the scientific techniques utilised in archaeology. This paper is a look at how better defining archaeology and providing a better structure for international standards can provide a stronger archaeological scientific method and more diverse scientific techniques.

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The State of Archaeology

Archaeology has had a long history of division and fragmentation, starting well before the polemic debates of the processual-post processual critique. Much of archaeological theory and history focuses on the processual-post processual period as a foundation for current archaeology and tends to relegate previous forms of archaeology as building blocks to a major paradigm change with 'New Archaeology.'

However, the previous forms of archaeology faced the same exact problems that processualism, the post-processual critiques, and other current forms of archaeology face: a struggle with disciplinary duality and a lack of definition. Archaeology has always been a multi-faceted discipline, yet has never established the core concepts of what archaeology really is and what it is that archaeologists do. We can see the questioning of where archaeology sits in relation to other disciplines starting as early as the 1800s. There were, of course, various definitions involving archaeology (as a science) as far back as the 1600s (Hall 1607), but it was not until the mid-1800s when historians, classicists, and others interested in archaeology began to discuss the ways the duties of the archaeologist overlapped with other disciplines.

One such form of questioning came from a geologist who argued that archaeology and history are closely related yet run inversely to each other, one becoming less important as the other becomes more prominent (Morlot 1861). Just over a decade later, a historian identified a similar issue between the archaeology of daily life and the art that defined interest in classical civilizations (Browning 1874). The 1900s introduced a new level of questioning and defining of what archaeology is and what the goals of the practitioner are meant to be. The period in the mid-1900s exemplifies the difficulty that archaeology has had with defining the discipline and understanding the way that archaeology relates to, and benefits from, a range of related disciplines. The processual movement sparked an aggressive period of archaeology where there were countless attempts to define archaeology, mostly in terms of archaeology's relationship to anthropology (Willey and Phillips 1958). This was followed closely by the period of post-processual critiques which highlighted a range of deficiencies in both the processual movement as well as archaeology as a whole (Earle *et al.* 1987). However, the period of post-processual critique was never a single, cohesive movement but instead was, and still is, a broad collection of philosophies, theories, and methodologies that support specific types of archaeology rather than the entirety of its practitioners. We can see this in the many theories that focus on underrepresented interpretive forms of archaeology like that of Marxist Archaeology (Bate *et al.* 1984), Feminist Archaeology (Wylie 1991) or theories directly imported from other fields like that of Middle Range Theory (Kosso 1991; Raab and Goodyear 1973) that all directly tie methodology to interpretive forms of archaeology.

One of the most important attempts at defining archaeology came with David Clarke who started to explore the disciplinary structure of archaeology apart from theory and methodology. Clarke argued that there are three levels of consciousness for any discipline starting with consciousness, then self-consciousness, and ending with critical self-consciousness. The first level of consciousness is established most simply by defining what archaeology is and what archaeologists do; followed by the second level of self-consciousness as a growth of data production and attempts to understand that knowledge; and ending with the final level of critical self-consciousness that is defined by an attempt to control the structure and future of a discipline (Clarke 1973). Clarke's discussion would place archaeology in the third level of consciousness as his points are looking to establish the structure of archaeology. I argue however, that within Clarke's paradigm, archaeology has skipped the first two levels of innocence and moved directly to the third level. I also argue that archaeology and its structure is not so easily defined in a linear path of consciousness but is instead composed of a series of

foundational components that need to be better defined for archaeology to be an independent discipline as well as a more scientific discipline.

The Archaeological Domain

Clarke's attempt at defining the structure of archaeology and the many attempts from other archaeologists to define what archaeology is, are part of a broader philosophical concept of what is a scientific domain. The domain is the foundational structure and framework of questions, problems, and definitions that guide a discipline's collection of information and knowledge (Shapere 1984). Every domain has different components which help define the boundaries between it and other closely related domains which have been developed over the course of decades and often centuries of philosophical, theoretical, and methodological discussions. Generally, the more mature a discipline is, the more well-ordered its domain is, with clearly defined standards, scientific methodologies, and boundaries between it and other domains. The younger or less mature a discipline is, the less ordered the domain is, which can often be seen as one of the divisions between natural sciences and social sciences, a division with which archaeology struggles.

Each science has its own components that are relevant to the questions and problems that are unique to each science. Archaeology should be no different in the development of its domain but most attempts to define archaeology and its domain have resulted in it being co-opted by other domains, most notably in recent years by anthropology. I have identified eight specific components to archaeology that need to be better defined and established as foundational concepts to the archaeological domain to better support the growth of archaeology as a scientific discipline. In this paper, I will only address the issues of the discipline, research methodology, and conventionality and briefly summarise the other five components, as the focus of the discussion is on the impact of conventionality and standards on the diversity of scientific methodology. The eight major components are: subject and content of research, purpose, the discipline, research methodology, theory, scientific attitude, and engagement, systematicity, and conventionality.

The Components of an Archaeological Domain

The first component – subject and content of research – is meant to firmly define what it is that archaeologists are meant to study. The second component is that of purpose. The practitioner's purpose in archaeology needs to be more clearly defined to answer why archaeologists study the subject. These two components answer the questions about what archaeologists study and why they do it. At the moment, those questions can be answered in a number of ways depending on where the archaeologist is working and what type of archaeology they are performing, if it is archaeology at all.

The first two components together create the foundation for one of the most important components, the Discipline. The Discipline defines the boundaries of archaeology and how it relates to other disciplines as well as the standards and structure that supports archaeology internationally. This defines the 'who' of archaeology, defining the qualifications and skills of a practitioner.

The fourth component is a research methodology that is unique to the issues and goals of the discipline, which I will discuss in-depth later in the article. This defines the 'how' in archaeology, how practitioners of the discipline fulfil the 'what' and 'why' of the discipline.

The fifth component is theory and the need for a wider range of theory types beyond the current interpretive theory that dominates archaeology.

The sixth and seventh components of a domain are scientific attitude and engagement and systematicity. These components work closely together to push archaeologists to be scientific at all times, to engage in scientific practice at all times, to approach all aspects of the discipline scientifically, and ensure that all aspects of the discipline are approached systematically.

The final component is conventionality, which is a formal, international, collaborative organisation that promotes all aspects of archaeology and their standards.

How Does This Help Scientific Diversity?

Archaeology's fragmented landscape has created a difficult environment for the exchange of ideas and methodologies and severely limits the spread of new scientific ideas. Overall, it is difficult to assess the degree of advancement of archaeology as a science. At the most fundamental level, it is unclear whether archaeology is a science or whether it is something else, its place in the hierarchy of sciences and social sciences is unclear. This creates a series of difficulties when it comes to producing a scientific method for archaeology or developing new scientific methodologies for the discipline. In addition to the lack of scientific definition, there are countless varied foundations to archaeology depending on the region where it is practised. The definitions of what archaeologists are and what they do vary from region to region, nation to nation, and institution to institution, making archaeology difficult to access and thereby further limiting the diversity needed to develop new and innovative scientific methodologies.

The following sections will be a look at how these three components, as part of the eight components of an archaeological domain, would create a better foundation upon which archaeologists could develop more diverse scientific methodologies.

The Discipline

The first component of Discipline must be more firmly established as there is too much variability in the definition of what archaeology is and what archaeologists do. This is more easily defined when the subject and content of research as well as the purpose are defined. I argue that archaeology needs to be defined as a basic science that supports a range of other disciplines with data on brute matter. Archaeology must establish its own domain and methodology as it relates to the goals of archaeology, not as it relates to other disciplines, like that of anthropology, in the same vein as other basic sciences like chemistry and biology support a host of other applied or interpretive sciences while maintaining their own independence.

This can provide archaeology with a stronger foundation which can be used to define the practical aspects of what it means to be an archaeologist. At the moment, that question can be answered in countless ways depending on where you are in the world which is evidenced in the inability to accurately count the number of practising archaeologists in the world, an issue that is highlighted in the count of archaeologists in the US. There have been a range of calculations throughout the years from different sources (Dean 2006; Herr and Christopher 2009) but a more comprehensive look was completed in 2014. The calculations found that there are between 7,000 and 11,000 practising archaeologists in the US, but the number is hard to pin down as there is so much variation in the term archaeologist and the degrees they hold (MacQueen 2014). An archaeologist wears many hats in practice and can often be considered a jack-of-all-trades with the types of jobs and duties that are expected of them in practice.

Becoming an archaeologist is no easy task. From the start, there is confusion and disagreement just on the spelling of the word archaeology. There are debates and discussions on the difference between archaeology and archaeology that are beyond a simple explanation of British versus American English

as some argue it is the difference between scientific and classical archaeology (Deetz 1989). What does that mean for someone trying to become an archaeologist? It poses a hurdle from the start of the process as the different spellings will affect your ability to search for information about archaeology or find relevant departments of archaeology.

The next issue comes with archaeology's co-option by anthropology, primarily in the US where archaeology is mostly considered a sub-discipline of anthropology. However, outside of the US, archaeology is often considered a standalone or independent discipline apart from anthropology (Haviland *et al.* 2013). This division is evident in the types of departments in which you can find archaeology; in the US archaeology is most often found as part of anthropology while in other parts of the world it is often a standalone department. This creates a major issue with the accessibility of archaeology but also poses a larger issue in terms of qualification and certification.

Other disciplines have distinct routes to becoming a practitioner and obtaining qualifications. In the UK for example, the government provides career advice that guides an individual through the process of obtaining qualifications, degree programs necessary, and apprenticeships available. For well-established disciplines like that of Law or Medicine, there are very clear routes to becoming a practitioner with distinct degree types, membership to governing bodies, and experience needed to become qualified (NCS 2021b). However, when it comes to archaeology the route is not nearly as clear. There are several degrees that are suggested for becoming an archaeologist including conservation, human evolution, and forensic investigation and a link to additional courses that could provide a similar education (NCS 2021a). The additional information is provided from the British Archaeological Jobs and Resources website that provides a list of 76 different departments that provide an education in archaeology. However, the list contains a wide range of departments including heritage and conservation, architecture, geography, history, classics, humanities, applied sciences, arts, cultural policy and management, earth science and engineering, mediaeval studies, history of art, forensics, natural resources, and anthropology (BAJR 2020). What path is one meant to take to enter archaeology and how does the content learned in one department compare to that of another?

Part of the purpose of the domain and the Discipline is to provide a boundary and framework for its practitioners so that the Discipline may be defined usefully. This creates a major barrier for qualification and the experience needed to become a practitioner. What are the skills necessary to become an archaeologist? Are they similar skills needed to become an anthropologist, a geologist, a historian, an archivist, a conservator, or a chemist? Where do the core skills of an archaeologist end and the skills of other related disciplines start? This lack of definition is most evident in the lack of a core archaeological research methodology.

Research Methodology

Archaeology has never been able to establish its own scientific methodology which prevents archaeologists from developing more meaningful scientific techniques and approaches. There are two main reasons why the lack of a defined research methodology prevents the development of more diverse scientific techniques. First, the lack of a common research methodology limits the accessibility of archaeology to potential practitioners. Second, the lack of common practice results in archaeologists regularly reinventing the wheel or redeveloping methodology unnecessarily.

The two issues arise from an inability for archaeology to develop a scientific methodology that is unique to archaeology. Rather, archaeologists in the past century have focused on adopting or adapting philosophies and methodologies from other disciplines that are ill-fitting for the needs of archaeology. We can see this starting heavily in the processual period where archaeologists relied heavily on logical

positivism which had already been retired as a dead philosophy in the 1960s (Passmore 1967; Preston 2013). This push for adoption for other scientific models and philosophies continued throughout the second half of the twentieth century with major theories on explanation being borrowed by archaeologists without first understanding the intellectual baggage and philosophical foundations of the original work (Fritz and Plog 1970). This resulted in a heavy-handed critique from philosophers and a lasting awkwardness between the two disciplines (Levin 1973; Morgan 1973). There are countless examples of this type of adoption through the years including the adoption of Middle Range Theory (Raab and Goodyear 1973) which was adapted by a number of archaeologists (Pierce 1989; Kosso 1991; Trigger 1995) which garnered critique from its original adapters as many of the later adaptations from other archaeologists did not hold true to the original sociological concept (Raab and Goodyear 1984).

This lack of a core foundation for an archaeological research methodology makes it difficult for potential practitioners to access archaeology. In the same vein as the Discipline, the variation of methodology in archaeology prevents diversity through restricted accessibility. Standard methodologies allow anyone from around the world to access a discipline and with that accessibility comes a broader diversity in practitioners which brings with it a broader diversity of scientific techniques. We can look to chemistry as an example of a highly standardised field with standard methodologies, standard languages, standard codes, and standard symbology that can be accessed around the world by anyone interested in chemistry (Wieser 2013). We can also look to the International Union of Geosciences that provides standards for education and methodology allowing it to be accessible anywhere in the world (IUGS 2017).

On the second issue, the lack of a common research methodology creates a wasteful cycle of regularly reproducing methodology and technology. A study of commercial archaeology across Europe found that for the most part the core methodology used was the same regardless of the country, but each had semantic differences that made them incompatible (Masur *et al.* 2013). There are also countless examples of archaeological databases that are seeking to provide a standard for data collection and storage. We can see this in the custom databases that are regularly built for archaeological sites like that of Çatalhöyük which was custom built over the decades long course of the excavation (Grossner *et al.* 2014). Or the many databases created that support multiple sites like that of iDig (Uildriks 2016) or the Archaeology Southeast database (ASE/University College London 2019). And again, we can look at the many data silos that have been created for archaeological data including the Archaeological Data Service (ADS/University of York 2018) or the ARIADNE database (Meghini *et al.* 2017). It can also be seen in the painfully slow adoption of technologies into archaeology often restricted by the size of projects and interest in technology (Caraher 2016). One major example of this slow adoption and cycle of reproducing methodologies in archaeology is the use of LiDAR across the discipline. LiDAR has been used in archaeology since the early 2000s (Bewley *et al.* 2005) but has not become standard practice in archaeology. Surprisingly, it was argued to be a paradigm shifting technology by some archaeologists nearly two decades after it started to be used in the field (Clynes 2018). Even more troubling, is the commonness of LiDAR now as it comes standard on new Apple products and is readily available to the average person (Apple 2020) yet still not a standard practice in archaeology.

The major issue of individualism in archaeology highlights the lack of any realistic formal, international, collaborative, institutional conventionality. Archaeology needs to develop an organisation that supports archaeology as an independent science with its own research methodology and stronger foundational definitions.

Conventionality

The major component that is lacking in archaeology and preventing the discipline from producing more diverse scientific techniques is an international conventionality. The domain and its components must be maintained through international collaboration as part of a formal conventionality. Without conventionality, archaeology will remain the fragmented and individual practice of modern archaeology.

Conventionality comes in two forms: formal and informal conventionality. Informal conventionality is composed further of two parts: social and disciplinary conventionality. Formal conventionality is also composed of two further parts: legal and institutional conventionality. At the moment archaeology has a mix of informal disciplinary conventionality and a fragmented and loose formal institutional conventionality.

Informal conventionality's first part, social conventionality, is composed of the social and cultural conventions that determine certain aspects of our social lives. These conventions are things like holding the door for someone or saying hello to a stranger. They are conventions that no one has truly agreed on in any formal setting and change from culture to culture with no source of authority. This informality can also be seen in the disciplinary conventionality that guides archaeology. This conventionality, again, has had no formal agreement on its conventions, which are things like field school experience, publication expectations, data quality, expectations of skills, degrees required for qualification and more. There are some more formal conventions that are currently being developed to address these issues but at the moment, these aspects of archaeology have never been formally established by convention. The lack of formal convention in these aspects means the quality of each will vary greatly from region to region, period to period, and nation to nation.

This introduces the importance of formal conventionality and its two forms. The first form is that of legal conventionality which is most simply the laws developed and maintained by governments. In archaeology, legal conventionality plays a small but often controversial part with widely varying laws around the world and few organisations that lobby or speak for the archaeological community. One major example of the lack of legal conventions in archaeology is in the disparity and variety of laws regarding metal detecting around the world. Most countries around the world have no laws regarding the protection of cultural heritage from metal detector hobbyists, there are several, like Canada, New Zealand, or Belgium where metal detecting is illegal. There are other countries like the US or Ireland that have vague laws that have loopholes and many opportunities for hobbyists to engage in illicit activities without risk. There are also countries like the UK where it is perfectly legal to engage in hobbyist metal detecting with few penalties for breaking the laws (Hardy 2017). The variety of laws internationally allows for things like the illicit antiquities trade to thrive and operate with little opposition.

Part of the reason why legal conventions are so lacking is because of a major lack of organised formal institutional conventionality. The final type of conventionality focuses on the institutional organisations that exist in a discipline. Archaeology currently has a wide range of institutions that provide some sort of conventionality within regional, period, or nation-based archaeology. However, there is no global organisation that supports archaeological conventions regardless of the speciality types of archaeology.

The landscape of archaeological conventionality is split in several different ways. There are academic, professional, and inter-agency organisations that seek to provide support for specific user-groups. Within these groups there are often regional, period, or national specific organisations that provide a

more specific level of support for user-groups. On the academic side, we have groups like the World Archaeology Congress, the International Union for Prehistoric and Protohistoric Sciences, or the International Union of Anthropological and Ethnological Sciences, along with the many journals and societies that support specific types of archaeology. On the commercial side there are national level groups like the Register for Professional Archaeologists or the Chartered Institute for Archaeologists that provide support and some standards for commercial or professional archaeologists within specific nations. There are also groups like the European Association for Archaeologists that seek to provide some guidance on a larger scale but are still region bound. Archaeology also has a range of inter-agency organisations that provide data silos, databases, and other types of support for specific regions or groups, like that of the database ARIADNE for European heritage or the Archaeological Data Service as a data silo and archive for archaeological data.

There are no international institutional conventionalities that can support the full range of archaeologies that we see in the fragmented landscape of archaeological institutions. Many of the more mature sciences are part of the International Council for Science (ICSU 2018) and have their own International Union which supports their growth, standards, and education around the world while working with the many specialists and regional organisations that are similar to those found in archaeology. One specific example is that of the International Union of Geological Sciences that provides education and outreach to its member nations and sister organisations to support the diversity of both its practitioners and its scientific techniques.

Summary

Archaeology needs to return to the most foundational definitions and concepts that make up the domain of the discipline to reduce its fragmented state, improve accessibility, and promote diversity in the scientific methodology employed in practical archaeology.

The way to do this is by better establishing the boundaries of the discipline to clarify the qualifications and experience needed for an individual to become an archaeologist. Providing standards to the basic definitions of archaeology will help make archaeology more accessible to a wider range of practitioners but will also allow archaeology to further develop the domain and strengthen its components, like that of research methodology.

Archaeology needs to better establish its research methodology as a component of the domain to reduce wasteful reinvention, provide standard practice across the discipline, and again, promote accessibility to a standard scientific methodology. With this in place, we can better highlight the areas where archaeology is lacking in scientific methodology and improve it, while also pushing for better and more innovative scientific techniques across the board.

These components need to be established as part of a formal institutional convention that can support all of archaeology around the globe. Current institutional conventionality is fragmented and focused on specific user groups rather than archaeology as a whole. By establishing an international organisation archaeology can push for better legal conventions but also support to increase accessibility to archaeology and to improve research and development into scientific techniques.

Finally, although this paper argues for more clarified definitions and international standards, it does not seek to disrupt the diversity of archaeological practice. Instead, the goal is to better understand archaeology, what it is and what we do as archaeologists in order to better utilise the diversity that gives archaeology its strength.

In the research for this paper, and my PhD, it has become apparent that there is often confusion between terms like fragmentation, division, and diversity. There is no argument here against the strength of archaeology as a diverse field with practitioners from varying backgrounds or utilising different approaches. Rather, the issue is with fragmentation and division which, by definition, describe something that is broken apart or separated that often produce tension between its parts. The issue of fragmentation and the argument of this paper focuses on the inability for archaeologists to communicate or collaborate effectively because of lacking integrity in the above components which are often small differences in semantics, definition, or measurement but can create massive limitations on an archaeologist's ability to utilise the strength in diversity of archaeology as a multi-faceted and collaborative discipline.

Most simply put, it is difficult for archaeologists to benefit from the diversity of archaeological practice because of our fragmentary state and lack of a core identity, leading to an inability to communicate effectively between, and benefit from, the many traditions, sub-disciplines, and specialisations in archaeology.

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Application of Scientific Methods (ED-XRF, OM, Technical Imaging) for the Analysis of A. Isenbrant's Painting 'The Mystic Marriage of Saint Catherine'

Maria Elisavet Samoili¹

Abstract

During the Bruges' Golden Age in the 15th and 16th century, the fine arts prevailed, and the great Flemish Primitives made a name for themselves. 'The mystic marriage of Saint Catherine' is a painting by the Flemish Adriaen Isenbrant, dated around 1520. This paper focuses on the first venture of scientific physicochemical examination on an Isenbrant's painting, for the identification of pigments and materials used. The analysis was carried out with the combination of both *in situ* non-invasive techniques and laboratory micro-destructive techniques. Specifically, non-invasive examination included the elemental analysis technique Energy Dispersive X-ray Fluorescence Spectroscopy (ED-XRF) and Technical Imaging (VIS, UV, IR, IRFC), whereas micro-destructive analysis was conducted by Optical Microscopy (OM). The paper proves that these techniques form a reliable combined scientific method approach. A complete identification of pigments and characterization of components and materials used in the past to manufacture an artefact was achieved.

The results revealed the use of typical Flemish painting techniques and materials of the 16th century. The traditional structure of the painting, its stratigraphy, was revealed and for the first time the painter's palette came to light: cinnabar and red ochre for red colour, azurite for blue colour, malachite or verdigris for green colour, yellow ochre for yellow colour and lead white in all mixtures. Spectra of some analysed points showed the use of modern materials and therefore some later restorations by conservators. The conclusions deduced from this study can help other anonymous paintings belonging to Isenbrant to be identified in the future and enhance our knowledge of paintings during the 16th century. Due to the lack of archival material and the bibliography gaps, they can also be an excellent tool for the History of Art in order to answer questions that could not be answered before.

Keywords: painting analysis, analytical techniques, pigments identification, XRF, optical microscopy, stratigraphy, cross-sections

Introduction

Early Netherlandish painting during the 15th and early 16th centuries in the Southern Low Countries is a brilliant high point in the history of art. The period saw the rise of a group of artists generally referred to as the 'Flemish Primitives' (Smith 1928: 238-239; Harbison 1984:588). Adriaen Isenbrant (1490-1551) was a Flemish northern Renaissance painter active in Bruges. Isenbrant worked in the workshop of Bruges' leading painter, Gerard David, but not much is known about his work as a disciple or as a free master (Held 1942: 388; Wilson and Jacobs 2000). Despite our incomplete knowledge, Isenbrant emerged as one of the principal representatives of the final conservative painting phase of 16th century Bruges (Oliver and Wolff 1986).

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Figure 1. 'The Mystic Marriage of Saint Catherine' by Adriaen Isenbrant, 1520 (Photo credit: Author).

The painting 'The Mystic Marriage of Saint Catherine' is dated to 1520 (Pavanello 2013) and it is an oil in oak panel, painted by Adriaen Isenbrant (Figure 1). The central group of the composition is formed by the Virgin and Child, Saint Catherine of Alexandria, who is depicted during the moment of receiving the ring, symbolising her spiritual marriage to Christ, and Saint Barbara, both widely venerated in Bruges. Next to the main figures, three more virgin Saints witness the event, Saint Margaret of Antioch, Saint Agnes and Saint Ursula.

The painting has dimensions 53.5cm by 38cm and its wooden support consists of two butt-joined oak boards. In 1838, the painting (among others) was donated by the Italian painter Domenico Pelegrini to the National Academy of Saint Luca in Rome, where it continues to reside today (Pavanello 2013).

The painting calls for attention from a technical point of view. As it is characterised by vivid colours and fine brushstrokes it illustrates the quality of the painter. Therefore, the intriguing questions include the identification of the materials used by Isenbrant, his palette and his skill of constructing the colour layers. The history of the painting prior to 1838 remains unknown. Thereafter, the painting was subjected to no analytical trials. In order to gain insight into painting materials, non-invasive methods, such as technical imaging and XRF were implemented. The examination was conducted *in situ* using portable instruments at the Academy of Saint Luca. In order to answer the complex structural composition of the paint layers, two samples were extracted from the surface of the painting and examined using Optical Microscopy (Rosi *et al.* 2010; Smith *et al.* 2017). After the scientific analyses, it was decided to proceed with the restoration of the painting not only essential after the extraction of the micro-samples but also for cleaning, removing overpaint and foreign materials, filling lacunae and joints and revealing colour's luminosity.

Materials and Methods

Technical Imaging

The surface analysis included first Technical Photography in 4 spectral bands: Ultraviolet-UV (360–400nm); Visible-VIS (400–780nm); Infrared-IR (780–1100nm). The imaging methods used were: VIS (Visible) and RAK (Raking Light), UVF (UV Fluorescence), IR (Infrared) and IRFC (Infrared False colour). A Technical Photography documentation usually consists of a collection of scientific images realised with a modified digital camera sensitive to the spectral range about 360-1000nm. Individually, each image provides very little information, however, collectively they represent a practical and successful methodology to study art (Cosentino 2014: 8, 2015a).

Frontal under normal illumination (VIS) and Raking Lighting (RAK) photographs were taken by NIKON TD200 Digital Camera equipped with a 70mm lens. The Ultra Violet Fluorescence (UVF) examination process involved positioning of two 380nm ultraviolet lamps in front of the painting surface in a dark room. The photography was captured by a NIKON TD200 Digital Camera equipped with a 70mm lens, with shutter speed of 15 seconds. Infrared (IR) photography was acquired by Sony DSC-F828 8MP Digital Camera (Sony 4colour Super HAD CCD) with 90mm lens, a skylight 58mm filter was applied to modify the camera for detecting the spectrum between 900nm to 1100nm only. For Infrared False colour images, the photographs were taken under exactly the same conditions by Sony DSC-F828 8MP Digital Camera with 90mm lens, equipped with a skylight 58mm infrared filter and 100nm band pass green and red filter. The IRFC image was created by digitally editing- mixing the channels of the VIS and IR images (the VIS green (G) and red (R) channels became respectively the IRFC blue (B) and green (G) channels, while the IRFC red (R) channel was represented by the IR image).

Energy Dispersive X-ray Fluorescence (ED-XRF) Spectroscopy

Energy Dispersive X-ray fluorescence (ED-XRF) spectroscopy was used for the characterization of elemental composition of the materials. This was intended to gain accurate and reliable results for the identification of the pigments in the paint layers.

Portable XRF analysis has been accomplished in situ on 16 spots for examining different colours, tonalities, shades and underdrawings and to identify the possible Isenbrant's palette (Figure 2, 3). Moreover, there were many retouches, which were found from the UVF imaging. In those areas, spot analyses had been implemented to understand the possible colouring material that the previous restorers employed in their work which would enable in distinguishing the material from the original one (Cesareo *et al.* 1992). The pigments used by the painter were recognized on the bases of characteristic chemical elements from the XRF spectra of analysed points while the elements were identified by the energies of their characteristic X-ray peaks (Mannino *et al.* 2013; Sawczak *et al.* 2009).

The equipment used was a portable Amptek X-123SDD X-Ray Spectrometer with a double laser point system and Silicon Drift Detector (SDD) coupled with a Mini-X X-Ray Tube System equipped with a Tungsten golden anode (50kV/35 μ A). The painting was placed in a 2cm distance from the tube and detector, the two lasers were pointed manually towards specific points that are referenced with numbers and pictures. All the measurements were done with fixed instrumental conditions: 37kV of applied high voltage and 15 μ A of cathode current, with 30 seconds time of analysis. Data acquisition was performed through a PC card (DPPMCA software). Once the X-ray tube was turned on, a standard 30-second CCC analysis for calibration was performed at the beginning, middle and end of the XRF analysis.

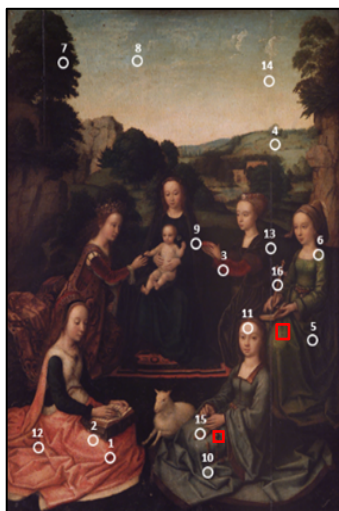


Figure 2. White circles indicating the XRF points; red squares showing the sampling areas.



Figure 3. In-situ XRF analysis. (Photo credits for figures 2-4: Author).



Figure 4. Collecting the sample and putting it in the test tube.

Sampling and Optical Microscopy

In order to acquire more information on the execution technique, a total of two micro-samples were extracted from a blue-yellow and a green area of the painting for more extensive analysis (Figure 2, 4). The samples were obtained from the painting by carefully scraping minute portions of the surface from the two-coloured points with a clean and dry sharp scalpel. Precaution was taken so that each micro-sample comprised the whole stratigraphy. The two areas were chosen because they afforded the widest variety of colours in order to gain a comprehensive understanding of the painter's palette. Samples were studied by Optical Microscopy (OM).

The Optical Microscopy analysis and the corresponding photographic documentation was conducted for studying the embedded cross-sections and providing the layer stratigraphy (Butler 1970: 107). The information was obtained by a Nikon Eclipse 50i pol optical microscope with Nikon D200 digital camera in visible light, and Nikon Eclipse E40 optical microscope with 50W mercury vapour lamps in UV light.

Cleaning and Conservation Treatment

The first step of the restoration process has been represented by a testing cleaning agent, for the removal of the layer of varnish. Samples have been realised in different areas of the painting in rectangular shapes to assess the most suitable compound. Different types of solvent methods for cleaning were chosen, but mainly acetone and dimethyl with acetone were used. Acetone is known to have multiple advantages for the restorer and the painting and therefore is an obvious choice. Acetone is a non-toxic, volatile compound, which both reduces the risk of inhalation by the restorer and vanishes quickly from the painted surface. This ensures the original colour of the painting remains unharmed. In other cases, wherever found necessary (i.e., abundance of Cu), dimethyl (20%) with acetone (80%), 3-ammonium citrate and dimethyl sulfoxide, pure in gel, were applied. The solvent in gel form had a better effectivity, due to increased retention time over the surface. In order to remove the old stucco and fill materials of the previous restorations, a scalpel was used. A USB-Microscope Veho

Discovery VMS-004 with 400x magnification was used in order to observe the details, such as the remaining dirt, the craquelure, abrasions, loses, retouches and the paint colours.

Results and Discussion

Technical Imaging

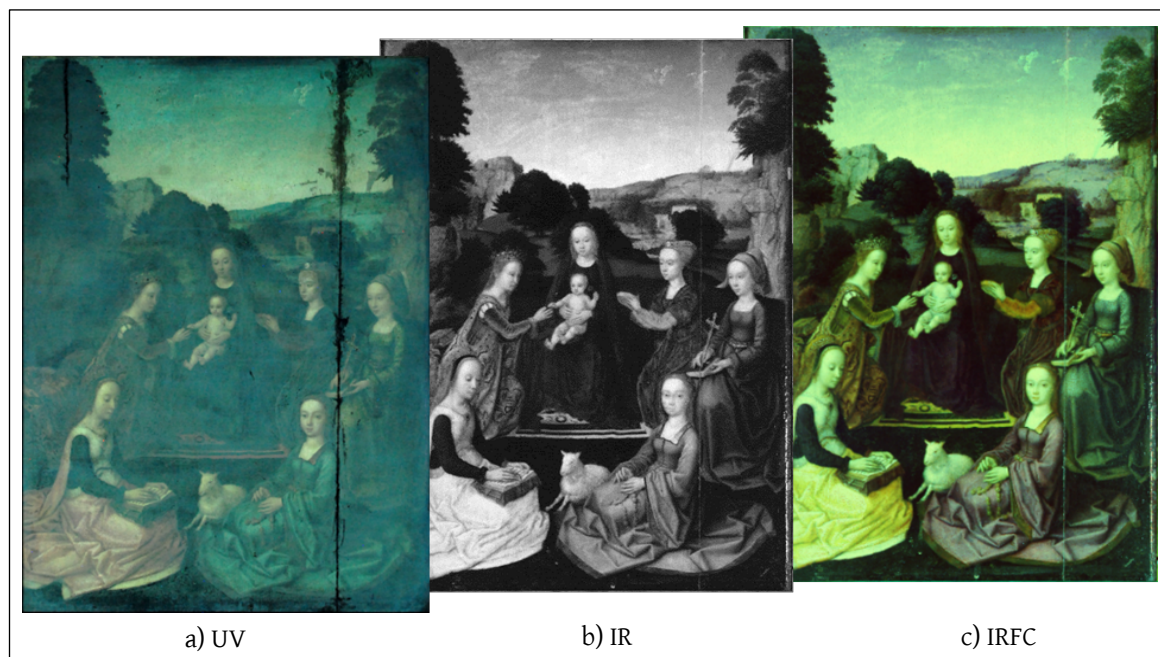


Figure 5. Technical imaging. a) UVF image; b) IR image; c) IRFC image (Photo credit: Author).

Visible (VIS) and Raking light (RL) were carried out mainly in order to evaluate the condition of the painting, cracked areas or lifted paint layer highlighting the three-dimensionality of pictorial surface and an overview of the state of conservation (Stuart 2007; Pellicori 2012). The painting was in excellent condition.

Ultraviolet Fluorescence (UVF) image was especially necessary for the observation of the painting's condition (Figure 5a). It was useful for providing information regarding the surface details of the painting, such as surface roughness and stains and allowed also identifying later retouched and restored areas, which are noticeable by their darker colour (Cosentino 2015b). Observing the level of darkness of the retouched areas, a chronological frame was made by characterising the retouches as older and younger. Observing the UVF image, a thick layer of old greenish fluorescent varnish was also found, with a natural origin.

Infrared (IR) has been the richest in terms of useful information, as it helped to understand the painting technique and the creative processes from many approaches by revealing the hidden sketching and brushstrokes that are not visible at first glance (Figure 5b) (Cosentino 2016). Infrared photography allowed a view beneath the surface, as it penetrates the upper paint layers until it reaches something that absorbs it, or it is reflected back to the camera, offering an enlightenment of the use of underdrawing by Isenbrandt, the modifications he made during the composition, the so-called *pentimenti* and later restorations under the varnish. The most interesting *pentimento* is in Saint Agnes' face position as Isenbrandt even though had painted her in profile face, he changed his mind and so the underdrawing in process, painting St. Agnes looking towards the viewer (Figure 6). IR revealed the

second eye, nose, mouth, and the very obvious ear. IR photography was thus useful to indicate how the painting evolved as the painter considered issues of iconography, description, and composition.



Figure 6. IR image of the pentimento. Saint Agnes was painted first in profile. The second eye, nose, mouth and ear are visible (Photo credit: Author).

Infrared False colour (IRFC) was also necessary for the tentative identification of the pigments, and even for mapping colours of hidden parts (Figure 5c). The alteration of the colours in the IRFC image can be useful for the primary identification of pigments but is just tentative because a number of factors can affect their actual false colours, and for this reason, more safe pigment identification was executed by XRF. For example, Saint Agnes's blue dress looks purple in IRFC image, indicating that the blue pigment could be Azurite.

X-ray Fluorescence Spectroscopy (XRF)

A wide selection of historic pigments used originally has been found, all commonly applied in the 16th century. They were identified on the basis of the characteristic chemical elements shown in a single analysed point (Kriznar *et al.* 2014). Some interventions have also been found, since chemical elements reveal some modern material, a sign that the analysed pigment does not belong to the original palette. Before delving fully into the identification of pigments, a clarification must be made regarding the XRF spectra obtained. Gold (Au) is consistently picked up by the XRF instrument due to its golden tube. The results are as follows in Table 1.

Table 1. Main elements detected by XRF in each colour.

Spot no.	colour	Main elements	Pigments Interpretation
1, 2, 3, 11, 12	Red/ Pink	Pb, Hg, Ca, Fe, Cu	Cinnabar, Red Ochre, Lead White
4, 5, 6, 7	Green	Cu, Pb, Fe	Copper based pigment, Lead White
8, 9, 10	Blue	Cu, Pb, Fe	Azurite, Lead White
15, 16	Yellow	Fe, Ca, Pb, Cu	Yellow Ochre, Lead White
13	Green- Restoration	Cu, Pb, Fe	Copper based pigment, Lead White
14	Blue- Restoration	Cu, Pb, Zn, Fe, Ba, Cr	Zinc White/ Lithopone, Viridian

Red colour

Five red based points were analysed (points 1, 2, 3, 11, 12) taken from different spots with different tonalities. The predominant chemical elements detected by XRF in all spectra were Mercury (Hg), Iron (Fe), Calcium (Ca) and Lead (Pb) (Figure 7). Mercury (Hg) reveals that the red pigment applied was Cinnabar [HgS]. Low peaks of Iron (Fe) and Calcium (Ca) show that the painter probably mixed cinnabar with a small amount of Red Ochre [Fe₂O₃]. The peaks of Lead (Pb) correspond to Lead White [PbCO₃]₂•Pb(OH)₂, a white pigment used to achieve the different tonalities of the colours. It is obvious from the spectra that Cinnabar, Red Ochre and Lead White were used in higher or lower quantities, depending on the tonality of the colour that the painter wanted to obtain. For dark red colour the quantity of Cinnabar and Red Ochre is higher than the light red colour, while the quantity of Lead White is lower in dark red colour and higher in light red colour. Thus, the red and pink colour was a mixture of pigments Cinnabar, Red Ochre and Lead White in different quantities in each spot. Historically, cinnabar is the native red sulphide of mercury, which was originally made by grinding a powder of cinnabar.

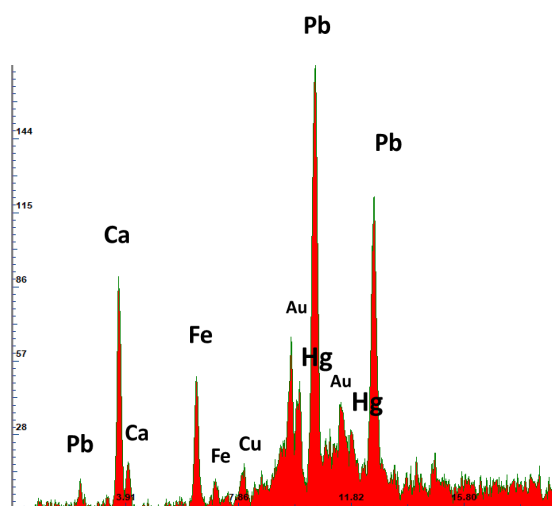


Figure 7. Dark red colour XRF spectrum.

Green colour

Four green colour points were analysed (points 4, 5, 6, 7). All four points have several different tonalities of green colour that go from very light to very dark. The analysis of the four points shows that the two abundant chemical elements were Copper (Cu) and Lead (Pb) (Figure 8). In every spectrum there was an important presence of Copper (Cu), showing that the colour was made by some copper-based pigment. With XRF technique it is not possible to distinguish between different green pigments based on Copper (Cu) and to identify the precise green pigment applied, because the XRF analysis offers the elemental and not the compositional results. Copper (Cu) is the only characteristic chemical element for a series of green pigments, making it difficult to have a clear answer about the exact green pigment. It is possible to narrow the possibilities by selecting only the historic pigments of 16th century, among which the most used were Malachite $[\text{Cu}_2\text{CO}_3(\text{OH})_2]$ and Verdigris $[\text{Cu}(\text{CH}_3\text{COO})_2 \cdot \text{H}_2\text{O}]$. The count numbers vary greatly, depending on the tonality of the colour. In the dark areas such as the trees at the back of the scene, the peaks of Copper (Cu) are higher, while in the light areas such as the landscape, the peaks are lower. In the light areas there is a higher presence of Lead (Pb), showing the use of Lead White $[\text{PbCO}_3]_2 \cdot \text{Pb}(\text{OH})_2$ in the mixture, to lighten the basic green colour.

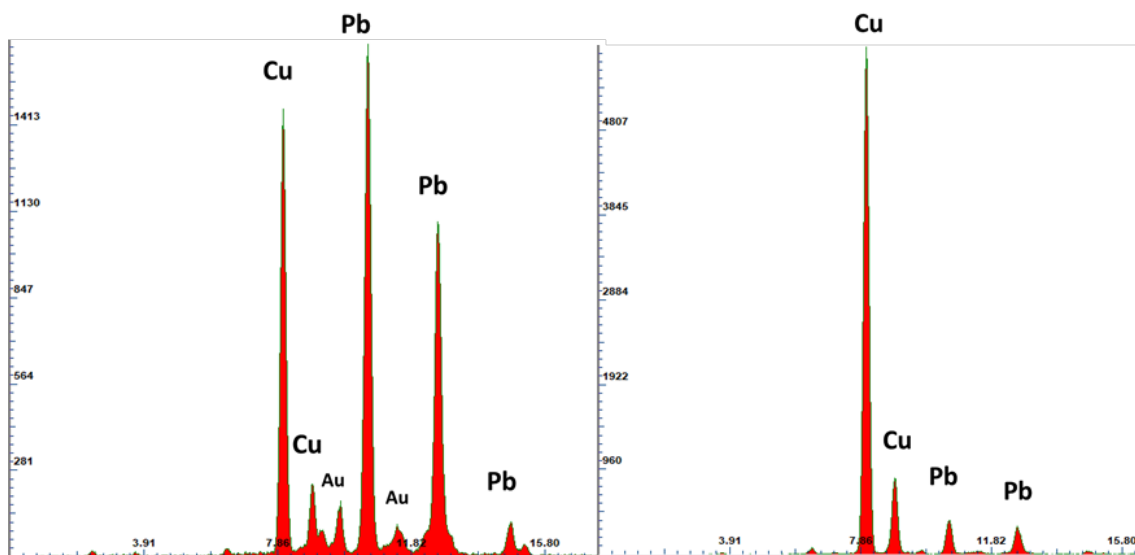


Figure 8. Green light and dark colour XRF spectra respectively. Light green has more Lead White.

Blue colour

Three blue points were analysed (points 8, 9, 10). Moreover, the blue colour had many different tones, from light to dark. The spectra of the three analysed points were quite similar, showing peaks of Copper (Cu) and Lead (Pb) (Figure 9). The most important element was Copper (Cu), revealing that the blue pigment was Azurite $[\text{Cu}_3(\text{CO}_3)_2(\text{OH})_2]$. Lead White $[\text{PbCO}_3]_2 \cdot \text{Pb}(\text{OH})_2$ was added in the mixture. The count numbers of Copper (Cu) vary according to the lighter or darker tone. In darker areas there is more Copper (Cu) and less Lead (Pb), while vice versa in lighter areas. For example, the higher peaks and therefore the densest and darkest colour can be found in the Virgin's Mary's mantle.

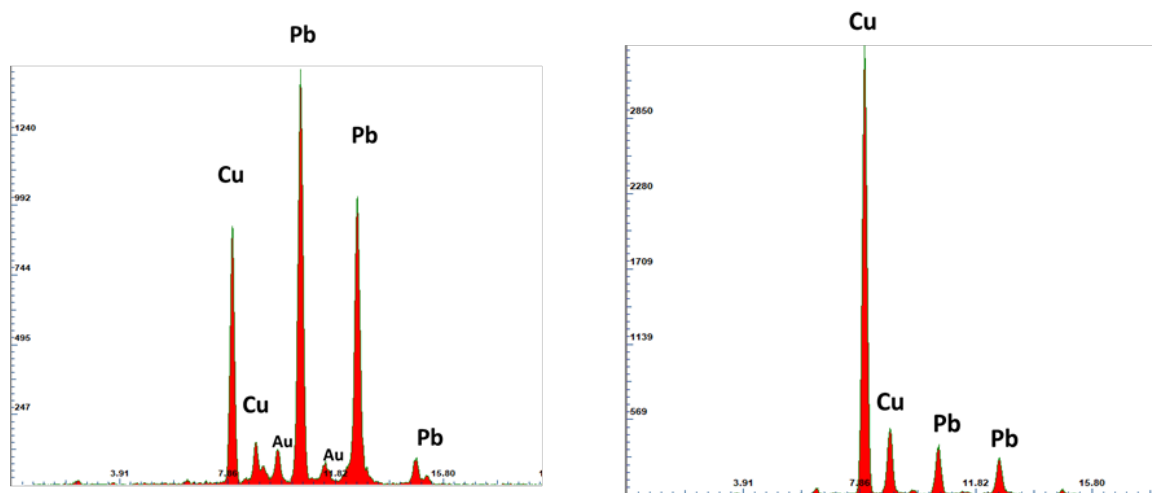


Figure 9. Blue light and dark colour spectra respectively. In dark colour there is more Copper and less Lead.

Yellow colour

Two yellow points were analysed (points 15, 16). The predominant chemical element, besides Lead (Pb) and Copper (Cu), which in this case belong to the copper based green pigment and Azurite applied in the two dresses respectively under the yellow colour, is Iron (Fe) and Calcium (Ca) (Figure 10). This leads to the conclusion that the pigment applied is natural Yellow Ochre [$\text{FeO}(\text{OH}) \cdot n\text{H}_2\text{O}$]. Lead corresponds to Lead White [PbCO_3] \cdot 2 \cdot $\text{Pb}(\text{OH})_2$].

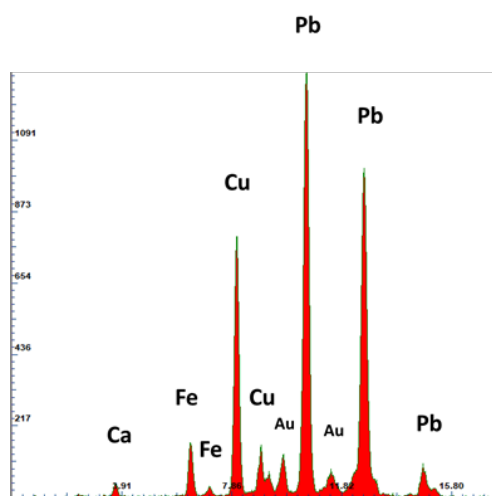


Figure 10. Yellow colour spectrum.

Restored Areas: Interventions

Two points in restored areas were analysed (points 13, 14). The point 13 showed peaks of just Copper (Cu) and Lead (Pb), leading to the conclusion that no modern pigments were used for this intervention. The point 14 revealed some modern materials, a proof of a younger intervention. Except for Copper (Cu) and Lead (Pb) that correspond to Azurite and Lead White of the blue-sky colour, XRF gave a nice peak of Zinc (Zn) and two small peaks of Chromium (Cr) and Barium (Ba) (Figure 11). On the one hand, Zinc (Zn) shows the use of Zinc White [ZnO] but on the other hand, the common presence of Zinc (Zn)

and Barium (Ba) may reveal the use of Lithopone [$\text{ZnS} + \text{BaSO}_4$] (zinc sulphide 30% and barium sulphate 70%). Both are modern materials and are used widely in restoration works. Zinc White discovered in 1834 and it is in use until today and Lithopone discovered in 1874 and it was in use until the 20th century. Chromium (Cr) may correspond to Viridian ($\text{Cr}_2\text{O}_3 \cdot 2 \text{H}_2\text{O}$), a green pigment discovered in 1838, which due to its excellent permanence and lack of toxicity could replace all other greens, both ancient and modern, and it is in use until today. The intervention in point 14 contains younger pigments, so a chronological frame is created assuming that this restoration area is younger than the one in point 13.

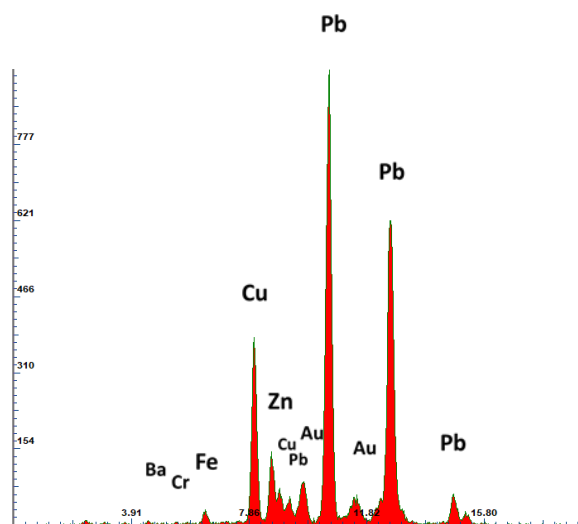


Figure 11. Point 14 restored area. Peaks of Zinc (Zn), Chromium (Cr)-and-Barium (Ba) indicate pigments of the 19th century.

Optical Microscopy (OM)- Stratigraphy

The samples of the painting have been examined with Optical Microscopy (OM) in white reflected light and under UV light and the stratigraphy was thus studied. The layer sequence, the combinations of paint layers, the pigment mixtures, their thicknesses and particle colour, size, and texture, as well as the presence of old and more recent varnishes were elucidated. These data were essential in the study of the painting as they provided access to the painter's technique and materials used in the technical execution of the painting (Stanley and Mayer 2006: 190). Photomicrographs gave a clear image of the layer stratigraphy, providing a useful 'pictorial' guide in terms of interpreting data.

The analysis of micro-samples from the painting illustrates the presence of a preparation layer, consisting of a thick ground layer (white- brown layer and brown organic layer) and on top the priming layer (yellowish with red and black particles). Apparently, before painting, the wood panel had been prepared with a preparation layer. Priming layer is mainly composed of earth pigments and became a coloured preparation used to emphasise the pictorial film overlying.

The paint layers were applied in both cases using very thin layers. The analysis showed that the blue-yellow colour sample consists of three different paint layers: 1) a light blue, probably a mixture of Azurite and Lead White, to paint St. Agnes blue dress, 2) an orange, just on the right side, containing yellow and red particles, probably yellow ochre, to paint the rosary upon the blue dress and 3) the final blue layer is painted as a glaze using azurite pigment. The green colour sample consists of just one paint layer: a green layer with green and yellow particles semi-transparent, a copper-based pigment.

On the top of the paint layers in both samples there is a brown organic layer, which is difficult to characterise. However, it can be assumed that it is about an old, oxidised varnish. The fact that it is brown advocates the hypothesis that is due to oxidation. On top of that is a clear varnish layer, a natural resin. On the second sample, in St. Margaret's dress, one more layer of varnish was discovered. However, the varnishes are not original since the varnish layers were not pigmented and probably were applied by the older restorers.

The different layers- stratigraphy- of the cross-sections, investigated in this study, are reported in Table 2 and Table 3. As can be appreciated in the two Tables, the stratigraphy was extremely rich. From the bottom to the top the following layers were identified:

Table 2. *Stratigraphy of blue-yellow colour sample.*


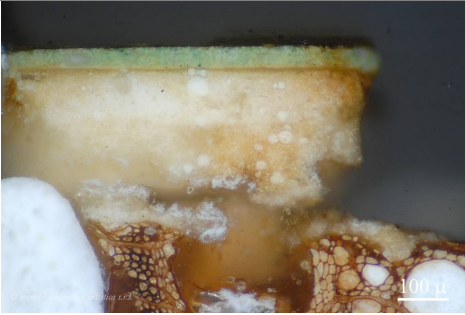
Sampling point	Colour	Stratigraphy	Interpretation
No.1. Blue dress and rosary of St. Agnes	Blue and yellow	White-brown preparation layer in several layers	Ground layer
		Brown layer, 15μm of organic appearance	Ground layer
		Yellowish-coloured layer, 5-10μm, containing rare fine red and black particles	Priming
		Light blue layer, 50 μm, consisting of a white matrix with blue particles	Azurite and Lead White
		Orange layer, present only on the right of the section, 10-15μm, containing fine yellow and red particles	Yellow Ochre
		Blue layer, 20μm, consisting of coarse to fine particles, blue, white and brown	Azurite
		Brown layer, 10μm, of organic appearance	Varnish
		Layer of organic appearance	Varnish

Table 3. *Stratigraphy of green colour sample.*

Sampling point	Colour	Stratigraphy	Interpretation
No.2. Green dress of St. Margaret	Green	White-brown preparation layer in several layers	Ground layer
		Thin brown layer, 5μm of organic appearance	Ground layer
		Yellowish-coloured thin layer, 5μm, containing rare fine red and black particles	Priming
		Green layer, 40μm, containing green and yellow grains	Copper based pigment

	Brown layer, 10µm, of organic appearance	Varnish
	Layer of organic appearance	Varnish
	Layer of organic appearance	Varnish

Isenbrant followed the tradition in panel paintings. In short, a Flemish panel painting of this period would typically have consisted of a ground layer, which would have been applied to the front of the panel in one to two layers and sanded to obtain a smooth finish. Northern grounds from the 15th-16th centuries are characterised by their use of animal glue and chalk (calcium carbonate), in contrast to the gypsum (calcium sulphate) grounds used by Italian artists during this period (Fremout *et al.* 2010). The preparation of the ground was most likely carried out by professional panel makers, as opposed to the artist's own workshop. Upon receiving the prepared panel, the artist would start by isolating the ground with a layer of oil (usually linseed or walnut) (Fremout *et al.* 2010). An initial design of the composition would then be drawn on top of the ground using a dry medium such as charcoal, pencil or chalk. Several paint layers and a varnish would have been added on the top.

Conservation Treatment

The initial treatment step consisted of surface cleaning to remove the thin layer of dust and grime, significant amounts of overpaint and chalk fill material, and mainly the thick yellowish varnish. Once they were removed, a visual improvement was obvious, and the painting partly recovered its chromatic balance and luminosity (Figure 12). The removal of the overpaint revealed hidden details, which were covered by the older restorers, while the removal of old fills revealed at least four campaigns of fillings and previous restorations. Under the varnish several old micro-retouches were also uncovered, which were visible as white and dark dots. After the cleaning, several pentimenti were found, mostly in the female figures, for adjusting their shape. Stratigraphic information also came to light after cleaning. A light orangish preparation layer, probably the priming, was visible, on top of which the paint layers were added. It was found that Isenbrant used white colour to express the highlights of the folds, while some transparent and invisible with the naked eye white lines forming details were noticed by the USB-Microscope, indicating that maybe the painter used lenses. The USB- Microscope was also helpful to observe details, such as the remaining dirt, the abrasions and losses, the craquelure (a natural phenomenon occurring when the medium is oil) and the movement of Isenbrant's brush.

After the cleaning was complete, the painting was re-varnished using a modern synthetic resin that will not yellow upon ageing, and the losses were filled. All of the phases of the restoration, including varnish, fills and retouching are designed to be completely reversible, to facilitate their easy removal in the future.



Figure 12. *Before (left) and after (right) conservation treatment (Photo credit: Author).*

Conclusions

The number of areas analysed by XRF Spectroscopy, and the pigment samples analysed by Optical Microscopy (OM), together with the contributions of the Technical Imaging (VIS, UV, IR, IRFC) as well as the restoration treatment, attribute the painting to the 16th century. It was demonstrated that a combined method approach, performed directly on the artwork and on small samples, is able to identify the materials that were used in the past to manufacture an artefact. The method resulted in a good combination enabling reconstruction of almost all the materials employed by Isenbrant, who followed the tradition in panel paintings.

Through Technical Photography, the method of painting execution and visibility of hidden parts was uncovered providing a clear possibility to order the steps and stages of the creative process for this painting and thus of reconstruction. Non-destructive XRF analysis was used for the characterization of elemental composition of the materials and thus it led to the identification of the pigments and decrypted the colour palette accurately and fast. Portable XRF spectrometer for *in situ* elemental analysis has increased the efficiency of the method. Optical Microscopy led to a deeper comprehension of the painting's historical and technical features by revealing Isenbrant's painting technique. The conservation treatment uncovered the hidden brightness of the colours, whilst also bringing forth the previously flattened volumes and shapes within the composition.

This analysis is the first venture of scientific examination on an Isenbrant's painting. For the first time his colour palette and his materials have been decrypted, a fact that can help in the identification of other anonymous paintings belonging to him in the future. Observing the mastery of Isenbrant in such

detail can broaden our understanding of 16th century Flemish painting technique. Due to the lack of archival material and the bibliography gaps, the application of the above analytical techniques and conclusions from this study should be an excellent tool for the History of Art in order to answer the questions that were difficult to be answered before.

Acknowledgements

I would like to thank my supervisor, Professor Stefano Ridolfi for his kindness throughout this project, and Dott. Fabio Porzio, restorer and art historian of the National Academy of Saint Luke in Rome, for the honour to work with him, special advice, his willingness and the opportunity to study many other paintings of the Accademia Nazionale di San Luca.

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Singing Trees and Glass Mountains: Do Increased Numbers of Counterintuitive Concepts Aid in the Transmission of Folktales?

Helen Ridout¹

Abstract

This paper investigates the importance of minimally counterintuitive (MCI) elements in the transmission and spread of folktales within Europe and the Near East. Two research questions are posed to explore how far MCI elements contributed to the spread of narratives both spatially and linguistically. Methodologically, this paper draws on a range of theories of cultural and psychological evolution, discussing the link between human memory and counter-intuitiveness. This relationship was visualised and analysed using histograms and significance tests against a sample set of 51 folktales from the ATU Index, with linguistic and spatial data drawn from the work of Bortolini *et al.* (2017).

Keywords: cultural evolution, folktales, cognition, memory, counterintuitiveness

Introduction

What makes memes go viral? Why are some stories more popular than others? Why do we still tell folktales that originated centuries ago? As anthropologist Dan Sperber asked in 1985, what makes some '[narratives and concepts] more successful ... more contagious, more 'catching' than others?' (Sperber 1985: 74). In response, a number of studies have been carried out, focusing on the memorability of types of concepts (Boyer and Ramble 2001; Norenzayan *et al.* 2006; Nyhof and Barrett 2001; Stubbersfield *et al.* 2017). These studies have found that many psychological and ecological factors influence the extent to which a narrative achieves cultural success, but human psychology places constraints on the memorability and transmission of narratives. There are many different types of narratives, of which folktales are one. To achieve success, these folktales must first stand the test of memory – but what are these differences that make some more successful than others? How do they exploit the peculiarities of human minds?

These questions of longevity and temporal dynamics are central to all folkloric research and lend themselves to an evolutionary study of culture and human memory. Understanding the evolution of culture and how cultural concepts remain stable and change over time is necessary to understanding why some folktales are transmitted and others are not. Humans do not passively retain information – they select, categorise, and transmit information based on their own cognition (Norenzayan *et al.* 2006: 532), and as a result, this places constraints on what can be remembered in a cultural corpus. Gradually the importance of minimally counterintuitive (MCI) elements on the memorability narratives is being realised, albeit with some controversy (Norenzayan *et al.* 2006; Stubbersfield *et al.* 2017; Upal 2011). MCI elements can be briefly defined as elements that violate human ontologies in a minor way, like a rock that floats on water. The importance of MCI elements to understanding how and why folktales spread, both spatially and linguistically is at the centre of this paper.

The starting hypothesis of this research is that the more MCI elements that a folktale has, the more likely that particular folktale is to be transmitted and spread. The focus of this research will be evaluating the relationship between these MCI elements and the transmission of folktales, determining what future research tasks should be undertaken to understand the potential causal links between these two factors. This research, unlike some that have come before (Norenzayan *et al.* 2006; Upal 2011), is

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closely tied to a real-world and wide-ranging dataset of Indo-European language and folktales (see Bortolini *et al.* 2017).

Cultural Evolution and the Remembrance of Folktales

The central tenet of cultural evolutionary theory is that culture is itself information. Drawing on Darwinian perspectives central to cultural evolution, cultural information – including folktales – are passed from person to person through repetition, observation, and language (Claidière *et al.* 2014; Mesoudi 2001). As such, cultural evolution can be defined as the fidelity and change of information over time and over the spread of the information, replicating and changing in a way broadly similar to biological evolution.

In comparison to our other extant relatives, humans are imitation machines – social learning in our species has high fidelity, frequency, and internal motivation, and is often highly unconscious and broadly applicable (Henrich and McElreath 2007). Humans learn via observation of others – everything from motor skills and affective responses in domains ranging from tool making to food preparation – why would this be any different for folktales? Regardless, this generates cumulative cultural evolution, which may exist to a significant degree only in the human lineage: building a body of culturally transmitted information – behaviours, practises and beliefs in populations which accumulate over time, with successful modifications.

Because culture is not inherited by the same mechanisms as genes, there is no guarantee that a given phenotype (i.e., a folktale) in different environments will be equally effective at transmitting its culture-type to other individuals. Typically, it is assumed that the probability of an individual adopting a cultural trait depends on whether the parents have that trait (vertical transmission). But unlike genetic inheritance, cultural traits can also be inherited from unrelated individuals (horizontal and oblique transmission), key individuals in the society (indirect transmission), or from the majority (frequency-dependent transmission) (Feldman and Laland 1996). Culture can change rapidly, and be produced intentionally, and hence is less random than biological evolution. The fundamental premise of a cultural evolution model is that selection should act on a culture-type, increasing the frequency of those items of culturally-coded information (i.e., folktales) in a population which, for one reason or another, are successful at passing themselves to the next generation – either vertically or horizontally. The only questions this poses is *how* culture is inherited – in separate ‘units’ or broadly as one package – and *what* makes these units of culture more socially replicable or reproducible than others.

Tails and Counterintuitiveness

Folktales can be defined as any tradition, dramatic or oral narrative, including serious myths dealing with the supernatural as well as tales told for entertainment and moralistic purposes (Fischer 1963: 236). Through the moralistic tendency of many folktales, they are embedded in culture through the couching of social norms therein. Any removal of these narratives from their indigenous place introduces qualitative changes, yet the materials of folktales are somewhat mobile.

The classification of these narratives into types has been one of the primary motivations of many folklorists, but only a few have categorised a sufficient number to be useful, with the primary source of much folkloric data being the Aarne-Thompson-Uther Index (Uther 2004), which was based on the initial systemisations of folktales by Aarne (1910) and Thompson (1964). The systemisations were established as a basis for the documenting of folktales based on ‘tale type’, documenting the languages each folktale appears in, and potential origins of each narrative.

Only a few folktales actually achieve sustained popularity – and there are many ecological and psychological factors that determine the extent and success of the narratives. All things being equal, a more memorable narrative is more likely to have a competitive advantage over a less memorable one (Norenzayan *et al.* 2006: 532). This can accumulate from generation to generation, leading to differential success. Ideas and narratives are not acquired and transmitted through a process by which culture impinges on a passive human mind. The minds of recipients of cultural materials selectively represent, transform and transmit cultural information; thus, the ordinary biases and transformation in human memory can constrain the content of cultural beliefs (Norenzayan *et al.* 2006). One potential reason for the differential recall of narratives is the presence or absence of minimally counterintuitive elements (MCI) in them; which has prompted debate amongst authors to whether their presence advantages recall of narratives (Norenzayan *et al.* 2006; Stubbersfield and Tehrani 2013).

But what makes a concept counterintuitive or intuitive? Boyer and Ramble (2001) define counterintuitive concepts as concepts that violate the ontological assumptions about the properties of ordinary objects. MCI elements are counterintuitive elements that violate ontology and schema in a limited or one way – such as a dog that can talk – whereas maximally counterintuitive elements are ones that violate an ontology completely – such as a dog that talks, lives forever, and walks on two feet (Upal 2011: 24). Intuitive concepts on the other hand, are intuitive because built into them are implicit references about their properties, and as such are rarely shown explicitly. Rather, these properties are assumed, making the concept itself comprehensible (Norenzayan *et al.* 2006). This is guided by intuitive ontology; such as the implicit assumption that when you throw a rock into water, it will sink because it is denser than the water around it.

The idea that counterintuitive elements are best remembered is not new within studies of cognition and in the study of folktales (Upal 2011). These studies suggest that expectation-violating and schema-incongruent concepts alongside MCI elements are better remembered because they attract attention, otherwise known as MCI theory. As such, MCI research reiterates a history of studies finding that counterintuitive concepts have a memory advantage over intuitive ideas (Purzycki and Willard 2016). When a reader's expectations are violated, they will attempt to resolve the situation by reasoning to justify the inclusion of expectation-violating information by summoning the relevant information on that schema that the reader possesses. If this attempt is successful, these concepts become tightly linked with the reader's existing schema that relate to the narrative, which were retrieved to try and explain the inconsistency (Upal 2011). This makes folktales which contain MCI elements more likely to be recalled and transmitted than narratives with only intuitive elements.

Norenzayan *et al.*'s (2006) study addressing the effect of MCI on narrative recall suggested that if MCI concepts are cognitively optimal, they should enjoy a cognitive advantage in memory and transmission. However, their implication is inconsistent with the apparent structure of culturally important narratives. If MCI narrative elements enjoy a better long-term recall than other concepts, they should dominate religions, folktales, and myths at a greater rate than Norenzayan *et al.* suggested. However, Norenzayan *et al.* (2006: 534) cites the study by Nyhof and Barrett (2001) which supports their hypothesis of the advantage of MCI elements in memory. Nyhof and Barrett (2001) reported their study where participants were divided into two groups, one that was told an entirely intuitive narrative, and the other was told a narrative with MCI elements. The recall advantage was observed when the group told a story with MCI elements after a three-month delay. This is significant, given that in most natural settings in which cultural narratives evolve, recall after a long delay is an important factor; a narrative which is memorable immediately but fades over time could not be successful. Another important finding of this study is that the effect of counterintuitiveness on recall is not linear – too many

ontological violations render a concept too counterintuitive to be comprehensible and memorable. Therefore, narratives which contain solely counterintuitive elements, or several maximally counterintuitive concepts are less likely to be remembered. Despite this, the reasoning as to why MCI concepts enjoy a greater recall over time remains an open question.

Boyer and Ramble (2001) argue that memory should preferentially remember and recall events or objects which violate expectations about the future but can be justified once they have been observed, suggesting that folktales may feature structural similarities in terms of MCI content. These findings are supported by Upal (2011) who refers to the hypothesis that the presence of a fixed number of MCI elements increases the memorability of the narrative only if the concepts make the story more coherent. It is supported by the fact that recall for counterintuitive concepts only increased when they were 'surrounded by intuitive concepts, suggesting that the counterintuitive concepts were not inherently more memorable, they became more memorable when placed in an intuitive context' (Stubbersfield and Tehrani 2013: 98). This indicates that there is a fixed number of MCI elements which predict the best recall of a narrative over time, which in turn would predict cultural success.

However, it is clear from these studies that MCI concepts make a folktale more memorable to a certain point, as long as it is coherent. Those narratives with MCI elements enjoy better long-term recall, suggesting that they can be transmitted for longer, and therefore spread further. This paper will build from this previous research and attempt to weave together these diverse factors in order to produce further insights into how the number of MCI elements influence the spread of folktales.

Data and Methodology

Data

The data that were used in this paper was derived mainly from two sources: the first of which was the Aarne-Thompson-Uther Index (Uther 2004), which is a catalogue of over 2000 distinct 'international tale types' distributed across Eurasia. Each of these folktales putatively represents a recognisable storyline comprising a variety of motifs across the cultures it appears in. Data of the MCIs that the sampled folktales contained was taken directly from the descriptions of the types from the ATU Index.

The second source of data was from the paper by Bortolini *et al.* (2017: 9142), comprising 596 'animal' and 'magic' tales that were recorded as present/absent in 33 populations, each population represented by a language. Their research was focused on using whole-genome sequences to 'assess the impact of processes involving...cultural diversity, focusing on the variability of folktale traditions' (Bortolini *et al.* 2017: 9140). This distribution of these folktales was recorded in a matrix of different cultures from Eurasia. These cultures are represented by languages. Language, in some paradigms can be considered as culture (Sharifian 2017), even though oftentimes they are not synonymous. This research focuses exclusively on the Indo-European language family, which originated in the Anatolian Middle East around 8000 to 9500 years ago (Bouckaeret *et al.* 2012). The Indo-European language family this research is using is based on the phylogeny made by Bouckaeret *et al.* (2012: 959), shown below in Figure 1.

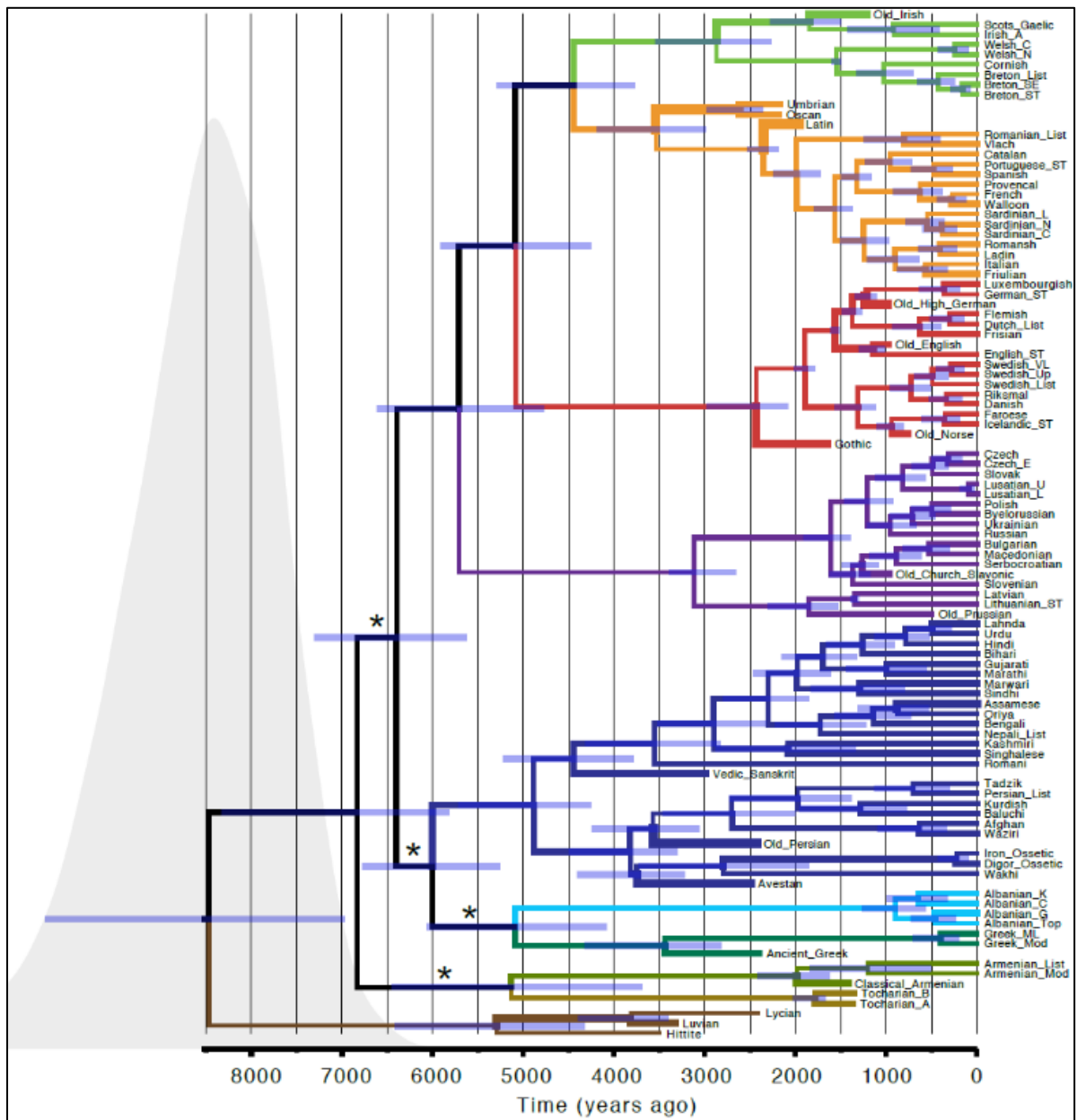


Figure 1. *The Indo-European language phylogeny, with coloured branches representing clades (Bouckaert et al. 2012: S1, with the permission of the authors).*

Due to this focus, I did not include the languages recorded by Bortolini *et al.* (2017: 9142) that did not appear in the Indo-European language family as pictured in Figure 1. The dialects of languages that exist outside the Eurasian landmass were also removed, like Mexican Spanish.

Methodology

To prepare the data ready for analyses, the folktales were subset into three classes: low frequency (0-4), middle frequency (4-14), and high frequency (14-18), with ‘frequency’ denoting the number of languages that folktale appeared in. The number of folktales that appear in each class is highly skewed, with over 300 folktales in the lower class, over 200 in the middle class, and only 19 in the high frequency class (Figure 2). For each class sample, 17 folktales were randomly selected, so that each class had the

same sample size. The class sample size 17 of randomly selected folktales provides a large enough data set (51) to get a partially accurate representation of the relationship between MCI count and these variables and is a suitable number of folktales that could be analysed under the time constraints.

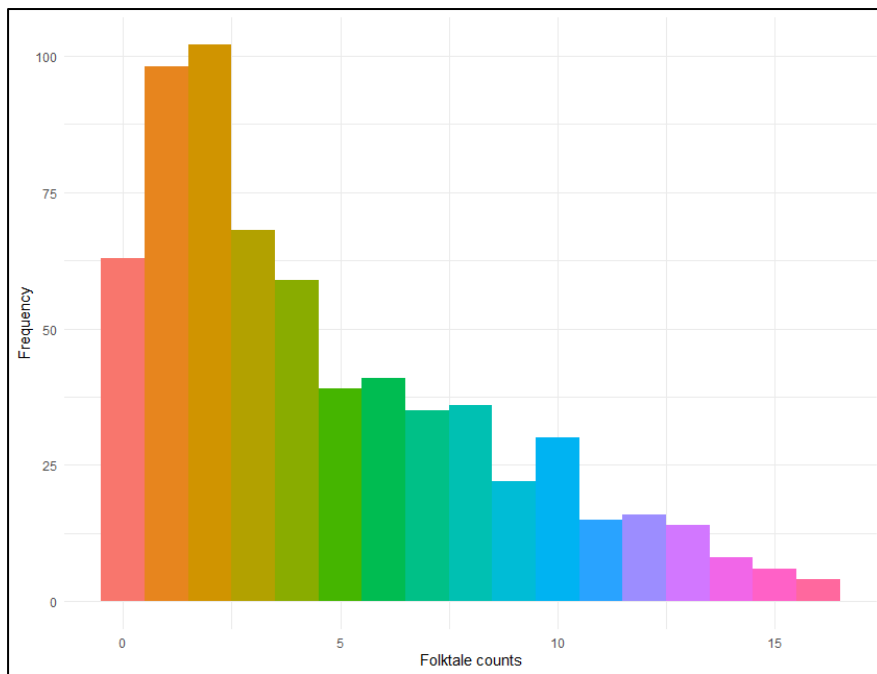


Figure 2. Histogram of folktale counts distribution.

Minimally Counterintuitive (MCI) Elements

MCI elements were defined according to Upal’s (2014: 233) definitions and Barrett’s (2008: 317) intuitive expectation sets of what could be predicted as an ontological violation. The number of MCI elements was counted by how many appeared in each story, and how many counterintuitive ideas surrounded a particular concept. For example, ‘The Land Where No-One Dies’ (X470B) appears in 6 languages and has two MCI elements, a land where no-one dies, and the personification of Death as a man who searches for the protagonist.

A young man seeks for a land where no one dies. On his way to the otherworld, he meets animals and men who do things for which they need a very long time, but they are not immortal. Finally, he reaches the land where no one dies and lives there together with a young woman. When he longs for his home, the woman advises him against leaving. He insists on going, and she warns him not to touch the earth. He passes the people and animals which he had met on his outward journey, but they have finished their work and died. Back home he meets a man with a carriage full of worn-out shoes, and he gets off his horse to help the man. But it is Death looking for him, and he dies.

The number of MCI elements from each tale was counted. Personal communication with several leading researchers in this field (i.e., Upal, personal communication, 2019) also ensured that the number of MCI elements seen in each of the selected folktales had the highest possible level of validity.

Linguistic Spread

The differentiation between linguistic and geographic spread of folktales is present in the three variables tested here. In this research, linguistic spread will be taken to mean the number of languages a folktale appears in (i.e., the frequency) and the number of linguistic clades the folktale appears in (based on the clades visible in Figure 1). The analysis will attempt to ascertain whether MCI elements are more important in the linguistic or geographic spread of a folktale.

Language Frequency

Language frequency is the number of languages that the folktale appeared in. To visualise the distribution of the data and the relationship between MCI count and frequency, histograms of both frequency (Figure 3) and density (Figure 4) were made, alongside a scatter plot. The strength of this relationship was then ascertained through the use of a Spearman's rho. Lastly, the statistical significance of this relationship was tested using a Poisson regression model.

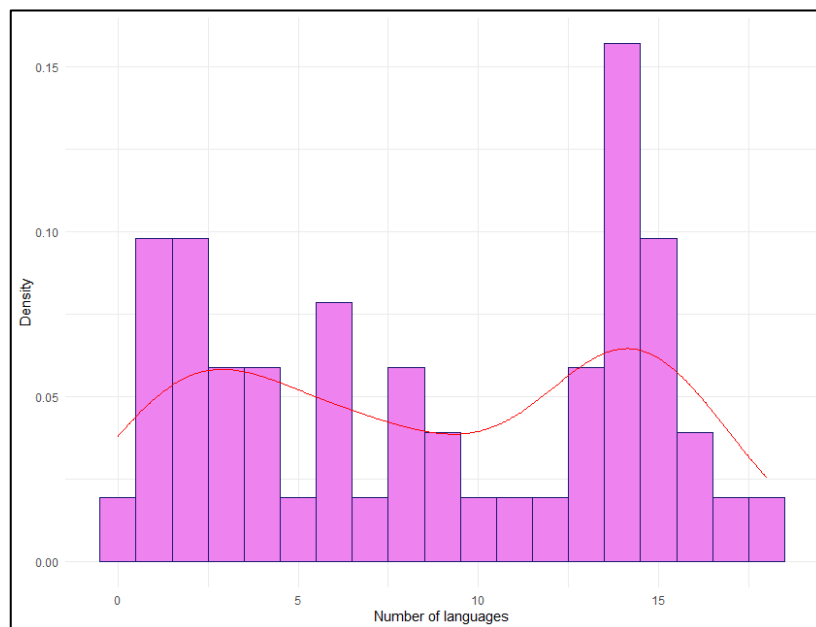


Figure 3. Histogram of sampled folktale frequency distribution.

Appearance in Linguistic Clades

The next variable used to test for linguistic spread of folktales was the number of linguistic clades the tale appeared in. This variable was based on the Indo-European linguistic phylogeny of Bouckaert *et al.* (2012), shown in Figure 1. Linguistic trees are often highly controversial, as they provide different insights into the cultural histories of their speakers – as well as a measure of relatedness of the languages in question. As such, it can be used as a proxy for linguistic spread, as the more clades the folktale appears in, the more frequent the folktale. This variable tries to control for counting a folktale that appears in French, Italian and Spanish (all very closely related) and one that occurs in Arabic, German and French (less closely related). The latter is more indicative of spread than the former. It remains predictable that the more languages the folktale is in, the more linguistic clades the narrative is in.

In much the same way as language frequency, the relationship between number of clades the folktale appeared in, and MCI count was tested through the creation of a scatterplot and the strength of the

relationship was tested through a Spearman's rho. The statistical significance of this relationship was also tested through a Poisson regression.

Geographic Spread

Geographic spread in this research can be considered as the actual distance the folktales have spread across via their transmission, rather than the languages/linguistic clades that they appear in.

Distance

The distance variable for each folktale was calculated using the location of each language the folktale appeared in. The location of each language in this research was placed at the capital city of the current nation-state of which each language is primarily spoken. For each folktale, the mean distance between all of these central language locations was added together and divided by the total number of languages associated with each folktale to create a distance metric. The limitation of this metric is that this research assumes that the capital cities are the centres – or the putative origin points – of that language. These locations are, in all probability, not the geographic centre of origin point of these languages. As the origin points of these languages are not known, or in the least highly speculative, capital cities provide a decent replacement.

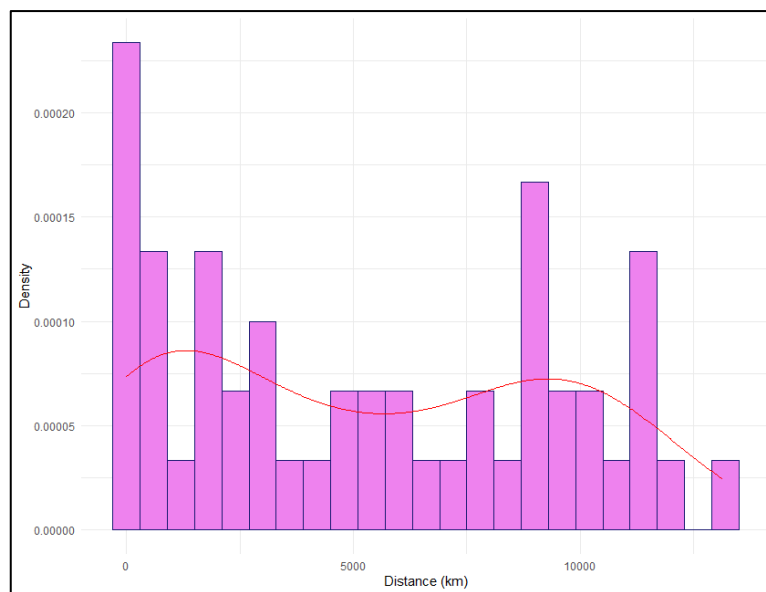


Figure 4. *Histogram of sampled folktale distance distribution and density.*

As with language frequency, to visualise the distribution of the data and the relationship between MCI count and distance, histograms of both frequency and density were made, alongside a scatter plot. The strength of this relationship was tested using Spearman's rho. As with the previous two variables, a Poisson regression model was used to test the statistical significance of the relationship due to the non-parametric nature of the outcome variable – the distance – as displayed in Figure 4.

A limitation that must be acknowledged in this research is that this methodology only incorporates a spatial-linguistic span, rather than an expressly temporal one. Even though the phylogenetic trees, like the one shown in Figure 1 are measures of time and not just linguistic similarity, this is not an exact measurement of temporality. As such, the most frequently occurring tales may just be the oldest, thus appearing in more languages and language clades, and had more time to spread. This is a limitation that

can be overlooked, however, due to the strong positive correlations which can be seen in the results, suggesting a strong link between these variables and MCI count. Whilst this link is not proven to be causal, the strength of such a connection cannot be ignored; indicating that the conclusions drawn from these results should be considered seriously.

Results

The goal of the research methods used here aimed to explore the relationship between MCI elements and the spread of folktales. This spread was measured using three proxy variables: the frequency of folktale appearance, the number of language clades they appeared in, and the geographic distance between the languages in which each folktale was spoken. If the research hypothesis is correct, low frequency and high frequency folktales should show differing distributions in the number of MCI elements present in each narrative. These distributions are shown in Figure 5.

As hypothesised, low frequency and high frequency show different distributions, and variability in the high frequency sample ($SD = 0.94$) was smaller than in the low frequency sample ($SD = 1.01$).

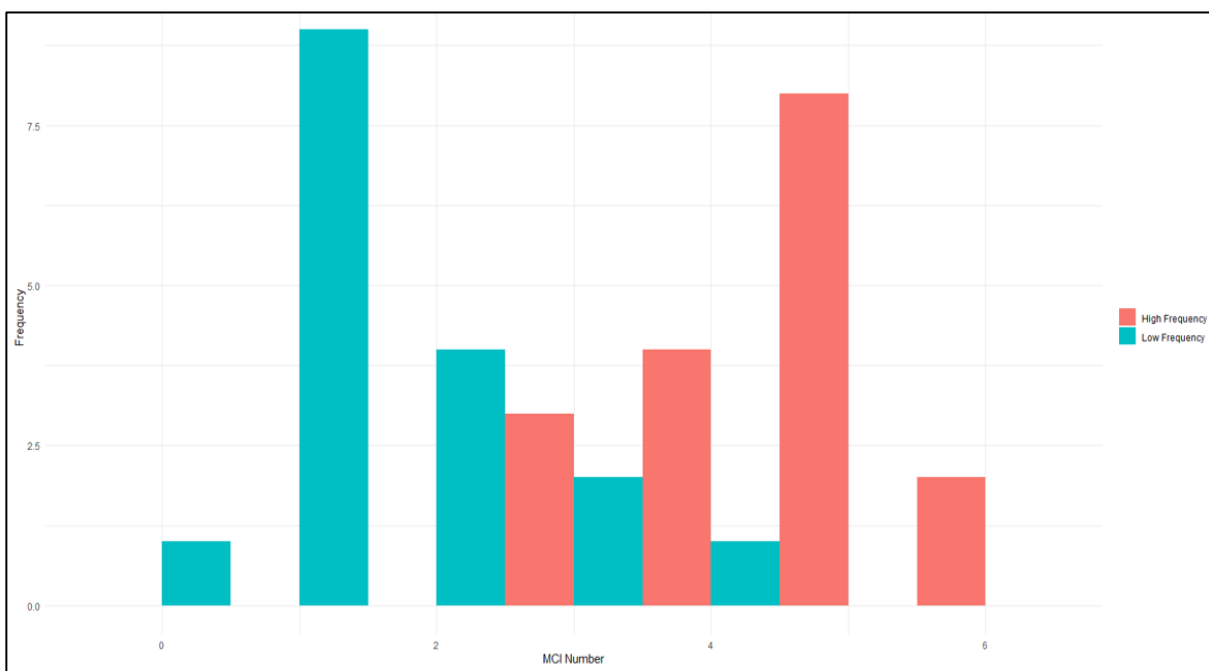


Figure 5. Histogram of frequency distribution of low language frequency and high language frequency folktales.

However, this difference in variability is not large. This may lead to the suggestion that cultural success is not predicted by the number of MCI elements. The visual distribution shows a difference in the number of MCI elements in high and low frequency folktales. In both groups, there is a clear modal number of counterintuitive elements. This indicates that there is a definite relationship between the number of MCI elements and a folktale’s cultural success. Amongst more culturally successful folktales, this mode is around four to five MCI concepts, whereas in the more unsuccessful folktales had a mode around one to two MCI concepts. This indicates that the greater number of MCI elements that a folktale has, the more likely it is to be transmitted and spread.

When all classes of data (low, medium and high frequency folktales) are included in a histogram of distributions (see Figure 6), three separate peaks in the data are present.

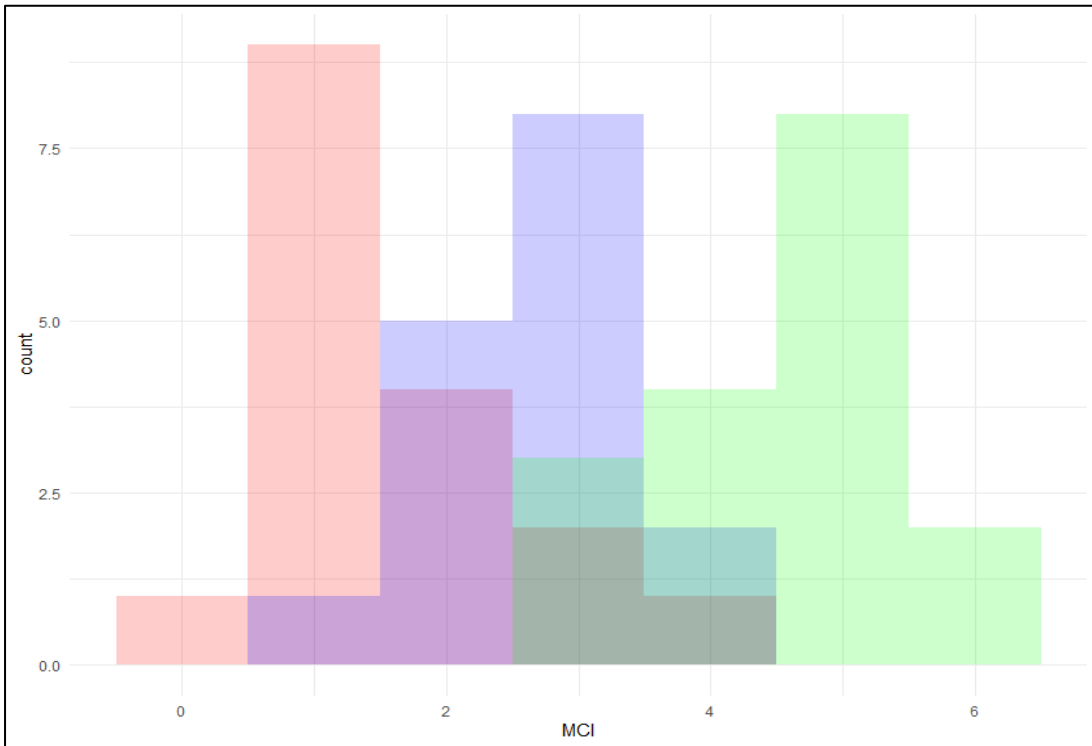


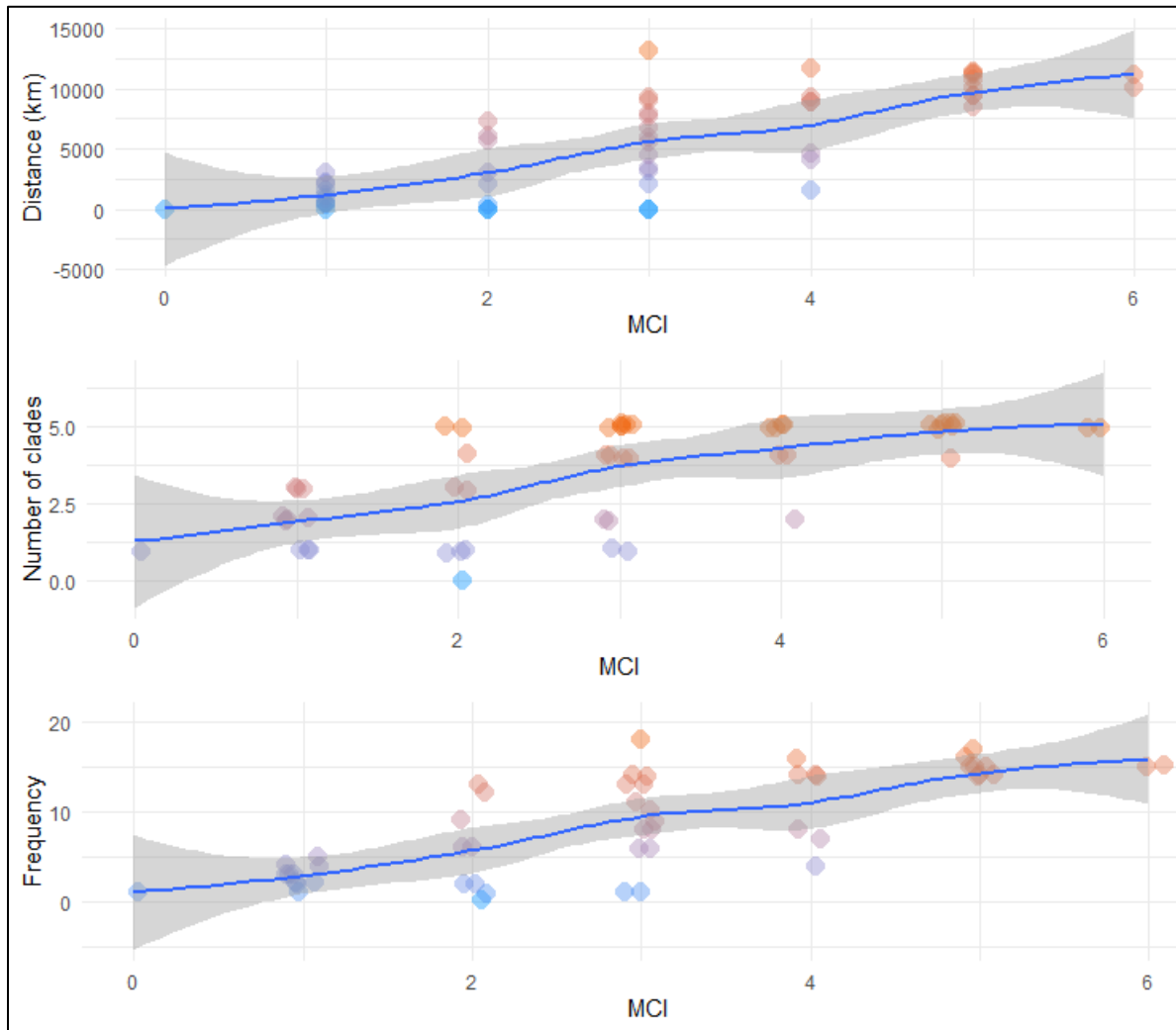
Figure 6. Histogram of MCI and frequency counts for all data classes.

This validates the outcome seen in Figure 5 that high frequency folktales do tend to have high numbers of MCI elements, and low frequency folktales tend to have low numbers of MCI elements. What is also visible from Figure 6, however, is that there is a threshold to this. Folktales with three to four MCI elements appear in all three data classes. This indicates that the spread of these folktales is harder to predict than folktales with lower or higher MCI counts. This may be because of some other inherent feature of these folktales which is not tested for here, such as bizarre elements or entertainment value.

Whilst the frequency of appearance of the sampled folktales is a good measure of popularity, to explore cultural success in greater detail, this paper added the additional variables of the appearance in number of clades and geographic distance.

In the case of each variable, both linguistic and geographic, this research found a strong positive relationship to MCI count in the folktales, visualised below in Figures 7, 8 and 9.

Further, all three variables had statistically significant relationships to MCI count on the order of $p < 0.0001$, suggesting a significant positive connection between MCI count and both types of spread. The results of a Spearman's rho show that there is a stronger relationship between MCI count and distance (at $+0.77$) than both of the linguistic variables, initially implying that geographic spread is aided more than linguistic spread by number of MCI elements in a narrative. This argument is supported due to the seemingly weaker relationship – according to the results of a Spearman's rho test – between appearance in number of clades and MCI count, at 0.67 .



Figures 7, 8, and 9. Scatterplots of distance, appearance in number of language clades, and frequency of appearance against MCI count with a smoothed conditional mean.

However, this initial implication can be disregarded when other factors are taken into account. The first of these is that the results of the Spearman's rho for MCI count against the number of languages the folktales appear in at 0.76. The difference between the former and the latter result is so small as to be inconsequential, indicating that the difference between the strength of their relationships is likely due to random chance. Further, the distance variable and clade variable were created using the frequency of each folktale, meaning that those with the highest linguistic frequency also, unsurprisingly, had the highest geographic spread and the highest clade number. Undoubtedly, this shows that the linguistic and geographic variables are highly positively correlated at the level of $r=0.99$. This weaker association between appearance in number of clades and MCI count may be explained by an unmeasured variable. Not only does this indicate that the spread of folktales, in both linguistic and geographic terms, is aided by a greater number of MCI elements per narrative, but that linguistic and geographic spread informs the other as indicated by the hypothesis.

This inherent connection between geographic and linguistic spread seen here may only be true in Europe and places where there is a high language-to-space ratio, limiting the generalisability of this conclusion to other language families and continents. As Europe contains a high diversity of languages

in a relatively small space, linguistic and geographic spread become conjoined, especially as the geographic data was based on the linguistic. As the folktale is transmitted outwards from its origin point, it could simply encounter more languages alongside the greater geographic spread.

Discussion

The provision of stability in folktales, as almost exclusively oral traditions, is hard to ratify. What the research did discover, however, is that more of these elements are found in the more frequently occurring narratives (as shown by a higher linguistic and geographic spread), and that this does not happen by chance. At an initial glance, it appears that MCI elements in a narrative are effective at transmitting and spreading the folktale across space, even if the languages differ. This indicates that more MCI elements in a folktale aid more in the geographic spread, rather than the linguistic spread.

The analysis and results in this research were mostly preliminary, but these inferences open up potential avenues for further research. Europe contains high linguistic diversity in a relatively small area, meaning that geographic and linguistic spread are twined closely together. These results could be contrasted with a similar study to this but in a mono-linguistic area, such as the United States. The geographic spread of folktales could be mapped from their putative origin points to see if those that spread farther had a greater number of MCI elements, as was found here. Such research would aid in showing whether greater MCI counts bolstered linguistic or geographic spread, and if the patterns in these different types of spread were created by the same variables.

Another inference that could be made from the results of this research is that the number of MCI elements affects how the human brain remembers detail, through the want to understand and justify the ontological violation that is inherent in counterintuitive features. This inference fits in well with MCI theory, as evolutionary psychology posits that our evolved minds consist in part of innate inferential systems – i.e., knowledge that exists without explicit learning. These memory and schematic systems provide a wide range of inferences that humans can make of the world around them, limiting in part the amount of learning that needs to be done. Most of these systems can be seen as ‘learning instincts’ guiding the gaining of knowledge and skills in specific domains. Purzycki and Willard (2016: 207) suggest that concepts and stories with content that minimally violate these inferences are easier to remember than knowledge that is entirely intuitive or entirely counterintuitive. This theory rests on the idea that the human mind possesses reliably developing knowledge categories governed by core knowledge domains, and that a concept becomes minimally counterintuitive when a part relating to one of the categories is mildly but systematically violated.

Simply, this leads to the inference that MCI elements prompt a better recall of concepts. This is demonstrated not only through these results – which show a greater transmission of those tales with more MCI elements – but also in a transmission chain experiment conducted by Nyhof and Barrett (2001). Participants of this study were told to recall as many concepts as they could from three separate categories – intuitive, minimally counterintuitive, and items with one bizarre feature but did not violate any ontological assumptions. After three generations of retelling, the proportion of remembered items was counted, as well as the memory distortions associated with each item. The most common distortions found were bizarre items becoming counterintuitive. The results of Nyhof and Barrett (2001) support the idea posited by the outcomes of the research here. This is as the research here shows that high frequency folktales tend to have higher numbers of MCI elements, indicating that these narratives are more readily memorable and transmissible in comparison to the low frequency narratives of the sampled folktales. This seems to confirm the hypothesis posited in this research that MCI concepts are better recalled than intuitive concepts. The implication of this is that, as these violations are attention-

arresting and inferentially rich, they therefore encourage further cognitive processing that facilitates their stabilisation and cultural transmission. Further, because they do not break all common sense of ontological expectations, they are not made incomprehensible (Willard *et al.* 2016).

Linking to the above, another inference that could be made from these results is that MCI elements, even though the limitations of imitation, communication, and memory, creates an abundance of stable cultural concepts – some of which are undoubtedly the narratives that make up folktales. It is these global similarities in human cognition and culture – i.e., the seemingly universal ideas of what is counterintuitive – that evolved in humans, that suggest that these folktales are not due to historical contingencies.

Memory plays a central role in how cultural material is communicated, but ideas are not acquired and transmitted through a process which impinges on a passive human mind. Rather, the minds of the receivers of cultural materials selectively choose which information to transmit, change and memorise (Norenzayan and Atran 2003).

Indeed, folktale narratives that achieve success are arguably those that happen to be the most successful at exploiting human memory. Those that are widespread contain MCI concepts because they become uniquely adapted to exploiting the structures of human minds by violating reliably developed and tested intuitive understandings of the world. This memory bias is what makes MCI concepts remain stable through the generations (Willard *et al.* 2016). This inference is borne out in the results here, which show that high frequency folktales are those with a higher MCI count. This suggests that these narratives are more transmissible, and therefore more likely to remain stable over generations. It is clear then, from this and these results, that MCI, at least to an extent, aids in the transmission of folktales.

It is well demonstrated in the bimodality of the data, observed in Figures 3 and 4. This result suggests that MCI elements have an effect on the spread, both linguistic and geographic, of only a proportion of folktales; those that have many or few MCI concepts, or that another unmeasured variable also affects the transmission. This suggests an interesting relationship between the number of MCI elements and transmission that could be further explored by breaking the dataset into high frequency and low frequency folktales. However, it is likely that the bimodality observed in this data is due to the sampling method. As the lower (zero to four) and higher frequency (14-18) classes are much smaller than the middle frequency class (five to 13), it is common-sense that the greater variability of folktales in this class is due to the greater class size.

Overall, this suggests that the higher frequency of folktales can be predicted by the number of MCI elements because they exploit the peculiarities of human cognition and memory. This mechanism facilitates the learning of narratives, even if they are intuitively implausible. This prompts a better recall through the universal intuitive ontologies in a way that is unbounded by culture, and not dependent on historical contingencies, even as the folktales – as an oral tradition – spread across a linguistic tree.

Conclusion

This paper aimed to identify the relationship between the number of MCI concepts and the transmission of folktales across both space and languages, and through this, make inferences on how narratives achieve cultural stability through and across generations. The results suggest that there is a strongly positive relationship between MCI count and the frequency of appearance of folktales. The research supports my hypothesis that the inclusion of MCI elements makes the story more memorable, more

likely to be reproduced, and thus to spread. The results here have important implications for the understanding of the peculiarities of human memory, and how certain cultural concepts become couched within societies. It also suggests how these cultural narratives become stable over time, providing important insight into socio-cultural diffusion of ideas.

The findings of this research were fairly robust, using real-world data as well as the ATU Index. Through this, however, the methodology can be seen as somewhat limited, focusing exclusively on the Indo-European cultural area and the data from the ATU Index, potentially reducing the generalisability of the results. Further, the selection of MCI elements is subjective. However, the selection of MCI elements was based on Upal (2011: 24, 2014: 233) and Barrett (2008: 317) to limit this subjectivity as much as possible. Future research in this area should seek to highlight how different kinds of stories told in populations reflect broader features of their cultures, as Da Silva and Tehrani (2016) suggest, preserving features of their culture's ancestral contexts and providing complementary data to archaeological and linguistic reconstructions.

There are no claims that human memory and cognition was built to favour MCI narratives, but rather that these were culturally selected because they already fit some in-built part of human cognition. The factors of this cultural success do not lie within the innate memorability of the folktale, rather, and by virtue of evolution, the inherent susceptibility of the human mind to preferentially remember counterintuitive concepts (Atran and Norenzayan 2003: 151). As such, these deviations enjoy a memory advantage because they generate the largest number of inferences with least cognitive effort, inviting further processing, which over time facilitates the stabilisation of narratives (Norenzayan *et al.* 2006). Therefore, counterintuitive concepts can be said to operate on the cognitive optimum. Through this convergence of the cognitive optimum and the memorability of counterintuitive concepts, the number of MCI elements in a folktale may determine the cultural stability and resilience of the narrative over time.

Acknowledgements

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Session 4

Interpreting the Past Through Each Others' Eyes: Critically Approaching Ethnographic Analogies

Erica Priestley¹ and Erik Solfeldt²

Introduction

Anthropology and archaeology are products of nineteenth and early twentieth century goals and pioneering members of these fields subscribed to the concept of linear social evolution, where Western society was the pinnacle of an evolutionary continuum. Other “less advanced” societies were viewed as ideal subjects for study and provided windows to past cultures on the basis of certain shared traits (often subsistence), a concept of which formed the foundation for ethnographic research. These understandings served research agendas and supported the notion that knowledge production was the exclusive task of certain members of society (Western white men). This ownership of knowledge continued through the late-twentieth century under the processualist paradigm where an adherence to functional interpretations obtained through scientific methods precluded Indigenous knowledge from being accepted (Wylie 2002: 4).

Indigenous (Traditional) knowledge has increasingly come to the forefront of archaeological discourse as the field attempts to unsettle its colonial methods. However, two main concerns come to mind. The first is that Indigenous ways of knowing are rarely seen as legitimate on their own terms, due to a perceived subjectivity of Indigenous knowledge and oral traditions, where reason and spirit can be inextricably interwoven, relational, and place-based (Hunt 2014: 3, 5; Ross 2019). This contrasts with the dualistic ontological-epistemological schism in the Western traditions which attempts to divorce one's understanding of the world from what is *in* the world (Ingold 2000:209-218; Watts 2013). While there are many examples of projects between Indigenous communities and Western researchers over the past twenty years, overcoming these *theoretical* issues has proven to be challenging. The second concern is a combined issue of authenticity and lack of diversity. This is particularly apparent in this session, where the ontological turn (discussed in more detail below) has been critiqued by Indigenous scholars, such as Zoe Todd (2016: 7-8), a Métis anthropologist, as white academics once more “discovering” things that Indigenous scholars always knew, despite having limited engagement with Indigenous knowledge or authors. These two concerns underscore a lack of multivocality and highlight fundamental issues that arise from reconciling anthro-archaeological agendas with Indigenous knowledge.

While this critique of the ontological turn and the use of Indigenous relational ways of knowing by Western scholars is valid, it should be mentioned that relationalism does not only derive from Indigenous ontologies and the ethnographic record – relationalism can also be found within Western philosophy and metaphysics. A critique of the Western ways of knowing can be found in early Marxism and phenomenology (Ingold 2000:6) which later was rendered through a postmodern lens (e.g., Deleuze and Guattari 2015). This has resulted in the recent development of a branch of postmodern philosophy that goes under the name of posthumanism – an umbrella term that includes theoretical perspectives, such as new materialism, new animism, multi-species studies, and queer theory, among others – all turning to relationalism and sharing the aim of rethinking the dualism of the Western ontology and the hegemonic relationship between the epistemologies of the humanities, and the social and natural

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sciences (Braidotti and Hlavajova 2018; Harris and Cipolla 2017). This relational rethinking is part of the 'ontological turn' which should rather be named the ontological *turns*. Embracing the ontological turn is to acknowledge different realities or worldviews that are different from your own (Holbraad and Pedersen 2017). It is to step out of your own ontology and see ontology as plural. This turn, however, works in two ways and that is why the term should be pluralised. Either one rejects the Western ontology and acknowledges many ontologies, or one acknowledges that reality actually is relational – whether it is perceived by a secular Western or, for example, an animist (Bird-David 1999; c.f. Descola 2013; Ingold 2011; Viveiros de Castro 1998). Both kinds of ontological turns use ethnography to formulate their metaphysics but in two different ways. One way is to make theories based on the ethnographic material and the other way is to turn to the ethnographic material for analogies in turn to argue for a relational reality (Alberti 2016). Both ways can be considered a colonialism of thought in terms of what Todd (2016) argues – but only partly as the foundation of the metaphysics partly derives from Western philosophy and partly from Indigenous ways of knowing, as the ethnographer cannot walk into fieldwork in theoretical blindness. The Indigenous ways of knowing will always merge with the Western ethnographer's own ontology. The situated and the non-situated knowledge is of equal importance - however, the question remains how to balance different worldviews and ontologies without diminishing their mutual relevance.

The Papers in This Session

This introduction attempts to situate ethnography within archaeology's history in order to demonstrate how diversity issues intrinsically stem from the field's development. It is clear that decolonising the field can only be achieved through collaborative discussions between all stakeholders and by reappraising the field's ontological and epistemological underpinnings (Hamilakis and Anagnostopoulos 2009). The aim of this session was to invite students to present studies which apply ethnoarchaeological methods or ethnographic analogies specifically where interpretations engage with Traditional knowledge, utilise posthuman theories, challenge Western hegemony, or employ fresh and diverse approaches to understanding the ethnographic and archaeological material.

The first paper in this section, by Rakesh Kumar, addresses the problem of applying widely accepted models when trying to understand healthcare issues and health inequality amongst hunter-gatherer communities in Nilambur valley, India. Kumar offers a fresh ethnographic study through first-hand participation in these communities, arguing that disparities emerge from displacement and that their experience of new illnesses should instead be understood through their own worldviews and onto-epistemologies. The next paper is by Joanna Tonge, who uses object biography in the analysis of a historical wooden hand mirror from the Trobriand Islands. Tonge critiques earlier ethnographic models for studying objects and instead analyses the hand mirror from its birth to its death, in other words from its manufacture throughout how it was used, in order to appreciate the social action behind the object. This approach celebrates the hand mirror for its dynamic and multivocal history rather than its value as a static object in the context of the 'cargo cults'. The last paper of this section is a study by Amanda Althoff which focuses on the human-animal relations amongst the Yup'ik of Nunalleq, Southwest Alaska. Althoff criticises earlier studies for applying direct cross-cultural ethnographic analogies, resulting in an explanation of the human-animal relations as shamanic and ecologically founded. By applying a relational theoretical approach that corresponds with the Yup'ik ontology, the study shows how humans, animals and artefacts are related in everyday practises.

Lastly, the speakers who presented at the CASA 4 Conference, but are not published in this volume are:

- Devina Dimri, Shiv Nadar University
Visualizing Little Lhasa: An Ethnographic Study of the Tibetan Community of Dharamshala
- Rhayan Gatbonton Melendres, University of the Philippines
Proximity Suitability or Social Relations? Pottery Making and Raw Material Procurement in Bohol, Central Visayas, Philippines
- Tanoy Sengupta, Deccan College Post-Graduate and Research Institute, Pune
Megaliths and Their Probable Association with Astronomy: A Case Study of Vidarbha Megaliths

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Why is There a Need for an Alternative Onto-Epistemic Understanding of Health for Contemporary Hunter-Gatherers?

Rakesh Kumar ^{1,2}

Abstract

The current paper illuminates existing problems and paradoxes in the perception of the health and healing practises of contemporary hunter-gatherer (H-G) communities, i.e. the Aranadan (A), Cholanaikkan (C), Kattuniakkan (K), and Paniyan (P) of Nilambur valley, Kerala, India. The health knowledge system and healing practises of the selected H-G communities are entrenched in historical context, grounded on individual as well as community experiences, deposited in environmental context and encompasses both the empirical and unempirical knowledge of healing. The studies find that the contemporary H-G's fail to acknowledge the new experience of illness caused by the diversity and fluidity of transition and displacement from the primary spatial context where beliefs, logics and worldviews were formulated. This has caused numerous serious health disparities among H-G communities. This paper argues for a new onto-epistemological model to address the new experience of illness of contemporary H-G's.

Keywords: health, healing, transition, knowledge, practises

Introduction

Hunting-gathering methods of subsistence have been considered to be the simplest form of economic subsistence and have been rendered as need-orientated means of production in which ecology itself functions as storage (Hill *et al.* 2014). These modes of sustenance practises started with *Homo erectus* in the last phase of the Pleistocene geological epoch (2 million years ago (MA)) and the functional aspects even in current times, here by no means does it imply the current H-G practises are similar of the past (Black 1975; Boyden 1970; Cohen 1989; Dunn 1968). H-G communities mostly have low population densities and are mostly family-based subsistence units. In times of hardship or scarcity of natural resources, a group of families functions as a single unit for the better management of resources and subsistence activities (Armelagos *et al.* 2005).

The present article has been designed in the cross-cultural context of four contemporary H-G communities of Nilambur valley, Kerala (India), i.e., the Aranadan, Cholanaikkan, Kattuniakkan, and Paniyan. The geographical study area falls under tropical-humid regions of the subcontinent (i.e. Western Ghat region) of India which never dries out completely. The *Carakasamhitā* (CaS)³, an ancient Ayurvedic scripture, categorised tropical-humid regions under the *ānūpa* (Wetland) category of *deśa* (landscape) and is referred to as disease-prone landscape associated with morbidic factors of wind and phlegm (Angermeier 2017). These communities are autochthonous, live with pre-agricultural levels of technology and are mostly endogamous. Therefore, they resemble the closest proxy of primordial food

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gatherer-hunter societies. It is important to note here that the author is by no means intending to compare the contemporary H-G's with prehistoric hunter-gatherers. Mostly, a group of families in these communities are settled together in different colonies in temporary shed-like structures, government-provided *pakka* houses, and huts but the few members of the Cholanaikkan community still practice a nomadic lifestyle and reside in natural rock shelters (*alai*) of the evergreen forest of the western ghat region of Nilambur valley, Kerala. The subsistence practises of the selected H-G communities include food gathering, small scale hunting, medical plant collection, honey collection, non-wood-forest product (n.w.f.p.) collection, fishing, and forest labourer.

Health disparities among the contemporary H-G communities are serious issues. The Lancet-Lowitja Institute collaboration report (2016) has published a detailed study entitled *A Global Snapshot of Indigenous and Tribal Peoples' Health* which shows that despite the pronounced diversity of indigenous communities, there exists a considerable amount of resemblance in their health and illnesses.

This article has critically reviewed the underlying onto-epistemological structure of the health and healing knowledge system of the selected H-G communities of Nilambur valley, Kerala and finds that one of the reasons for the health inequalities is the existing problem and paradox in the concept of health and healing practises. The study also identifies that the contemporary H-G health model is cut out of experiences of new illness caused by the transition and displacement from the primary spatial context in which beliefs, logics and worldviews were formulated. It has caused numerous serious health disparities among H-G communities. Therefore, this article argues for a new onto-epistemological model to address the new experience of illness of contemporary H-G communities.

Literature Review on Hunter-Gatherers' Health: Contextualising the Argument

Scholars have discussed that H-G's can be vulnerable to various kinds of diseases or illnesses because of their exposure to or direct/indirect interaction with plants, animals, insects and parasites, which are capable of causing various infectious zoonotic diseases (Ackerknecht 1942a; Ackerknecht 1942b; Ackerknecht 1945; Ackerknecht 1946; Armelagos *et al.* 2005; Armelagos and Barnes 1999; Audy 1961; Barnes *et al.* 1999; Black 1975; Boyden 1970; Cohen 1989; Dunn 1968; Eaton *et al.* 1988; Orman 1971). Scholars have also highlighted the possible situations for interaction with disease vectors during gathering, hunting, taking prey to the home after hunting, consuming contaminated prey or food, as well as bites from insects, snakes and other organisms (Armelagos and Barnes 1999; Armelagos *et al.* 2005). Other factors like seasonal change, dietary shift, and accidents or injuries have also a significant inclination towards health problems (Black 1975; Barnes *et al.* 1999; Cockburn 1971; Ungar and Grine 2006; Groeneveld 2018).

However, a plausible number of well-founded studies have pointed out that among the family level H-G unit or communities which are characterised by low population size, density and weak social network are less susceptible to infections and contagious diseases because they regularly change habitational place, have less proximity with animals and other humans, and accumulate less waste at habitation sites (Fábrega 1997; Hill *et al.* 2011; Grove *et al.* 2012; Hill *et al.* 2014; Holmberg 1969; Katz 1982; Kessler *et al.* 2017; Kessler *et al.* 2018). Environmental factors like high and low temperature and seasonal change can also cause health problems (Ackerknecht 1946; Fábrega 1997). On the other hand, the compelling shreds of evidence from studies on historical epidemiology, medical anthropology, and archaeology put forward cogent arguments that if the H-G communities are shifted to permanent settlement in a particular place, shift their diet pattern, and are having a larger size, higher population densities and a complex social network, they are more prone to infectious diseases, contagious diseases, epidemics, and chronic diseases (Fox 1988; Fried 1967; Harris and Ross 1987; Harwood 1970; Holmberg 1981; Johnson

and Earle 1991; Kleinman 1986; Laughlin 1963; Mascie-Taylor 1993; Service 1975; Trinkaus 1989; Tooby and Cosmides 1990).

The literature indicating health and healthcare practises of the H-G community (in general) has largely focused on the characteristics of diseases and illness of the H-G community and the descriptions are mostly from a non-indigenous or outsider perspective. These studies calculate health essentially in bio-statistical terms like nutrition deficiencies, maladaptation, the period of sickness and diseases, and inclination towards more serious diseases. It defines health as the absence of disease, adaptation, and maximising human potential (Groeneveld 2018; Kessler *et al.* 2017; Kious 2002; Lee and DeVore 1984; Richmond *et al.* 2007; Ungar and Grine 2006). These descriptions are arguably problematic because of indisputable differences in cultural experiences, worldviews, and beliefs between the indigenous (H-G communities) and non-indigenous (outsider researcher) populations (Richmond *et al.* 2007). However, many studies have tried to explore the indigenous concept of health by focusing on the science, nature and extent of indigenous medicine, use of indigenous knowledge in primary health care services, and hunter-gatherer lifestyle as a model in public health (Durie 2004; Gallagher 2019; Guite 2010; Kleinman, 1978; Saklani 1992; Maher, 1999; Rajendran and Rajan 1999; Richmond *et al.* 2007; Rankoana *et al.* 2015; Salali *et al.* 2016; Pontzer *et al.* 2018). Hardly any serious attempt has been made to explore the philosophies and views of H-G communities on health and healing knowledge systems.

Methodology

Data Collection

The data has been collected after a social survey and semi-structured questionnaire. A purposive sampling method was used for the selection of the colonies and a convenient sampling method was used for collection of in-depth interviews (IDIs) and focus groups discussion (FGDs). A total of 18 colonies ($A_{n=4}, C_{n=2}, K_{n=6}, P_{n=6}$) were visited. The sample population includes both the male and female population with a mean age of 51.4 years (yrs). The data informing this article comes from both the primary and secondary data sources. The primary data collection includes the sources (I), qualitative data in the form of in-depth interviews (IDIs) and focus groups discussion (FGDs) and ethnographic data were collected in the form of observation (both participant and direct). The FGDs have an average of six to seven respondents, mostly men and few women and the age of the group is between 45 and 65 years. Secondary data is collected from government reports like the Integrated Tribal Development Project (ITDP) reports, Kerala Forest Department (KFD) report, Grama Panchayath offices data, census records, and previous research.

Data Analysis

To interpret the collected qualitative data, the abductive approach was undertaken. The data analysis was conducted through the following steps:

1. Step I: transcription of interviews in textual form. It is important to note here that the interview was recorded in Malayalam and H-G communities' native language and was later translated and transcribed into English.
2. Step II: Content and framework analysis.
 - a. Identification of pattern, connections, and themes: The words and phrases are related to H-G communities' conception of health, recognition and categorization of diseases (serious and non-serious diseases), method of diagnosis, knowledge of medicine, the decision-making process for the selection of medicine, and mode of treatment.

- b. Formulation and application of codes: Two types of coding method were used, i.e., open coding (to organise raw data and determine the frequency, similarities, difference, relationships and contexts) and axial coding (to identify interconnection and link, to map the shift of content, and to see overall emerged pattern). The coding was done manually but with the help of Nvivo 11.4 and ATLAS.ti 7.5.16 software.
3. Step III: Data comparison. After doing systematic coding of data (IDIs and FGDs), all the abstract codes and categories were compared with field notes of passive observation, secondary data, and literature reviews to verify the exactitude of interpretation and internal reliability of codes.

Ethical Consideration

The researcher had duly taken the permissions from Schedule Tribe Development Department (D3-19920/19) Thiruvananthapuram, India, and Department of Forest, Government of Kerala (KFDHQ-5757/19-CWW/WL10) Thiruvananthapuram, India. Each H-G community agreed to voluntary participation and informed consent was obtained from all the individuals before data collection.

The Concept of Health among the Selected H-G Communities of Nilambur Valley, Kerala

The selected H-G communities perceive health as (a) the individual's normal functioning behaviours and abilities, and (b) the individual's causal contribution to the larger socio-economic goals pursued. For example, on an answer to the question of 'how do you know that a child or someone is sick or unhealthy in case he/she doesn't tell himself/herself?'⁴. The common responses from the chosen H-G communities of Nilambur valley, Kerala were as follows:

...the mother can understand the mood or condition of the child. It's a common phenomenon. Once they get the disease they stop playing with other children, eating less, always crying, etc....⁵

...the older generation people have knee and back pain issues, so they are no longer able to come with us in the forest...⁶

Health has a social context among these communities, unlike western bio-statistical calculations. For example, pregnancy is considered a productive work and a contribution to the larger social goal, i.e., producing progeny. Not only do H-G communities perceive health and illness differently from western or non-indigenous systems, but also in their rationale many of the bio-statistical explanations of diseases/illness (for example, skin, respiratory and gastrointestinal diseases) are considered as non-serious. The scope of causal explanation of diseases or disease vectors among H-G communities is also culturally disparate from the western-centric approach (WCA) (Anderson and Kirkham 1999; Coward and Ratanakul 1999; Fábrega 1997). Contrary to the WCA, H-G communities have both a naturalistic and supernaturalistic explanation of diseases with the aid of native logic and healing methods for the diseases. These explanations include cultural relative experiences, beliefs, worldviews, values,

⁴ This was a common question asked during the IDIs and FGDs recording among the H-G communities (A, C, K, & P) of Nilambur valley, Kerala. The IDIs & FGDs were recorded between December 2019 and March 2020.

⁵ This was the common response from all the selected four H-G communities (A, C, K, P) of Nilambur valley, Kerala. But this particular extract is taken from the reply of a woman of A-community from Kattupara colony during FGD in February 2020.

⁶ This quotation is from the K-community from Kulbalpara colony. This was a response to the question cited above. It was recorded during FGD in January 2020.

metaphoric mind,⁷ imaginations, and knowledge about plants, animals, and landscape (Anderson and Kirkham 1999; Coward and Ratanakul 1999; McDonald 1999). This ‘metaphoric mind’ involves the supernatural agents from either immediate or distant external groups (which are both benevolent and malevolent) to expound causation as well as perform healing for a certain kind of disease or illness (Cajete 1952). In short, the ethno-philosophy of A, C, K, and P associates the root cause of health problems to natural causes (like heat and cold), to supernatural intervention (god’s anger, spits, and evil eye), and to outsider effects. In their causal explanation of diseases, the inferences are also connected to direct and localised everyday experiences. Whereas the healing methods involve (a) knowledge about the plants and their secondary compounds, animals and their by-products, water, soil, and other minerals, (b) special sets of skills like massage (*Pidichukodukkal* and *Oddanereyaakal* [in C-community]), (c) treating with the help of mantras, magico-medicinal practises, and (d) removing of a malevolent external agent, amelioration by veneration or sacrifice to the specific god/ancestral power or location (*Orissadu*, *Koriorissadu*, *Daivaadal* [in C-community]).

Among the chosen H-G communities knowledge related to health problems and therapeutic remedies are associated with the subsistence behaviours of individual community members and stored as collective knowledge in the cultural cloud and ecological context (outside the mind and body of an individual). The members of the H-G communities involved in self-medication/self-healing processes by altering/modifying the diet, application of ecological knowledge, and in some cases getting assistance from the immediate family members, neighbours, or kinship members. This assistance includes sharing of medicinal knowledge, sharing of medicinal material, use of special sets of skills, and caregiving. If the disease or illness is serious, unfamiliar, life-threatening, or produced by systemic diseases at that time, then it requires the expertise of a professional healer from outside of the respective community.

The Current Condition of H-G Communities of Nilambur Valley and the Problems and Paradoxes in Health/Healing Knowledge Systems

The Current Condition of Selected H-G Communities of Nilambur Valley

H-G communities of Nilambur Valley, Kerala are currently undergoing fundamental changes in their structures as well as subsistence strategies. This transition is the outcome of transformation from hunter-gatherer societies to sedentary societies. The major force behind the transition is the effective implementation of nation/states policy of inclusion of H-G communities (or nomadic or tribal/indigenous) into the mainstream developmental goals. For example, this includes the provision of places or *packed* houses for permanent settlement, making public distribution systems (PDS) available to the people of the society, and the policies of converting nature into natural resources under the ownership of state (like forest regulation on hunting or conflict over space). However, other factors like unavailability of forest products in the near vicinity, market (or trade) demand, and economic forces are also the reason behind the transition of H-G communities at a fundamental level as well as subsistence level. The transition has also brought a change in the pattern of livelihood, living conditions, population size and density, relationship with the environment and proximity with animals. The reduction in animal (as well as human) migration has increased the possibilities of infectious

⁷ Cajete (1952) in *Native Science: Natural Laws of Interdependence* described the metaphoric mind as ‘the oldest mind and has been evolving approximately three million years. Parallel to collective evolution, in individuals it develops from birth about the time a child begins to learn language and eventually recedes into subconsciouses’.

diseases caused by the new proximate relationship and reciprocal transmission of disease vectors between human and non-human populations. The sedentary settlement has exposed the population to human and animal waste and contaminated water, which can also cause diseases among the community members.

On the other hand, few sections of the H-G communities are resistant towards the fundamental changes in the structures (or relationship with landscape or ecology) as well as subsistence strategies. These sections of the community reside deep inside the forest and prefer to live their life in isolation or have minimal interaction with outsiders or other communities. These sections of H-G communities are in a quandary situation and constantly negotiating between the novel and traditional experiences. While community sections with low resistance and reside in forest fringes have a constant interaction with outside communities and are involved in constant trade of goods, views, culture, and tradition.

For example, shifting from hunting-gathering to sedentism makes societies vulnerable to disease vectors originating from meagre waste and faecal managements, diet shift increases the risk of diseases originating from vitamin and mineral deficiencies, change in population density and social structure increases the risk for infection, and proximity with animals (due to sharing of common spaces) upsurges the risk of zoonotic disease (Armélagos and Barnes 1999; Armélagos *et al.* 2005; Audy 1961; Barnes *et al.* 1999; Cockburn 1971; Eaton *et al.* 1988; Grove *et al.* 2012; Hill *et al.* 2011; Kessler *et al.* 2018; Lederberg 1998; Livingstone 1958; Orman 1971; Simmons 1989; Sprent 1969; Wadsworth 1984).

These are the factors that make health a dynamic phenomenon because diseases have a physical essence and are placed in the physical body (Fábrega 1997). If this is the case, then perceiving health problems (or diagnosing diseases) and the construction of healing mechanisms through static beliefs (with the help of 'metaphoric mind' and imagination) and native logics might be problematic because it will fail to accommodate the novel experiences of illness.

The Paradox of Static versus Dynamic

It is discussed in the above section that the transition to sedentism can have an adverse impact on health. This major shift in food habit (omnivorous, balanced food to *Kanni*, a dish prepared of rice and salt and the occasional addition of fishes and crabs) led to the nutritional imbalance causing diseases like anaemia (in females and children) as well as vitamin deficiencies that lead to night blindness. But in H-G communities' perception of health problems, these newly formed diseases have no reference because they perceive health through static native logic. Not only the novel problems, but also problems like skin diseases and other short-term infections have no scope within the health problem perplex. This forms a paradox of static versus dynamic perception of health and healing among H-G communities.

Instead, healing in the medical literature has been defined in various ways. Kok's (2016) definition of healing, i.e., 'restoring the person to the life context', seems closer to the H-G's dimensions of healing (Kumar 2020). Among the selected H-G communities, two dimensions of healing can be perceived, i.e. the dimension of individual healing, which involves personal health and healing of mind and body through spiritual and emotional healing and dimension of collective healing, comprises cultural wellbeing along with individual wellbeing. Both the healing model has two parts (a) diagnosis and (b) treatment/application of therapeutic remedies. The diagnosis of diseases and illness incorporates the close observation of (long and short term) behaviour, normal functional abilities, touch, and change in colour (of the body or body waste), temperature and other psychosomatic changes. This method or step of diagnosis is neither uniform nor universal for all H-G's. Whereas the steps of treatment/application of therapeutic remedies indulge caregiving (both from immediate or distant community members), use

of herbal medicine (mostly the primary component but in some cases secondary component) and animal products. Insofar as the dosage is concerned there is no definite measurement or interval because it is believed that their medicine has side-effects. But in a practical context, this depends on the severity of diseases and age of the person. The horizon of knowledge of medicine for diseases ranges from commonly encountered diseases (like fever, cough, cold, headache, stomach pain, tooth pain, ear pain, back & bones pain, wound or cut or injury, skin disease, menstrual pains, snake bites) to uncommon diseases (like-cholera, mouth cancer, tuberculosis diabetes, chickenpox, fertility-related issues, etc.).

These domains of healing are based on ethos and philosophy of life (as discussed in the earlier sections of the articles) in which nature is culturally constituted and personified to establish an emotional relationship with ancestor, ecology as well as with nature. It implies that H-G communities venerate nature (animals, plants, rivers, mountains, non-human organisms) not as the external world of physical substance but as mother and father. For example, unanimously all the four tribes venerated (discussed above) *Maldivian* (the mountain god) as a father. This is because nature caters their needs and is a source of all kinds of foods, medicine, and other requirements. However, there does exist a degree of variance in lived experience, meaning-making processes, and 'imaginatively constructed' myths, religion, ceremony, and other practises among the H-G communities of Nilambur valley.

The knowledge of healing among H-Gs are also vested in the collaborative model of economic production, and they store this knowledge in an ecological context, outside the mind and body in the form of image and action (like growing area/place, colour, and shape, etc.). This has created an eco-cultural cloud for the repository for social learning and collective intelligence for information transfer to the next generation. But the information has been governed by the rule of secrecy and sacredness to protect (both in terms of purity as well as misuse) knowledge and claim ownership over it (Kumar 2020).

The plant grows among rock. I don't know the name, but I can identify it. If you have any doubt about medicines let me show you the plant (not clear the name) and reveal how to consume it.⁸

...I don't know the name. It grows near the river. He (a member of Kattunaickkan colony of Kumbalpara, Nilambur Kerala) had a bone fracture and applied that paste...a creeper used for bone fracture when it grinds it turns into yellow colour ...We do not use these names. When we need it, we just collect it.⁹

It is clear from the above description that H-G communities' practice of ecological and social storage is very significant for healing. The interconnectedness and relatedness with the landscape stimulate a sense of belonging and historical connection (in spatio-temporal context) which was the core of the caregiving model of healing. The transition or displacement from traditional land may result in the dismantling of experience, eradication of previous models, the annihilation of interconnectedness and relatedness with the landscape. Therefore, the small change in landscape/environment may have a larger impact on health management mechanisms.

Likewise, the perception of health through static beliefs and logic, the healing models among contemporary H-G communities are also guided by the ancestral repository of knowledge. The later generations have not contributed any new knowledge to the repository despite the experience of the

⁸ A member of the C-community has responded during the IDIs on the question of 'can you tell the name of the plant of which you are discussing?'

⁹ During FGD at K-community at Kumbalpara colony, one of the members replied when the researcher asked the name of the plants.

need for new knowledge to cope with new kinds of diseases. The lack of innovation and research in the domain of healing made traditional healing mechanisms very static, too.

Discussion and Conclusion

Anthropological studies mostly focus on the content of indigenous knowledge by describing and documenting the knowledge system of indigenous people and overlook the factors behind knowledge variability: who knows what and why (Service 1975). Knowledge variability is an important component of health and healing models of H-G communities because of its relation to both the socio-economic factors and cognitive factors (Service 1975). In any discussion on health, the knowledge-biology relationship becomes very critical for the reason that it not only comprises physiological and biochemical factors but rather represents a complex, innate, cultural understanding in a particular social context. Therefore, the epistemological and ethno-ontological understanding of health and healing becomes very significant in H-G communities' cultural context.

H-G's conception of health and survival is a continuous process and mostly implicates the *posteriori* (i.e., based on previous experiences) perspective of both the individual and collective understanding to maintain health (Kleinman 1986). It comprises knowledge acquisition, intergenerational transmission or diffusion and knowledge transformation processes. But these knowledge and experiences are a culturally specific dynamic mixture of tradition and present intervention which comprises of native belief systems, empirical apprehension, and worldviews. It also involves various dimensions of life (i.e., intellectual, physical, emotional, and spiritual) and establishes a transpersonal relation with another non-human organism (such as animals, plants, spirits, ghosts, ancestors and gods) for the perception of health and designing the dimensions of healing. In Laughlin's (2013) terms, this 'polyphasic culture' of transpersonal experiences and meaning-making processes guide people to develop numerous symbolic and ritual methods for the perception of health and healing methods (Kleinman 1986). This eventually situates the conception of health in a trans-historical context where the past, the present and the future co-exist simultaneously.

It is important here to contemplate whether this onto-epistemic model of health and healing is applicable when a society or culture is going through the rapid transition of socio-economic practises, demography, social relation, and structural transition of functionality and subsistence pattern (as mentioned in the above case study). The phase of transition is important for the onto-epistemic understanding and conception of any knowledge system for the reason that transition involves the alteration of worldviews due to the process of bi-culturalization, cross-border exchange, geophysical relocation, and change in social networks. The first layer of transition brings about change in cultural framework related to working experience, cognitive processes, ontogenetic history of a particular social framework, the cultural pattern of meaning and experiences, thought, feeling, action and mode of being. This diversity and fluidity of transition transmutes characteristics of the individual as well as society, norms, customs, values, beliefs, artefacts, the medium of symbolic resources (which is accumulated and translated across generations), and decision-making processes.

These fundamental changes, in turn, reflect in the new relationship with the environment, self-other interaction and interdependence between self and sociality. The shifting of meaning, experience and disposition of beliefs become very crucial to implicate a *posteriori* perspective on health and re-establish a transpersonal relationship with non-human beings. The repositioning and calibration of social relation and negotiation with adapted cultural practises create confusion, emotional & social dis-functioning and cultural drift, which leads to change in the symbolic structure of the meaning-making process, dynamic reconstruction of meaning, self-repositioning and at last self-transformation.

However, the second layer of transition is intergenerational conflict over worldviews, belief, and values. This conflict is more pertinent in a society where the population ratio of old versus young is skewed towards one or the other. The older generation tends to protect the traditional worldview belief and values whereas the younger generation operates from the altered cultural model with diverse worldviews, beliefs, and values. This conflict over operational models asks for a new onto-epistemic understanding of the current situation and develops a model which is adaptive as well as accommodative.

The H-G communities' knowledge of healing doesn't only involve simple diagnosis, labelling and treating the diseases/illnesses, but also incorporates the process of explanation and evaluation in which culturally specific truth and belief has a significant place. But due to transition and cultural diversification, the truth and belief of ethno-epistemology continuously vary. This disposition of culturally specific belief and truth urges for a new cognitive model to accommodate new experience and develop alternative knowledge management and meaning-making processes that are more inclusive and accommodative to capture the new experience so that health disparities can be addressed, and health can be maintained for better survival.

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Reflections on a Wooden Hand-Mirror: A Historical Melanesian Object

Joanna Tonge¹

Abstract

Historical archaeology of Indigenous societies can aid in challenging the often-flawed ethnographic models that emphasise static identities rather than the dynamic nature of these societies (Flexner 2014). Objects are important to a multivocal past, in the Pacific particularly as the history of the last two hundred years is mainly to be found in written sources by outsiders (Kirch 1985; Spriggs 1997). Considering its historical context and utilising the archaeological method of object biography to unfold the ‘drama’ (Joy 2009) of this wooden imitation hand-mirror allows for a greater depth of nuance to the history and anthropology of the 19th and 20th century Trobriand Islands. Untangling the processes which constitute its biography, with a focus on the initial importance in its creation, its ‘peak’ life as an ‘inscribed’ object (Marshall 2008), allows a narrative of social action to unfold. This mimetic hand-mirror is considered in the context of practises traditionally labelled ‘cargo cults’ within anthropology, that often marginalise objects like these. Though it does not have a reflective surface, it nonetheless forces reflection and recalls the power of the object to which it alludes in the need to self-scrutinise. The irony of the looking glass that is so often held up to our own culture in the study, and the critique of the study (Jebens 2004) of cargo cults and colonial contexts is encapsulated in this object.

Keywords: Melanesia, Mimesis, mirror, object biography, colonial



Figure 1. Side A

Figure 2. Side B

This is the orientation that is used to understand references to ‘top’ etc. (Photo credit: Author).

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Object Descriptions

An ethnographic object constructed completely of dark tropical hardwood, this object from Melanesia is heavy to hold and smooth to the touch. It consists of two main shapes: a thin cylinder or 'handle' ending with an extant pyramid shape, and a flatter cylindrical 'plate' with two 'faces'. Abstract geometric patterns have been incised to encircle both faces, edged with enclosing lines on either side; on side A are a series of interlocking spirals and side B an unbroken zigzag pattern. Where each face meets the handle, there are triangular carved lines on both sides, one side has a small additional line underneath perpendicular to the triangular shape. Both faces are slightly lopsided, however effort towards symmetry is evident. The edges of the plate are thin at the left and right widening at top and bottom in a convex shape. Travelling towards the base of the handle the bottom of the object widens; this end has an edge that has not been reduced to the same extent as the rest of the handle. Surfaces are smooth, indicating the object was likely oiled, possibly with coconut oil (Josh Pollard pers. comm. 2017). The handle is particularly smooth, in comparison with the faces, perhaps due to a greater attention to the feel of handling the object or through repeated handling itself. A blackish-blue stain is visible on side B, in addition to a small amount of black hardened substance, possibly pitch or resin, that can be found as droplets on one side of its face, including a smudge of the same substance near the top.

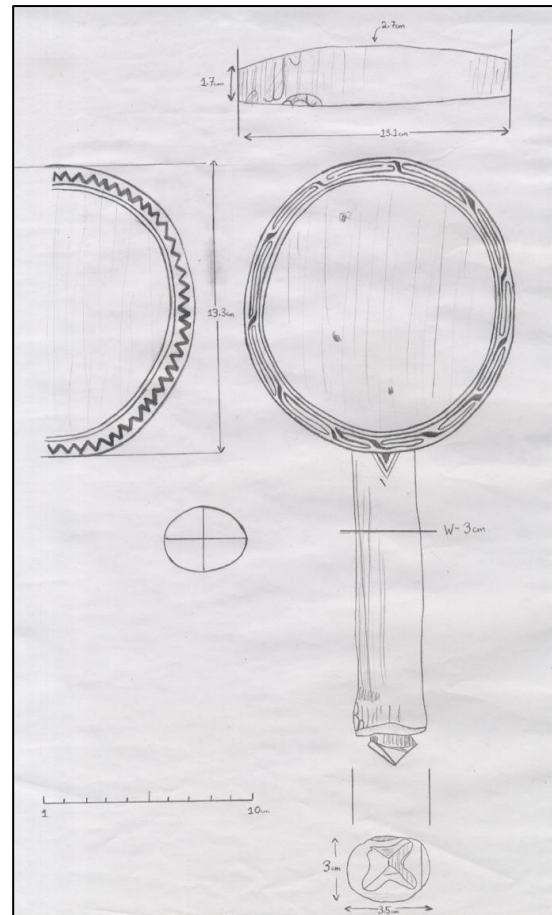


Figure 3. Archaeological illustration of Melanesian ethnographic object; Dimensions: L 27.5cm, radius of cylinder 1.5cm avg., radius of face 6.6cm; Side 1: zigzag and solid line either side of pattern width of 1.3cm; Side 2: interlocking squiggles and solid line either side of pattern width of 1.4cm (Photo credit: Author).

Introduction

The care taken, and skill involved in the creation of this object has marked it out as socially powerful from the time of its production. It can therefore be understood as an 'inscribed' object holding a place of significance in social life and performance in its very manufacture (after Marshall 2008: 69). The size and handle-able nature of this object are indicative of its importance as a tactile object, to be held and interacted with, thus its meaning through this interaction likely changed through time. However, in opposition to 'lived' objects (Marshall 2008: 69) which gain import through use, this object was imbued with a great deal of social significance in its initial creation. The material which constitutes this object, a tropical hardwood, in combination with its aesthetic properties and subsequent shaping and

decoration, are important in understanding its meaning and use. Untangling the processes which constitute the biography of this object, with a focus on the initial importance in its creation, its 'peak' life as an 'inscribed' object (Marshall 2008: 69), allows a narrative of social action to unfold.

Melanesian Ethnographic Context

The likely impetus for the creation of this object can be found in the response by indigenous peoples of Melanesia to European power, connectivity, and abstracted processes of production. This creative response provides insight into the epistemologies of these people, as they built on pre-existing material practises of representation and categorisation (Bell and Geismar 2009: 14). As an ethnographic object from Melanesia in good condition, this object was likely constructed during the late 19th or early 20th century, during which time a range of so-called 'cargo cults', or millenarian movements became widespread throughout Oceania (Bell and Geismar 2009: 13). These 'cults' are indigenous responses to contact and collection that is inherent in the political, social, racial, and economic inequities of colonialism (Bell and Geismar 2009: 14). The aim of these activities was

...apparently to gain possession of European manufactured goods i.e.; axes, knives, aspirins, china plate, razor blades, coloured beads, guns, bolts of cloth, [etc.] and other goods to be found in a general department store (Burrige 1960: xv).

In some of these cults such as the so-called, 'Vaiala madness' in Papua New Guinea, ritual artefacts were destroyed, and new objects were created, mimetic of European social practises, to aid in the acquisition of 'cargo' and bring about the return of the ancestors in their cargo ships (Bell and Geismar, 2009: 13; Burrige 1960: xv). The mimesis of these objects not only makes forms of European power accessible, as some of the mystery of production can be transferred in this new, mimetic object, but it also generates symbolic power for the group members of the millenarian movement. This object likely originates in the Trobriand Islands, Melanesia, where objects are of particular importance to people; in their attention to 'things, we see how individuals try to control others, while at the same time, they attempt to manage their own self-images, autonomy, and political destinies' (Weiner 1988: 160). This object reflects this attempted management of self-image, autonomy, group, and wider political destiny.

Material: Merbau

This object is comprised of wood of the tree species merbau or *Intsia bijuga* (Bramwell *et al.* 1976: 245; Walker 1989: 103) known as 'kwila' in Papua New Guinea (Walker 1989: 103), it is a 'handsome', dark, mahogany red wood, 15-20% heavier than oak (Bramwell *et al.* 1976: 245). In the Trobriand Islands, it has 13 traditional uses (Thaman 1994: 161) and is one of the most highly sought-after species in the area, due to its 'attractive and durable wood' (Thaman 1994: 167). It is valued as a high-quality material for specialised wood carving of objects of spiritual or prestige importance, such as 'idols, pendants or tiki, ceremonial kava bowls, carved prow pieces for canoes, or items for the burgeoning tourist market' (Thaman 1994: 167). In these Islands, merbau is also one of the plants which is protected or cultivated in graveyards, sacred groves or around temples (Thaman 1994: 168). This object is socially significant in its very material; as a tree cultivated in places of spiritual importance related to ancestry, it is a specialised composition of spiritual material related to traditional modes of life. Despite a marked movement away from tradition, the ancestors were extremely important to the concept of the 'cargo-cult'; 'they [the ancestors] are making the cargo-making access to cargo possible' (Burrige 1960: 264). Merbau was deliberately chosen as the material this object constitutes, likely for its association with spirituality and ancestry.

Process of Making

This object was first cut from the heartwood of a hardwood tree; following along the grain, a single piece of wood has been crafted to create its shape, and the grain is retained as visually noticeable throughout the object. Hardwood is difficult to work with; however, working along the grain and working ‘with care’, merbau can be finished to a fine surface (Bramwell *et al.* 1976: 245). This object was likely made in a similar way to other traditionally worked wooden objects from Melanesia. Canoe prows, for example, share similar carved patterns and are often constructed out of the same material. While traditional techniques appear to have greatly influenced the creation of this object, it should be noted that different parts of the object have been created differently with different techniques. The pyramid shape at the end of the handle, for example, appears to have been created using a saw-like tool. As the master carver using a nail instead of animal bone in Malinowski’s 1922 study,² this may be indicative of changing tool use and the dynamism of the ever-changing nature of tradition.

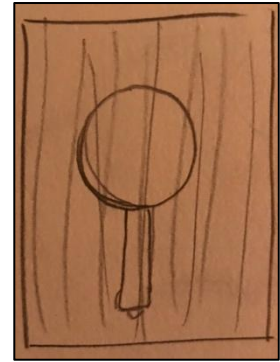


Figure 4. Object was visualised within single piece of wood (Photo credit: Author).

Gell (1998: 69) describes a kind of ‘psychological warfare’ which is brought about in the creative process or ‘magic’ of the artistry found in canoe prows used in the kula exchange network. He notes that it is a lack of knowledge of the specific technical process of bringing ‘raw material to finished product’ that creates this ‘magic’ (Gell 1998: 69). Through controlled access to knowledge of the craft, the technical process itself is meant to disarm in that it is overwhelming to comprehend; ‘the artistic agency on display is magical, the result of the artist’s ingestion of a magical tradition and substances which communicate carving skill’ (Gell 1998: 69). Most of this prowess is in the physical ownership and political deployment of display by the owner of the prow, the importance of access to the services of a master carver ‘whose artistic prowess is also the result of his access to superior carving magic’ (Gell 1992: 46). This Melanesian object was similarly made by a knowledgeable carver, who perhaps owned and deployed this object in magical, political display.

Allusions

Geometric features found on traditional artefacts in Papua New Guinea serve to indicate social identity and relationships with members of the group (Owen 2015: 167); this includes the multiple different abstract features incised into the surface of this object. Zigzags and interlocking swirls can also be found on a range of other items of material culture, particularly the zigzag motif is common ranging from decoration of pottery, masks, drums, bullroarers, etc. (Pitt Rivers Online collection 2017). The interlocking spiral pattern is a less common motif however similar swirl patterns can be found on canoe prows, which are often made of the same wood species (Thaman 1994: 167). The form, pattern, and nature of the material of this object positions it into several categories related to traditional Melanesian craft and references to a European object.

² Malinowski’s *Argonauts* image of a master carver carving a canoe prow, *tabuyo*, with a long iron nail (previously a wallaby bone) driven by a hammer, likely a very similar method to those used in the incision of the pattern found on this object (Image credit: Malinowski 1922: plate XXVI).

Lapita, Zoomorphism and the Sea

Influenced by the widespread Lapita culture (Spriggs 1997: 1), Western Pacific motifs retain many elements of Lapita style (Terrell and Schechter 2007: 59). Items of Lapita material culture are known to strongly allude, though not exclusively, to complex ideas of the sea and sea turtles. Zoomorphic references are common, as are cultural interpretations of animal life in these references, though these have become more abstracted through shared cultural understanding through time (Terrell and Schechter 2007: 59). The depth of time that the Lapita culture has had influence in the region in addition to its widespread, makes it practical as a unifying tradition in opposition to colonial enterprise. It follows that references to Lapita culture have been made in this object, particularly considering that the material it is composed of is spiritually significant and relevant to ancestry. Allusions made to the form of a sea turtle are found in several geometries evident in this object.



Figure 5. *Sloping shape of object face, akin to rounded turtle shell.*
(Photo credit: Author, 2017).



Figure 6. *Triangles as head of turtle, note the swirls perhaps referring to the sea*
(Photo credit: Author, 2017).



Figure 7. *Shape at bottom, zoomorphic, like body of turtle seen from above* (Photo credit: Author, 2017).



Figure 8. *Several aspects of this object seem zoomorphic, particularly akin to a sea turtle, a common Lapita motif* (Photo credit: Bernard Spragg, under CC0 1.0, Public Domain via Wikimedia Commons).

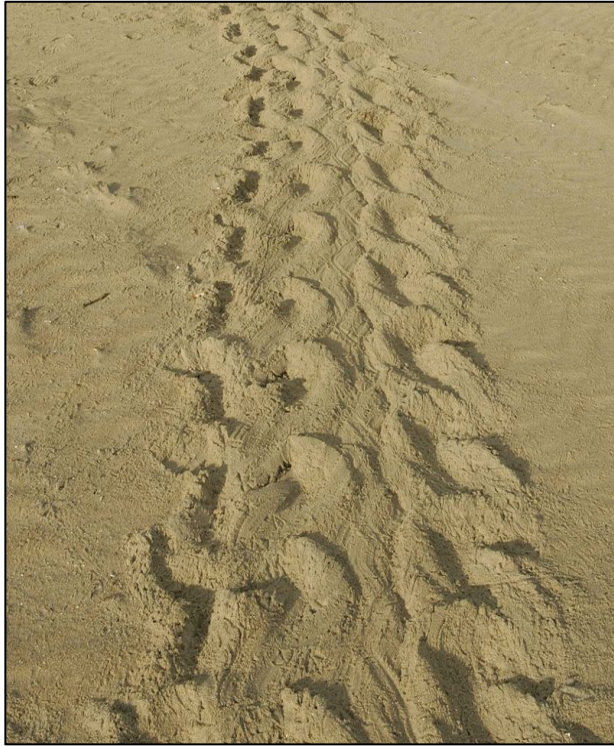


Figure 9. Tracks of a sea turtle. Similar to the interlocking spiral pattern on face A (Public Domain via Wikimedia Commons).



Figure 10. String bag (*bilum*) Papua New Guinea, late 20th century possibly wild tulip bark fibre (under CC0.1.0, via Wikimedia Commons).

Bilum bags

This object exhibits continuous and unbroken geometric lines enclosing both faces, which is comparable to the continuous string and geometric patterns of *bilum* bags. As woven cloth was not part of Papua New Guinea cultures (Owen 2015: 159) continuous string bags, called *bilum*, are important (Owen 2015: 170). They are made using a variety of different tree fibres (Owen 2015: 170) and as another form of making in Papua New Guinea, these bags are known to have influenced the designs of many other traditional crafts (Owen 2015: 159). Bilum manufacture is understood as a female craft and is seen as a womb, ‘our mother; it has continuous fertility’, it is also related to sharing and has been used for political or protection purposes (Owen 2015: 171). When used by men, bilums go through transitions of signification whereby they are attached to ‘hard or flat surfaces or bound in some way’ (Owen 2015: 171), thus it is not a huge conceptual leap to refer to bilum on a hard surface through visual carved patterns, to bind bilum patterns into this hardwood object. *Bilums* are made using figure eight type loops that form a continuous string (Owen 2015: 159), this seems very reminiscent of the interlocking spirals of one face of this object. In this way this object refers to female matriliney while maintaining the ‘maleness’ of this object. People in Papua New Guinea share a belief that ancestor spirits could be kept in a carving (Bramwell *et al.* 1976: 219) and it is the wealth of women which ‘fundamentally expresses the immortality of the group’ (Weiner 1988: 163). In this way this object creates and re-enforces an existing unity and longevity by referring to other traditional crafts and their unifying meaning in geometric patterns.

Ceremonial Clubs

This object from Melanesia shares many attributes to ceremonial clubs which were important objects of prestige and status in traditional Trobriand society and were widely distributed throughout the South Seas (Malinowski 1920: 12). They were often made of heavy hardwoods, with proportions between elements ‘no less artistic than their (sometimes perfect) carving’ (Malinowski 1920: 12). Additionally, in size, handle-able nature, and place of origin this object appears very similar to these clubs and therefore likely would have held a similar position in Trobriand society. Malinowski describes their ceremonial nature as illustrating Islanders’ proclivity for display, noting that the elaborate decorative features of these objects often overshadow their use as weapons (Malinowski 1920: 12).

One example of a ceremonial club from the Honolulu Museum of Art exhibits very similar incised patterning found on either side of this object, a spatulate club from Milne Bay Province, Massim region, in the Trobriand Islands. The spatulate club is akin to this object in many ways; the patterns, the similar (though darker) hardwood and its similarity as a ceremonial club. This suggests that the Melanesian object studied in this analysis is likely also Trobriand in origin.



Figure 11. *Spatulate club decorated with incised work on both sides at the head. Note the similar patterns of swirls and zigzags. Ceremonial sword club, Trobriand Islands, Milne Bay Province, Massim region, Papua New Guinea, early 20th century, carved wood with traces of lime (Public Domain via Wikimedia Commons).*

However, there are differences which prompt further questioning; for example, the inclusion of lime in the spatulate club. It is unclear whether lime was included in the imitation hand mirror, and it is not out of the question as it may have been washed, or, it may have been the intention to add lime at a later creative stage. It is possible that the absence of lime suggests that form and reference, possibly coupled with a short-use life, surpassed any perceived importance of ‘finishing’ with lime as more traditional objects may have been. The object’s existence and importance as an ‘inscribed’ object may have been enough, without the need for further decoration or integration into a ‘full’ tradition of filling with lime. However, the complexity of the incised patterns, particularly the spirals of side, indicate a high level of competence and skill in working with the material, and time taken in its initial manufacture. Additionally, while ceremonial clubs vary in shape and size, and while each is unique, there do not appear to be any shapes that correspond particularly with the deliberate shape of this object.

Hand Mirror

The decoration, size and shape of this object are immediately reminiscent of a hand-mirror. Other clubs are more often spatulate, dance paddles are symmetrical with patterned 'faces' at either end of a handle, other clubs of different shapes are never circular; of the three museum collections investigated for comparison none held clubs with similar faces (Museum of Anthropology and Archaeology Cambridge, Pitt Rivers Museum Oxford, Bernice Pauahi Bishop Museum Hawai'i, 2018). Personal communication with scholars specialised in Pacific arts (Marshall 2017) and with familiarity with Pacific archaeology (Pollard 2017: pers. comm.) confirmed the uncommonness of the object's shape. Despite being constructed of nearly entirely a single weighty material and without completely perfect symmetry, the object appears skeuomorphic of European hand-mirrors from the early 20th century. Allusions to hand-mirror shape and style are, rather than focussing on the creation of an exact imitation, allows access to the symbolic power of the ownership of a hand-mirror for Trobrianders. A European hand-mirror easily fits into the list of European manufactured items given by Burridge which were alluded to in the formation of 'cargo cults' (1960: xv). European concepts of purity and decoration govern hand-mirrors in a much more rigid fashion than is the case in this object. The object was likely not made in direct observation of a hand-mirror and was likely referenced from memory. The Art Nouveau style which includes 'swirling lines, eccentric geometry and exotic bodies' (V&A 2017: Art Nouveau), which many European objects may have been part of, is in line with the continuous swirling lines and geometries of this object.

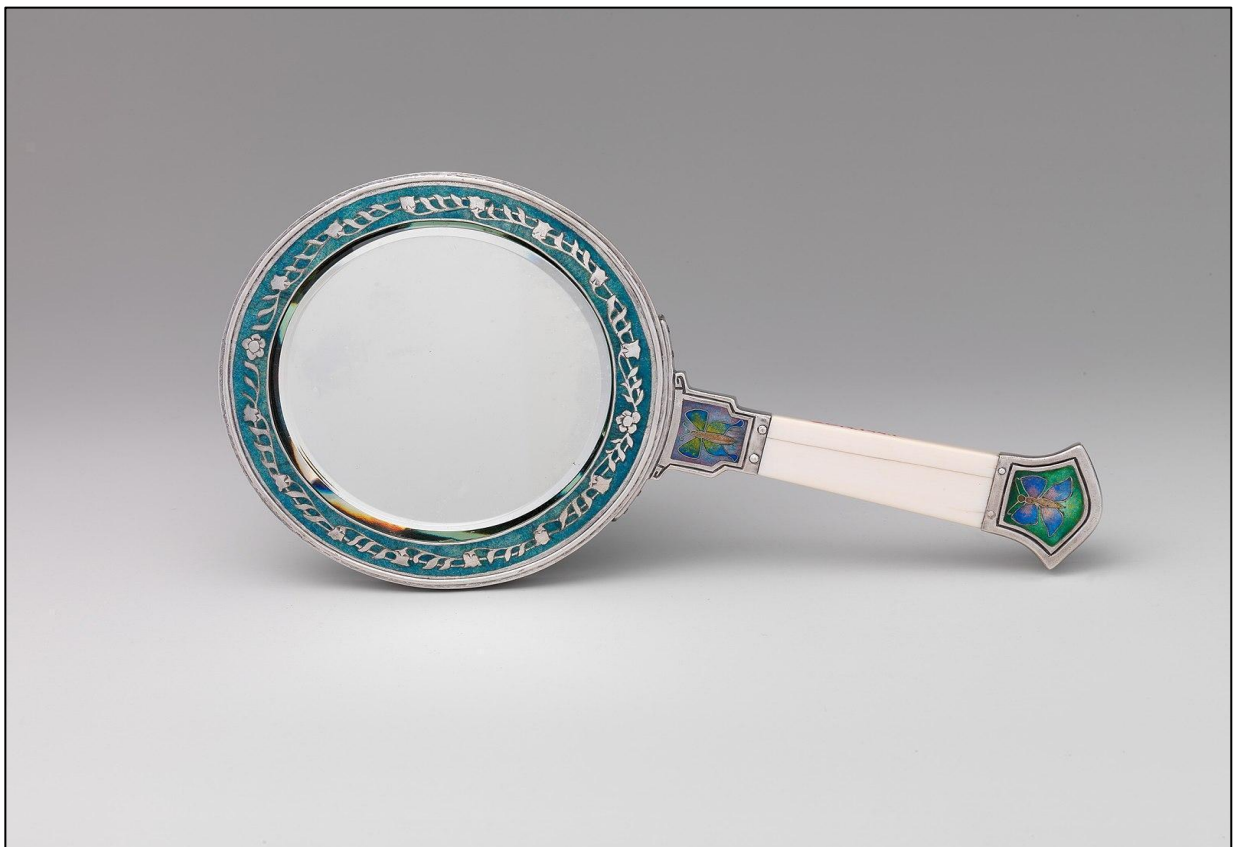


Figure 12. Art Nouveau mirror from early 20th century, circa 1908. Metropolitan Museum of Art, Accession number 2014.199.1 (Public Domain via Wikimedia Commons).

The choice not to include lime in the creation of this artefact may have been made to continue the allusion to the uniform appearance of a European metal hand-mirror. Patterns found on European hand-mirrors from the 20th century are generally visible around the edges but tend to blend more than they stand out, the reflective face being the focus. It is notable that both faces of this object are without decoration of any kind in their interior. It is possible that one side or both at one point had a polished shell or another shiny or reflective surface glued onto the interior of the face, however there is little visible evidence to support this. Perhaps instead an emphasis is placed on the visual aspects of the grain of the wood, a greater focus on the material which maintains reference to spirituality, ancestry, and locality. The mimetic quality of this object is demonstrably important here, rather than an attempt at perfect re-creation, a physical reference to an object yet to materialise from the ancestors.

Use

Objects constructed of wood used in rituals or ceremonies can lend psychological support to the individual using them, they can also make visible the symbols of social unity of the group thus furthering social ends (Bramwell *et al.* 1976: 218). Ceremonial clubs, which are very similar to this object, were used during 'festivities, mortuary ceremonies, dancing gatherings, great annual feasts' (Malinoski 1920: 12), as objects functioning as a multi-purpose cultural tool. Used primarily for decoration they would be 'noticed and much admired' (Malinoski 1920: 12). Very probably this object was used in a similar way to ceremonial clubs, however as part of a millenarian movement its use was hybridised, moving away from traditional uses, though retaining its importance as an object of creative power and referencing traditional methods of accessing or creating this power. Its 'peak' use, though perhaps brief, was likely in the rituals and dance activities of the cult as 'power [is]... immanent in all things and is accessible through direct physical participation' (Bell and Geismar 2009: 13). However, the act of making is likely to have been the most important part of this object's 'use'-life, in its assertion of new identities and cultural methods. Understood in a similar way to the knowledge of the master carver perhaps the knowledge of how to create these European goods, or lack thereof, is harnessed and interpreted as a form of dazzling power. The material nature of this and other objects enables people to make the 'intangible manifest' (Marshall 2008: 61) and access knowledge and power in the creation of political and personal identity.

Droplets of resin and black stain suggest a period of 'use' during the life of this object in which it was not treated with a great deal of care. Merbau is a type of wood that is likely to stain a dark blueish colour if its surface encounters compounds of iron in damp conditions (Walker 1989: 103). This suggests a perhaps careless treatment of the object in storage or a part of its life in which its careless treatment left it in less-than-optimal conditions. As an ethnographic object it is now the subject of anthropological study, it is possible that this careless treatment occurred during this transition and travel to the UK when taken or bought by a collector.

Discussion: Mimesis and the 'Other'

This object represents a collision of traditional Melanesian, or more specifically Trobriand, beliefs and a response to European influence. Most allusions made in the construction and likely use of this object are firmly grounded in Trobriand society, however, with blank faces surrounded by patterns on either side, and a handle-able nature and size this object is very reminiscent of a European hand-mirror. For Trobriand Islanders 'the loss of things and the death of people translate into political action - because such losses are a threat to all that went before - expressed in the creation and regeneration of identities, ancestors and rank' (Weiner 1988: 163). It is frequently suggested that 'cargo cults' in the Pacific represent a 'moral regeneration: the creation of a new man, the creation of new unities, the creation of

a new society' (Burridge 1960: 247). Thus, in this object is an inherent political action, and a creative process working to form identity. In the act of mimesis, the 'imitation' draws on 'the character and power of the original, the point whereby the representation may even assume that character and power [...] is as necessary to the very process of knowing as it is to the construction and subsequent naturalisation of identities' (Taussig 1993: XIII-XIV). Arguably, Trobrianders in the destruction of local objects and the rejection of colonial Christian modes of life, 'are making a passage from the conflicts of two worlds into the bliss of another' (Burridge 1960: 249). This object can represent and identify this 'passage', however fleetingly felt, serving to concrete the more ephemeral 'new society'. It is in this vein that social events that are often labelled as 'cargo cults' are sometimes portrayed as 'proto-nationalist movements designed to reassert native autonomy' (Spriggs 1997: 276). Additionally, the destruction of traditional things and the 'consumption of imported commodities' can reveal the creativity of Trobrianders and their epistemologies (Bell and Geismar 2009: 14).

Conclusion

Objects are important to a multivocal past, particularly in the Pacific as the history of the last two hundred years is mainly to be found in written sources by outsiders (Spriggs 1997: 3). This object is a good example, as it represents and re-enforces both a collision and forging of a new direction. However, there is little mention of objects such as this in anthropological accounts which describe 'cargo cults'. Said's (2010: 1874) observation is relevant in this discourse in which researchers are often encompassed within 'the main circumstances of [their] actuality' when focussing on the 'Orient'. Despite this, anthropologists have been forced to engage with indigenous understanding of materialisations and distortions caused by Western concepts of culture, largely due to the influx of new commodity forms with colonisation and globalisation (Bell and Geismar 2009: 13). The irony of the looking glass that is so often held up to our own culture in the study, and the critique of the study (Jebens 2004) of cargo cults is somewhat encapsulated in this object. The imitation hand-mirror, though without a reflective surface, regardless forces reflection and recalls the power of the object to which it alludes in the need to self-scrutinise. An 'inscribed' (Marshall 2008) object marked out as socially powerful at time of production, this object has greater significance changing over time, imbued with and reinforcing an inherent meaning. As Joy (2009: 545) notes, things can be inferred from what did not happen to the object; it did not stay in the Trobriand Islands, likely it was discarded or taken, and picked up by an ethnographer. As Taussig (1993: XIV) notes, 'No understanding of mimesis is worthwhile if it lacks the mobility to traverse this two-way street...' and this object crosses back and forth, in time and space between cultures and politics entangled.

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Human-Knot-Animal: Ontological Considerations of Animal-Human Relations at Nunalleq, Southwest Alaska

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Abstract

Animal-derived and animal-depicting artefacts are abundantly present at the pre-contact Yup'ik settlement of Nunalleq, Southwest Alaska. A significant number of archaeological discussions on such materials have been quick to revolve around ritual and shamanism, resource-exploitation and adaptation to the environment. Yup'ik ethnographies from the 19th and 20th centuries, however, portray animal-human relations in ontologically different ways. It would be anachronistic to assume static projections back into the past, and yet, these oral traditions pose a stark contrast to the way Yup'ik animal-human relations have been approached archaeologically. How can this knowledge then inform our archaeological thinking? This paper discusses a way of engaging conceptually with an ontological *situatedness* through ethnographic studies, and how these might inform and erode archaeological frameworks on a metaphysical level rather than trying to project specificities back into the past. Discussing the entanglement of the Yup'ik inhabitants at Nunalleq with seals, it is argued that artefacts at the site show a meaningful participation in practises of navigating and stabilising social identities and boundaries of being human.

Keywords: relational ontology, human-animal studies, arctic archaeology, material culture studies

Introduction

In recent decades, considerations of the ontological *situatedness* of archaeology as a disciplinary inquiry into the past have served to question the universality of many of the baseline assumptions that underpin much Euro-American scholarly writing as well as archaeological practises more widely (Cipolla *et al.* 2019). This critical ontological 'turn' (Marshall and Alberti 2014) has been particularly useful in showing the potential for decolonial practises in archaeology (Schneider and Hayes 2020) in non-Western contexts, where Euro-American traditions of thought and practice frequently overwrite local lived realities, past and present.

In this paper, I argue that these reconfigurations are especially potent for Arctic archaeology, particularly concerning questions of animal-human-material culture entanglements. Focusing on the 16th to 17th century pre-contact Yup'ik site of Nunalleq, Southwest Alaska (Hillerdal *et al.* 2019), I propose that relationality and the navigation of boundaries between human-ness and animal-ness are of fundamental importance in the investigation of such local ontological frameworks. In the following, I prefer to use the term 'relational ontology' rather than 'animism' to describe Yup'ik conceptualizations of other-than-human persons. This is not only to avoid the evolutionary and 'proto-religious' connotations invoked by Tylor's 19th century definition of animism (Alberti 2016a; Bird-David 1999), but also to underline its philosophical salience as source of theory and worlding (Viveiros de Castro 2004).

As a first step, I examine Yup'ik animal-human relations from a relational point of view, working with ethnographic literature. Second, I explore these relations through the example of seals at the

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archaeological site of Nunalleq. Finally, I offer some suggestions on how to further inquire into the study of Arctic animal-human relations.

Animals and Humans in a Yup'ik Context

As is also the case for indigenous people elsewhere in the world, Yup'ik ontological and epistemological principles of interspecies responsibility regularly conflict with the human-centred, dualistic Western paradigm (Fienup-Riordan and Rearden 2012: 38).

The understanding of animal-human relations in the past is often limited by dualistic nature/culture approaches which tend to obscure the full complexity of animal-human experiences (Boyd 2017; Conneller 2011; Hill 2013; Ingold 2000). In a Yup'ik context, as Ann Fienup-Riordan and Mary Rearden point out (2012), such binaries are inappropriate for the investigation of the realities of living and interacting with animals, both past and present.

Contextual studies of animal-human entanglements have demonstrated their potential in various publications (e.g., Armstrong Oma 2013; Boyd 2018; Conneller 2004; Losey 2010). One particularly influential concept – perspectivism – developed by anthropologist Eduardo Viveiros de Castro with reference to Amerindian ontology (e.g., 2004) emphasises that nature/culture or human/animal dichotomies are not universal. He describes a human-ness being at the core of any person, only distinguished and shaped by a 'clothing' made up of different 'affects' (2004: 465, 474). These physical envelopes help to retain a certain perspective which serves to embody a differentiated experience different for any kind of animal or human. 'What is nature to us may well be culture to another species' (Viveiros de Castro 2004: 471). Animals are subsequently detailed as having the same values, social structures, and items as humans – cultural from their own perspective. In a recent article, Erica Hill (2019) has suggested that perspectivism in the Arctic may be a useful concept for exploring notions of personhood, identity, and the use of material culture to transcend boundaries. In the following, I seek to further explore this notion in a Yup'ik context through a case study of seal-human encounters at Nunalleq.

Yup'ik lifeways are relational. Within a Yup'ik world, everything has *ella* – awareness (sentience). In this responsive world, personhood is not limited to humans, and *being* is not a state, but an active engagement with the world (Fienup-Riordan 1994; Fienup-Riordan and Rearden 2012). Working from this leading imperative to explore Yup'ik material culture, then, demands a re-conceptualization of some of the basic assumptions about social identities, bodies, and what it essentially means to be human in a Yup'ik world.

The accounts collected by Fienup-Riordan (1994; 2005; 2007; 2012), and earlier ethnographers such as Rasmussen or Nelson (1899) contain information on local concepts of animal personhood and animal society similarly structured to human society (e.g., Laugrand and Oosten 2015: 51-52). One example may be the account of the boy who went to live with seals in their underwater men's house, where he socialised with them, learned their social hierarchy, lifeways, their perspective on humans, and was eventually killed by a hunter because he appeared to him as a seal. The boy himself perceived the seals as humans living in an underwater equivalent of the men's house, the *qasgi* (Fienup-Riordan 1994: 2-3; Fienup-Riordan and Rearden 2012: 17). Similarly, seals also receive teachings from their elders (Fienup-Riordan 1994: 53) and organise the seating in their *qasgi* in similar ways as to a Yup'ik social hierarchy (1994: 62). In a historic account, a young man named Atertayagaq became lost at sea after drifting off on detaching sea ice. He recalls socialising with sea mammals and through living like them on the ice, he interacted regularly with them. One day, he encountered what he thought were human hunters, but after he blinked, he realised they were actually walruses (Fienup-Riordan and Rearden 2012: 23).

Conceptually, these and similar accounts can be described as being reliant on perspective and interaction – the former often allowing for a meaningful interaction between species who are usually unable to communicate directly.

As Fienup-Riordan (1994) and others (e.g., Alberti 2016a) have explored, humans living with many other-than-human persons who share a similar social system and mode of being are in need of boundaries and containment to uphold their human-ness in everyday life. This view raises questions of human-ness and practises associated with delineating one's (human) identity. Laugrand and Oosten (2015) agree that humans are not intrinsically human by pre-configuration but by 'being a moral person in terms of the ideas and values of [their] society' (2015: 345). Being human is an 'activity rather than a state' (Strathern, cited in Fienup-Riordan 1994: 49). Humans need to act as humans, because 'boundaries are dynamic and transitional' (Fienup-Riordan 1994: 49). Human-ness can be lost temporarily or permanently. This can either be directly related to not following elders' teachings (Fienup-Riordan 1994: 61), or through more extreme circumstances such as intense emotional trauma (Fienup-Riordan 1994: 57), isolation from other humans/ loss of human community (Fienup-Riordan and Rearden 2012: 23) and may be facilitated by taking on animal affects such as furs (Fienup-Riordan 1994: 57; 59). A mixture of these is often at the core of permanent transformations which occur in uncontrolled and dangerous circumstances.

Only particularly skilled or trained persons can safely engage in full perspectival transformations. These usually take place in controlled situations, such as seasonal festivities or gatherings (Fienup-Riordan 1994). Such persons are generally referred to as 'shamans', both in anthropological literature as well as by contemporary Yup'ik elders. However, for this paper, I prefer the term 'specialist' in order to avoid a particular narrative of shamanism that has influenced anthropological literature (cf. Solomon 2017). A specialist in this context is an individual who is particularly skilled and/or trained to communicate between different communities and persons, including animals and other-than-human persons. This may include transformative events, which occur under controlled circumstances and entail potential changes of appearance and, subsequently, perspective. This change in appearance, crucially, is linked to taking on 'effects' as mentioned above (cf. Hill 2019; Viveiros de Castro 2004). These affectual items help the wearer to appear in a specific way – they may be furs, beaks, wings, tusks or flippers (as described by Nelson 1899: 394). Animals can take these off to appear human, and humans can take these on to appear as animals.

Throughout everyday life, people would be aware of the transformative potentialities latent within them; concerned with *avoiding* transformative events; i.e. stabilising the perpetual potentialities of change and boundary crossings (Fienup-Riordan 1994). This, however, does not preclude the deliberate enhancement or engagement with the fluidity of appearance and being. As Hill (2019) discusses, hunters are fully aware of the potentialities of highlighting non-human parts of their appearance in order to avoid being detected as human hunters. This everyday negotiation with stability and change includes many animal-shaped and animal-derived artefacts.

The above discussion of appearance may appear as a paradox. On the one hand, transformational occurrences need to be avoided, but at the same time, humans may choose to alter their appearance in everyday situations. To clarify: human identity is in need of re-creation by appropriate interaction with other persons, as well as feeling, thinking and acting as human. Thus, it is not solely one's appearance that *delineates* one's identity, but, ultimately, *actions* (including thoughts and feelings) shape the way persons are recognized and interacted with (cf. Fienup-Riordan 2005: 155; Fienup-Riordan and Rearden 2012: 32). From a seal's perspective, a hunter who does not follow the elders' teachings in their actions may appear distorted and scary – no matter the hunting gear (Fienup-Riordan 1994: 62; Fienup-Riordan

et al. 2005: 155). A hunter, even if choosing to alter their shape to appear as a seabird rather than a human on a kayak, still *acts* human; in interaction with other humans, and in interaction with the animals preyed on.

Taking on affectual items – such as masks – to change one’s perspective may seem contradictory to the notion of appearance as enabling transformation. But in order to *act and socialise* like a different species – thus ‘transforming’ through social practice – one might need to shift perspective effectually to allow for successful *intraspecies* communication – becoming the same species to communicate. A situated, embodied perspective may thus re-form one’s identity – temporarily (as in the case of the boy who lived with seals for a year, or a specialist communicating directly with animals by taking on animal perspectives for a particular occasion) or permanently. Ultimately, one’s interactions in a responsive world will (re-)create identity. In fact, affectual perspective-changes should not be seen as an *initiation* of transformation, but rather a type of action that allows an ever-existing tendency for change and transformation to be channelled in *specific* and beneficial ways; usually by a specialist in a controlled context. Transformation or change thus does not need to be sought out and initiated. Instead, the *containment* and *stability* of fluid, relational identities and relationships is what requires the attention of specialists and careful, potentially prescribed everyday practises (Alberti and Marshall 2009; Fienup-Riordan 1994).

Within this relational framework, relationships do not cease to matter when a person – human or non-human – dies. For instance, animals are engaged in a cycle of life and death and are aware of their treatment between death and renewal (Fienup-Riordan and Rearden 2012: 111). The handling of their remains thus includes an animal awareness of how their bodies are butchered, cooked, shared and worked into clothing, gear, and other artefacts (Fienup-Riordan 1994: 51; Fienup-Riordan *et al.* 2005: 155). Fienup-Riordan (1994) describes obligations to greet the killed animals with seal oil (for land mammals) or freshwater (for sea mammals) – desired substances that the animals are craving, and that only humans can provide. Fulfilling such obligations are important acts of reciprocity, and it may be assumed that working with animal bodies would be similarly influenced by the awareness of following the animals’ wishes and needs.

Furthermore, if taking on affects allows for a certain perspective, the shaping of artefacts into animals may allow those artefacts to enter a specific social interaction and communal identity. Artefacts derived from animal bodies or shaped into animal forms are thus closely entangled in the everyday concerns of Yup’ik community members and their interaction amongst themselves and the animals they share the world with. Considering the artefacts as agents themselves may reveal social dimensions not grasped by sole typological or zoological assessment (cf. Boyd 2017).

Nunalleq

Situated along the Bering Sea coast of the Yukon-Kuskokwim (Y-K) Delta, the site of Nunalleq (Figure 1) was and remains related to a rich landscape inhabited by a variety of animals. The nearby mountains, rivers, the wetland tundra and the shallow coastal waters were home to migratory birds, small and large land and sea mammals, as well as salt- and freshwater fish (Fienup-Riordan 2007; Fienup-Riordan and Rearden 2012; Masson-Maclean *et al.* 2020).

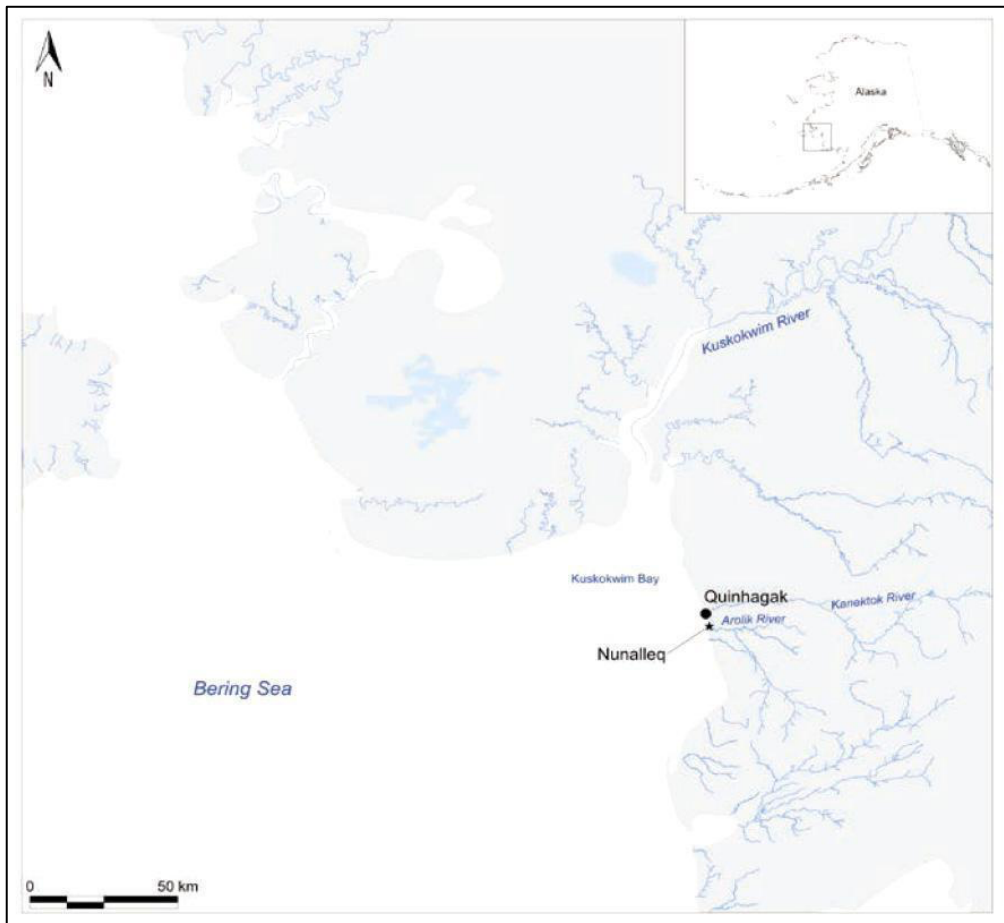


Figure 1. Location of the archaeological site of Nunalleq, and the contemporary village of Quinhagak, Southwest Alaska (after Hillerdal *et al.* 2019: 7, courtesy of Charlotta Hillerdal).

First contact with Europeans occurred in the late 18th century (Shaw 1998) and resulted as in many parts of Northern America in a rapid Native population decline due to introduced diseases such as smallpox (Fienup-Riordan 2007; Friesen and Mason 2016). Post-contact lifeways are documented through these lenses. It has often led scholars to claim that pre-contact lifeways have been largely lost (Masson-Maclean *et al.* 2020). However, Fienup-Riordan and Rearden (2012: 18) assert that

...though much changed, much also remained of [Yup'ik] pre-Christian views of the world, especially their belief in the essential personhood of animals and in the responsiveness of the natural world to human thought and deed.

Indeed, it is important to recognize that even disruptive change does not negate aspects of continuity, particularly in colonial contexts (cf. Frink 2016: 4; Stahl 1993: 246).

Archaeologically, the pre-contact life in the Y-K Delta has not yet been explored in depth (cf. Fienup-Riordan 2007; Mossolova *et al.* 2019), though excellent preservation of organic material in the wetland tundra may allow for detailed research (Friesen and Mason 2016; Hillerdal *et al.* 2019; Masson-Maclean *et al.* 2020). Logistical and transportation issues along with severe coastal and riverine erosion have often limited research in this particular area of the Arctic (Hillerdal *et al.* 2019; Masson-Maclean *et al.* 2020). In addition, many Yup'ik communities choose not to disturb archaeological sites out of respect for their ancestors. The Nunalleq (lit. 'Old Village') project began in 2009 as a rescue excavation, when

residents of the nearby village of Quinhagak (see Figure 1) became aware of an abundance of artefacts being washed into the Bering Sea due to coastal erosion (Fienup-Riordan 2015; Hillerdal *et al.* 2019). The excavation of the well-preserved sod-house complex is ongoing and has since become the largest and one of the most significant archaeological investigations in Southwest Alaska with a vast community-based framework (Hillerdal *et al.* 2019).

The settlement was occupied mainly between the 16th and late 17th century AD (Masson-Maclean *et al.* 2020). Thousands of well-preserved artefacts, mostly of organic materials like grass, wood, bone, and ivory, have been recovered and are currently undergoing extensive analysis. Aspects of ontology have been brought to the fore in recent scholarship, particularly by those working with the wealth of masks excavated (Mossova and Knecht 2019; Mossova *et al.* 2019). I will not repeat the points made in those publications, but instead focus on aspects of stability and transformation, building on the ethnographic frameworks I established above.

Animals at Nunalleq

Animals are abundantly present at Nunalleq in different embodied manifestations. A list of Western taxa or typological (utilitarian) reiterations can be found in several publications where they have been successfully used to describe, discuss and interpret the archaeological assemblage (see e.g., Mossova *et al.* 2019 for a comprehensive overview of animal presence at Nunalleq). For the purposes of this paper, however, I wish to think about different encounters with animals at the site. By discussing these encounters from the embodied perspective of the archaeologist, I attempt to convey emotional, olfactory, haptic, and poignantly un-classificatory engagement with the animals at the site, which will help in thinking through these past encounters (cf. Lucas 2011).

During each day of the excavation, one would come in contact with animal presences at the site. Animal bodies would be frequently encountered in several different ways, on a broad spectrum of presence and engagement. The discovery of almost entirely preserved bodies of dogs – both in burial and in the context of the collapse of the structure – sparked emotional and experience-based engagements. Leashes and collars would similarly connect to the excavators' own experience with handling and/or owning dogs.

Figurines and faces of animals, both rendered in ivory, antler, or wood, similarly allowed for encounters of specific kinds of animals that many excavators could (and wished to) identify. They made present the animal bodies clearly and ranged from masks and mask attachments to lures or pendants. Excavators would try to distinguish between polished wood, ivory, and antler, basing their observations on weight rather than initial looks – ivory appears darkened by the earth, and polished wood can deceptively look like antler or ivory before it is cleaned.

The remains of animal bodies were surfacing, no matter if worked or unworked – a distinction not always useful – in every context and with degrees of immediate identifiability for the excavators. This included baleen, ivory, teeth, antler, bones, fur, and skin (leather). Less immediately accessible or palpable were the traces of seal oil – which carried a particular odour when excavating house floors. The inclusion of fur in ceramic oil lamp temper furthermore serves as an example of sometimes overlooked animal bodies that one would encounter during a day on site.

Such animal encounters are frequent and daily for archaeologists at the Nunalleq site. This, in juxtaposition with the past occupation of the site, serves to illustrate the different bodily, emotional and sensorily engagements one could have with different kinds of animals, animal bodies, and degrees of presence. While the contemporary experience is not to be projected into the past, my aim here is to

shift the discussion of animal ‘things’ from typological realms into situated, embodied encounters while giving the reader an idea of the range of artefacts and remains present at the site.

Seals and Humans at Nunalleq

I now place my preceding points into a particular constellation of sociality, materiality and being. This may serve to challenge some previously held notions and offers a starting point for further inquiry. I have chosen the relationship between seals and humans at Nunalleq and will draw on a frequently found artefact associated with this relationship: seal-faced labrets (Figure 2).

Ethnographic accounts generally highlight the importance of seals in this part of the Arctic (Fienup-Riordan 1994; Frink 2016; Laugrand and Oosten 2015). Faunal analysis at Nunalleq has underlined their ‘economic as well as symbolic role pre-contact’ (cf. Mossolova *et al.* 2019). Indeed, they are bodily present in miniature versions of themselves as figurines and toggles, peeking out from labrets and other artefacts, as well as are present in their bones and through oil. They are the most common animal to be found in mask imagery, particularly attachments (Mossolova *et al.* 2019: 121).



Figure 2. Examples of wooden seal-faced labrets found at Nunalleq (image taken by Anna Mossolova and Rick Knecht of the Nunalleq project; collage by the author).

Thinking through the notion of actions (including thoughts) shaping appearance and identity, and directly (re-)creating relations, this locally important relationship between humans and seals directly informs conceptualizations of what it means to be human at Nunalleq. In fact, if examined under the aspect of perpetually engaging in creating a stable 'human' identity, one may argue that humans depend on other animal communities (cf. Harris 2014) to delineate themselves as human – acting human thus depends on interacting with others. I suggest that it is particularly important for the human community at Nunalleq to engage with seals in order to assert their own human-ness. If humans cannot act in human ways (i.e., interact with seals in particular), they will be unable to stay human. After all, being human is not a pre-given category. Artefacts are crucial to this interaction – created *from* seals, *for* seals and *with* seals. They may act as mediators themselves – a pendant shaped like a seal may very well inhabit a seal perspective and enable more stable interactions. Similarly, the frequent appearance of seal masks (Mossolova *et al.* 2019) seems to highlight the practice and need to communicate with seals more directly with the help of specialists.

However, it is important not to associate every artefact depicting a seal (face) as meant to facilitate transformation of the wearer. A labret with a seal face, for instance, does not allow for a transformation into a seal. The shape of the labret does not help the wearer to take on a seal appearance or act as a seal. As discussed previously, this would be a dangerous potentiality in everyday life, where active stabilisation may be prioritised. Instead, the labrets often include a seal *face* – distinctive in its expression of a seal above water with its nostrils closed. This seal's perspective is recognized as above water; directed at humans, whom they observe both above and below the surface in order to judge their actions (Fienup-Riordan 1994). Usually, their gaze is directed at humans through the water's surface – a sphere human gaze cannot penetrate – seals may look out of the water, but humans are unable to gaze down into the seals' *qasgi*. Allowing the labret not only to observe humans and for humans to gaze back, but to become part of a human's body may furthermore *stabilise* a person's appearance for the seals as they emerge from the water – *recognizing* their own kind and making the human hunter *more* stable through it. Being observed and recognized by seals may thus be an important part of being human.

Labrets at Nunalleq come in very different shapes, sizes, decorations and materials. Not all of these are so deeply intertwined with seal-human interaction – which, again, highlights the necessity to investigate their social role in more detail rather than stopping at classification. Labrets seem to engage with aspects of identity and personhood – for example, dolls and masks include depictions or inserts of labrets (Mossolova and Knecht 2019); underlining the labrets' social importance for embodied *personhood* (cf. Fowler 2004: 23).

In the case of the seal labrets, this communication between human and seal seems to allow for recognition, mediation and observation. The labrets are everyday parts of one's body and identity. It is not paradoxical that someone can have a part of seal-ness and seal-perspective in their body, as identities are full of potentialities (Fienup-Riordan 1994; Hill 2019). One always has a part of the seal in oneself, which is why transformation requires less effort than stabilisation. It is thus crucial to maintain human-ness through (inter)action, and perhaps even concentrate this seal-perspective into an active part of one's human life by allowing it to peak out in a stable manner. A complementary discussion may address the transformative potential of seal masks – not stabilising one's fluid seal-ness within one's stable human body, but rather channelling it for a perspectival change that allows for communication.

Discussion

Within a broader scholarship that recognizes the need to employ ontologically situated studies (e.g. Alberti and Fowles 2018; Cipolla *et al.* 2019), it is cautioned against finding another ‘general’ concept that can be applied to different times and places as a template (Alberti 2016a; Alberti and Marshall 2009; Conneller 2011). In the present study, a perspectival, relational ontology emerges through conceptual investigations of Yup’ik ethnography in relation to animal-human entanglements. It has not been sought to relate particularities back to the pre-contact assemblage, but rather to seek a local conceptualization to think through human-ness and seal-ness at Nunalleq.

As I seek to highlight, the de-centring of the ‘human’ – as a monolithic and pre-given, stable identity – aids in critically re-assessing the lived reality of being a person at Nunalleq. Animals – in their multitude of communities and social relation to humans – are not automatons (Armstrong Oma 2013). In a Yup’ik context, they may be persons, and interacting with their communities is crucial – because this relationality is part of the very foundation of being human.

Furthermore, I would like to offer two suggestions for further inquiry.

Firstly, I want to underline the possibility of engaging with relational data on a quantitative scale. Non-Western ontologies may stand accused of being areas of inquiry that cannot – and perhaps should not – be grasped by more traditional archaeological methodologies. However, for example the potential of social network theories in relational contexts has been put forward in recent years (Knappett 2020; Mills 2017). While I agree with Ingold (2013) and Hodder (2012) that network studies are not representative of lived reality, they do offer a heuristic means to investigate large sets of *relational* data. Working with large assemblages, this would be an important tool to think with; spanning potentially thousands of artefacts and providing an exploratory tool to finding patterns that may prove useful in interpreting the assemblages in a more appropriate relational framework. I have undertaken such a study of the Nunalleq material, and tentative results offered interesting lines of inquiry and further study (Althoff 2020).

Secondly, I emphasise the need for current and future research to challenge traditional archaeological narratives of animal-human relations in the Arctic. Some possible areas of inquiry have been suggested in this paper, and I wish to include another aspect that has not been mentioned thus far. Common narratives are focused on resources, cost-benefit calculations and thus posit the (male) hunter at the core interface of animals and humans. If we take a relational stance, it should be clear that even gendered roles need stabilisation (Fienup-Riordan 1994; 2007). Furthermore, not only men but women, children and other members of society are equally involved in the navigation of animal-human relations. As for many Native American societies, gender roles are not mutually exclusive, but complementary (cf. Tsosie 2012). It would thus be useful to revisit the notion of Yup’ik community on notions of gender, social roles and labour division when thinking about animal-human relations and the encounters between different members of society with the animals (Harris 2014). For example, animal-human relations are negotiated by women through the welcoming of animals into the settlement through offering water or seal oil, through butchering, cooking and sharing meat and oil; through everyday awareness of seals and their wishes (Fienup-Riordan 1994); through the creation of pottery tempered with fur, as well as through preparing hides and intestines, and sewing – an engagement both with animal bodies and the creation of a ‘second skin’ that may even carry affectual qualities (Hill 2019). The question of gender, community and animal-human relations is thus tightly entwined with considerations of relationality and embodiment.

Conclusion

Animals are deeply enmeshed in the fabric of everyday life through their bodily presence, their social requirements and the animal aspects contained within every person – human or not. With personhood and appearance being dependent on practice, perspective and interaction, a systematic approach to such relational concerns is necessary and provides another foundational starting point for locally relevant archaeological theory-making.

The relational approach chosen here with its conceptual source in Yup'ik ontology challenges rigid typological assumptions. It contributes to understandings of the *kind* of relationship that played out between humans, different animal communities, and the artefacts entangled in these every day practises and concerns. The necessity to act as a human in order to maintain being human is crucially important within relational ontologies, and seems to be, at Nunalleq, particularly concerned with the interaction between humans and seals. There is no inherent human-ness – if placed in a void, one may be a person, but not human. Acting human and thus *being* human *always* depends on interaction. I have argued that shifting our attention to stability and containment in a fluid, responsive world may aid in contextualising animal-related material culture more appropriately.

The animal-human relations at Nunalleq both defy and vitalize the very term – they are human-knot-animal relations; they are inextricably connected. In order to *be* human, one must *act* human – which is always a practice in co-practice with the animals dwelling in the spheres humans navigate on a daily basis. For inhabitants at Nunalleq, seals appear to be particularly important in this negotiation of human-ness. It is the enacted *relation* that creates identity. The archaeology of Nunalleq shows a powerful participation in this endeavour to navigate boundaries, communicate and strengthen social bonds through animal bodies and animal artefacts. Through careful attention to underlying ontological frameworks in ethnographic writing, archaeologists may refine their understanding of past realities.

As Charlotta Hillerdal, leading archaeologist at Nunalleq, puts it, 'Both "scientific" and "Yup'ik" narratives are strong enough to carry contradictions, and dynamic enough to take colour from each other.' (Hillerdal 2017: 75). These tensions, contradictions and dynamics will doubtlessly lead to more detailed and sophisticated insights at Nunalleq and the wider Arctic archaeological area – contributing to a post-colonial archaeology that critically reflects on the ontological *situatedness* of animals and humans alike.

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Session 5

Echoes from Beyond: Diversity in the Archaeology of Death

Elifgöl Doğan¹

Introduction

The fifth session of the conference, chaired by Alberto Abello Moreno-Cid and José Santiago Rodríguez Gutiérrez, undoubtedly tackled one of the most challenging –if not most intriguing– themes of the conference: Death. Although many view death as an end, or as the philosopher Geoffrey Scarre puts it, as ‘...the end of the script with no hope of a sequel..’ (2007: 2), death hardly ever means ‘the end’ in archaeology. In contrast, it perhaps is the place where archaeology starts.

The subject of death has occupied the minds of many archaeologists since the advent of the discipline. In pursuit of unravelling fascinating mysteries in distant parts of the world –more often than not in colonised places–, early archaeologists eagerly sought out the ancient dead. The excavation of numerous burial contexts and collecting of archaeological human remains in the 19th century, filled European museums with a myriad of human remains collections available to the public gaze and scientific scrutiny (Walker 2008; Aldrich 2009; Biers 2019; Curtis 2003; Fforde 2013; Jenkins 2011; Stumpe 2005). Indigenous human remains that were plundered from colonised countries in Africa, Australia, the Americas, and the Levant, were utilised in anthropological studies on ‘race’ and justified colonial narratives about the presumed superiority of Western civilisation over the colonised ‘primitives’ (Aldrich 2009; McLean 2012; Siapkas 2016). This preoccupation with race theories, however, started to gradually fade away in favour of a more scientific and contextual search into understanding the lives and death of ancient people in the 20th century. Following the discovery of sensational burials such as the tomb of Tutankhamun and the royal tomb of Ur, which were adorned with ostensible funerary finds, archaeological investigations into ancient dead not only received widespread media and public interest (Day 2006; Stutz and Tarlow 2013), but also opened a door for archaeologists into ‘a complicated world frozen in time’, waiting to be meticulously decoded. These unexpectedly well-preserved and intentionally curated burial settings made archaeologists realise the significance of the context in which the dead were found, paving the way for the emergence of *Funerary/Mortuary Archaeology*, or *the Archaeology of Death*.

The Archaeology of Death investigates contextual details surrounding human burials, and based on a multidisciplinary analysis of these, makes inferences about not only the dead, but also the living. Since the dead simply ‘do not bury themselves but are treated and disposed of by the living’ (Pearson 1999:3), it is only expected for burials to provide archaeologists with a myriad of information about the lives of past societies. The analyses of burials sheds light on not only the cultural views of the living about an afterlife or their overarching belief systems, but also their cultural practices, social structure, identity perception, health, diet, and population genetics (Larsen 2002; Robb 2013; Pearson 1999; Sofaer 2006; Stutz and Tarlow 2013). Moreover, through bioarchaeological studies, even individual biographies of the dead (e.g., age, sex, height, pathology etc.) can be created (Larsen 2002, Martin, Harrod and Pérez 2013). Furthermore, by revealing the minute details in a burial context, archaeologists can reconstruct entire life histories of the dead and the diverse social processes that shaped them (Larsen 2015; Martin, Harrod and Pérez 2013; Robb 2013). These life histories not only help archaeologists to pinpoint specific

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physical, biological and cultural patterns demonstrated in skeletal assemblages, but also to untangle how the concepts of death and dying manifested itself in funerary contexts of ancient cultures.

Papers in This Session

The motivation behind proposing this session was to shed light on the differences we observe in the ways ancient people expressed themselves in funerary contexts. By inviting researchers working on interesting case studies around the world, we hoped to prompt a discussion about the extent to which the manifestations of death diverged in different archaeological contexts, and what this meant for our current archaeological understanding of death. This session hosted twelve papers, four of which are published in this volume, and involved conversations on key fieldwork methodologies and theories incorporated within *Archaeology of Death*, ethical issues such as handling of human remains, as well as the challenges surrounding the interpretation of funerary contexts. The speakers of this session came from ten countries and presented us with interesting case studies from the Czech Republic, China, Denmark, Egypt, Germany, Greece, India, Italy, Portugal, Spain, Syria, Sweden, the United Kingdom, and the United States.

In ‘Property or Peers? Exploring Diversity in Human-Animal Burials’, Nora Nic Aoidh (University College Dublin) critiqued the androcentric and anthropocentric ways in which archaeologists perceive and understand archaeological concepts of death and burial, within the context of human-animal burials. Nic Aoidh’s paper opposed the idea that humanity’s relationship with animals has always been driven solely by exploitative, capitalistic objectives by examining human-animal burials across the world over a diverse range of time periods.

In ‘Reframing Egyptian Mummy Portraits: (De)Constructing Identity in Freedmen Funerary Portraiture’, Avery Warkentin (University of Oxford), examined mummy portraits from Egypt –dated between the early first and mid-third centuries CE–, as an extension of freedman art which sought to communicate social and cultural capital after death. As an alternative to the existing scholarship on mummy portraits which typically focus on art-historical questions, this paper aimed to socially situate these objects, and highlight the ways in which they helped people to assert their status and identity.

In ‘The Bog: A Living Body, Place, and Narrative Actant Within the Liminal Phase’, Marianne Gabrielsson (the University of Gothenburg), interrogated the common acceptance of bogs as simple burial landscapes. By using the Gundestrup cauldron and the Eutin figures as case studies, Gabrielsson highlighted the significance of bog burials in ancient societies, particularly in Northwestern Europe, and proposed an alternative interpretation of bogs as living bodies and narrative actants within the liminal phase of burial contexts.

Finally, in ‘Roadway to Hell: Roman Influences on Late-Iberian Funerary Practices’, José Luis Martínez-Boix (Universitat d’Alacant), focused on the funerary landscapes of Contestania, the Iberian region of southeast Hispania. Offering a series of reflections on the Late Iberian funerary remains, Martínez-Boix explored the relationship between the definitive Romanisation of Contestania (south-eastern Spain) and the resulting material diversity observed within the funerary assemblage.

Acknowledgements

On behalf of the CASA 4 Organising Committee, I thank the session organisers, Alberto Abello Moreno-Cid and José Santiago Rodríguez for proposing such a fascinating theme, and for chairing this session in which our audience had a chance to explore manifold puzzling aspects of death in ancient times and across geographies. I also thank the authors whose works are published within this volume for their

tremendous dedication and patience in the lengthy editing process. Lastly, a special thanks goes to all the speakers who presented at the CASA 4 Conference, but are not published in this volume:

- Ahana Ghosh & Chandrima Shaha, University of Calcutta
The Dead and Their Grave Goods: A Study of Deccan Chalcolithic
- Biyang Wang, University of Oxford
The Buddhism Influence on Tombs in the Tang Dynasty Centered in Guanzhong Region
- Casey Barrett-Gibson, University of Leicester
Planting Gold - The Significance of Jewellery in Bronze Age Burials and How Modern Connotations Impact Our Understanding of Who Owned and Wore It
- Dana Allan, University of Southampton
Dead and Varied: Variation in Funerary Practices Resulting from the Social Status of Pathology in the Gravettian of Moravia
- Eleni Gourgouleti, National and Kapodistrian University of Athens
Early Mycenaen Cemeteries as Fields of Transformation
- Elisa Pizzuti, Sapienza - Università di Roma
Re-Searching Urnfields from Southern Italy: Using Legacy Data for New Sight on Final Bronze Age
- Frank Fan, Fudan University
The Tomb of ShuiQiu's: Another Narrative of the Rise of WuYue State
- Victor Costa, University of Coimbra
The Luxurious Cemetery of Conchada: A Study of the Economic-Social Relations that Pushed the City of Coimbra into Contemporaneity

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Property or Peers? Exploring Diversity in Human-Animal Burials

Nóra Nic Aoidh¹

Abstract

In the context of animal burials and human-animal burials, it has been standard practice to obsessively fixate upon the human actor as the main subject of the burial, often viewing the animal as another accessory or grave good. This paper seeks to oppose the idea that humanity's relationship with animals has always been driven solely by exploitative, capitalistic objectives by examining human-animal burials case studies from across the world over a diverse range of time periods. It is crucial to challenge the utilitarian lens through which archaeology often views animals and, this paper illustrates that throughout our shared history, humans have viewed animals not simply as accessories to our own lives but as individuals with their own social identities. Through examples and case studies, this paper demonstrates that humanity's relationships with animals throughout prehistory are as nuanced and complex as they are diverse.

Keywords: prehistory, human-animal relationships, burial, identity

Introduction

The story goes that while French naturalist Pierre Sonnerat was exploring Madagascar, he pointed to a lemur and asked: 'What is that?' His local guide replied '*Indril*' meaning 'There he goes!'. As Sonnerat did not speak Malagasy, he incorrectly assumed this was the animal's name, and documented it as such. While likely unfounded in truth, this anecdote of mistranslation demonstrates how the untrained ear can perceive successful interpretation and understanding when it has not been achieved. Similarly, the way we perceive and understand archaeological concepts of death and burial are largely moulded by our classically androcentric and anthropocentric predecessors. The case studies presented in the paper challenge the narrative that animals have always been viewed universally as commodities, totally separate and inferior to humans. The examples are arranged here into three main categories: religious contexts, war and battle, and domestic contexts. In each of these categories, the examples are discussed in a manner which centres the non-human animal (henceforth, 'animal') and its relationship with the human actor. The case studies discussed here demonstrate not only that humans viewed animals as more than their commodified or commercial value, but that the ways in which humans valued and interacted with animals was hugely diverse and unique. In order to broaden the study of human-animal relationships, examples are taken from various continents and range temporally from the Mesolithic period up to the Iron Age. They demonstrate that for us, like Sonnerat in the anecdote, it is critical that we reassess our anachronistic biases and preconceptions, that we 'retrain our ears' so to speak – so that we can truly listen to what is being said in these echoes from beyond.

Animals at the Altar

For as long as humans have conceptualised religious beliefs and practises, animals and the extended natural world have featured as key elements. They are often assigned a spiritual role or are thought to have a unique connection to the spiritual world. Some of the most common expressions of animals' importance in religious activities include totemism, animal worship, and animal sacrifice. The latter two are more easily recognisable in burial contexts (due to their young age and their grave goods which were uniquely unfit for purpose) and, as such, constitute the two examples discussed in this section.

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Living as Gods

Much of the archaeological record concerning animals in religious practises pertains to animal sacrifice, the animal being used as a tool for the human subjects to perform a particular spiritual ritual or practice. While the 'sacrifice' in 'animal sacrifice' implies that the animal had some level of value to the human, the animal in this case is ultimately an unwilling accessory to human motives. However, there are some instances in antiquity wherein the animal itself was worshipped as a deity. As early as the 1st Dynasty (3100-2900 BC) in Egypt, bull cults such as that of the Apis of Memphis came into existence (Dodson 2005). The Apis bull was said to be a living incarnation of the god Ptah, the creator of all things including other creator gods. Ptah ultimately developed into the god of craftspeople and architects, though he maintained his status as one of the key figures in the Egyptian pantheon (Kozma 2006). The Apis bull cult persisted for centuries: murals uncovered in tomb D, which was built during the 18th Dynasty (1550-1290 BC), depict an Apis facing a pile of food offerings, with deity figures in front and behind. The animal itself is painted black and white, with a red rectangle on its flank, and it has been suggested that the grey colouring of its horns may indicate silver sheathes (Dodson 2005). The colour pattern described here was a key component of the bull's identity, as the Apis was locked in a reincarnation cycle. This is linked back with Ptah who was classically associated with regeneration (Kozma 2006). When one incarnation died, the next was identified by its markings and colouring. If the current Apis had not died of natural causes, it was "ceremonially killed" (Hess *et al.* 2008: 125), and the search for the new incarnation could begin.

After the 18th Dynasty, dead Apis are described as having been 'buried in splendour' (Dodson 2005: 73), but there is little evidence before this date to indicate that this was a long-standing tradition. Dodson (2005) proposes that fragmentary cremated cattle bones found in pots from earlier Apis tombs could have been the result of ritual posthumous feasting of the deceased. The author points to a passage in the Pyramid Texts, written during the 5th and 6th Dynasties, called the 'Cannibal Hymn' wherein the king devours the gods (manifesting as sacrificial bulls) to take on their strength, which 'demonstrates his power over the other gods' (Eyre 2013:86). While this theory could account for the lack of Apis burials before the 18th Dynasty, it could also be applied to animal burials in a global context: animals whose remains were previously interpreted as evidence of butchery and sacrifice may have actually been worshipped as gods during their lifetime, with humans feasting on their bodies as an extension of that worship.

Dying for Gods

While the animals discussed above maintained a sacred role in expressions of worship, a significant proportion of animals whose burials are associated with worship rituals were indeed sacrificed. Animal sacrifice was quite common in the ancient world, and certain examples can offer insights into the shifting cultural perspectives of the ancient world. In Tel Haror, Israel, a ritually interred donkey was found in a pit associated with a Syrian type temple. This donkey was dated to the Middle Bronze Age III (1700-1550 BC), a time wherein most donkey burials in Eurasia and North Africa consisted of sacrifices. Donkey sacrifices were used in a variety of rituals such as the construction of temples and elite funerary rites and were sometimes feasted upon post-sacrifice (Bar-Oz *et al.* 2013). However, while many of these donkey sacrifice burials were fragmentary, the animal at Tel Haror was completely intact. In addition to this, the donkey possessed unique grave goods: it had a metal horse bit placed in or near the mouth and saddlebag fastenings on its back (Bar-Oz *et al.* 2013). The bit possessed gaps in both the collars of the cheek pieces, likely from extensive wear, meaning the bit was not specially constructed for this burial. Where one cheek piece was missing, the collar was intentionally broken and reshaped to resemble a complete bit. In addition to this, one of the rope loops was at a 90-degree plane relative to

the other, rendering the bit ineffective. Analyses on the lower premolars of the donkey showed no signs of wear and suggested that the animal was likely too young to have been trained as a draught animal. This suggests that the bit did not have a direct association with this particular donkey and was likely a symbolic feature (Bar-Oz *et al.* 2013). Aside from the worn, broken, and reshaped bit, there were no other bridle fittings found with the animal which reinforces the idea that the bit was symbolic rather than practical. The thickness and material of the saddlebag fasteners were also analysed. It was concluded that the saddlebags were not made of fibrous materials like linen or wool (which could have been sewed) but of leather. The small size and volume of the fasteners suggested that the saddlebags themselves were quite small: the estimation given by Bar-Oz (2013) is 35x20 cm. Unlike the metal bit, these saddlebags may have been too small for practical use. This could suggest that while the bit was not specially made for this sacrifice in its original form, the saddlebags were, though their shared impracticality implies that they were both symbolic grave goods.

Cuneiform accounts from this time period show that donkeys were usually ridden and driven with a nose ring, a nose band, or a neck rope (Greenfield *et al.* 2018). Though they were indeed ridden, it was uncommon for them to be bridled like horses. Even in instances such as the Early Bronze Age IIIB (2800–2600 BC) donkey burial at Tell eṣ-Şâfi/Gath, wherein the teeth showed evidence of wear from a bit, it is typically concluded that the bit was made of organic material (e.g., Wood, rope, bone, etc.) and not metal (Greenfield *et al.* 2018). Bar-Oz *et al.* (2013) suggest that the horse bit was likely inserted *ad hoc* either before or after the ritual slaughter of the donkey. Iconography from Syria and Anatolia at this time depicts equids involved in ritual spaces and ceremonies, including being reared within temple domains and pulling the carts of certain deities in processions (Bar-Oz *et al.* 2013). Furthermore, progressing into the Late Bronze Age, the preferred equid of choice for elite rituals and ceremony shifted from donkeys to horses (Greenfield, *et al.* 2018), which makes the blending of associated grave goods in the donkey burial at Tel Haror particularly interesting. It is possible, therefore, that the donkey burial at Tel Haror represents the beginnings of a shift in cultural human-animal relations. By blending aspects of distinct equipment associated with horses and donkeys, this sacrificed animal could embody the roles of both animals, or perhaps some other kind of equid such as an onager or a mule.

Animals at War

War: what is it good for? In some sense, war is a human exercise in rejecting humanity. As paradoxical as it may seem, the strategically organised slaughter of one's own species is a behaviour found mostly in humans – though there is evidence for chimpanzees participating in war-like behaviour (Morris 2014). Therefore, it is particularly interesting when non-hominin animals are honoured with warriors' burials and social status akin to that of a human soldier. In a way, these animals are humanised in the recognition of their contributions to war and battle. This section discusses two examples of animals most often associated with war in the ancient world: horses.

War Horses

In Pazyryk, Siberia, an interment in a large burial mound was shared by a single human male and ten horses. The remains were all dated to the mid Iron Age, c.300 BC (Hill 2013). Each horse possessed a variety of personal items, including saddles, pendants, and tassels. The grave goods associated with the horses were also unique to each animal. The grave goods seemed to reflect individual characteristics such as age, abilities, and personal accomplishments, with the oldest of the ten possessing the greatest elaboration (Hill 2013). The individuality of the possessions buried with the horses suggests that each horse had established a personal history and identity during its lifetime. While classic interpretations of this type of human-animal shared grave would view the horses as belonging to the human, this

example could be interpreted quite differently: rather than presuming this case to be a human grave featuring horses, this example could be of a horse-human shared grave, with the horses possessing equal or similar ownership of the grave to that of the human. These animals could have had identities and qualities independent of this man. While their shared grave clearly demonstrates that part of the horses' own ontology is formed by their relationship with this man, their unique ornamentation and richly decorated grave suggest that the horses' individual identities were not purely relational. Equally, it is important to note that a significant part of the man's identity must have been relational to these specific horses. This example shows that outside of the spheres of domestic life, animals could be viewed as more than tools for hunting and companionship: as important members of society.

The Proverbial High Horse

Horse burials in particular were quite common in societies wherein horses were multifunctional, as a means of transport, food, companionship, and symbols of social status. However, like humans, the degree to which their graves are furnished varies drastically case by case. An Iron Age cemetery in Sedgeford, Norfolk, UK contained a variety of inhumations and cremated remains, both horse and human (Cross 2011). Many of the graves contained full or articulated humans alongside partial horse remains, suggesting that horse sacrifice was common practice. Written accounts from this period in England confirm that the elite warrior class were often buried alongside their horses, and partial horse remains in a grave were a symbol of elevated social status. However, one grave stands out: a single 8-year-old male horse was buried under what may have been a mound. The horse was near-complete with no obvious pathology other than a fracture of the nasal bones, which Cross (2011) suggests came from a strike from a sharp, heavy object (possibly an axe). This horse was unique not only in its apparent solitude and mortuary mound, but also in its positioning: while many of the shared human-horse graves in this cemetery positioned the human resting on an 'upright' recumbent horse, this animal was placed in the foetal position, with its head resting on its shoulder. An accurate C14 date could not be reached due to the decay of the bones, but the fill in which the animal was found contained pottery from the Late Iron Age and the Saxon period. Cross (2011: 205) states that the grave of this complete horse suggests sacrifice: 'probably aimed at ensuring fertility or possibly battle success, and honouring the gods, spirits, ancestors, or combinations of all or any of these motivations'. While this interpretation is certainly plausible, it is argued here that another key possibility has been excluded: that the loss of this horse, whether through sacrifice or battle injury, made enough of an impact on the community that they constructed a mound over his grave. This individual was clearly given special treatment, as it was buried alone, positioned uniquely in the grave, and was given a burial mound – an honour which was apparently not afforded to any of the humans in this cemetery.

Animals at Home

The domestic sphere and the concept of 'home' is often considered a universally central aspect of human life. In order to explore this concept sufficiently, the following section is the largest of the three. It explores animals which were very directly associated with home life, as well as those whose domestic roles were more ambiguous.

Dogs: Man's, Woman's, and Child's Best Friend

Man's Best Friend

Dogs are some of the earliest domesticated animals in human history, and one of the most commonly represented species in human-animal burials. Our relationship with them seems to be almost universal, with dogs having been domesticated repeatedly and independently across continents throughout

prehistory (Willis 2011: 91). The ritualistic nature of their burials indicates that their identities in life spanned far beyond the imagined confines of utility. Two Mesolithic burial sites in particular demonstrated this: Skateholm I and II in Sweden contained several richly decorated human-animal burials. One dog in particular was buried with flint blades and red deer antlers. These objects would typically be associated with the burial of a human male at this time. This indicates that the dog likely maintained a unique social identity during its life and that this identity was, on some level, comparable to that of a human male (Fahlander 2010). While this example shows the veneration and appreciation shown to some dogs, others met a less favourable end. Fahlander (2010) notes that there is considerable diversity in the circumstances of death and the post-mortem treatment of dogs, stating that some were killed violently while others seemed to die of natural causes. Equally, some were buried with a considerable amount of grave goods, and some were buried with none. Fahlander (2010) states that these examples could mean that dogs were even more similar to humans in that they possessed diverse social roles, identities, and relationships in society.

Woman's Best Friend

In some parts of the world, dogs held roles of protection and healing, specifically for women. On the Areopagus rock outcropping near Athens, Greece, the cremated remains of a middle-aged Mycenaean woman were accompanied by an adult dog laid over her head. The dog's bones were not burned, and therefore were likely not included in her funeral pyre (Day 1984). Though there is no contemporary written evidence regarding the roles of dogs in Mycenaean Greece, their cultural significance is well accounted for in later antiquity. In classical Greece, dogs were seen as significant animals to the gods: they were particularly sacred to Hecate, the goddess of magic and spells, and puppies were often sacrificed in her honour. All across the mainland, dogs were believed to have healing and purifying qualities; they were believed to have the ability to purify wounds inflicted during hunting or by weapons of war and were sacrificed to purify warriors who had died in battle. It was thought they could cure blindness by licking the eyes of the impaired and cure the sick by absorbing the illness of the afflicted (Scholz 1937: 13). It is no wonder, then, that they were also associated with women specifically, whose pain and 'affliction' is often necessary for the creation of new life. Indeed, in the cult of *Eilithya*, the goddess of childbirth, cockerels and dogs were sacrificed to her in order to ease a woman's labour pains (Day 1984: 88).

Dogs in this part of the world are also depicted on geometric vase artwork as hunters but also as protectors and guardians. Scholz (1937: 37) suggests that in the event that a dog was not or could not be buried with its master/mistress, a figurative or symbolic representation would suffice. This supports the idea that the position of the dog above the head of the woman meant that the animal held the role of guardian or protector. However, as it was not burned as part of the woman's funeral pyre, it is also possible that the dog was sacrificed after her death. Day (1984) posits that this may have been done to purify the woman in death, or to protect those who survived her. In much of the ancient Greek world, the dog's role of protection and purification was maintained in death as in life – a unique case of an animal's relationship with a human continuing in the afterlife.

Child's Best Friend

The association of dogs being buried with or near children is surprisingly common in the Bronze Age. A ring ditch in Fengate, England which contained two child burials also possessed a recut in which a single articulated dog skeleton was found just a few meters away (Harding and Healey 2013). Halfway across the world in Thailand, also dating from the Bronze Age, the rich burials at Nok Nok Tha consisted of a number of child and infant graves. In one of these, the jaw and rear limbs of a pig were placed on

the child's chest, perhaps as a food offering for the dead, while an adult dog was placed at the child's feet (Steadman 2016). It is possible that the dog was placed here to protect the child in their journey in the afterlife, though the potential of companionship should also be considered. The distinction between the way in which the dog and pig were treated in terms of articulation and position suggest that the role of the dog, while still in servitude to the human, was valued more closely to human life than the pig. In Europe, in later antiquity, dogs are similarly seen as protectors and helpers of children. Near the Athenian Agora, Greece, an affectionately termed 'bone-well' (Dimakis 2020: 104) contained the remains of an adult male, a child of about 11 years, and approximately 450 fetuses, new-borns, and infants. It also possessed the remains of over 130 dogs. The well was dated to approximately 150 BC. Roughly 55km north in the town of Eretria, another well contained the remains of at least 19 infants and over 1100 dogs, dated to the 3rd century BC (Dimakis 2020). 240km to the southeast, a well in Messene contained a number of broken amphorae, infant remains, and dog bones (Burbou and Themelis, 2010: 116). As discussed in the preceding section, dogs in Hellenistic Greece held the role of healer and protector, but also one of purifying the dead. It is likely, then, that many of these animals were sacrificed to purify the dead infants or to protect and accompany them to the afterlife.

Life on the Edge: Liminal Beings in Domestic Spaces

Curiosity for the Killed Cat

Like the homes of many animal-lovers, the habitation sites of certain Native American tribes often contained pet burials. The Hopewellian groups that lived during the Middle Woodland period (100 BC - 500 AD) are a prime example of this phenomenon. Hopewellian domesticated dogs were regularly buried close to home, while most humans were cremated. However, humans of high social status were often buried near one another in large funerary mounds (Perri 2015). In the town of Elizabeth in north-western Illinois, one mound in particular contained an unusual occupant: a young bobcat kitten. Hopewellian human-animal shared burials were quite rare in mounds from the Middle Woodland period. Of the few human-animal shared graves which exist, many of the animal remains which were found accompanying human graves were fragmentary or incomplete, often suggesting some form of butchery and possibly sacrifice.

However, the grave bobcat kitten from mound 7 is described as having 'paralleled the mortuary treatment of humans' (Perri 2015: 4). Not only was the animal buried alone, but it was completely intact and in possession of grave goods. It was estimated to be four to seven months old at its time of death and showed no signs of slaughter or butchery. Perri (2015) suggests that the animal was separated from its mother as early as one month after its birth, speculating that the mother was killed either by humans or natural causes, and points to the lack of visible perimortem trauma when suggesting probable causes of death; illness, exposure, malnutrition and starvation, poisoning, or drowning. The grave goods associated with the bobcat were among the most common in Illinois Hopewellian human burials; four shell beads and two effigy carnivore canine 'teeth' pendants carved from mammal bone. These were found near the chest, suggesting they formed a necklace which was placed over the deceased. Interestingly, mortuary adornments made from mandibles of predators were often from bears and coyotes: wild predators which had no domestic relationship with Hopewellian groups. These adornments were never made from the remains of domesticated dogs, however, nor were they made from bobcat mandibles (Perri 2015). This, along with Hopewellian ceramics depicting human-bobcat scenes, suggests that bobcats in general had an established role in the human domestic sphere and were possibly even welcomed (Perri 2015). However, this overview of the possible relationship between the Hopewellian Middle Woodland people and bobcats does not account for this specific burial. Perri (2015) proposes that the young age of the bobcat implies that its mother was killed, and the kitten was left

orphaned. While this theory is certainly possible, it is argued here that the kitten was likely separated from its mother while they were both alive. Modern bobcat mothers in North America have been known to move their dens every one to six days for the first two months after they give birth (Hansen 2007). It is important to note that bobcats are born in litters, not as single kittens. The fact that this Hopewellian mound contained only one bobcat kitten could mean that it was separated from its mother and siblings while they were still alive, possibly during one of the many den-moving phases. What caused this separation can only be speculated; perhaps it wandered too far from the new den or was abandoned as the runt of the litter.

Regardless of how it came to be alone, the solitude of this bobcat in the mound suggests that it formed a relationship with the humans who buried it on its own, without the company of its siblings. In addition to this, bobcat kittens remain dependent on their mother until their 'dispersal' or coming of age (Hansen 2007: 55). A bobcat's litter can disperse as early as nine months or as late as two years after birth: the fact that this animal was separated after one month but was able to survive for at least another three implies someone else was providing shelter, nourishment, etc. It was obviously cared for, and potential human-bobcat relations (as illustrated in ceramics) imply that it was likely given special treatment. This would explain why the bobcat kitten was buried in a Hopewellian burial mound as opposed to having been inhumed in a habitation space (like dogs) or cremated (like most human members of these groups) (Perri 2015). Regardless of the circumstances which lead to the kitten being separated from its mother, the kitten's burial in the mound coupled with its human-like grave goods indicate that this specific animal was seen as existing beyond the confines of typical pre-existing Hopewellian human-bobcat relationships. It is argued here that while the human-like grave goods show the kitten was elevated to the status of human or human-equivalent, its burial in the mound demonstrates an even higher elevation in its social standing, at least in death.

Dingoes vs. 'Doggos'

As we have seen, burying animals as pets or companions is not uncommon in the ancient world. While commemorative and sentimental, these are often distinguished in some way from human burials. In some cases, however, the human performance of post-mortem rituals for non-human animals is almost indistinguishable from human burials. These human-esque animal burials act to distinguish 'humanity' from 'personhood'; the former being a description of one's species and the latter referring to one's position as an individual in society. This conceptual distinction is exemplified well by the remains of a mature dingo located on a rock ledge central to the Arnhem Land plateau in northern Australia. This animal was wrapped in paperbark and the body was enclosed in the rock ledge with stones, a treatment known as a 'bundle burial' (Gunn *et al.* 2010). It is dated as having died and been buried between 1680 and 1930 AD. This type of burial remains standard practice for the human deceased in aboriginal communities in Arnhem, and while the ochre-treated bones of fragmented animal remains are common in ceremonial arrangements, a whole animal burial such as this is 'most unusual' (Gunn *et al.* 2010: 11), particularly because the remains which appear in ceremonial arrangement are typically interpreted as being sacrificial. It is important to note at this point that dingoes are not simply feral dogs, nor are they viewed as dog-equivalent in Arnhem aboriginal culture. They did, however, pave the way for domestic dogs in terms of social roles and responsibilities: while domestic dogs were not introduced to the continent until the start of the colonial period in 1788, the oldest dingo remains in Australia date to 3905–3446 years BP (Shipman 2021).

The role of dingo in central Arnhem was that of a protector and guard dog and a companion of women and children, particularly elderly women. This was likely due to their dog-like characteristics; namely, their loyalty, sociability, and intrinsic instincts of protecting the group. However, dingoes differed from

dogs culturally, in that they were seen as being much more in tune with the spiritual world. Dogs had been introduced into the country fully domesticated and so were automatically integrated into the human world (Ginsberg and MacDonald 1990: 53). Dingoes, however, were liminal beings: not fully wild, but not fully domesticated. Ethnographic accounts tell of dingoes being adopted as pups and socialised with humans and dogs, only to be set free in their adolescence in order to join the natural and spiritual world. This liminal aspect of their being allowed them to help protect their human home against malevolent spirits just as much as human intruders. Despite their seemingly functional role in domestic spaces, dingoes were not seen as the personal property of the humans by whom they were reared. Ethnographic accounts demonstrate that they were not only trusted and respected as pets or working animals, but “*almost as members of the family*” (Gunn *et al.* 2010: 13).

However, the other side of their dual nature can be seen as more sinister. Adult dingoes are thought to be dangerous and cheeky, hence their release from the domestic sphere in their adolescence. These cultural understandings and social relationships are broadly accepted in central Arnhem, but there are some rare cases wherein single dingoes were reared and kept into old age. These were typically individual pets or hunting companions. While humans and dogs were placed in bundle burials on rock ledges, most dingoes kept into maturity were wrapped in paperbark and buried in the ground. This demonstrates that even when kept in the domestic sphere of human life, the dingo dead were treated differently than humans and dogs. This makes the dingo bundle burial in Arnhem particularly unusual. In addition to being treated differently from other dingoes, this particular animal was also missing a key element seen in typical human or dog bundle burials: its bones were not treated with ochre. The process of treating the bones of the deceased with red ochre is quite common across Australian aboriginal cultures. In some groups, red ochre is specifically associated with spiritually significant creatures known as ‘totemic beings’ (Taçon 2004: 36), such as kangaroos, emus, dogs, and menstruating women. However, the specific association of red ochre with the deceased stems from the traditional belief that it helps the core elements of an individual’s spirit cross over into its next stage of being: ‘The souls of dead people are returned to the water and earth-dwelling spirit-child phases of existence through ... the action of painting the bones of the deceased with red ochre’ (Taçon 2004: 38).

While all human bundle burials in this area (and one other separate dingo burial in southern Arnhem) were treated with ochre, Gunn *et al.* (2010) note that this particular dingo bundle burial did not show any evidence of being painted with red ochre. However, it is also stated that the remains were photographed in situ, and that only the skull was removed for examination. Therefore, it is possible that evidence of ochring could have been found on the undisturbed underside of the bones, while any loose ochre residue on top of the bones may have dispersed. Smith and Litchfield (2009: 124) state that both dingoes and snakes are “over-represented” in Aboriginal mythology and that dingoes, specifically, are affiliated with spiritual affairs and superstition more than any other animal. With that in mind, it is also possible that the dingo buried on the Arnhem Land plateau was not ochred because the human responsible felt that there was no need to assist the animal in finding its path into the spiritual phase of existence, outlined above by Taçon (2004). Regardless, it is obvious that amidst the intricate layers of cultural context and mythology, a human formed a deep and meaningful bond with this particular animal and felt that it deserved to be mourned and buried with the care and respect due to any loved one.

Conclusion

As discussed at the beginning of this paper, the archaeological record has tended to categorise animals into a small number of simplistic relationships; domestic, utilitarian/agricultural, and sacrificial. Using this system of classification, a number of the examples discussed here would be considered sacrificial;

the bulls in Egypt which led full and decadent lives, the Mycenaean dogs which were believed to possess magical healing and purifying abilities, and the Israeli donkey adorned with grave goods which were somewhat meagre (and were associated with a different animal) would all fall under the same classification. This generalisation does not convey the important differences in how these animals lived before they were sacrificed, and the unique motives behind each animal's intentional killing. The examples discussed in this paper are not 'cherry-picked' to prove a point – rather, they can be used as exemplary models to re-examine other animal burials. This paper has not aimed to prove that human-animal relationships have never been utilitarian: it has shown that humanity's relationships with animals is much more diverse than that, and that the variety of non-utilitarian relationships between humans and animals is extremely broad and diverse. The aforementioned classical interpretations are far too broad and generic to fully encapsulate the nuanced and complex relationships humans have had with certain animals all over the world throughout prehistory. There are several examples of humans and animals interacting which are similar across many cultures, but there are far more examples of unique and multifaceted human-animal relationships, only a fraction of which were discussed here. It is extremely important that we, as archaeologists, reconsider our own modern, Western understandings of human-animal relationships, and utilise the evidence available to us; archaeological and ethnographic, to understand how animals and humans interacted with one another across the ancient world.

Afterword

Though the anecdote outlined in the introduction is untrue, there may be some whimsy left in the world: in Richardson's (1885) Malagasy-English dictionary he explains that the word 'rajako' (or 'jako') translates to 'monkey'. He claims this originates from an incident wherein a pet monkey belonging to an English sea captain escaped the ship, and the sailors chased after it, calling it by its name: 'Jack! Jack!' Monkeys are not native to Madagascar, so it is completely possible that the word originates from this type of encounter. Magnificent, if true.

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Reframing Egyptian Mummy Portraits: (De)Constructing Identity in Freedmen Funerary Portraiture

Avery Warkentin¹

Abstract

Fayum portraits are a well-defined category of portraiture which includes around one thousand painted funerary images from Egypt dated between the early 1st and mid-3rd centuries CE. Focusing initially on two case studies, that of the freedman Eutyches and the grammarian Hermione, this paper will examine mummy portraits as an extension of freedman art which sought to communicate social and cultural capital after death. The majority of the scholarship on mummy portraits has typically focused on art-historical questions and, as such, much work remains to be done to socially situate these objects. In response, this analysis hopes to understand the ways in which Fayum portraits provided a unique and vital means of self-delineation for individuals who wished to assert their status by constructing a specific identity. In the particular case of freedpeople, a constructed sense of self would have been incredibly valuable in response to the intrinsic alienation of their previous position as slaves. Thus, this paper will use Ward Goodenough's theory of social personae and Chris Fowler's concept of mortuary transformation to resituate freedmen portraits within a longer tradition of mortuary idealisation. The analogous complexity of legal status in Roman Egypt will be used to demonstrate the need for these individuals to affirm their status, wealth, or ethnicity in a constantly changing landscape of legislation. As such, Egyptian mummy portraits provided an essential opportunity for freedmen to self-assert their identity through the process of funerary transformation in a region that was in constant ethnic and legal flux.

Keywords: Roman Egypt, Fayum portraits, social identity, mortuary idealisation

Introduction

Fayum or mummy portraits are a well-defined category of portraiture which includes around 1000 painted funerary images that come to us from different locales all over Egypt and are dated most commonly between the early 1st and mid 3rd centuries CE (Common Era, alternative for AD). Much of the scholarship on these paintings has typically focused on art-historical questions (Borg 1998; Brilliant 1991; Doxiadis 1995; Geoffroy-Schneiter 1998); academics have been interested in dating via clothing and hairstyles, in isolating specific artists and schools, and in the function of the portraits in relation to ancient cultic and religious practice (Montserrat 1993: 215). As such, much work remains to be done to socially situate these portraits or to understand their function as products of the complex and malleable political and legal landscape of imperial Egypt.

This paper will examine mummy portraits as an extension of freedman art which sought to communicate social and cultural capital after death. The focus will be on two case studies, that of the freedman, that is, an individual who had been legally manumitted from his former status as a slave, Eutyches and the grammarian Hermione respectively. After a brief overview and history of the portraits themselves, Egyptian mummy portraiture will then be situated as an example of funerary memorialization that performed the role of identity-construction. Beginning from the portraits of the freedman Eutyches and the Egyptian woman Hermione, I will argue that Egyptian mummy portraits provided a unique and vital means of self-representation for Egyptian freedmen and their descendants.

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This paper will use Ward Goodenough's theory of social *personae* and Chris Fowler's concept of mortuary transformation to resituate Egyptian mummy portraits within a longer tradition of mortuary idealisation. The analogous complexity of legal status in Roman Egypt will be used as a foundation to demonstrate the need for individuals to affirm their status, wealth, or ethnicity in a constantly changing landscape of legislation. The 'divorce between social reality and juridical categories' in Roman Egypt thus encouraged individual self-definition (Walker 2000: 28). As such, Egyptian mummy portraits provided an essential opportunity for freedmen to self-assert their identity through the process of funerary transformation in a region that was in constant ethnic and legal flux.

Mortuary Idealisation

Before discussing the mummy portraits themselves, it is pertinent to situate my analysis within the theoretical framework of mortuary practises. Early archaeological analyses used cemeteries, burial mounds, funerary monumentality, and, when present, grave goods to construct cultural, social, or historical interpretations of the deceased individuals. In the 1960s and 1970s, however, there was a shift in focus towards a theory known as processual archaeology, which sought to examine the theoretical bases and analytical methods that informed previous archaeological interpretations. In turn, various subdisciplines of Mortuary Archaeology arose in academic communities, thus shifting the discipline of archaeology from a belief in the objective materiality of archaeological remains towards a more subjective analysis, referred to as 'post-processual theory' (Chapman 2013: 47). In my own analysis of artistic funerary practises in Roman Egypt, it is important to emphasise the deeply contextual nature of archaeological inquiry as well as the subjectivity of the identities of the individuals who are commemorated. As Chris Fowler (2013: 511) explains, 'identities are negotiated relationally and contextually', yet there remains the issue of how one defines identity, or what aspects of identity one chooses to include in an academic analysis; ethnicity, age, sex, gender, personhood, kinship, wealth, prestige, and rank are all intrinsic to the social identity of an individual.

The term 'social identity' was coined by the sociologist Ward Goodenough (1965: 7) to refer to aspects of identity that depended on social relations with others, relations that came with duties and rights. In examining the social and relational nature of identity creation, Goodenough (1965: 7) acknowledged that each person has numerous social identities, or 'social *personae*', which are '[t]he composite of several activities selected as appropriate to a given interaction'. Goodenough (1965) suggested that these *personae* must express an intelligible biographical reality and must fit conventional social roles. Archaeological inquiries have subsequently often approached mortuary materials and processes as reflecting and affirming social identities constructed in life. However, as Fowler astutely argues, to view mortuary rites as purely affirming pre-existing identities fixed at the point of death is to ignore how social relations and, by extension, the social person is negotiated and transformed repeatedly through mortuary practises and the mortuary process (Fowler 2013: 513). As such, 'the meanings assigned to such materials and phenomena are ultimately culturally determined' and thus cannot be understood as self-evidently descriptive (Kus 2013: 67). Fowler's thesis reinforces this point as he argues that 'mortuary transformations are often important in achieving an idealised form of existence after death' (Fowler 2013: 511). Fowler and Kus' emphasis on the idealisation of identity after death informs my analysis of the subsequent portraits, which depict transformations in the identities of individuals during the very mortuary process that provides archaeologists with their evidence. Egyptian mummy portraits, in a very literal sense, reflected the individuals they commemorated yet their social function must be analysed within a constructed mortuary identity. This reality reflects both Goodenough's theory of social *personae* and Fowler's idea of mortuary idealisation. Thus, this examination exists at a

nexus of archaeological inquiry and is subject to both Goodenough and Fowler's analyses, which intersect within the context of funerary commemoration.

Fayum Portraits

Egyptian (or Fayum) mummy portraits is the academic term referring to a type of mortuary portraiture common in Roman Egypt, the largest quantities of which come from the Fayum Basin, an oasis region located 100km south of modern Cairo and just west of the river Nile. The majority of the portraits have been discovered at the archaeological sites of Hawara, an ancient town located in the Fayum Basin, as well as at Antinoopolis, a city founded in CE 130 by the emperor Hadrian and located south of the Fayum Basin (Montserrat 1993: 215; Walker 2000: 23). The practice of Roman portraiture was an artistic tradition dating back much farther than the Roman Imperial period (27 BCE–4th century CE)². In the Roman Republic (509–27 BCE), funerary portraits were restricted to the nobility and to the families of serving magistrates. Those portrait masks had an exemplary role; they were intended to instil in younger members of the family group the virtues practised by their ancestors (Walker 2000: 23). The mummy portraits of Roman Egypt are considered a stylistic evolution of this Roman tradition while also functioning as a continuation of the much longer process of mummy preparation and decoration connected to the 'ancient Egyptian cult of the dead' (Gschwantler 2000: 21). The portraits themselves appear in the middle of the 1st century CE and continued to be used for approximately 200 years, up until the mid 3rd century CE, when the practice slowly fell out of favour. The title of Fayum portraits speaks to their local function, whose use followed the Egyptian funerary tradition of covering the head of the mummified individual represented in the portrait. To this end, portraits were painted on individual wooden panels that were then inserted over the mummy wrappings or on linen shrouds that covered the mummified body (Walker 2000: 23). Portraits were also painted on plaster heads as plaster became more widely available throughout Egypt. The display of these portraits, as inferred from papyrological evidence for the sequence of events at Roman-Egyptian funerals, was not limited to their display in family tombs but also likely included their display in funerary processions (*ekphora*). These processions provided the opportunity for the deceased and their painted portrait to be carried through the town or village and be viewed not only by the deceased's immediate family, but also by the wider community before being taken to embalmers for mummification (Walker 2000: 24).

As previously mentioned, many art historical analyses have used the portraits' hairstyles, clothes, and jewellery to date them. While some stylings speak to local tastes, the general reflection of metropolitan Roman fashion implies that the subjects of the portraits themselves were likely engaged in local administrations on behalf of imperial authorities (Walker 2000: 23). Such an interpretation predicts my succeeding section on the uniquely malleable legal landscape of Roman Egypt. Whatever the material and artistic details, the aesthetic purpose of the portrait remained consistent: to serve as a visual record of the deceased as he or she had appeared in life. While these paintings have artistic value, it is also important to acknowledge that these portraits served more than a purely decorative function. Rather, the artistic register of the mummy portraits allowed for their social function to be communicated without words and *in situ*, revealing the process of identity transformation and construction that occurs in death. The social function of these portraits was intensely multifaceted. The fact that most of the portraits were likely painted while the subject was still alive suggests an active form of artistic commemoration that would have involved more than simply the painter and the subject (Walker 2000: 24). Familial and community participation in the display of this apparently individualised artistic tradition was also intrinsic to the process of identity construction; this implies another level of social

² BCE refers to Before Common Era; CE refers to Common Era

applicability. Individuals *chose* to depict themselves in ways that reflected their economic status, ethnic background, political position, or familial connections, a fact which speaks to the social nature of the paintings. Each portrait's clothing, jewellery, background, decorative elements (i.e. garlands, markers of employment, cups/food), or, in some cases, literary inscriptions, communicated a curated identity to those viewing it. In order for these portraits to perform the function for which they were created, a reciprocal social exchange was required between the deceased and the viewer who encountered the subject's portrait postmortem.

Legal Landscape in Roman Egypt

I turn first to the local context within which both individuals under analysis would have found themselves. Egypt's complex ethnic history meant that, by the Roman period, equally complicated legal structures were required to define and govern the heterogeneous region. This continued legislative complexity provided a social and political context in which individuals needed a variety of means, including art, to affirm their status, wealth, or ethnicity. To provide a brief overview, in the Ptolemaic system (305–30 BCE) all people were divided into two groups: Hellenes (Greeks) and Egyptians. Hellenic – or 'not Egyptian' – status was based on official geographic origin, and virtually all foreigners qualified as Hellenes. For most purposes, the term meant 'immigrant' or 'foreign settler'. Already in the Ptolemaic period, ethnicity looked increasingly slippery: 'Ethnic' categories were neither constant nor clearly defined but were rather based on fluctuating historical circumstances and forces (Bagnall 2000: 27). Official ethnicity in the pre-Roman period moved from representing the geopolitical origin of the head of the household to being a heritable status, and from that to being an acquirable status (Rotman, Scholl and Straus 2014: 453). As such, Graeco-Macedonian military settlers, civilians of Greek descent, official Greeks of Egyptian or mixed descent, and local Egyptians all coexisted in both rural and urban contexts. The Romans, in response to Egypt's ethnic malleability, took a different and distinctly legal approach to categorization and control. They maintained a distinction between Greeks and Egyptians but classified Hellenes as a subcategory of Egyptians, not as their opposite. As a result, a distinctly Roman class structure emerged. At the top were holders of Roman citizenship followed by the citizens of Ptolemais, Naukratis, Antinoopolis, and Alexandria: non-Romans, but still citizens. To complicate matters even further, citizens of Alexandria retained a slightly higher and legally distinct status compared to those of Ptolemais, Naukratis, or Antinoopolis due to the city's history as the centre of foreign political and legal institutions for the region of Egypt. The final and lowest class in Roman-Egypt included Egyptians, or peregrine non-citizens in Roman terms, hence all inhabitants that existed outside of the two previous categories (Bagnall 2000: 28).

The composite, contested, relational, and mutable character of ethnicity and legal status in Roman-Egypt is undoubtedly at the root of the complexity in constructing and curating identities via artistic channels such as mummy portraiture. All individuals, whether holders of Roman citizenship, non-Roman citizens, or non-citizens would have been subject to a continually fluctuating regional landscape in which maintaining, or creating, a distinct individual identity was vital in communicating social, political, or economic capital. Freedpeople would have been doubly interested in self-asserting their identity due to their former enslaved status. Mummy portraits thus presented an entirely autonomous opportunity, separate from traditional administrative structures, for individuals to control their own identity. It is no surprise that these identities were often idealised. The complexity of legal status in Roman-Egypt informed the need for individuals to affirm their status, wealth, or ethnicity in a constantly changing landscape of legislative and administrative structures.

Eutyches

Two case studies illuminate my analysis of the role that freedpeople played in this process of artistic commemoration. First is the portrait of Eutyches which is now housed at the Metropolitan Museum of Art in New York City (USA). The portrait (H 38cm x W 19cm) depicts a young man in three-quarter view; the young man faces out towards the viewer, looking directly out from the portrait. Scholars have dated the portrait to the first half of the 2nd century CE, however dating remains somewhat contentious as the provenance of the portrait is unknown. The inscription is one of the most interesting in the corpus of portraits as it directly refers to the subject as: *Εὐτύχης ἀπελ(εύθερος) Κασσιανοῦ Ἡρακλειδ(ο) [Εὐανδ(ρο) σεσημ(είωμαι)]*, 'Eutyches, freedman of Cassianus Heraclides'.'³

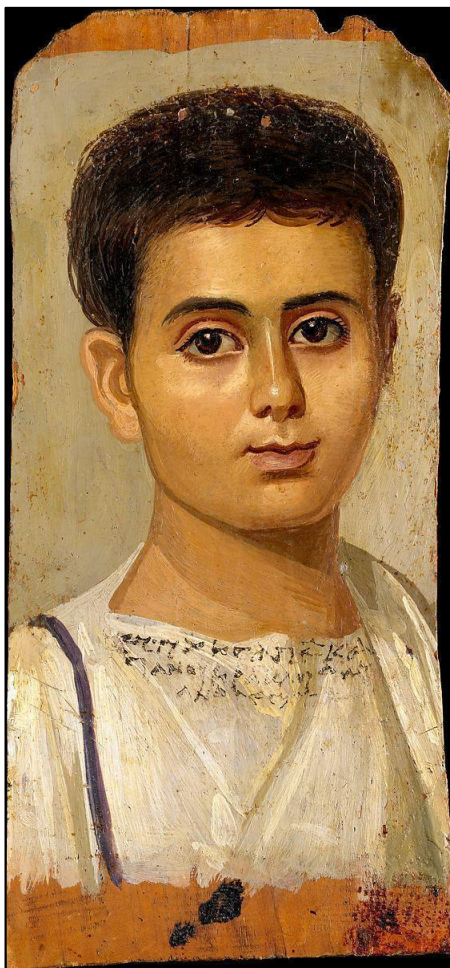


Figure 1. *Portrait of the Boy Eutyches, encaustic on wood, CE 100-150, H 38cm x W 19cm, The Metropolitan Museum of Art, New York City (Public Domain).*

³ Different readings of the Eutyches inscription have proposed slight variations in translations. Translated by Parlasca (1966) as 'Eutyches, freedman of Cassianus Heraclides', the text has been altered by Clarysse in Doxiadis (1995) to read 'Eutyches, freedman of Cassianus, son of Heraclides'. A final alternative reading was proposed by Bagnall and Worp (1984), who suggested the name 'Evandros' and the verb 'signed'. Thus, their translation reads: 'Eutyches, freedman of Kasianos', then either 'son of Herakleides, Evandros' or 'Herakleides, son of Evandros' followed by 'I signed'. Regardless of the nuances of translation, the most important piece of information to my own investigation, *ἀπελ(εύθερος)*, remains consistent.

The portrait's artistic details can be read through a lens of mortuary identity construction and social communication. To begin, the inscription itself situates the subject as part of a specific class of freedmen, a fact which would have immediately communicated a variety of political, economic, and social implications to a viewer. The painting appears intensely life-like as incredibly fine brushstrokes create a highly realistic depiction of Eutyches. This constructed realism is notable when compared to the corpus of mummy portraits as a whole, since the vast majority of individuals are depicted with much rougher brushwork and far less attention to minute artistic detail. The shining, almost completely smooth, golden skin of Eutyches, as well as other details, again serve to create a naturalistic delineation of the subject: Eutyches' hair is a rich dark brown and painted with tiny, wispy strokes; his eyes are ringed with delicate eyelashes and a subtle ring of dark kohl; the left side of his body is softly shadowed and turned slightly away from an external source of light. While all of these details at a basic artistic level served to reflect how Eutyches actually appeared in life, they also simultaneously contributed to Fowler's idea of funerary identity construction. Such attention to an accurate funerary depiction can be read antithetically as a marker of mortuary idealisation. A freedman such as Eutyches would have had an interest in asserting his status, whether social, economic, or political, to the community to which he belonged, especially as someone who, it appears, was unable to live a long life after manumission. There is also the possibility that Eutyches commissioned a painting of himself younger than he actually was at the time of his death, perhaps in commemoration of the moment of his earlier manumission. This would provide yet another layer in the mortuary transformation and idealisation that occurred after Eutyches' death.

Other details in the portrait further support such an analysis. Eutyches is dressed in a white tunic with a purple *clavus* draped over his right shoulder. A white mantle sits across his left shoulder under which is written the three lines of Greek text. The choice of clothing, the *augusticlavia*, reinforces an idealised identity. The purple *clavus*, in Roman tradition, served to indicate a social status above regular citizenry but below senators and magistrates (Goldman 2001: 221). The exact contemporaneous function of such dress in Roman Egypt is not as important as the fact that it communicated a specific kind of Roman identity, one linked to political participation and elite status. Additionally, the presence of text itself could suggest a certain level of education, another marker of eliteness or community integration. All of these artistic features were thus chances for Eutyches, a freedman, to assert an idealised form of his own identity via an intensely malleable form of artistic commemoration.

Hermione *Grammatike*

A further potential example of freedmen commemoration appears in the portrait of a woman whose name and profession are inscribed onto her portrait. Discovered and excavated by Flinders Petrie in 1910-11 at Hawara, the portrait of Hermione *Grammatike* now resides in Girton College, Cambridge (UK). The portrait (H 30.5cm x W 21cm), which is dated to the early 1st century CE, is set among intricate bandages of the highest quality linen which are wound in layers in a rhomboid pattern. To the left of Hermione's neck reads the inscription: *Ἑρμιόνη γραμματική*, 'Hermione, *Grammatike*'.

Unusually, this inscription provides both the name and profession of the subject in question. Various interpretations of the *Grammatike* inscription have provided a myriad of possibilities concerning the position, status, and ethnicity of the woman Hermione, all dependent on various translations of the mysterious Greek word *γραμματική*. According to Montserrat (1997), this term has been translated variously as 'teacher', 'teacher of the classics', 'instructor in the rudiments', 'reader in the Classics', 'lady', 'secretary' and 'literate'. However, for this analysis, I have chosen to proceed via Dominic Montserrat's reading of the inscription as one depicting a wealthy freedwoman whose employment was

that of a grammarian or teacher.⁴ This interpretation is based on the context of discovery. The painting style is much less detailed than that of Eutyches. Hermione is depicted in a close-set view with only the edges of a light-coloured tunic top visible above the bottom portrait edge. She wears large, rounded earrings and her dark hair is drawn away from her face and parted down the middle of her scalp. These details, together with the portrait's inscription, can be viewed as attempts to delineate and curate a form of idealised identity that would be immortalised and communicated after death.

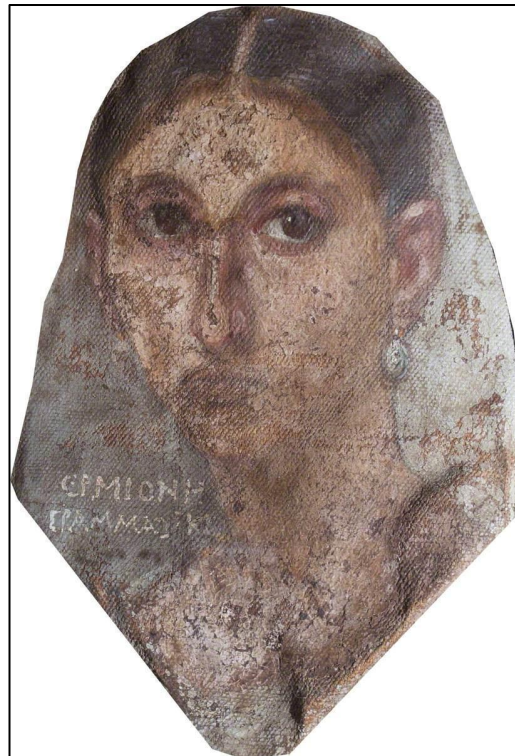


Figure 2. *Hermione Grammatike*, encaustic on linen, CE 1–100, H 30.5cm x W 21cm (with the permission of Girton College, Cambridge).

Just as with the portrait of Eutyches, Hermione's artistic features communicate a lifelike reality which, while providing a sense of authenticity, also serve to reinforce a self-asserted identity. Unfortunately, the preservation of Hermione's portrait is significantly poorer than that of Eutyches. Nevertheless, Walker (2000: 25) suggests that her clothing and jewellery follow patterns of elite Roman dress and display, thus placing Hermione's depiction within a similar visual lexicon of Roman aristocracy. The most important marker, however, of freedperson self-delineation remains the inscription itself; Hermione most likely *chose* to include her profession on her funerary portrait, thus personally creating a narrative of identity. The gendered dynamic of Hermione's portrait adds yet another layer of meaning to such a choice. Hermione's identity as a woman would have shaped her possible experience as a slave, freedwoman, and/or grammarian. In navigating these varied systems of oppression, the creation of a

⁴ Montserrat (1997) discusses that the portrait of Hermione was found together with the portrait of a man with the inscribed name Heron. As such, an analogous analysis of both portraits provides the potential of their freedperson status. Hermione and Heron's names are both religious (they are named after gods) and appear in a singular form on their respective inscriptions. While there may be other reasons for this choice of inscriptional commemoration (limited space, difficulty of writing), these naming patterns follow those of slaves and, subsequently, freedmen, who frequently only had a single name, often adjectival (Felix) or religious (Hermione, Heron).

personal identity could have presented a vital form of self-preservation for someone who existed at the nexus of multiple systems of alienation. In asserting her position of employment alongside traditional artistic elements in her funerary portrait, Hermione was able to curate an individual identity that transcended systems of legal, patriarchal, and political oppression. This idealised reality would have been communicated to viewers within the context of a malleable landscape of political and social competition.

Analysis

These two case studies provide an intensely focused analysis concerning the potential of freedperson identity construction. Such an analysis is naturally constrained by the limited quantity of mummy portraits. It is also limited by the general lack of inscriptions that would indicate freedperson status, as other artistic or visual markers are essentially non-existent. This means that while we do not have any other inscriptional evidence confirming the freedperson status of other subjects in Egyptian mummy portraits, the existence of the Eutyches and Hermione portraits suggests the possibility that many of the other individuals in these portraits may also have been freedpeople. Thus, the desire of such freedpeople to self-assert and curate a specific kind of identity via mummy portraits could have much wider implications. Economically, the mere ability to pay for a portrait would have been an immediate marker of economic and social status within a community. Demographically, mummy portraits are almost evenly split across gender and depict a wide variety of ages, the majority being somewhat middle aged, 30-50 years old, as reflects general life expectancy trends of the time (Doxiadis 1995: 36). The variety in subjectivity further reinforces the social role that these portraits performed: a vastly varied contingent of a diverse population was equally interested in using this specific form of mortuary commemoration in order to curate a distinct identity in death. The personal artistic details, as well as demographic and economic factors suggest a distinct desire for individuals, whether freedpeople or elite citizens, to use art as a means of identity construction. If this desire can be understood as foundational to the creation of Egyptian mummy portraits as a whole, the added dimension of freedperson status would suggest an even greater need to construct an idealised funerary identity.

Theory of Natal Alienation

To frame this specific re-examination of mummy portraiture, I turn first to Orlando Patterson's analysis of natal alienation and slavery. Patterson (1982: 5) posits that slavery was not only an economic or legal status, but also a social one as the slave, 'alienated from all 'rights' or claims of birth, ceased to belong in his own right to any legitimate social order'. Slaves were innately socially separate from their free counterparts in that they were not allowed freely to integrate the experience of their ancestors into their lives or to anchor their living present in any conscious community of memory. Legitimate, binding markers of status, family, or community were necessarily absent from the social relations of slaves. The loss of ties of birth, the alienation from all formal enforceable ties of 'blood,' and from any attachment to groups or localities other than those chosen for him by the master inevitably led to profound emotional and social implications (Patterson 1982: 5-6). This foundational function of natal alienation in Roman slavery suggests a system in which freedpeople, after manumission, would have had a profound desire to reassert their legality and identity in whatever means were available to them, if only to affirm their newfound status as *not* slaves. This desire was often manifested via physical commemorations, of which mummy portraits are one example. In the context of Roman Egypt, freedperson mummy portraits can be understood as responding directly to the deracination that slavery brought about. Not only was the fluctuating legal and ethnic landscape of Egypt intrinsic to this kind of identity construction, but Egyptian funerary traditions themselves reinforced art as a means of social communication. Thus, the artistic variables of each mummy portrait presented an opportunity

for the deceased to construct a visual identity that communicated social and cultural capital. These variables included, most obviously, hairstyles, jewellery, and clothing. However, more subtle choices of framing, painting style, and additional elements all equally contributed to the process of mortuary transformation and idealisation. In the case studies of Hermione and Eutyches, elements of elite culture were immediately visible via clothing and jewellery while inscriptions provided a distinct insight into an individual conception of self.

Audience and Attention

Lauren Hackworth-Peterson (2006: 228) suggests that in order to understand freedmen art one must take into consideration the contemporary audience(s) for each monument and shift the perspective from one that privileges only elite ideals to one that prioritises features that would have commanded a viewer's attention and thus communicated something about the social identity of the individual(s) who paid for it. Hackworth-Peterson's proposed shift is intrinsic to what this paper argues: rather than understanding Egyptian mummy portraits as merely artistic indicators of elite expenditure and funerary investment, the cases of Eutyches and Hermione suggest that mummy portraiture served a distinctly social function. Portraits presented an immediate opportunity for marginalised individuals such as freedpeople to construct and communicate an incredibly basic element of political, cultural, and social life: identity. However, identity construction post-mortem was 'not usually concerned with (or capable of) materially representing the entire biographical identity of the deceased in a totalized singular form. Rather, funerary monumentalization commemorate[d] the deceased person while drawing on idealised, desired identities' (Fowler 2013: 524). In the case of mummy portraits, individuals, including freedpeople such as Eutyches and Hermione, sought to construct idealised identities that placed them within traditional Roman artistic structures, structures which, in mummy portraiture, communicated social and cultural capital in a highly competitive and malleable atmosphere (Hackworth-Peterson 2006: 228). Even as precise distinctions in status remain difficult to ascertain in the absence of formal status indicators, it is clear that the individuals depicted in my two case studies and, by extension, other freedpeople sought recognition via their own self-delineated and idealised mortuary identity.

Conclusion

Artistic delineations of freedperson identity were not limited to portraiture but can rather be found in a variety of contexts, including literary. Petronius' *Satyricon* provides such an example: as Encolpius, the work's protagonist, steps into the home of the wealthy freedman Trimalchio, he is amazed at the mural painted on the wall of the entrance hall. The mural depicts 'a slave-market, price-tags and all. Then Trimalchio himself, holding a wand of Mercury and being led into Rome by Minerva. After this, a picture of how he learned accounting and, finally, how he became a steward. The painstaking artist had drawn it all in great detail with descriptions underneath' (Petron. *Sat.* 29). This description of one freedman's decorative self-delineation noticeably reflects many of the elements of mortuary idealisation that Egyptian mummy portraits suggest. Trimalchio, in his own home, commissioned a piece of decorative art in which he himself is the subject and in which his identity is satirically idealised. While this example is part of a larger comedic commentary, its existence reinforces an understanding of freedperson art which prioritises a process of self-definition and identity curation. Mummy portraits, just like Trimalchio's mural, were incredibly effective at conveying an individual sense of social and cultural identity through their use of a widely understood and accepted visual register. These idealised identities communicated to the viewers who observed them a distinct sense of self. Furthermore, in the particular case of freedpeople, a constructed sense of self would have been incredibly valuable in response to the intrinsic alienation of their previous position as slaves. Freedmen constituted a separate

collective identity that, in many ways, required much more conscious forms of memorialization. Physical freedperson commemorations, whether portraits, inscriptions, murals, or monuments were the result of individual initiatives and personal motives that may not have been uniformly shared by all members of society (Mouritsen 2005: 38). Consequently, 'there was no single unified field of competition, but many separate, localised fields, which each developed their own conventions' (Mouritsen 2005: 63). In the case of Roman Egypt, funerary mummy portraiture represented a vital means of personal self-definition for freedmen. As such, the localised, competitive, and highly malleable landscape of Roman Egypt in the early centuries CE is intrinsic to this paper's artistic analysis. Freedpeople such as Hermione and Eutyches actively sought to assert their identity through the process of mortuary transformation. As such, mummy portraits performed a specific funerary function while also serving as a physical marker of social status, community participation, and self-delineated identity. While no commemorative practice was universal – throughout the Empire, or even within a region or a single community – the corpus of Egyptian mummy portraits allows for a more nuanced understanding of the ways in which freedpeople sought to communicate and construct identity in the ancient world (Mouritsen 2005: 62–63).

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The Bog: Living Body and Narrative Actant

Marianne Gabrielsson¹

Abstract

This paper explores the idea of bogs as living narrative actants, focusing on their role in burial practices. By analysing two artefacts, the Gundestrup cauldron and the Eutin figures, the aim is to investigate what significance bogs have in relation to liminality, passage, and transformation, and how we can use the bog as a lens for studying burial practices and diversity. From a relational perspective, involving a conceptual framework of nomadic subject and mythemes, this paper argues that bogs played a vital role in burial practices as well as other social practices in Scandinavia and northern Europe during the Pre-Roman Iron Age. This article reconceptualises bogs as bodies which embody human thoughts, intentions, and perceptions. As such, bogs become not only living 'bodies', but living actants and co-actors in social practices. The Gundestrup cauldron and the Eutin figures share a common denominator, *movement*, which appears as central in the burial practises. Together with interaction, movement causes a dislocation from Death to Life, making the burial practice a ritual of life: birth, and re-birth. Bogs play a vital role in this transformation as they function as living actants, embodying human's perceptions, ontologies, practises – and interaction between each other, other social groups, and nature.

Keywords: bog, materiality, actant, Gundestrup cauldron, Eutin figures, liminality, pre-Roman Iron Age, burial practises, emotional charge, mytheme

Introduction and Aim

Archaeology of death explores human societies through their funeral practices. These practices are different depending on culture, social context, beliefs, ideology, trade connections, location, and specific period during the prehistoric era. This makes death and burials a quite broad and diverse field within the archaeological discipline. This paper will thus focus on *one* of many aspects of death in general and of funeral practises in particular: bogs.

Building on previous work on bogs in a burial context (Gabrielsson 2020, 2021), this paper emphasises the inevitable relation emerging between humans and bog when a dead body or artefact is placed in the bog. Previous research does not explicitly investigate this, but rather approaches bogs as merely a tool for our social practises (Chapman 2015; Fredengren 2018; Kelly and Bentley 2015) – and being a tool, the bog automatically becomes a dead object which neither has a function nor has an active role in our interpretation of dead bodies and selected items that are found in it.

Contrary to this view, I aim to emphasise bogs as active, and *living* bodies interacting with human bodies. This perspective problematises the current discourses on bogs as mere burial practises and proposes that bogs extend beyond being handy tools for social practises and become co-actors and bodies themselves. In doing so, this paper will answer two questions:

1. *What significance do bogs have when it comes to liminality, passage, and transformation?*
2. *How can we use the bog as a lens to study broader social practises?*

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When Two Bodies Meet – Nature and Culture Moving Together

When the body, or an item, is placed within the bog-room, these dead objects transform into living bodies, meeting and interacting with the ‘bog-body.’ Anthropologist Don Kulick (2019) defines this as ‘nature meeting culture’. When nature (bog) meets culture (humans/items/perceptions/worldviews) the limit between nature and culture becomes difficult to identify and define. However, the act of placing a dead body, or item, in the bog, is not a simple action, as it also involves a procession of placing thoughts, intentions, perceptions and worldviews (Chapman 2015; Kelly and Bentley, 2015; Fredengren 2018). The Swedish archaeologist Christina Fredengren defines this procession as ‘bodies in becoming’ (2018:18).

The process of what is emerging within the ‘bog-room’ is the result of nature and culture constantly floating into each other. This process presumes culture acknowledging nature as a body. In relation to this, I argue that bogs in the context of bodies, always possess an emotional charge (Ørskov 1966) that is constantly exchanged between materiality and humans. According to Ørskov (1966), this emotional charge is one of the foundational elements in the construction of social practices. For example, a statue gains a different meaning for each viewer depending on *what it makes the viewer think of it*. This reasoning applies to the bogs, as emotional charge has strong connections to burial practices or other practices of placing artefacts in the bog.

When humans interact with bogs, they automatically give them (including the dead bodies and artefacts placed in them) a different emotional charge. Due to the floating movement within bogs and of humans in the bogs, however, it is difficult to really establish who is influencing whom, as the interaction works both ways. When we assign emotional charge to materiality (bogs), it becomes an active agent in the process of the dead body or artefact becoming a symbolic new-born subject.

The struggle between nature and culture can be seen as a struggle for power (Rosaldo 1993), in which culture (humans) needs to keep nature at a safe distance to avoid being threatened by it and to maintain power over it. Yet, this paper leans more towards the anthropologist Claude Lévi-Strauss’ idea of how nature and culture work together as binary oppositions. Elements such as life, death, nature, and culture might indeed be each other’s oppositions, but are also simultaneously bound to each other as one cannot exist without the other. As such, Lévi-Strauss defines them as foundational *mythemes*, constituting the foundation for all narratives (Carlshamre 2005; Lévi-Strauss 1955).

Another aspect of the relation between nature and culture is emphasised by the philosopher Rosi Braidotti and her concept of ‘nomadic subject’ as elastic and always floating (Braidotti 2002:2). According to this view, bogs are constantly moving entities between earth, water, and sky and create rooms with blurred boundaries.

This idea of nomadic subject is also examined by the theoretical feminist Karen Barad (2003, 2007), who emphasises the significance of interaction between materiality and humans. In Barad’s view, materiality is not a fixed substance, but rather a substance in becoming, based on its interaction with humans. Similar to Braidotti, Barad stresses the constant movement within the bog as ‘nomadic’. However, this view harbours the danger of the body (or artefact) being too entangled with the ‘bog-room’, creating a dichotomy of either moving forward or remaining within the liminal phase of unidentified borders.

My own position is in favour of a relational perspective which emphasises the mutual relations between the bog and humans. Advocating a ‘symmetrical’ view, I propose not only contextualising bogs in the struggle between culture and nature, but also trying to understand what they symbolise for the

question of how humans recognize them as nature *and* as body. In doing so, I view bogs as active collaborators in the process of creating human practices. Such perspective emphasises the complexity in defining the limit between human body and material body – as well as viewing culture and nature as co-workers instead of each other’s opponents.

Inspired by Lévi-Strauss (1955), Braidotti (2002) and Barad (2003, 2007), this paper will use the idea of relation, interaction and collaboration between bogs and human practices. When talking in terms of *two living bodies*, bogs become a spatial as well as temporal room *and* a living body. As such, they can be placed in the context of having a voice and intentionality with effects on human bodies, their practises, and idea-worlds. There is a clear relation between the locations in which human actions and practices take place. In that context, I advocate illustrating bogs and humans working together as two bodies.

A Microarchaeological Approach

Based on a ‘bottom up’ approach, this analysis rests upon a relational microarchaeological perspective, focusing on material traces of social practices, and how they relate to bogs. The intention is to infer from the traces of these practices in a local context about the ‘greater’ picture.

The two studied artefacts were deliberately chosen because of their different characteristics: one is a complex, well-laboured silver plate, and the other consists of two simple wooden figures. However, both are dated to the Pre-Roman Iron Age in Northwestern Europe (Figure 1), and both have a strong relation to bogs and burial practises.

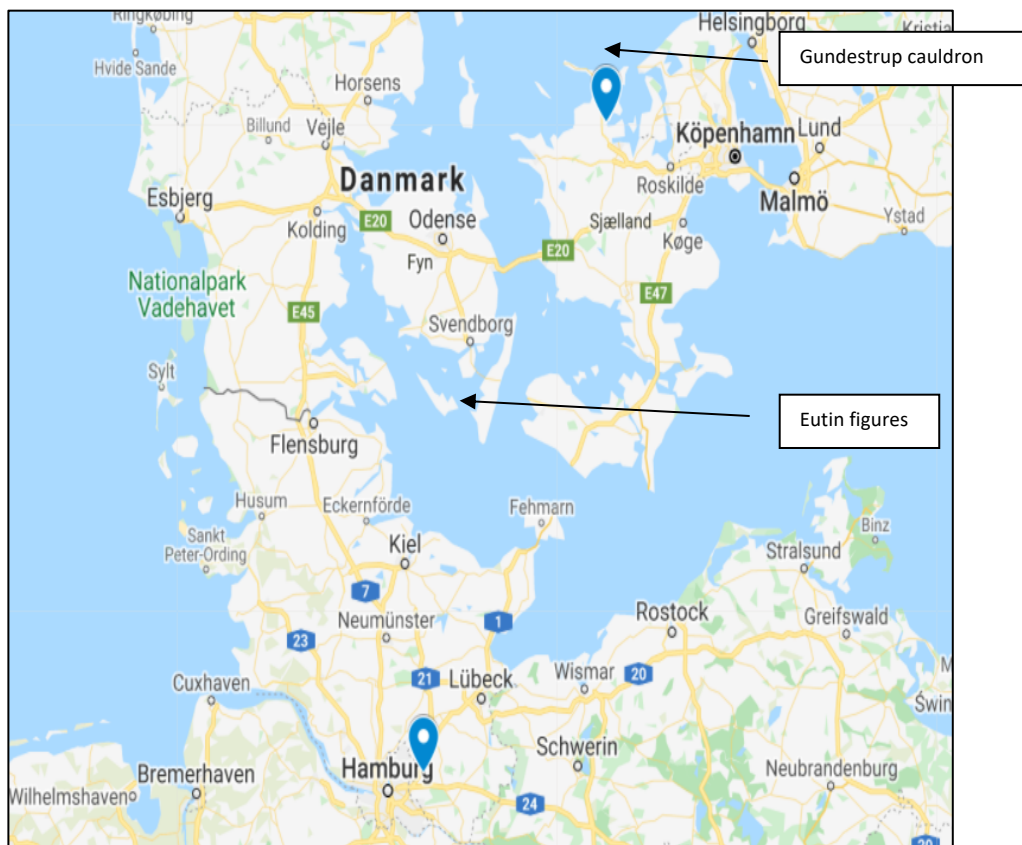


Figure 1. Geographic location of the objects discussed in this analysis: Eutin figures (Germany) and Gundestrup cauldron (Denmark) (Map is created by the author on Google Maps).

The Eutin Figures

In 1948, two enormous wooden figures were found in a remote bog, *Aukamper Moor*, in Braak near Eutin, Schleswig-Holstein in Germany. The figures were found lying together beneath the bog surface and were dated to 300-200 BCE via C14 analyses (Aldhouse-Green 2012: 60). Owing to carefully carved details of genitals, indicating female and male characteristics, the British archaeologist Miranda Aldhouse-Green (2015: 42-59) has interpreted the figures as depictions of one female and one male individual.

As two big oak branches constituting the figures' legs resemble a fork, the figures might actually have served for a specific purpose. Moreover, the holes on the figures' shoulders are believed to have been used for attaching the arms, which were found to be carved from another branch to the torso (Aldhouse-Green 2012).

The figures are quite tall (Figure 2); the male measures 275cm and the female is 230cm. They show no evidence of weather damage, suggesting they were placed in the bog immediately after being produced (Gill-Robinson 2005). Their faces are quite expressive owing to their wide-open mouths and eyes which draw immediate attention to their faces (Aldhouse-Green 2012: 60). The hair of the male figure has a carefully elaborated short fringe, whereas the woman wears what appears to be a *Suebian-knot* on top of her head (Lund 2002: 44; Sierksma 1960).



Figure 2. Detailed carving of facial expressions, genitals, and hairstyles
(Image credit: Tieva, CC BY-SA 4.0 via Wikimedia Commons).

The physical differences between the two figures indicate that the sex of the figures was intended to be distinguishable. The careful design of their genitals and the fact that the female's hips are broader compared to the male's are indicators of this effort. The bodies lack detail except for the woman's breasts being carefully carved and placed widely apart. The male's genitals are barely discerned and seem to have been damaged during the excavation (Lund 2002: 44). Although they were both found lying on their stomach just beneath the bog surface, the archaeologists believe that the figures were placed standing in an upright position gazing out over the vast bog – thus were probably visible for several kilometres afar (Aldhouse-Green 2015).

In situ, there were traces of fire, including a large amount of ash, carbon and burnt stones. Several layers of fire remain throughout the stratigraphy, indicating that this location was continuously used for making fire (Johansen 1981), which could be indicative of ceremonial activities, rites, or special events (Johansen 1981). Common interpretations and theories in relation to the two figures can be analysed under five categories:

1. The figures buried in the bog might represent specifically selected dead individuals. This interpretation raises the question of who these individuals might have been – ruling elite, priests, or other high-status members of the community?
2. The figures embody spirits dwelling and living in the bogs.
3. The figures might be substitutes for real humans. The lack of weather damage on the wood indicates that the figures were placed in the bog soon after being produced (Aldhouse-Green 2015:43). According to this assumption, the community might have sacrificed the wooden figures instead of sacrificing human beings during different rites (Gill-Robinson 2015:357).
4. The figures might represent the Celtic god *Teutates*, considered the 'God of the people', who always wanted the best for the community and its members (Aldhouse-Green 2015:42). As such, the individuals turned to *Teutates* in all sorts of daily life situations: threats, war, external and internal crisis, bad harvest, or misbehaving individuals excluded by society, as described by Tacitus.
5. The figures might be representing a practice involving 'burying' couples (male and female) in the bogs. Such a practice might be highly symbolic, referring to the Gods *Frey* and *Freyja*, or symbolising fertility (Sturlasson 2020). *Priapus*, the Roman version of *Frey*, is often depicted with an erected penis (mentioned in English manuscripts already in 1268) (Maxwell 1913:67). This oversized genital might indicate influences on rituals focusing on fertility: involving births as well as good harvests. As part of this practice, farmers were requested to light fires and erect wooden-like *Priapus* figures beside the fire to save their cattle from pestilence (Maxwell 1913) – a practice similar to how the Eutin figures have been used. However, it is still not established whether the Eutin figures are representations of *Frey* and *Freyja*, or interpretations of the Roman god *Priapus* (Reaves 2008).

The problem concerning the interpretations of *Frey* and *Freyja*, arises from the fact that the female figure wears a Suebian-knot. According to Tacitus (Tacitus 2005), only men and male warriors carried this hairstyle, which requires researchers to explain why in the case of two figures which were interpreted as *Frey* and *Freyja*, the figure representing a woman wore this traditionally male hairstyle. One explanation would be that the head with the Suebian knot might not have been the original head, i.e. the figure might have been manipulated by putting a male head on a female body – either before the figure was placed in the bog, or after the excavation by archaeologists accidentally matching wrong bodies with their heads. Alternatively, the hairstyle might just be a plain hair knot.

Most likely, the figures are some sort of representations of gods in a sacrifice context. They had probably stood on an altar, close to the fire by which fire-rites had been conducted (Johansen 1981: 87). The Suebian-knot indicates further that the figures, according to Tacitus (2005), could have been produced by Roman craftsmen who depicted Suebian Germanics as typical barbarians.

The wide-open mouths and eyes of figures, might be symbolising communication as in shouting, screaming, or singing out loud to each other or to the gods, the dead bodies, the members of the community, or even to the craftsmen producing the faces (Gill-Robinson 2005). Altogether, we can deduce that the figures, with their god-like images, might have functioned as objects of scarification rites (Sierksma 1960: 168) – or *incarnations of significant dead individuals*.

Although previous research approaches bogs from various perspectives, the figures are still considered as *symbols* rather than *actants*. This paper, instead, considers them as *actants*, and emphasises the relation between actant and symbol. In consideration of human practices as narratives of how different societies perceive their surrounding world, I contend that bogs played a vital role in burial practices, approaches to death, and diversity during the Scandinavian and Northern European Pre-Roman Age. Diversity is specifically visible through the different emotional charge humans attribute to the bogs, indicating a ‘living’ relation and interaction in which bogs become collaborators rather than passive burial landscapes.

The Warrior Plate C6574 (the Gundestrup Cauldron)

The second object of analysis concerns the Warrior plate C6574. This cauldron was found in 1891 at about 60-90cm of depth in a bog in Rævose, east of Aars, in the north of Jutland in Denmark. The cauldron was dated to sometime between 100 to 80-50 BCE by C14 dating (Aldhouse-Green 2001; Olmsted 1979; Persson 2020).



Figure 3. The Gundestrup cauldron after being assembled (Photo credit: Nationalmuseet, Lennart Larsen, Public Domain via Wikimedia Commons).

As we see in Figure 3, the cauldron is made of outer and inner plates of rectangular shapes. All plates are engraved with various scenes and symbols, including illustrations of busts surrounded by animals and fantasy creatures. Furthermore, the inner plates demonstrate rather complex and detailed narratives which are further analysed below.

The Warrior plate C6574 illustrates a narrative involving a procession of both soldiers, gods, animals, fantastic creatures, and other symbols. The procession is divided by a line in the shape of a big horizontal tree. Below the tree, a procession of three *carnyx*² players and seven foot-soldiers are marching toward a dog standing on its rear legs. In front of the *carnyx*-players, a foot-soldier swings a sword and carries a helmet decorated with a wild boar head on top. In front of him, six more soldiers are marching with shields and spears. Behind the dog, a gigantic god-like figure is floating and holding another soldier with both his hands. The soldier is being held upside down facing a big container, tub, or cauldron (seemingly of metal or wood), waiting to be drowned or baptised. The god-like figure having long hair in a ponytail, or maybe a plait, appears to be unidentifiable in terms of its sex. The ponytail could also be a headpiece decorated with hair covering the figure's shaved head. The figure is dressed similarly to the soldiers depicted above the tree line, having striped shirt and knee-long trousers with zigzag pattern shoes with laces (Summer 2018:116).

Above the tree, four horse soldiers are moving away from the god-like figure. The first and the third soldier are unarmed, wearing helmets decorated with different animals on top. The second soldier carries a sword and a helmet with a deer antler on top. The fourth soldier is also carrying a sword, wearing a helmet with a bird on top. All four soldiers are led by a snake decorated with a ram horn (Aldhouse-Green 2001:114).

The tree is placed horizontally, with its roots to the left, close to the container held by the god-like figure (from left to right when read) (Figure 4). The heads of the *carnyxes* have their mouths open toward the soldiers on horseback, located just below the snake.



Figure 4. *The Warrior plate C6574* (Photo credit: Claude Valette, under CC BY-ND, via Flickr).

² A *carnyx* is a celtic bronze trumpet common during 200 BCE- CE 200 (Pre-Roman Iron Age). The trumpet is S-shaped and is held vertically when being played. The opening had the shape of an animal head, often a wild boar. The trumpet was probably used to frighten the enemies in battles (Gabrielsson 2020:7).

The interpretations of the plate vary. The god-like and sexless figure is often interpreted as representing the Celtic god *Teutates*, the Irish god *Dagda* or the Roman version *Mars*. The plate might also be depicting a narrative of re-birth, or reincarnation, as described in different Irish myths (Klindt-Jensen 1961; Maumenés 2016). Aldhouse-Green (1986) disagrees with those who make a connection to *Dadga* and claims that making such inferences based on written mediaeval myths might be problematic as these might have been unknown for the people of Gaul during the Pre-Roman Iron Age. Instead, Aldhouse-Green refers to the general perception of cauldrons as bearers of magic powers in connection to re-birth. Water, as a phenomenon, represents both birth and fertility, as well as death and sacrifices in this interpretation. One specific sacrifice might have been carried out through the slicing of the captivated prisoners' throats and pouring their blood into a cauldron. These sacrificial cauldrons were considered sacred among, for example, the *Teutonic* tribe – and the Warrior plate might just as well describe a sacrifice scene, indicating a duality in which water symbolises life and death (Aldhouse-Green 1986:147).

The interpretation based on the concept of re-birth highlights the scene where the god-like figure seemingly drowns, or baptises the foot soldier, who seems to be reborn after this ceremony as a horse soldier. The Welsh medieval myth of *The Four Branches of Mabinogion (Pedeir Keinc)* corroborates with this theory, as it tells a similar story of soldiers who died in a war yet were reborn as stronger soldiers after being boiled in a magic cauldron (Aldhouse-Green 2001:114). In connection to this, a counter interpretation is advocated by Olmsted (1979: 219) who claims that the container is instead a tub made of wood – in a Gaul context, and it relates to the myth of *Táin Bó Cúailnge*, in which a horizontal tree lies at the centre of symbolism. According to this myth, the tree is a barrier which must be passed using an army tank to reach the queen *Medb*. As knight *Fráech* fails, he is sent back to fight *Cú Chulainn* who is bathing in a river. The story ends with *Fráech* being drowned in the river during the fight. Olmsted argues that because of the limited space on the surface of the object, the river is depicted as a container/tub – however, the snake in the scene can be a reference to water.

Maumenés (2016:352) connects the idea of rebirth and reincarnation with the cycle of a year. The horse soldiers represent the four seasons, and the way the engraving depicts them in twos actually illustrates the light and the dark seasons. Furthermore, the helmets represent specific festive occasions during the year. Maumené also highlights the fact that the horses and the soldiers together have three legs, which might symbolise the three lunar months of each season (12 lunar months per year equates to four horse soldiers). The standing dog symbolises, according to Maumené, the connection between the world and the other world. The total number of 11 soldiers (including the one drowned/baptised) represents one solar year consisting of 12 lunar months and 11 days. This puts the cauldron in the context of being a calendar representing time and the movement of the celestial bodies.

Another central interpretation concerns the tree. Because of its corporality (lying as a delimitation between two worlds), it can be read as a line between lower and higher worlds. In the engraving, we see the foot soldiers marching in the lower world, towards the god-like figure to be reborn into the higher world. These new bodies are led by the decorated snake, symbolising the transformation from lower to higher worlds. All this bears evidence of a practice driven by the idea of rebirth and reincarnation (Kaul 2009:46).

The god-like figure exists, beside the Warrior plate, on two other plates found at the same site together with the Gundestrup cauldron, indicating, from their motifs, a clear water connection. In relation to this, Olmsted (1979: 182) advocates the theory that the plates should be read from left to right, starting

with plate C6573 and ending with the Warrior plate. This is a metaphor for the celestial movement in which the gods, and animal figures, moved clockwise on the scene, towards the right.

The narratives about serialities in social practices and world views also involve movement being *both* circular and linear. The nomadic subject within the bog-body is moving around in the liminal space, as well as having an intentional linear idea of moving toward the post-liminal phase and transformation. The seriality in human practises is also characterised by a circular idea of birth, death, incarnation, and reincarnation – illustrating a metaphor of a wheel slowly and simultaneously moving forward and making a circle.

What we see is how the Warrior plate has an interactional relation with both humans and bogs. This hints at a practice in which humans approach death from a circular perspective and the bog holds a vital role. There is a deliberate ontology behind the decoration on the Warrior plate (and the cauldron as a whole), implying the idea of reincarnation. However, this transformation cannot take place without the bog as an actant and collaborator between the living and the dead. This is specifically illustrated through the horizontal tree separating the dead soldiers from the symbolic new-born ones. The bog is also explicitly illustrated by the cauldron held by the God-like figure: the cauldron might be interpreted as a micro-bog, in which the dead soldiers need to ‘drown’ to be reborn as stronger and better soldiers.

Result and Discussion

The overall result from the analysis shows how burial practices incorporate bogs in similar ways: as a living actant that becomes a collaborator rather than remaining as just a symbol. Employing Lévi-Strauss (1955), Braidotti (2002) and Barad (2003, 2007), both the Warrior plate, and the Eutin figures correspond well with *mythemes* and nomadic subjects. Although *mythemes* can be considered archetypal phenomena, the analysis still presents a diversity in the burial practises in relation to the two artefacts. Despite the difference between the artefacts in respect of appearance, as well as purpose (incarnation and reincarnation), they still share a common denominator: *movement*. Reconnecting with the nomadic subject (Barad 2003, 2007; Braidotti 2002), both movement and actancy are part of a ‘living’ phenomena. By moving the focus from burials to birth, or from death to life, bogs symbolise a living movement and actant. They become the ‘spokes-person’ for the members of a community and their ontology and practices. As such, it is inevitable to avoid interaction and conversation between humans and bogs, which will be further discussed in the following section.

The Eutin Figures and the Warrior Plate

Looking at the Eutin figures, we see clear indications of such interaction as the figures are depicted as two humans. Especially their facial expressions are (in all their simplicity) indications of conversation – a conversation that involves both words (the open mouths) and more implicit gestures and expressions (their wide-open eyes). Another form of conversation is represented on the Warrior plate. In contrast to the Eutin figures, the Warrior plate is richly decorated with details from various influences, creating an almost hybrid-like practice involving both celtic- and hindu-oriented elements. Nevertheless, despite the widespread range of ideas, the Warrior plate narrates a story of a relation between humans, death, and bogs.

Although bogs are dated to different times (being 100 to 250 years apart from each other), the different artefacts still share the same ontological idea of movement being vital for the dislocation of death into life. Bogs also represent symbols for water, which is rather explicitly articulated on the Warrior plate. The idea of reincarnation appears as logical since water is closely connected with birth. However, it is also closely connected with death – as in drowning.

The Eutin figures do not articulate water as explicitly as the Warrior plate. The fact that they were placed lying in the bog could indicate their symbolic relation to water. They might have been placed in the bog to bless the community with good harvest, health, trade, and harmony in social interaction. Moreover, the theme of drowning appears to be absent in the Eutin figures. Instead, the incarnation indicates life, as in allowing perceptions, ontologies, and ideas to dwell inside the bodies of the figures. Bogs as actants can, in this context, be interpreted as ‘living’ collaborators as water bodies, similar to the case of the horizontal tree on the Warrior plate. Similar to the tree, by being placed horizontally below the surface of the bog, the Eutin figures might have become a line between worlds – our world and the ‘otherworld’.

Bogs should not be considered as primarily ‘graveyards,’ but instead suitable locations for connecting life and death. Bogs as living bodies (bog bodies), incorporate universal *mythemes* such as life-death, body-spirit, and the earth-otherworld. As mediators, they serve to unify nature, materiality, and culture. Through movement and water, they do not explicitly point at burial practices in the sense of burying dead individuals, but rather indicate bogs as suitable places for depositing, and conducting ceremonial rituals. As a result, bogs become *collaborators*.

In the context of diversity, bogs become living actants as they connect various influences of culture, beliefs, trade connections, and social contexts. Both artefacts were deposited in bogs, reflecting human worlds, thoughts, intentions, and actions. Thus, through the lens of the bog, we see not only these reflections, but also the interaction between ontologies, practices, and the bog. In this view, we can imagine humans having a *conversation* with the bog – a conversation with emotional charge working two-ways: just as humans imprint bogs with certain emotional charge, the bogs, living actants, ‘respond’, and exchange emotional charge with humans. This movement illustrates the floating and constant connection between nature and culture.

Thus, an important aspect is how bogs expand beyond the burial context. Burials in bogs cross a threshold and gain a ‘new’ life. This ‘new’ life turns actual human or animal bodies into diverse symbols of harvest, war success, and beneficial trades between tribes, communities, or other groups.

The floating movement between emotional charges executed through rituals – imprinted with myth, magic, spirit, and power – makes the bog a ‘body’ which meets, and interacts, with other bodies. We can therefore use bogs as a lens reflecting human worlds, thoughts, intentions, and actions from a broader perspective. Bogs are indeed a naturally suitable location for burials and ritual ceremonies, but they are also transparent windows where abstract ideas based on ontological perceptions *and* concrete practises flourish. These practises can be interpreted as two different narratives: incarnation and reincarnation. While the Eutin figures tell a story of death, conception, incarnation, and movement *within* the body, the Warrior Plate tells a story of death, transformation, reincarnation, and movement *outside* the body. This relation, however, between *within* and *outside* cannot work without the bog, indicating a circular relation between humans, bogs, and practises.

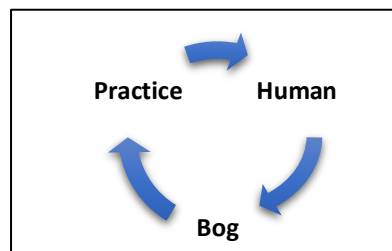


Figure 5. *Circular relationship between humans, bogs, and practises.*

The circular movement illustrated above in Figure 5, is a clear indication of how we can use the two artefacts to expand our knowledge of the interaction and *collaboration* between humans and nature. From the model above, we can also understand the complexity of bogs, being both a suitable place for deposition, conservation, and burials, *and* a living ‘body’. As such, bogs become living co-workers and actants for the central *mythemes* of life and death. The circularity is furthermore an indication of how life and death not necessarily should be seen as binary oppositions, but instead working together in the relational circle of perceptions and practices.

Conclusion

By using two different artefacts, from two different locations and time periods, this paper identifies bogs as central to the practices concerning death, life, and after-life. The fact that the Warrior plate is dated 100–250 years later than the Eutin figures indicates that bogs maintained and even increased their significance from pre-Roman Iron Age to Roman Age - in which we encounter an increasing use of so-called ‘bog-bodies’ in Northern Europe and Scandinavia (Gabrielsson 2020).

Recapitulating the initial research questions, bogs are indeed important for perceptions of liminality, passage, and transformation. By using bogs as ‘lenses’, we understand that burial practices involve a greater context of practices, rituals, beliefs, and social interactions. The narrative told by the artefacts involves diverse approaches to burial rituals, pointing at the multidimensional function of bogs. It is central in these narratives that bogs are not only suitable spaces for deposition of bodies and other objects. They act as *living* collaborators, implying their function as living actants. As such, bogs embody human’s ontologies, rituals, and perceptions of death – and life.

The approach advocated by this paper is an attempt to put bogs in another context, by introducing a hybrid dimension to the relation between humans and bogs. Through circularity, we do not only identify interaction between humans, bogs, and practises, but also how this circularity gives birth to ‘new’ interactions and perceptions. We should therefore consider this paper a brave attempt to broaden the understanding of human’s interaction with nature from a multifaceted perspective, in which movement, water and circularity hold vital functions. Death becomes Life, and the key to that transformation is called bogs.

Find the wheel of transformation.

Supercomputer boom!

Connection.

(“Quantum” Zeneli and Lithvall 2016)

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A Road to the Afterlife: Roman Influences on Late Iberian Funerary Practices

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Abstract

Previous research into funerary archaeology in late Iberian Contestania has revealed similarities regarding the chronology (from the 1st century. BC), their location (always close to sites with a marked Roman component), and the presence of Iberian painted pottery in their grave goods. Based on these elements, I offer a series of reflections on the Late Iberian funerary remains, its possible relationship with the definitive Romanisation of Contestania (south-eastern Spain) and the resulting material diversity that likely resulted from this process.

Keywords: funerary practices, Iberian, Contestania, Romanisation, painted pottery

Introduction: The Archaeology of Death in the Iberian World

Necropolises have sparked the interest of researchers since the earliest studies conducted on Iberian culture at the end of the 19th century. Initially motivated by the well-preserved materials recovered from the funerary context and their aesthetic value, necropolis excavations started in the late 19th century. Yet, the motivation behind these excavations was rarely about recovering contexts or explaining the implications of the funerary traditions for past societies. These early studies mostly served to fill the public and private collections in Spain with pieces recovered from the sites (Ramon 2010: 841-842). Unfortunately, these early works resulted in the loss of valuable archaeological contexts, as well as the looting and plundering of the necropolises. The drive behind these practises was called 'necro-centrism' (Ramon 2010: 841; Verdú 2015: 34), a concept in which the graves were seen as treasures to recover, regardless of their archaeological significance. This *ethos* was perfectly summarised by Lorenzo Abad in his work about the archaeology of Alicante at this time: 'archaeology was understood mainly as the recovery of showy materials and as the confirmation of literary texts' (Abad 1984: 201).

Nevertheless, the study of Iberian necropolises progressed in tandem with the development of archaeological research in Spain, with discoveries of enormous importance, such the Lady of Elche in 1897 (Albert and Rouillard 2020) and painted Iberian ceramics (Paris 1903-1904), to the archaeology practised both within and beyond the peninsula. These events increased interests in Iberian culture and allowed for the characterisation of Iberian art (Abad 2007: 13), as well as the distinction of Iberian culture, understood as an artistic and cultural manifestation that was different from that of the Classical world, albeit with substantial contact with other Mediterranean cultures.

Necropolis excavations in the Iberian area maintained their importance throughout the 20th century. Despite the setbacks caused by the Spanish Civil War and the dictatorship between 1939 and 1955, the steps taken in the research of the Iberian funerary world in the second half of the 20th century undoubtedly contributed to the consolidation and improvement of the methods used in these studies. Through spaces such as the Southeast Archaeological Congresses (later called National Archaeological

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Congresses), the debate was revitalised and gained new impetus, including the first stratigraphic dating, the inclusion of typologies, and the sharing of data from the sites (Beltrán 2007). This whole climate contributed to discarding the previous 'pan-Celtic' theses (Ruiz 2016: 51) that denied the entity of the Iberian culture and considered the Celtic populations from Europe the predecessors of the population of Hispania. Thus, Iberia was accepted as an authentic culture formed by a group of peoples who settled on the Mediterranean façade of the Iberian Peninsula. In addition, the other Mediterranean cultures of the time had a decisive influence on the evolution and development of Iberian cultures, as can be seen in the monographs on the subject (Aranegui 2012).

In the late 1960s, researchers began to assess the funerary record with a broader perspective, overcoming the descriptive and classificatory paradigm that had previously predominated in Iberian studies. The inclusion of different perspectives, in the wake of the New Archaeology or processual archaeology, led to an understanding of the funerary phenomenon as a more complex material manifestation of society. These perspectives adopted horizontal studies (related to spatial organisation, scales and landscape), vertical studies (dealing with issues related to social hierarchies) and a mixture of both studies (D'Agostino 1987: 49).

On the theoretical level for the archaeology of death, the New Archaeology approached funerary contexts as manifestations of the deceased's social status and position in life. Therefore, making a comparison between different graves, and the patterns manifested in them helped archaeologists with understanding the structures of the society in which the deceased lived, as well as the social hierarchy of that society (Bartoloni 2002; Parker Pearson 1982, 1999). The funerary contexts, thus, are the products of an intentional deposition and therefore regulated by specific social guidelines (Vicent 1995). They are generated by the behaviours, rites and practises of the culture people belonged to and lived in before they died, hence, they evidence a cultural act (Abad 2003b).

Post-processual school, on the other hand, relied on multiple theoretical and procedural approaches when evaluating funerary contexts. Besides the analysis of the organisation of society, vital behaviours, beliefs and occupations, post-processualists also gave importance to the study of ideology and mentalities (Vincent 1995: 24-29). The processualist approach was thus criticised for assuming that human behaviour could be governed by universal laws. In contrast, post-processualism emphasised that an individual could be the agent of their behaviour, without being necessarily bound by the so-called universal patterns. Regarding the theoretical position on the archaeology of death, post-processualism asserts that ritual symbolism is not a manifestation of power relations, but an idealised expression of them. According to this view, the death of an individual can serve as an ideological scenario that helps to maintain the inequalities already present in society. Thus, death would serve as a vehicle of social warning based on the power relations present among the living (Parker Pearson 1982).

In the 21st century, the archaeology of death as a subdiscipline has been consolidated with broader perspectives which assist archaeologists in studying necropolises. We now have better tools to understand the archaeological record and multidisciplinary teams that can obtain a diverse set of data about sites via surveys or excavations. In addition, archaeology is constantly critiquing and evolving, forced to improve and reconsider how we obtain information from past societies. Diversity is a perspective of analysis that helps us to overcome preconceived ideas as well as to better approach the reality of social relations. By utilising this perspective, the next section will discuss the ways in which the study of Iberian necropolises informs our understanding of Iberian culture, as shown in the recent studies on funerary spaces in Contestania, such as the one carried out for the necropolis of l'Albufereta (Verdú 2015).

The 1st Century BC Funerary Record: Problems and Possibilities

In this section, we will focus on Iberian necropolises and funerary culture, in the Late Iberian Period, specifically the 1st century BC. This period has been frequently revisited by Iberia researchers in recent decades to explain the assimilation process through which the Iberian society became integrated into the Roman provincial sphere (Abad 2003a; Bayo 2019).

In the 1st century BC, the southeast of the Iberian Peninsula witnessed a gradual adaptation of local populations to the new dynamics imposed by Romanisation. In the last decades of the 1st century BC, the small *oppida* (Iberian fortified towns) near the coast swelled in terms of population size as a result of the expansion of Roman municipalities and colonies (Sala *et al.* 2014: 79). The research uncovered that these *oppida* were Late Republican fortifications erected by Italic soldiers following the confrontation between Sertorius and Pompey in Hispania (Sala and Moratalla 2014). As a result, the history of Contestania and the interaction between the Roman and Iberian populations radically changed in the 1st century BC.

Taking this historical context into account, the study of the 1st century BC necropolises in Contestania provides an opportunity to analyse how these processes of Romanisation and cultural exchange can affect the region, as burial sites provide substantial evidence for the analysis of processes of interaction (Jiménez 2006: 68). However, it is very difficult to derive from the archaeological record whether we are dealing with a series of burials of Iberian or Roman Republican populations since in both cultures the funerary record is quite similar. For example, grave goods are present both in incineration ritual and in burials where ashes are deposited in a cinerary urn. Besides, in these two cultures, the burials are accompanied by ceramics which are not only linked to the consumption of certain food, or drink as well as ointments, but also used as funerary vessels for children in both contexts (Fuentes 1992).

Archaeological research in Contestania has traditionally supported the idea of an Iberian ethnic link in the late necropolis based on the presence of painted pottery in the graves, either as a part of the grave goods or as a cinerary urn, usually in the style known as Ilicitan I (Tortosa 2004, 2006). This production is characterised by its baroque composition with a large presence of plant and geometric elements, as well as representations of birds, wolves, and some human figures, which in some cases have wings. The use of painted Iberian pottery as grave goods in these contexts led researchers to consider these as of indigenous character and, since these potteries were made and mainly found in sites from Contestania. In this way, their presence in the cremations has served as an ethnic indicator of the person cremated, as interpreted in the five tombs with painted pottery from the necropolis of Quart-Cañete in the Roman colony of *Valentia* (García-Prósper *et al.* 2002-2003).

However, it is important to note that the differentiation between ‘archaeological cultures’ is no more than a distinction made by researchers. Archaeological cultures have been established based on the pooling of the materials present in a region, defined on the presence or absence of different objects in them. Therefore, we must be critical when trying to define ethnic groups solely based on the material aspect (Jiménez 2008: 71; Shennan 1989). Furthermore, we must understand that the ethnic reality in the 1st century BC Contestania was most likely hybrid and changing. The movement of Italic armies, traders, and civilian populations of heterogeneous ethnical composition, which were displaced by the armies, could have transformed the local population substratum, resulting in a society with an amalgam of ethnic nuances. However, this apparent diversity should not necessarily mean a distinction between the community members as we perceive it today.

Re-analysing these archaeological sites through a different lens can help us to avoid certain interpretative prejudices that fail to address the complexity of the cultural, social, and political

processes that took place in Contestania during this period. The current research focusing on the materiality and sites of this period offers an opportunity to reflect on this problem in the context of Contestania. These studies can also be used as comparative cases to understand this period in other parts of the peninsula.

The 1st Century BC Necropolises in Contestania

The funerary space of the Late Iberian Contestania includes a series of interesting necropolises which can tell us about the Romanisation of the southeast of the peninsula as they are associated with the main scenarios of transformation in Contestania (Figure 1). As pointed out above, these late-period necropolises mutually share painted Iberian pottery of the Ilicitan style as grave goods. In this section, I will present three areas: the necropolis of Poble Nou (la Vila Joiosa), the necropolis of Fapegal (Alacant) and the northern necropolis of Tolmo de Minateda (Hellín). These three necropolises are considered to be Iberian because of the ceramics of their grave goods but are located in areas of the region particularly affected by romanisation. Revisiting their contexts in the light of the new data we know about Iberian culture at this time, can help us to learn more about the process of assimilation of Iberian culture into the Roman world.

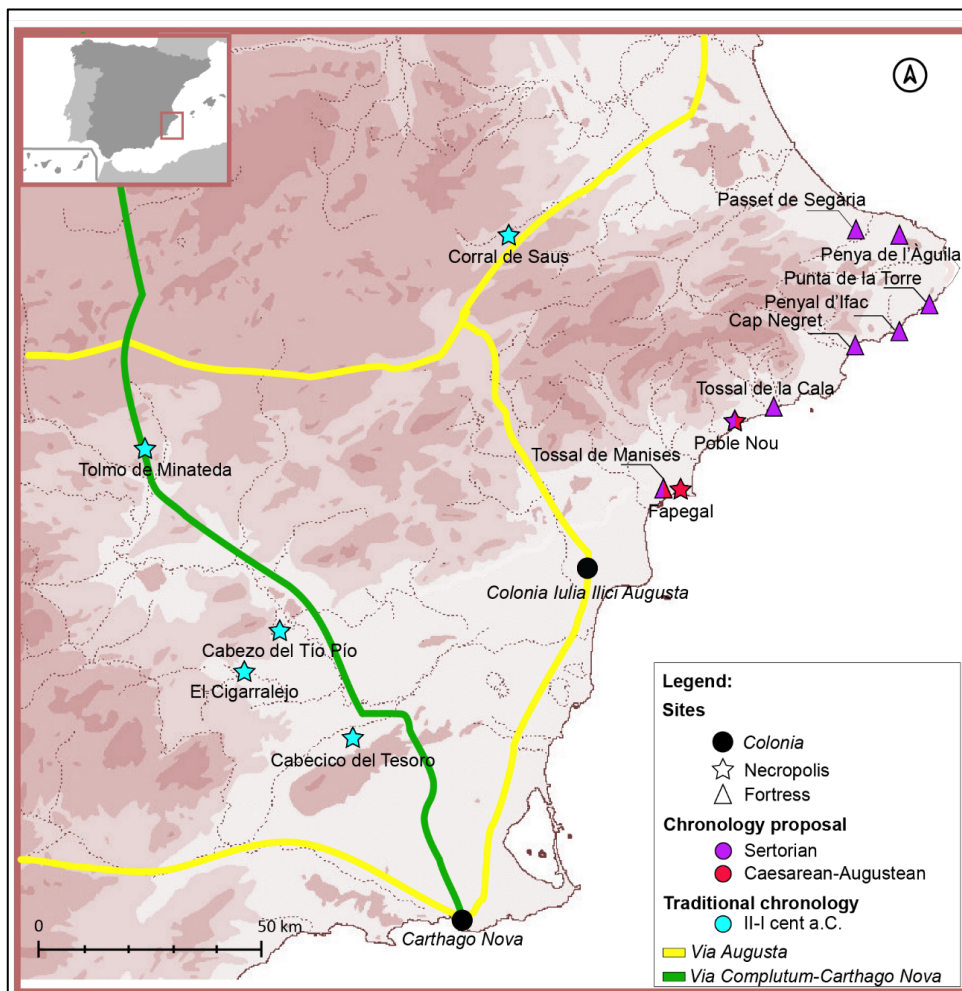


Figure 1. Location of the necropolises, colonies and fortresses of the 1st century BC in Iberian Contestania (Image credit: Author).

Poble Nou (la Vila Joiosa)

The necropolis of Poble Nou is located on a road that connects the ancient oppidum of Allon (beneath the city centre of la Vila Joiosa) to the site of Tossal de Manises-*Lucentum*. This necropolis is interpreted as a funerary space used from the Early Iberian Period into the Late Iberian Period (Espinosa *et al.* 2014: 116). However, the discovery of a V-shaped trench (*fossa fastigata*) during an urban expansion in la Vila Joiosa, which yielded the evidence of a Roman military camp used during the Sertorian wars and a Roman laundry (*fullonica*), has revealed that the necropolis of Poble Nou also had a clear Roman presence in the 1st century BC. This perimeter trench was related to a military camp (Espinosa *et al.* 2014; Moratalla *et al.* 2018). Besides, near this necropolis, the archaeologists found the Roman coastal sanctuary of La Malladeta, where a major remodelling was carried out in 100 BC – it was not abandoned until AD 80 (Rouillard *et al.* 2014) – adding another nucleus of Roman influence to this necropolis during its late phase.

The archaeological excavations conducted during a road construction uncovered two main periods of activity connected to this necropolis: an early phase, between the 6th and 4th century BC, and a late phase, from which most of the burials come, and a later phase dated to the end of the 2nd century and the 1st century BC. Yet, evidence shows the use of the site also continued occasionally until the Late Roman period (Espinosa, Ruiz and Marcos 2005).

The second phase is the one that interests us for the case study of this paper. Tombs found here are examples of cremations in secondary deposits with a discrete marking (sometimes a flat slab or small accumulations of stones). The cremations were placed inside painted *kalathoi* that functioned as cinerary urns and were accompanied by grave goods consisting of Campanian pottery, thin-walled pottery and oil bottles (Espinosa *et al.* 2005; Pérez 2011). All the *kalathoi* were decorated in the Illicitan I style or a variation of it, the ‘Levantine symbolic style’, defined by M. Pérez based on a study of 22 tombs from this necropolis (Pérez 2011; Pérez 2014).

The Campanian ceramic plates that covered the *kalathoi* of these cremations show that the chronology of the pieces corresponds to the middle of the 1st century BC,³ making them contemporaneous to the Roman period in the area.

Fapegal-Parque de las Naciones (Alacant)

Located to the north of the city of Alicante, the necropolis of El Fapegal-Parque de las Naciones exemplifies a funerary site associated with the Late Republican fort and later Augustan *municipium* of Tossal de Manises-*Lucentum*. Data recovered from two excavation campaigns that took place between 1990 and 1992 and between 2004 and 2008, is not yet published. Yet, a publication on the amateur excavations at the site (Rosser 1990-1991), and a general report written by R. González (2001: 376-383) offer interesting results.

Among the assemblages recovered, the presence of Iberian painted pottery in the Illicitan style, deserves particular attention as these verify the continuation of the Iberian cultural signifiers in this period (Rosser 1989: 234-235). It is apparent that this pottery was used as a cinerary urn in the tombs 2, 3 and 4. In particular, the plate of *terra sigillata* found in tomb 2 and the plate of the same production (Drag. 17B) found in tomb 3, allow us to date these cremations to the first decades of the 1st century AD.

³We thank the Vilamuseu, especially Antonio Espinosa and Amanda Marcos for their collaboration and allowing us to review these materials.

Furthermore, the plate from an incipient *terra sigillata* found in tomb 4, is interpreted as a lid for the Iberian *kalathoi* used as a cinerary urn.

Despite the lack of data, this necropolis offers a very interesting scenario due to the materials that were found in the tombs and the location of the tombs in the vicinity of a Punic fort which was converted into a late Republican bastion at the time of the Roman civil wars (Olcina *et al.* 2020). The presence of cremations and the Ilicitan painted pottery shows that the region was occupied by a population whose material culture indicated a transition from Iberian tradition to the Roman, although some items from Iberian production are still present at the site.

Northern Necropolis of El Tolmo de Minateda (Hellín)

The last funerary space analysed in this section is the northern necropolis of Tolmo de Minateda, which is located at the foot of the northern slope of the hill in the municipality of Hellín (Albacete). This is a funerary space of great interest, with several cremations linked to staggered monuments that can be dated between the 2nd century BC and the 1st century AD (Abad 2003b). Among this series of cremations, we would like to draw attention to a specific burial, No. 43 (Sanz 1997). It is a superstructure built with adobe bricks in the form of a stepped monument, with a square ground plan, and it is located on a stratum with numerous coals interpreted as coming from the funeral pyre (Abad 2003b). The urn is an Albacete-style painted Iberian pottery, a crater of the Ilicitan style (Tortosa 2006). It was found inside a *loculus* protected by a stone encasement and covered by an Iberian dish that resembles Lamboglia 5 typology.

Among the other finds, we also find an *oinokhoe* painted in the Ilicitan style (Abad and Sanz 1995), as well as another cremation in a caliciform urn with the same type of decoration, which were found on a boundary wall close to this burial. Associated with this space, the funerary stele of Helena Graeca (Abad 1996: 94-95) the testimony of a Greek *nomen*, was found which may have formed part of the top of one of the stepped monuments in this area. Based on this evidence, it is likely that the site included a funerary complex that could be dated to the last decades of the 1st century BC (Abad 2003b).

This funerary space chronologically corresponds to the Augustan foundation of the municipality of *Ilunum*, located in the same site and dated by the inscription found on the commemorative wall (Abad 1996). This data recovered from the northern necropolis of Tolmo de Minateda shows likely evidence of convergence and influence between the local population and the Italic groups.

Reflections on the Presence of Iberian Painted Pottery in Burial Sites

These examples indicate how the Iberian painted pottery that was used as cinerary urns in the necropolis of the 1st century BC, stands out as relevant funerary objects in a context of cultural and social change. The ambiguous interpretation of the late grave goods and, especially, the presence of local ceramic production has led researchers to consider the burial with a specific type of pottery as quintessentially Iberian, discounting other possibilities, such as contacts between groups or culture blends which might have diversified the pottery assemblage. This conception, together with the enduring theory that Ilicitan pottery was a genuine example of Iberian symbolism (Santos 2004), has convinced archaeologists for a long time to identify Iberian sites solely with symbolic materials. However, we must consider other factors before drawing solid conclusions.

Firstly, there seems to be a pattern indicating a relationship between these funerary spaces and the arrival of Italic populations in the surrounding area because all the 1st century BC necropolises emerge about the time the Roman presence shows itself in the region. For example, the evidence shows that, around this time, the Roman military established a camp at a municipium in the vicinity (*Ilunum* in the

case of Tolmo de Minateda). Moreover, these necropolises were located near a late Republican fortress (Fapegal-Parque de las Naciones). Therefore, there might have been likely cultural exchanges between the people who used these necropolises and those who lived closeby. However, the research into the Late Iberian period equates the 'Iberian painted vase' to Iberian burials (e. g.: Espinosa *et al.* 2005; García Prósper *et al.* 2002), even if these were found in romanised environments. Similarly, funerary urns that were used in cremation contexts – and were a 'swansong of Iberian culture' – were often interpreted as Iberian burials (Moratalla 2004: 915) with little consideration of potential cultural exchange between different populations.

Based on this view that relies on old classifications, we would expect to find Iberian painted vessels in all cremation cases. Yet, the site of *Portus Magnus* in Bethioua (Oran), excavated by M. Vincent in 1937, poses an exception to this rule, undermining the reliability of such classifications. The reports on this case (Balil 1956; García y Bellido 1954) present a case of inhumation – of an individual of an unknown sex – buried in lateral decubitus. The body, facing east, seems to be buried in a ritual of marked *punic filiation*, which is considered common in that area (García y Bellido 1954: 251). The grave goods (two dishes of Italic *terra sigillata*, a Dressel 2 lamp, and *oinokhoe* painted in the Ilicitan I style) indicate that the grave dates back between 20 BC and AD 10, making this tomb a chronologically curious case. (Balil 1956; García y Bellido 1954). This case does not fit to the theory that associates late cremation and painted Iberian pottery, as it exemplifies an inhumation that is not typical to the Iberian Peninsula. Thus, we must rethink the association established between this type of material and late funerary spaces and incorporate new perspectives that avoid generalisations and confining our views into ethnic assignments and historical interpretations. Incorporating diverse interpretations is the way to make sense of archaeological dilemmas and complex relationships between societies in a more open and multidisciplinary way. Contact between groups, especially in times of great political, social, and cultural changes, often manifests in the material culture, which might show diverse variations, resulting from outside cultural influence.

We observe patterns that show Ilicitan painted pottery in environments where Iberian societies and their landscape show a transformation induced by the increasing Roman influence. It suggests that these potteries played an important role in the material expression of the hybridisation between populations. In addition, several aspects make the unique painting production more than the mere decoration of ceramic vessels. Although this pottery is made following the traditional patterns and techniques of Iberian culture, with very refined, well-fired orange wares, painted with tones ranging from red to sienna, obtained from iron oxide (Abad and Sanz 1995), it has some peculiarities that distance it from the so-called 'Iberian tradition'.

Recent research has provided extremely important data for the understanding of this production since many of its forms imitate pieces of tableware and the late Roman-Republican metallic repertoire (Ronda and Tendero 2014), a framework that is further analysed in the author's PhD research. Moreover, a distinctive feature of this production is the imitation of certain motifs. Although there are precedents in Iberian ceramics in terms of formal imitations of foreign models (Bonet and Mata 1988; Sala 2009), in no case did these imitations attempt to copy the decorations shown on the original pieces. The case of the Ilicitan productions is different, as shown by the identification of the goddess Artemis Bendis (Ronda 2018), the representation of Octavian in a form that imitates a cantharus (the two-handled cup used for drinking) (Ronda and Tendero 2015; Ronda and Tendero 2014) and of a walker wearing a *paenula viatoria* (Martínez and Sala 2021). These examples indicate how the Ilicitan I style pieces demonstrated some aspects of the Roman beliefs and culture on the late Iberian pottery, generating a new form of

expression through their decoration, which shows the intensity of the cultural changes through a highly original material expression.

Although the cases have been briefly presented, it is important to emphasise the exceptional nature of the data that reveals the presence of ceramic production of Iberian tradition in a context imbued in the process of material Romanization of Contestania. These sites must be understood as a space of great historical and cultural value, as they are the material traces of the mixture between the remains of the Iberian society and the incipient Roman provincial culture. In these cases, this is reflected in a context as significant as the funerary context.

We can therefore accept the particularity of this painted ceramic production, which is found in a space and time full of political and cultural effervescence. On the one hand, the production is maintaining its traditional techniques and motifs present in the traditional technological heritage. On the other hand, it also mixes motifs and scenes drawn from the Italic sources, who most likely came to the region during the battles of the Sertorian and Pompeian-Caesarean civil wars and then settled down in newly founded colonies and municipalities. From the pottery decorations, we can partially reconstruct the collective imaginary of a society that is reformulating itself.

In this sense, it should come as no surprise that some of the painted ceramics present in the tombs could also be reinterpreted from an Italic perspective, contextualised with the environment in which they were found. Only further archaeological research and the appropriate implementation of strategies and methods derived from iconography can help us to uncover more information about these scenes and whether there is a special selection of scenes or motifs to be used in funerary contexts.

Conclusions

Based on the selected examples, it is apparent that the Late Iberian funerary world presents a highly complex scenario of sociocultural change due to the confluence of identities and cultures that were present in the Iberian Contestania, as a result of the Roman civil wars in this area of the south-east of the Iberian Peninsula.

Roman civil wars meant not only battles but also the movements of troops thus causing a mixture and coexistence of different cultures. As a result of these relations, adaptations arose that created a cultural 'third way', not purely Iberian, not yet purely Roman, which is reflected in the funerary record of the Late Iberian necropolis of Contestania. This might be explained by the potential cultural contact between the indigenous population and the Italic populations that arrived here after being displaced by wars. I suggest that the funerary spaces traditionally considered as Iberian cannot be differentiated from those that would correspond to the late Roman-Republican period in Contestania. The evidence shows that not all burials with painted Iberian pottery in their grave goods are directly related to the presence of an Iberian individual in the grave, as the case of Portus Magnus demonstrates. Furthermore, research into Iberian pottery in the Ilicitan style shows the existence of both formal and decorative approximations to the Roman world. This diversity found in the response to death gives us an idea of how they adapted to these cultural changes.

For all these reasons, we can conclude that ethnic identifications in areas of cultural confluence must be assessed with caution. In recent decades, archaeological research, through the revision of sites in the light of new chronologies and materials, has managed to refine and contextualise archaeological data within a larger historical framework. The events that took place in the southeast peninsula, now show us nuances to previous interpretations. Furthermore, a holistic archaeological study, involving consideration of gender perspectives, spatial distribution at different scales and iconographic studies,

can allow for reviewing the elements of the funerary sphere from diverse points of view. These new studies can help us better understand the concept of materiality in the last stages of what we know as Iberian culture.

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Session 6

The 3Ds: Diversity, Dissemination and Disclosure of Heritage

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Keywords: diversity, dissemination, disclosure, heritage, archaeology, digital heritage, cooperation, exchange, stakeholders

Introduction

Diversity, Dissemination and Disclosure are important concepts for any scientific research and its audiences. The same is true for archaeology. In a globalized world, diverse and democratic knowledges are needed to keep science relevant for both scientists and broader society (Fisher 2009). With this in mind, we set out to create a space to share different ways of understanding archaeological research and shed a light on its outcomes.

The aim of this session was to identify and share new ways to spread archaeological and heritage research. Nowadays, research is about more than just developing interesting and important findings; it is also about the ways we share it with stakeholders and communities. A more participative archaeological project leads to more diverse heritage engagements, and this is what we wanted to promote and share with our session: how researchers are making diversity, dissemination, and disclosure possible. Further, we wanted to ask how methods can be implemented in diverse sites and be adapted to different contexts.

Session Theme

We sought to engage researchers who use innovative and diverse ways of sharing archaeology and heritage insights, as well as knowledges and methods. One of the main themes of the session was the use of digital tools, which are a significant part of heritage and archaeological research, particularly in their ability to present the results to the stakeholders and communities (Vincent *et al.* 2018). All the contributions gave a great insight into different research topics within our session theme. For this reason, we consider that all of them deserve a mention, including the papers that did not end up in these conference proceedings.

Papers in This Session

Out of ten papers presented at this conference, five are published in this volume:

Luca Ottonello (University of Glasgow) and his presentation ‘Can Digital Technology Redress War Crimes Against Cultural Heritage?’ raised awareness on the heritage lost to war and how digital technology can help in the conservation and further investigation of this lost heritage.

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Ekin Berk Polat (Koç University) presented on ‘Living and Understanding Together: How Can We Foster More Informative and Inclusive Public Outreach at Göbekli Tepe?’ with a perspective of how TV and media can influence the audience and their perspectives on the cultural heritage of Göbekli Tepe in Turkey.

Sergio Larraurri Redondo (Instituto de Estudios Riojanos) with ‘The Way of St James: Diversity, Dissemination and Disclosure of Jacobean Heritage’ explains how the inclusion of different pilgrimage routes in the UNESCO World Heritage List have affected the cities and towns through which the routes go and the heritage of these routes.

Lastly, the organizers of this session have also included two papers:

Isaac Martínez Espinosa and Belén Martínez Pérez (Instituto de Estudios Riojanos) presented on ‘The 4-D in Archaeology: Diversity, Dissemination, Disclosure and *Diversión* (Fun). New Concepts in Heritage Teaching’, touching upon the work they have been carrying out to innovatively approach the medieval heritage of La Rioja (Spain) and to cater to people of all ages. We argue that the dissemination of our heritage is very important in childhood, and it is necessary to start engaging with it at this moment of life (Martínez and Martínez Pérez 2021).

Aida Loy (Leiden University) talked about the use of 3D models in conversations with different stakeholders of an archaeological site in Spain in ‘3D Models as Tools for the People: A Conversation with Stakeholders of the Hillfort of Coaña (Asturias, Spain)’.

It is our hope that these papers and presentations can be useful for those interested in the diversity, dissemination, and disclosure of archaeological and heritage research and that the results of this session can inspire new ways of understanding and working in these fields.

Acknowledgements

We would like to thank all the researchers for their participation and interest shown in the session. As well, we would like to thank the CASA committee for giving us the opportunity of organizing this session. Lastly, a special thanks goes to all the speakers who presented at the CASA 4 Conference, but are not published in this volume:

- Despoina Vasiliki Sampatakou, University of York
Trowels and Bones: Using Twine to Tell Stories about the Mycenaeans
- Ellie Graham, University of Aberdeen
3D Techniques: Disseminating Climate Impacts Through Archaeological Heritage
- Fridtjof Leemhuis, Norwegian School of Theology, Religion and Society
Redeeming the Dust: The Temple Mount Sifting Project and The Problem of Participatory Heritage
- Kirsten Huffer, University of Cambridge
A Middle Ground for Difficult Heritage: Commemorating Lynching via the Equal Justice Initiative’s National Memorial for Peace and Justice and Community Remembrance Project

- Yuxi Xie, University of Oxford
Learners, Players, and Pearl Divers: An Investigation of Pearling Activities in East Asia in the Context of Archaeological Virtual Reality Game-Based Learning.

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Martínez Espinosa, I. and B. Martínez Pérez. 2021. *Aproximación al Castillo de Davalillo en la Edad Media. Propuesta Didáctica Para su Divulgación en la Actualidad*. Logroño: Siníndice Editorial

Vincent, M., V. M. López-Menchero Bendicho, M. Ioannides and T. E. Levy. 2018. *Heritage and Archaeology in the Digital Age: Acquisition, Curation, and Dissemination of Spatial Cultural Heritage Data*. Cham: Springer

Can Digital Technology Redress War Crimes Against Cultural Heritage?

Luca Ottonello¹

Abstract

This paper will start by listing and analysing case studies of some of the major crimes against cultural monuments and institutions across the 20th and 21st centuries, giving a summary of what was lost and how. It will then move on to look at the different ways, proposed and adapted by both national and international associations to redress the damage that was done using digital means; or alternatively look at some available digital technology that could be used to aid in the analysed cases. The focus question will be whether these proposed solutions are viable and if they should be used according to interested parties like the local communities, the international cultural associations and the scientific community; or if alternatively, there would be no point in taking such actions due to the nature of what was destroyed.

The discussion at the end of this paper will turn towards concluding which solutions are the most viable for this conundrum, the reasons depending on the results of the analysis of both the crimes and the proposed digital technology to be implemented. At the same time, the paper will list the reasons why some solutions might not work in order to assess the overall effectiveness of such approaches.

Keywords: digital archaeology, historical games, Palmyra, terrorism, reconstruction.

Historical Background of War Crimes Against Cultural Heritage

There are countless instances where what could be considered ‘war crime against cultural patrimony’ took place. These instances are not just limited to the present but have been recurrent in history. The concept of war crime against personal property is recent and focuses on the concept that property destroyed illegally during a conflict needs to be replaced not only physically to its economic value, but also to its sentimental and cultural value. This was the initial intention at the International Geneva Conventions in 1949 (Frulli 2011): to stop the senseless destruction of cultural property during war situations, which was done by both sides during World War II. References to a concept of cultural patrimony are even more recent: it was first addressed at the Hague Convention for the Protection of Cultural Property in 1954 and identified the need for the protection of objects, cultural costumes and monuments of universal cultural value, paving the way for the concept of Cultural Heritage (Frulli 2011).

Given the recent development of cultural protection concepts, this discussion will be limited to the destruction that happened after 1954 of what is seen as cultural heritage and argue that all history from the beginning of time should be reconstructed or recovered using digital technology— another topic to be addressed in different research. Therefore, we will be exploring the destruction of cultural heritage since 1954 due to wars and how digital technology has been used to try and recover what was lost; at the same time, we will question if it should be done and how.

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Recent Tangible Cultural Destruction: Types of Structures and Objects Destroyed

There have been numerous crimes against tangible heritage in the last century. The first high profile case that kickstarted media coverage and the Taliban association to the destruction of cultural heritage was the two Buddhas of Bamiyan, in Afghanistan. These statues were dated to around the 6th century AD and were destroyed in February 2001 by the Taliban using dynamite, as the statues were taken to be heretical idols for the extremist group (Placido 2016).

More direct war conflicts also destroyed cultural heritage, a very prominent example being the Mostar during the Bosnian War, where part of the ancient town was destroyed and the famous bridge Stari Most (Old Bridge) was destroyed in 1993. This was alleged to be deliberate cultural property destruction and then later the bridge was rebuilt in 2004 (Coward 2010). This may cast a doubt over the need for digital reconstruction of monuments lost during wars, a topic better explored later in this paper.

The next type of cultural destruction due to war and terrorism was the looting of the cities of Adab, Hatra and Isin in Iraq after the 2003 invasion by the US, namely the looting of the National Museum of Iraq, where hundreds of thousands of artefacts were lost (Williamson 2010). The chaotic and uncontrollable nature of the situation can create further problems, especially if the physical records of such artefacts are lost, thus making it difficult to even remember their existence.

Many populations in several countries have been constant targets for historical destruction, driven by political instability and conflicts, such as for example the destruction of several Jewish synagogues (Andézian 2009). This last case links to yet another type of cultural destruction, that of religious texts, the most prominent example being the Aleppo *Codex*, partially damaged during the riots against Jews in Syria in 1948 (Tharoor and Maruf 2016). The abovementioned cases open discussion on the complications of digitally reconstructing and recreating such a type of destroyed heritage

The final type refers to the more visible and direct destruction of cultural property, an example being the largely destroyed city of Palmyra in Syria. This was a large-scale operation that resulted in the destruction of several monuments, buildings and museum objects by ISIS and Taliban groups, and among the lost lives was the site director, who was executed, making it a loss of human life and culture due to his extensive knowledge of the site (Tharoor and Maruf 2016). This effectively brought the destruction of cultural property to international attention. This paper will examine how this international attention rapidly yielded numerous physical or digital reconstruction projects sponsored by various countries and assess the types of digital solutions proposed in the process.

Review of the Digital Solutions to Redress Crimes Against Cultural Heritage

The sections above briefly introduced some of the crimes against cultural heritage that happened in the last decades. Acknowledging the list is not meant to be comprehensive, the criteria for choosing what to describe was mainly due to the applications of digital technology made on such objects or sites and the potential, due to their nature, of having some advantageous result. It is crucial to focus on the possibility of using digital tools to recover cultural heritage and not delve too long into what is and is not included in this list.

The first example, the Buddhas of Bamiyan, is the perfect starting point to explore one of the most used tools in contemporary reconstruction: photogrammetry. This technique involves taking several pictures of an object, normally in a 360 degrees fashion, using rotating plates or simply going around the object, and the resulting pictures are used to recreate digital objects which can then be displayed as a digital copy or even used for 3D printing (Westoby *et al.* 2012). Looking at this description, it is noticeable that the physical destruction of the Buddhas makes it impossible to get these precisely

positioned pictures. Even at the time when the Buddhas were still there, such a feat would have been very difficult.

Nevertheless, a group of scientists did develop a technique to reconstruct the Buddhas with photogrammetry and it worked as follows. The team dealing with the reconstruction identified three separate sources of imagery that would have solved the issue: first, they took some clear images from the internet showing the sides of the Buddhas that were detailed enough and aligned enough to give an approximately clear image. Second, they then identified some images taken by a tourist between 1965 and 1969, which were added to the previous image list. Finally, the team used three metric images taken by Professor Kostka from the Technical University of Graz (Zou and Unold 2003). Using a mathematical algorithm to combine the different size images, the team recreated an exact match to the original by simply joining all the images in a point cloud in the photogrammetry software; this was then imputed in a milling machine (an early version of a 3D printer) and a scaled reconstruction was recreated to be used for a museum display (Grun, Remondino and Zhang 2004). The above example shows that photogrammetry has the potential to solve many problems in the reconstruction precision of some documents. With the option of using random pictures from the internet to do so, the possibilities of such a tool to be used to regress criminal damage on cultural heritage are quite high, but there are other factors to consider. For example, one concern is the willingness of the local population to emotionally accept a reconstruction.

The next example was the destruction caused in Bosnia, which saw the ancient bridge of Mostar destroyed and then later rebuilt. This is a difficult case, because the people suffered the loss of the actual bridge and the aim of the faction destroying it was to demoralise the population by allegedly committing an act of deliberate cultural and physical history destruction (Coward 2010). This example was not placed in this paper as part of the list of problems to be solved by digital technology but instead as an example of a property that would not benefit from such a treatment. This is because there is not enough research done on the emotional impact resulting from the destruction of cultural objects.

Digital technology can effectively reconstruct the bridge in all of its details. A similar type of work was done in Bosnia, on the town hall of Sarajevo, using 3Ds Max software, which is used to create objects to a level of detail that can span from cartoonish to hyperrealism (Rizvić *et al.* 2008). This same method could have been used to reconstruct the bridge in Mostar, but in this case, the loss may not have been bound to the physical bridge itself. Making a copy of the bridge would not bring back the destroyed one to which the local population were emotionally and historically attached, shedding doubt on the effectiveness of digital reconstruction in mending local population's emotional scars connected to lost tangible heritage (Vecco 2010).

While the bridge has been physically reconstructed, the local population tends not to show the same attachment to it as they did for the destroyed one, for the reasons explained above. As such, digital solutions could be usefully implemented. A suggestion is to use video games and interactive narratives to study the users' emotional reactions, similarly to the exploration of digital Palmyra. This research could focus on emotions in reconstructions, but that goes beyond the scope of this paper.

The next example was the generalised looting of archaeological excavation sites and museums in Iraq after the US invasion in 2003 (Williamson 2010). These incidents are not isolated, they are common during and after wars. Another similar example could be seen in Egypt with the looting of several sites and museums during the Arab Spring (Knell 2011). The digital approaches used in museum collections and their preservation could be easily adapted to this situation. The amount of storage in museums worldwide has hit a historical high, and this means that more and more objects are kept out of sight

with little chance of seeing an exposition space (Kersel 2015). Sharing objects between museums has always been physically difficult, due to their delicate nature, and several solutions have been suggested using digital techniques, which involve objects' scanning and internet sharing.

A suggestion is the creation of a storage facility in a 3D environment, where objects are placed after being scanned and the general public can have access to. All that is needed are technological requirements, like a camera and a computer, which are quite common in museums nowadays (Wachowiak and Karas 2009). This, in turn, would create a situation where, if the artefacts were either stolen or destroyed like in Egypt or Iraq, museum curators around the world would be able to retain the original information about the missing objects and a physical cloned version of each that would be available either virtually or physically through 3D printing. The first challenge that would come into mind when using this method to preserve objects is the issue with copyright in museums. With such a system, the original site or museum that held the object would fundamentally give the right to copy its collections to any entity in the world able to replicate their artefacts, this would theoretically present problems for copyright law (Crews 2015).

The above is a very difficult problem to address, since one would have to balance the benefit of ensuring the conservation of the object by holding its replicas around the world, while at the same time risking losing control over the ownership of the object's image and interpretation. Such situations would not only impact the financial survival of the museum that owns the artefact, but, returning to the problem of authenticity, the emotional and cultural attachment to these replicas could be problematic.

The next cases of cultural heritage mentioned were the destruction of Jewish synagogues and the partial destruction of the *Aleppo Codex* (Tawil and Schneider 2010). The first destruction could be addressed just like the Buddhas or the bridge in Bosnia, with the same results previously mentioned. However, the *Codex* would involve a different set of problems for digital technology. In order to redress the damage done to the *Aleppo Codex*, the only viable solutions would be either a photo-based reconstruction or, if not available, another technique used previously on the Dead Sea Scrolls, in particular the En-Gedi scroll. The scroll was put through a process that allowed it to be read regardless of the condition and damage, and was performed through several stages (following Seales *et al.* 2016):

- Volumetric scanning, or taking several scans using different digital techniques to obtain the best-detailed scan,
- Virtual unwrapping, that is, taking the scanned scroll and unwrapping it from the rolled state without damaging the physical version in the real world,
- Segmentation, or dividing the closely 'glued' fragments of the scrolls, making it possible to distinguish the separate layers that at times are not visible to the human eye,
- Texturing, that is, obtaining the original colour and brightness of the object, and distinguishing the writing on it,
- Flattening the curved surfaces caused by deformations,
- And finally, merging and visualising, which means putting all the layers together.

The entire process develops through digital technology and the only part that potentially has a physical interaction with the object in question is the scanning; this in the case of the *Aleppo Codex* would in theory allow the text to be recovered in parts, where it was either damaged or burned, but only if it had been scanned prior to its destruction. Therefore, in the case of war crimes performed on objects such

as this, there is a partial hope of recovery but completely dependent on the extent of the damage, previous safeguarding work, and in these cases a full recovery would not be possible regardless.

The last case study analysed is one of the most recent and introduced the largest number of digital applications out of all of them. The case of Palmyra in Syria, partially due to the political situation and the international journalist cover that it received, was the most publicised instance of a war crime against cultural heritage. The case involved mainly Russia (as the supporting ally that allegedly liberated the town) dedicating many resources from the State Hermitage Museum to develop a method of recovery of the destroyed heritage (Piotrovsky 2016); Italy, dedicating their own digital resources and methods to the recovery; and the UK joining forces with Italy by mainly providing international news coverage (Voon 2016). A particularly detailed photogrammetric project, called the Arc/K Project, was aimed at reconstructing Palmyra virtually using several freely available tools and bringing together experts in the field who would contribute to the project based on recovering, at least virtually, what was lost (Arc/K Project 2018).

Going through the initiatives in the mentioned order, the Hermitage Museum adopted the largest number of digital methods to recreate parts of Palmyra, one of the projects being the creation of approximate 3D models of some destroyed buildings: the Temple of Baalshamin, the Tower Tombs, the Temple of Bel, the Triumphal Arch and the statue of Allat (Al Jazeera America 2016). Once the approximate reconstruction was made, holographic optical illusion was created using a series of reflective pieces of glass to give a 360 degrees-view of the destroyed buildings. The end product was planned to be a series of giant holographic projections on top of the destroyed ruins, to give an idea to the visitors of how the place looked like before the terrorist attacks; but it was never finished.

The second project led by the Hermitage Museum included a stylised reconstruction of the Agora in Palmyra, using Blender as the modelling software, and Unity, a game engine that created an interactive market. The user could explore this market using a pre-made character and ask the merchants details about their products, costs, and origins (Chance 2016). This initiative opened the opportunity for interactive gaming to be used in the project, but just like the previous one, it was soon abandoned.

The last attempt by the Hermitage Museum was the up-to-date extensive (but not complete) reconstruction of the monuments of Palmyra using 3D software. These reconstructions, to scale and with precise measurements, were handed over to the Syrian government to use as a blueprint to reconstruct Palmyra at a later stage (Piotrovsky 2017).

The Italian and UK project used the digital technology available in a more direct, physical way to reconstruct the destroyed Arch. The Arch was rebuilt with stones from the Carrara mines and a giant 3D printer that used thousands of pictures taken at 360 degrees round the arch by many volunteers to use with photogrammetry. The project resulted in an almost perfect reconstruction of the Arch, just on a smaller scale. The issue with this method was the great expense of \$143,000 (Voon 2016), and despite the great publicity, it was done once and never continued, in the same fashion as the initial Russian projects.

The last-mentioned Arc/K Project was much less publicised and required less costly methods. Although it is still ongoing, the project has a very slow pace due to the volunteer-based system, relying on internet-based and volunteer-given pictures, as well as digital reconstructions of some monuments in Palmyra. Some of the finalised reconstructions can be found on SketchFab, freely available for download to the public (Arc/K Project 2018). At a later stage, these reconstructions could contribute to a physical reconstruction of the lost monuments or simply be a reference for future generations of what the ruins looked like before the attacks.

Conclusion

Assessing the uses of digital technology to redress the damage done against cultural heritage in illegal acts of war and terrorism is not as straightforward as one might expect. Each one of the mentioned solutions had butts and ifs; making it hard to suggest a one-off solution. First, there are two types of damages done to cultural heritage, one is physical, and the other is intangible. You can rebuild what was destroyed, but especially for the local people who have an emotional attachment to the physical, the rebuilding or the digital reconstruction will never have the same emotional value that was lost when it was destroyed, making it a pointless practice in many instances.

Second, digital technology has many advantages and disadvantages as outlined in the following paragraphs.

Digital reconstructions require a very precise set of pictures to be taken at particular angles, to avoid areas of darkness, discrepancies with the reconstruction or a complete software failure due to lack of data. In the case of the Buddhas, this was solved and resulted in both a detailed digital and physical copy being made. In the Aleppo Codex case, this could be impossible because some pages were destroyed and unavailable in pictures. In the case of Palmyra, this would be very difficult or even impossible due to the nature of the tourist and volunteer pictures which were all taken with different filters, lights, and distances. Nevertheless, this does present a good chance to keep archaeological records and have exact measurements to be used for eventual physical reconstructions and has a large potential in terms of education, history retention and preservation.

The written material recovery, as mentioned above, could be done using the same method as the Dead Sea Scrolls' case. The positive result of this approach is that most damage done to a written record can be recovered this way and gives hope in many instances where written records have been damaged through criminal war acts against heritage. The problem, however, is that if there is no remaining fragment of the object (for example in the case of fire, theft and/or destroyed pages), there is nothing that can be obtained through this method.

The holographic method could potentially be a good balance between physical and digital reconstruction, as it would not require the physical printing of the objects destroyed during wars or terrorist attacks, and it would allow the public to still see the results of such an attack. Regardless, the result is itself a historically recorded event not to be forgotten or covered up. The problem faced by this method is the same as photogrammetry, as it relies on the same technology and/or manual reconstruction and may lack details or contain mistakes that would create 'fake' or inaccurate historical records.

Handmade digital reconstructions can be very precise, as in the example of the Hermitage Museum model for the Syrian government, which could potentially be used to reconstruct the ruins using 3D printing technology. Or it could be an approximate cartoonish version like the other reconstruction made by the Hermitage Museum. The emphasis could be on the historical content, like the trading aspects, or on the animation and exploration aspects of an ancient, reconstructed area (with the potential of reconstructing the lost intangible heritage); but, at the same time, dealing with areas which are not precisely reconstructed and open to misinterpretation by the audience.

The last method of digital reconstruction by photogrammetry used a large number of pictures and a physical print of the object. The high cost already speaks about the problems: photogrammetry requires many pictures before the act of destruction and the physical print resulting from this is complicated, making it effectively the most expensive method. This may also result in a backlash by the local

community because of the irrecoverable intangible heritage aspect which would be lost regardless of the cloning of the site.

The overall conclusion that one might take away from analysing the possible and already performed digital applications on cases of crimes against cultural heritage leaves a mixed sense of possibility and a long list of problems to follow. The use of photogrammetry allows to rebuild, at least in the digital world, copies of the buildings and artefacts lost to these conflicts, but at the same time it leaves gaps, measurement inaccuracies, or it might not be possible at all due to the lack of such images. Furthermore, these reconstructions will likely not replace the emotive attachment that was lost with the original structures.

The use of handmade reconstructions has a high risk of inaccuracy, but the application of video game technology might allow the users to experience emotionally how it felt to be living among the structures and the people when the monuments were first built or just before the attacks that destroyed them; allowing partially the emotive senses to be satisfied.

Lastly, the possibility of using holographic technology to project the ancient, destroyed buildings on top of the remaining ruins might recall the historical memory of the place and even reignite the emotive attachment; but as before, it is all dependent on the available information, pictures, and a large amount of interpretation, which might not coincide with the reality of things. Most importantly, the emotional reconstruction of heritage needs to be always taken into account, as memories can be subjective and not correspond to dominant narratives in the local cultural context. More work needs to be done towards the integration of emotions, cultural depiction and possibly moving away from precision in order to allow the public to emotionally reconnect with the lost heritage in the way they perceive most fitting.

Therefore, considering the current digital technology, one might say: yes, in technical terms, digital methods can redress the destruction of cultural heritage, but only to a limited extent, dictated by both finances and availability of technology. But on the other hand, such reconstructions would still just be a partial recovery of the cultural heritage as not enough has been done, up to date, on attempting a reconstruction of the emotional heritage of the areas destroyed. More research needs to be done in this direction to investigate the impact of reconstruction on the local population's emotive attachments, and only then would there be a truly comprehensive attempt to reconstruct archaeological patrimony destroyed by conflict.

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The Ways of St. James: Diversity, Dissemination and Disclosure of Jacobean Heritage

Sergio Larrauri¹

Abstract

Pilgrimage routes to Santiago de Compostela are still alive during the first decades of the 21st century. You only need to go out into the streets of Jacobean villages to see it: posters, pilgrim shelters, metal plaques on the ground indicating the itinerary, people from all over the world dressed with backpacks on which the significant scallops hang. How have the Ways of St. James become roads of culture dissemination in Europe for the past 1.000 years? How can we understand our heritage through this lens?

Pilgrimage practices of medieval origins to Santiago de Compostela have been recovered in our society, in our towns, not only in a religious or spiritual context, but rather because of their tourist, heritage, cultural or personal experience values. Its resurgence has been a complex process that must be traced back to the second half of the 20th century. The main elements that contribute to the rebirth of the pilgrimages to Compostela are its heritage richness, diversity, disclosure and dissemination of the Jacobean heritage, factors which, as we shall see, have been important.

Keywords: The Way of St. James, diversity, dissemination, disclosure, Jacobean, heritage, Middle Ages

Introduction

The Ways of St. James are an extensive interconnected international network of pilgrimage routes whose final destination is Santiago de Compostela, where the tomb of the Apostle Santiago is located. How has it been possible for a cultural and religious route to survive more than 1000 years while preserving its main historical characteristics? The diversity, dissemination, and disclosure of the Jacobean heritage over the centuries allows us to enjoy, as we will see in this article, the dynamism of a space of universal values, commercial and heritage wealth, exchanges and cultural advances and development of artistic styles. The history of *Iter Sancti Iacobi* is, in general, a success story except for some periods of crisis. It is more correct to use the plural and speak about The Ways of St. James — *Itinera* —, because around the Jacobean claim, an extensive network of roads has been formed. Therefore, there are four major historical routes whose destination is the same: Santiago de Compostela.

Along the following paragraphs we will start from the origins of the Camino de Santiago until its recovery as a universal phenomenon during the second half of the 20th century and the enormous cultural heritage that it treasures, which has earned it recognition by UNESCO as a World Heritage Site. A pilgrimage route where culture, religion, tourism, adventure, or sport come together in an itinerary that becomes an experience and life experience.

Although the issues on which the 3D session of CASA IV is based are mentioned on several occasions, this article is more oriented towards exposing the research on the origins of the Camino de Santiago, its expansion, the importance it has today and its rich heritage.

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2021 is the Jacobean Year or Holy Year. Motivated by this event, many pilgrims/travellers would set out on a route to their final destination, Santiago de Compostela. Due to the circumstances of the world pandemic that we are suffering, it is not foreseeable that such a large number of pilgrims will arrive, and neither is the temporary opening of some of the main heritage sites or Jacobean infrastructures.

These are: The Primitive Way, The French Way, The Portuguese Way and The English Way. In addition, there are three other routes in the North of the Iberian Peninsula: *El Camino de la Costa*, *El Camino Interior* and *El Camino Lebaniego* (Figure 1). Indeed, there are as many ways of St. James as starting points towards Compostela; hence, it is better to speak in the plural.

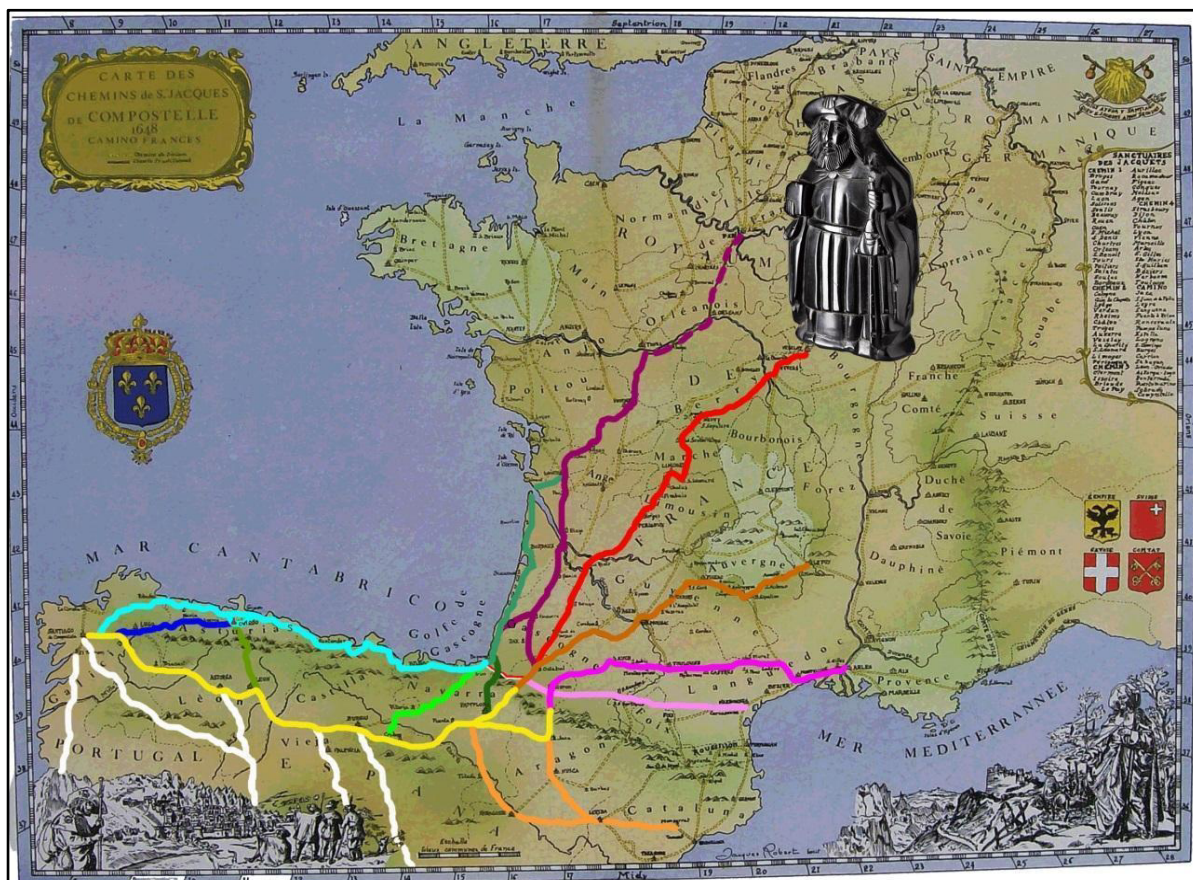


Figure 1. *The Ways of St. James based on Carte des Chemins de S. Jacques de Compostelle, Map from 1648 (accessed and annotated on angelpilger.net).*

A large part of the prestige and popularity of the Jacobean claim emanates from the possibilities for diversity that it offers to those who walk it (experiences, faith, spirituality, adventure, business, curiosity, penance, tourism, interculturality, sport, etc.) and, at the same time, from the enormous diversity of points of view from which it can be analysed, interpreted and given meaning (history, sociology, economy, art, philosophy, dialogue, legislation, urban planning or politics). A fruitful diversity that meets all the conditions for it to be a resounding success and that, since its medieval period, has turned these pilgrimage routes into a means of interrelations and exchange of people, of products or artistic phenomena, and of cultural transmission. The Pilgrimage Routes to Santiago de Compostela are for all these reasons a universal phenomenon with a multidimensional character.

In these first decades of the 21st century, it can be declared that The Ways of St. James continue to be a developing, living, and dynamic space of diversity, heritage, and culture. There is no doubt about it. With the exception of the disastrous period, we are currently suffering as a consequence of the COVID-19 pandemic, their contemporary dynamism is unquestionable.

Since the last decades of the 20th century, the pilgrimage to Santiago de Compostela has intensified with the international recognition of several routes in Europe, its promotion owing to tourist advertising, literature, television series, cinema, social networks, and the dissemination made by the pilgrims themselves.

In the towns and roads crossed by these routes, numerous elements contribute to disseminate and publicise their Jacobean condition as signs indicating the route, pilgrim hostels, metallic plates on the ground indicating the direction, restaurants with menus for pilgrims, information points, QR codes for pilgrims, etc. The Jacobean human component is rich and diverse: people from different origins, cultures, religions, races, and socio-economic conditions walking together along the same route and with the same destination with backpacks on their shoulders distinguished by the famous shells as a symbol of their pilgrim condition. The final destination has not changed since the 9th century: crossing the Romanesque *Pórtico de la Gloria* of Santiago de Compostela Cathedral (Figure 2). This amazing portal, from the second half of the 12th century, is the masterpiece of Romanesque Spanish sculpture. A recent restoration project has allowed it to recover all its splendour (see Fundación Barrié 2020).



Figure 2. *Pórtico de la Gloria* (©Fundación Catedral de Santiago 2021).

The Origins of the Pilgrimage to Santiago de Compostela

However, can we speak of diversity, diffusion, and disclosure of the Jacobean heritage in its earlier centuries? Were they substantial ingredients for its development and popularity?

The origin of the 'Jacobean fact' goes back several centuries, specifically during the first half of the 9th century, under a veil that is as distant in time as it is legendary. An anchorite named Pelayo alerted the bishop of *Iria Flavia*, Teodomiro, of the existence of supernatural lights (Pousa 1992) convinced of being in the presence of a divine sign; they found a marble arch with the remains of a body, which they identified as belonging to the apostle Iacobus, James the Great, James son of Zebedee or Saint Yago. Thus, the *inventio* or discovery was produced, the revelation of the miraculous presence of the authentic burial place of the apostle Saint James in the lands of Galicia and, as a consequence, its establishment as a *locus sanctus* or devotional focus for Christendom.²

The veneration and worship of the holy places, saints/martyrs, and relics, as nexus, intercession and union with the divinity are one of the most characteristic phenomena of Christianity and the origin of pilgrimages, as well as expressions of individual and collective attainment of sacredness. Certainly, the sacred presence of the body of an apostle is one of the main claims and advertisement for fervent believers.

The presence of the holy body of the son of Zebedee is based on the tradition of his evangelization in the Iberian Peninsula. It was undoubtedly revolutionary news that would soon be propagated, due to its enormous impact on ideological, religious, and political interests by both the Asturian monarchy – initiated by Alfonso II, *the Chaste* – and the Hispanic ecclesiastical institutions. Both institutions claimed and were strengthened and blessed by the presence of the remains of the apostle in Compostela, in a remote enclave – Finisterre (*Finis Terrae* for the romans) – in the extreme northwest of the Iberian Peninsula. The European political, ideological, and mythological context of the Carolingian Empire was decisive to its success (Pousa 1992).

The transfer of the episcopal seat of *Iria Flavia* to the place where the tomb of the apostle had been discovered was the definitive boost for the spread of his cult. *Finis Terrae*, the Roman name for the Spanish area of Finisterre in Galicia, became a sign of the evangelising expansion of Christianity throughout the world, at the same time as it sanctioned the legitimate right of the Asturian monarchy and its independence. In addition, the kingdom had the apostle as a protector against its Christian and Muslim enemies (Rucquoi 2017).

Its political centre was located in Oviedo, the site of another first-rate religious enclave and the first destination of numerous pilgrimages, later passing through Santiago de Compostela: San Salvador de Oviedo. The donation of a jurisdictional control in AD 812 to this church, something that Alfonso II himself would later do with Compostela, shows the first attempt to establish a pilgrimage centre in Christian Hispania. It would soon give way to the impetus that the *Iacobi locus sancti* would have, although it continued to be a focus of attraction for many pilgrims.

It was Alfonso II's grandchild, Alfonso III the Great, who at the end of the 9th century built a large church where the saint's body was found and moved the headquarters of the episcopal seat of *Iria Flavia* to there (Pousa 1992). Thus, Santiago de Compostela was consolidated as an urban centre and religious emblem

² There is an extensive bibliography about the Ways of St. James being in constant renovation and improvement including compilations. See bibliography at the end of the article.

of Christianity, supported by the dissemination/disclosure of the possible presence of the remains of the apostle St. James.

The announcement soon spread throughout the territories of the Iberian Peninsula and crossed the Pyrenees, reaching the whole of Western Europe, as evidenced by the presence of ultra-Pyrenean pilgrims before the year 1000. Thus in 950 the bishop of Le Puy, Godescalco, was on a pilgrimage to Santiago de Compostela (Pousa 1992). The retinue that sheltered the *episcopus* on his way to the tomb of the Apostle stopped at the monastery of San Martín de Albelda (La Rioja) (Figure 3) to commission a copy of the text of Ildefonso de Toledo *De Virginitate Beatae Mariae*, a manuscript made by the monk Gomesano (Pousa 1992). This illustrious pilgrim to Compostela, Godescalco, stands out for his pilgrimage from such a distant land and at a complicated time for travelling, through a Jacobean route that was not yet settled.

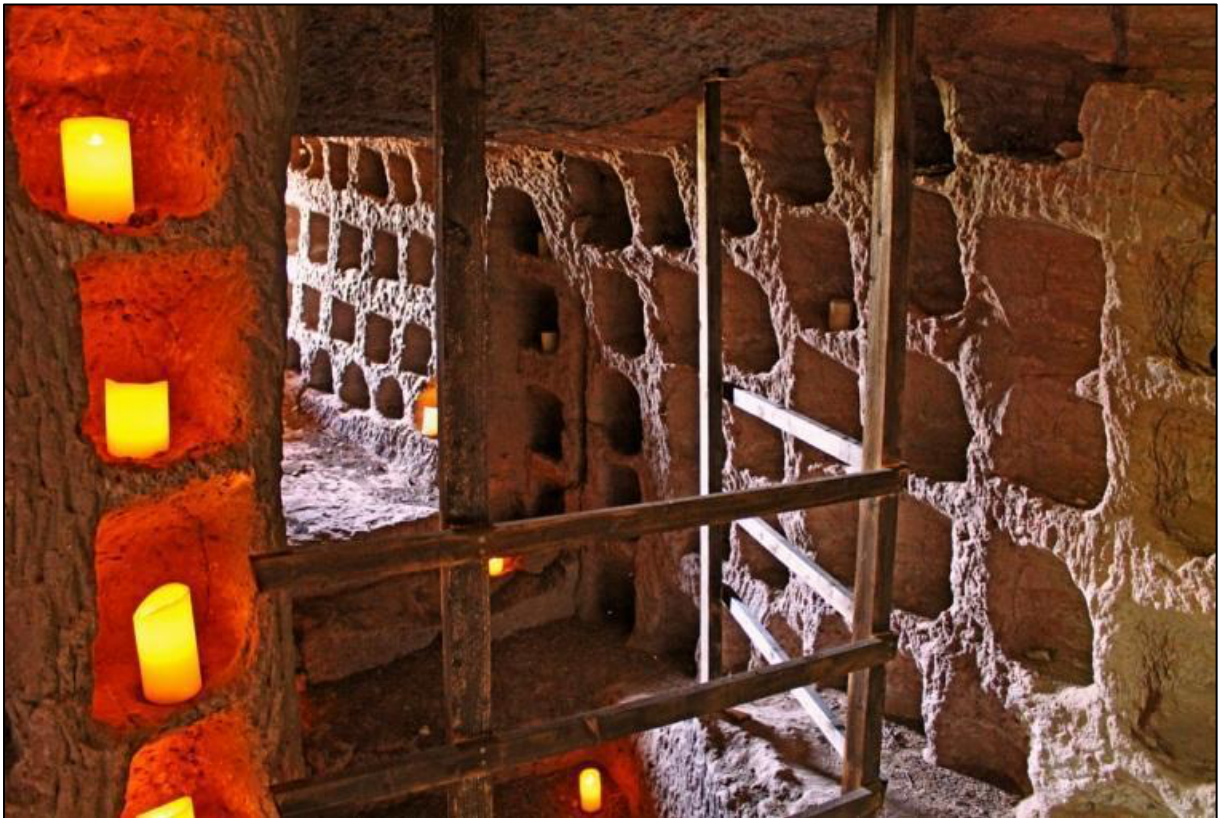


Figure 3. Medieval hermitage cave of San Martín de Albelda (Photo credit: David Antón 2019).

This manuscript entails the disclosure of three important elements. First, the international nature of the call to visit the remains of the apostle in Compostela, even if it was an elitist pilgrimage. Second, the town of Le Puy en Velay was the beginning of one of the main routes to Compostela, the *Via Podensis*, and at the same time the Jacobean devotional epicentre where the ‘Black Virgin’ was venerated. Third, the Monastery of San Martín de Albelda itself, a monastic institution of early medieval origin, which became a renowned and dynamic cultural centre thanks to its *scriptorium*, as the visit of Godescalco testifies in the middle of the 9th century (Pousa 1992).

Throughout the following centuries, especially during the Middle Ages, the fruitful dissemination of the presence of the sacred remains of St. James led to the success of the Compostela claim, consolidating it as one of the three great pilgrimage centres of Christianity, together with Rome — seat of the papacy —

and Jerusalem — the Holy Land (Caucci 1999). Numerous routes by sea or land allowed pilgrims to arrive at the place where the Holy Remains of Santiago were located. The construction of the Jacobean phenomenon implies the creation of a physical structure, but also a political and legal framework for a unified western world.

The 12th century represents the peak of Jacobean pilgrimages. The massive pilgrim influx and the success of Compostela are related to religious factors such as faith, the fame of the thaumaturgical apostle, the fulfilment of vows or penances, and due to economic and political reasons (Pousa 1992). We cannot forget that we are not just discussing religious routes, but also political, cultural, economic, commercial, military, and urban development routes. These motivated different political and religious institutions to express their support and spread their ideas.

In short, the consecration of The Ways of St. James could be carried out thanks to several physical and ideological factors: a good network of routes that formed the backbone of the European territory and whose destinations were these great holy places; royal and institutional initiatives in favour of the routes and territories through which they passed; ecclesiastical appeals to Compostela; and an intentional policy of diffusion and disclosure of Compostela through numerous literary (travel) stories and sacred writings.

In this regard, the role played by what is considered to be the quintessential source of the pilgrimage to Santiago de Compostela, the *Liber Sancti Jacobi*, better known as the *Codex Calixtinus*, must undoubtedly be revalued (Moralejo, Torres and Feo 1992). The Calixtine work, whose supposed authorship is by the French clergyman Aymeric Picaud, was made around the year 1140 under the auspices of the Pontiff Calixtus II (Pousa 1992). The ecclesiastical head of Rome finally confirmed the authenticity of the discovery of the tomb of the apostle Santiago in Compostela and, with this, created a brilliant piece of propaganda for the sanctuary that would spread and spread its role as a destination for Christian pilgrimages (Pousa 1992).

This is the role played by the Codex, the first written itinerary of The Ways of St. James and a source of dissemination par excellence of the Jacobean myth. It was not the only one. Other recited or written works were also in charge of making known the Jacobean world or its enormous heritage, such as numerous travellers' stories (Vieliard 1937), of which those made by figures of royalty, high nobility, or saints such as San Francisco or Santa Isabel of Portugal acquired a special meaning, or historiographic sources such as *Historia Silense* or *Historia Compostelana*. Through them, the healing and thaumaturgical power of the apostle Santiago and his devotion was emphasised, but they also awakened other forms of attraction for individuals such as curiosity and the economic potential of the route.

These texts also mention the main temples or places of worship along the pilgrimage routes to Santiago de Compostela, the bodies of saints to be visited, fountains, hermitages, bridges, monasteries and, in particular, everything related to the reception and care of pilgrims, the poor and travellers, such as types of accommodation (hostels, hospitals, shelters, etc.) and the services provided.

Between the 12th and 15th centuries, The Ways of St. James became widespread phenomena due to their cultural, social, urban, political, religious, artistic, or economic implications. An outstanding aspect of these medieval pilgrimages, like contemporary ones, is their nature as an active framework for the coexistence and convergence of different cultures, languages, races, origins, ideas, products, people, genders, techniques and even religions.

It would be interesting to focus research on the role of women (González Vázquez 1989) in this world of pilgrimages, which for the medieval period has traditionally been omitted or relegated to the

background consequently, largely, of the androcentrism of the sources. New historiographical conceptions or social doctrines, the possibilities of new information media or the application of archaeology and physical anthropology are making it possible to break certain traditions and generate research with analyses of a global nature, where expressions such as pilgrimages are understood as a socio-historical phenomenon in male and female terms.

After the medieval splendour and social recognition of The Ways of St. James, the Ways entered a much more serene stage as a consequence of external factors: numerous political and religious conflicts between countries, wars, plagues, subsistence crisis, the strength of the new discovered lands, cultural and religious renewal movements or the break of the Christianity (Protestant Reformation) (Vázquez de Parga, Lacarra and Uría 1998, book 1). This international context was a major impediment for European travellers or pilgrims. The decline of the pilgrimage to Compostela and its loss of popularity was gradual.

Revitalisation of the Jacobean Phenomenon

In the second half of the 19th century, the 'Jacobean phenomenon' would again gain prominence thanks to various aspects such as Romanticism, Spanish nationalism, the interest of the church and the rediscovery (once again, second *inventio* or discovery) of the remains of the apostle during archaeological excavations in the cathedral of Santiago de Compostela, after they were hidden during the Middle Ages.

But without a doubt, by the time the figure and the meaning of the presence of the apostle Santiago in Compostela took centre stage, it was the middle of the 20th century, when it served as a political instrumentalization of the ideals of Spanish nationalism and the Franco regime (Colorado, 2018).

Therefore, the fundamentals were laid for the revitalization of the Pilgrimage routes to Santiago de Compostela. The foundation in Spain and in various parts of Europe of associations of Friends of the *Camino de Santiago*, with the aim of recovering the Jacobean routes and promoting research on the subject and trips to Compostela, were some of the measures that contributed to the Jacobean resurgence. In this sense, the first association stands out: *La Société Française des Amis de Saint Jacques de Compostelle*, from 1950; and the scientific research about the *Camino de Santiago* published in 1948/49 by the historians Vázquez de Parga, Lacarra and Uría (1998) still remains essential.

The Spanish government's attribution of the status of 'Historic-Artistic Site' to The Ways of St. James in 1962 (5 September, Decree 2224/1962), the renovation of the historic centre of the city of Santiago de Compostela, the gradual improvement of services for pilgrims and of the Jacobean heritage, all allowed the international opening of the Ways and their commercialisation as a new cultural-touristic product. Exhibitions, congresses, magazines, and historical research contributed to not just promote and disseminate, but also awaken and familiarise society with the 'Jacobean fact'.

The revitalization of *Itinera Sancti Iacobi* was consolidated in the final two decades of the 20th century thanks to various international factors, such as the declaration of the city of Santiago de Compostela as a World Heritage Site by UNESCO (4 December 1985); the designation of The Way of St. James as the First European Cultural Itinerary by the Council of Europe (23 October 1987) and its declaration as a World Heritage Site by UNESCO (10 December 1993), which was extended in 1998 to all the routes in France (The Le Puy Way, The Limoges Way, The Tours Way and The Toulouse Way), and in 2015 to the routes in the North of Iberian Peninsula (The Coastal Way, The Primitive Way, The Interior of the Basque Country-La Rioja and The Lebaniego Way) (Figure 4).

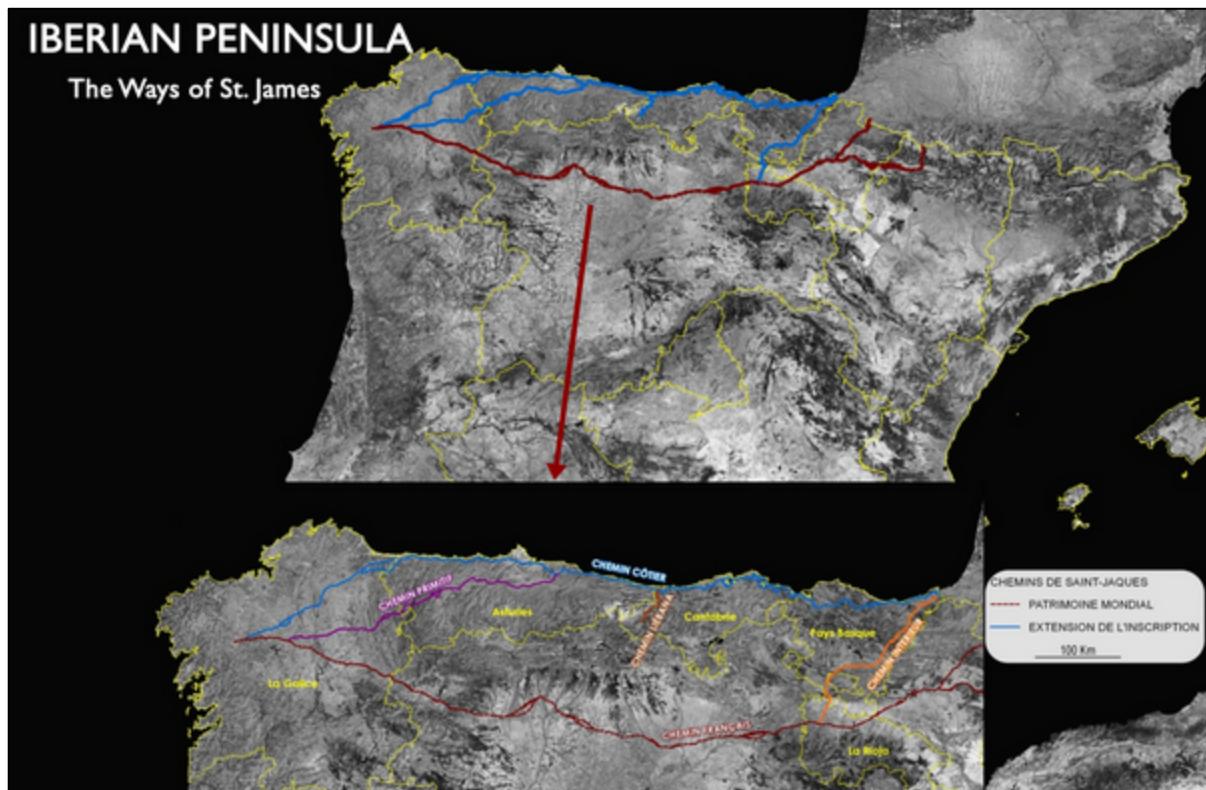


Figure 4. *The Ways of St. James in Iberian Peninsula (UNESCO 2015).*

Since then, the revitalization and resurgence of the pilgrimage to Compostela have been experienced in society and visible in roads, paths, towns and cities, a scenario that we can define as a 'Jacobean Renaissance'. In fact, in recent decades, the Ways to St. James have become some of the most important touristic and cultural products at a regional and international level, as well as a field object of heterogeneous studies and extensive bibliography (Barreiro Rivas 1997; De Los Reyes Gómez 2000; Estepa Díez *et al.* 2000; García Turza 2000; Martínez García 2011; Palma García and Yribaren Muñoz 1993; Ruiz de la Peña 1993).

According to specialized web pages such as galiwonders.com the motivation to undertake the journey to Compostela is not limited to purely religious reasons, as it was in its beginnings, but rather reflects the multifaceted contemporary diversity in which we live. Motivations are very diverse: adventure, experiences, culture, tourism, heritage, landscape, mental, health, sports, social relationships, spirituality and so forth.

This means, on the one hand, finding a formidable diversity on The Ways and, on the other hand, discovering a fact that has accompanied it since the beginning of the Jacobean cosmography: maintaining its momentum and vividness with the dissemination and disclosure of its essence but also of other elements that support the mentioned motivations.

The Jacobean Holy Year is a cyclical event that is linked to the calendar: it is celebrated when the feast of St. James the Apostle, on 25 July, coincides with a Sunday. Since the early 90s, a very interesting bonus has been added under the *Xacobeo* brand: an ambitious cultural, heritage and touristic programme organised to disseminate, promote, conserve, and boost the Jacobean pilgrimage routes, its heritage and historical value, its culture, its people, and the final destination city, Santiago de Compostela (El País 1993).

The celebration dates to the Middle Ages, probably from the first part of the 15th century, although in order to justify it and give it more relevance and diffusion in that century, an earlier origin was sought, specifically in the figure of Pope Callixtus II (12th century) and in the confirmation of some of his successors (Pousa 1992). The result is quite attractive: those who make the pilgrimage to Compostela during the 365 days of the Compostelan Holy Year enjoy the privilege of full indulgence. The strong institutional backing of the celebration went hand in hand with the great popular acceptance of the Compostela claim. Nowadays, it also serves as a framework for the development of various programmes and initiatives to boost tourism, culture, and heritage in order to promote, revalue, disseminate, enhance and research the *Itinera Sancti Iacobi* and their diverse and rich cultural and natural heritage. This natural heritage runs along paths that are not only beautiful spaces but protected as natural and national parks such as Pyrenees and the Baztán area in Navarra or the Ulteira forest in Galicia. The landscape diversity throughout the different regions that it crosses in the Iberian Peninsula, but also in Europe where it also coincides with natural and protected paths. The study of the archaeology of these landscapes cannot be covered in this article for reasons of space, but it deserves a mention in it.

The Jacobean Heritage

The Pilgrims' Routes to Santiago have been a place of encounter, exchange and cultural dialogue between travellers and the societies through which they pass, of the dissemination of ideas and artistic styles, and of the movement of traders, artists, and craftsmen. All this has contributed to the constant shaping of a magnificent cultural heritage appreciated for its diversity and quality, which survives to this day. In this way, we can affirm that The Ways to St. James are an exceptional cultural landscape (Estepa Díez *et al.* 2000).

A rich intangible cultural heritage in the form of myths, songs, festive events, proverbs, oral traditions, and legends — like 'the miracle of the rooster and the hen of Santo Domingo de la Calzada' (Figure 5) — grew around the comings and goings of many people on the Ways.



Figure 5. Rooster. Iron weathervane. Tower of the cathedral of Santo Domingo de la Calzada, La Rioja (Photo credit: Author 2019).

At the same time, examples of immovable heritage that enlivened and enriched Jacobean spirit in diversity and dissemination include religious centres like churches, cathedrals, hermitages, or monasteries (Pousa 1992). Further examples include the infrastructure that facilitated transit such as bridges or the roads themselves; constructions created specifically for the care and shelter of pilgrims, the poor or travellers such as hostels or hospitals (Larrauri Redondo 2010; Martínez García 2002) and the characteristic linear urbanism, the axis of which is the Jacobean route. It is important to note that many of these milestones resulted in the birth of new populations or their development (Larrauri Redondo 2010). The Jacobean cultural heritage is characterised by its diversity of typology, artistic styles, influences, and technical solutions.

The Ways of St. James were certified in 1987 as the first ‘Cultural Route of the Council of Europe’. Their definition is ‘a cultural, educational heritage and tourism cooperation project aiming at the development and promotion of an itinerary, or a series of itineraries based on a historic route, a cultural concept, figure or phenomenon with a transnational importance and significance for the understanding and respect of common European values’ (Council of Europe 2010/53: 25). Among the main objectives of dissemination are contributing to the promotion of European identity and citizenship through knowledge and awareness of Europe’s common heritage, and the development of cultural links and dialogue. Further objectives include protecting and promoting cultural heritage, social, economic, and cultural development and finally promoting education, networking, and sustainable tourism. The Ways of St. James as the first European Cultural Itinerary is ratified as a space for diversity, dialogue, exchange, and meeting of cultures, as well as a space to strengthen European ties in a globalized context.

The resources for the 21st century pilgrim on the Jacobean heritage is abundant and varied: touristic guides on paper or online, websites, forums, blogs, online maps, apps, geographic information systems, virtual tours, portals where videos or photographs are shared, etc. The Information and Communication Technologies provide a world of information about the Jacobean experience while allowing pilgrims to make the journey to Compostela as smooth as possible.

In recent years, the term cyber-pilgrimage has even begun to be used, defined as ‘a person who travels, virtually and through images, [across] The *Camino de Santiago*’ (Yáñez López 2014). From home, these cyber-pilgrims exchange their boots and the blisters on their feet for a mouse and their screens that allows them to quickly experience the rich heritage of The Ways of St. James.

The Ways of St. James are an exceptional landscape in terms of heritage diversity and cultural values. We must not only refer to history and the diversity of cultures that make it up, but we must understand diversity as the main issue of the Way. Without that diversity of architectural styles (Figures 6, 7, 8), the diversity of literary stories, the different types of European law that influenced Hispanic law, the diversity of people and mentalities or monetary diversity, we would not be able to understand the current European multiculturalism that has as a link the Way, that is, the pilgrims.



Figure 6. *Late Romanesque. Head of cathedral. Santo Domingo de la Calzada, La Rioja*
(Photo credit: Author 2017).



Figure 7. *Capitals. Church of the Jacobean hospital. San Juan de Acre de Navarrete - La Rioja*
(Photo credit: Author 2017).



Figure 8. *Saint Jean de Luz* (Photo credit: Author 2018).

Conclusions

Throughout the previous paragraphs, we have verified how the diversity, diffusion and dissemination of the Jacobean heritage has sustained the emergence, development, and recent rebirth of The Ways of St. James. The Ways are a space for meeting which help to forge the European identity. A phrase attributed to Johann Wolfgang von Goethe says, 'Europe was made by pilgrimage to Compostela' (Pousa 1992). Undertaking this special journey allows us to appreciate the final destination, Santiago de Compostela, but even more so to discover along the way details and aspects of the human and natural landscape.

The Ways were, especially during the Middle Ages, a great artistic and cultural axis through which the Romanesque and Gothic styles spread. The result of this movement of people across large territories is a great diversity of heritage assets. Without this pilgrimage route, for example, the construction of great Romanesque cathedrals such as Santiago de Compostela, Vezélay, Jaca or Santa Fe de Conques cannot be understood. Neither are the splendid and colorful Gothic cathedrals such as those in León or Burgos, or the brilliant churches nestled in Jacobean towns such as San Pedro de la Rúa in Estella, of the Holy Sepulchre in Torres del Río, San Martín de Tours in Frómista or Saint Blasé in L'Hôpital-Saint-Blaise.

The patrimonial legacy of the Caminos de Santiago is not limited only to sacred goods: numerous secular infrastructures and services were generated around them to facilitate the exchange of people and products. Bridges, roads, hospitals, inns, markets, castles, fountains or even towns where there was no human settlement before are a relevant example of this historical heritage and expression of cultural development in the heat of the Jacobean phenomenon. Heritage diversity is one of its main assets.

Walking along the pilgrims' routes to Santiago is a unique experience of discovery and self-discovery, of meeting and sharing, of cultural exchanges and emotions, multicultural content, but also to know the monumental richness and diversity of the Jacobean heritage, the fruit of centuries. And it is here where the role of pilgrims is substantial. In this world of Instagram, Telegram, Twitter, Facebook, emails, etc., where immediacy and communication coexist with walking sticks, boots and backpacks, photographs, descriptions and testimonies of pilgrims, they become the most effective tool for the dissemination and diffusion of The Ways of St. James and its heritage.

As has been said, undertaking the adventure of reaching Santiago de Compostela in this 21st century becomes in itself an incredible experience: diverse and heterogeneous participants take part by joining an itinerary towards the same destination. On their journey, the pilgrims know, recognize and value the enormous Jacobean heritage thanks to various forms of dissemination created for this purpose such as temporary exhibitions, interpretation centres, information panels, virtual reality, or communication strategies.

The dynamism that characterizes contemporary pilgrimages to Compostela is directly related to its heritage richness, diversity, disclosure, and dissemination of the Jacobean heritage. A heritage that is the result of centuries of cultural legacy and that still has a long way to go for understanding, enjoyment, and conservation by society.

¡Buen Camino!

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Living and Understanding Together: How Can We Foster More Informative and Inclusive Public Outreach at Göbekli Tepe?

Ekin Berk Polat¹

Abstract

Towards the end of 2019, the Year of Göbekli Tepe, billboards of Istanbul were adorned by a mysterious symbol that was advertising the second Turkish series on Netflix: *The Gift*. It excited the Turkish public as the first archaeological science fiction series ever shot in the country, which became a hit shortly after its release. Nevertheless, there is a price for growing popularity. Over the years, Göbekli Tepe has faced various peaks of pseudo-archaeological interpretations. Several documentaries and books including but not limited to 'Magicians of the Gods', 'Ancient Aliens', 'Cradle of the Gods', making pseudo-scientific claims, eventually surpassed scientific research. A survey about the relation between archaeology and the public in Turkey shows that 37% of the population gain knowledge about archaeology through television, which also makes problematic documentaries more visible compared to scientific research. A website and online blog launched by the German Archaeological Institute as part of the Göbekli Tepe Project for beating those narratives seem not to have achieved the same popularity. The need for further public involvement to increase the scientific community outreach regarding cultural heritage also remains inadequate as it lacks community development and diverse awareness raising projects. For that reason, the issue of public outreach at the site becomes more prominent in terms of preventing pseudo-archaeological narratives. This study aims to investigate current trends regarding the outreach at Göbekli Tepe. It discusses how archaeologists and stakeholders can develop better outreach projects while allowing diverse understandings of neolithization in Anatolia and sedentism in complex communities.

Keywords: Göbekli Tepe, public outreach, archaeological excavation, Neolithic, diverse narratives

Introduction

Instead of for its scientific importance, many people are interested in archaeology for its appeal as a field of study full of adventurous explorers. As an archaeology student, I have also been exposed to this. This general interest is also valid for Göbekli Tepe, since the site has a very interesting position considering the rapid changes in the last couple of years, which significantly increased the site's overall popularity, especially in Turkey.

In this research paper, I shall start discussing the excavation history and features of Göbekli Tepe along with the distribution of the T-shaped pillars in the surrounding region to understand the archaeological features of the site. To continue, I will discuss the interpretations of the site and its position to understand the Neolithic Period. Lastly, I aim to investigate the current trends regarding the outreach at Göbekli Tepe and discuss why archaeologists and stakeholders should develop better outreach strategies in light of the site's growing popularity.

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Excavation History and the Main Features of Göbekli Tepe Archaeological Site

Göbekli Tepe is located in Şanlıurfa province, in the south-eastern part of Turkey (Clare 2020: 81). The site was discovered in 1963. The German Archaeological Institute has been responsible for archaeological research and excavations in close cooperation with Şanlıurfa Museum since 1995 (Schmidt 2011). The site was newly inscribed as a UNESCO World Heritage Site on 1 July 2018 (Clare 2020: 86). Göbekli Tepe is characterised by monumental oval buildings with anthropomorphic T-shaped limestone pillars from Pre-Pottery Neolithic (PPA) A and Pre-Pottery Neolithic B levels which date back to 9500 to 8000 BCE (Clare 2020). There are four main enclosures named A, B, C, and D, which can be seen in Figure 1. The central two T-shaped pillars are better in terms of their quality and bigger compared to the rest of the pillars that surround them. Many pillars are richly decorated with animal figures along with some high reliefs (Schmidt 2011).



Figure 1. Main excavation area with monumental PPN A enclosures (Photo credit: Nico Becker, German Archaeological Institute).

Although animal remains and other residues were found in the archaeological deposits, there was no indication of domestication of any animal or plant species in the site. Moreover, water sources were also lacking in the site (Clare 2020). Consequently, archaeologists interpreted that the people used the site not as permanent settlers but as hunter-gatherers. Recent technologies and the results of geomagnetic survey investigation show that there might be more enclosures under the surface of the mound. As a result, around 20 enclosures can be under the surface and spread around, which are waiting for further excavations (Schmidt 2011).

Distribution of T-Shaped Pillars in the Region

Göbekli Tepe is characterised by its monumental T-shaped pillars. Although the smaller T-shaped pillars were found in the surrounding regions, as Figure 2 illustrates, the large-scale pillars can only be seen in Göbekli Tepe. The other sites that have smaller versions of the pillars can be categorised with the Lion Pillar Building, which corresponds to the later layer of Göbekli Tepe (Moetz and Çelik 2012). Even though the overall interest of both archaeologists as well as visitors focus on Göbekli Tepe, the surrounding regions are also very interesting and demand further investigation to completely analyse the meaning of the T-shaped structures in the region.

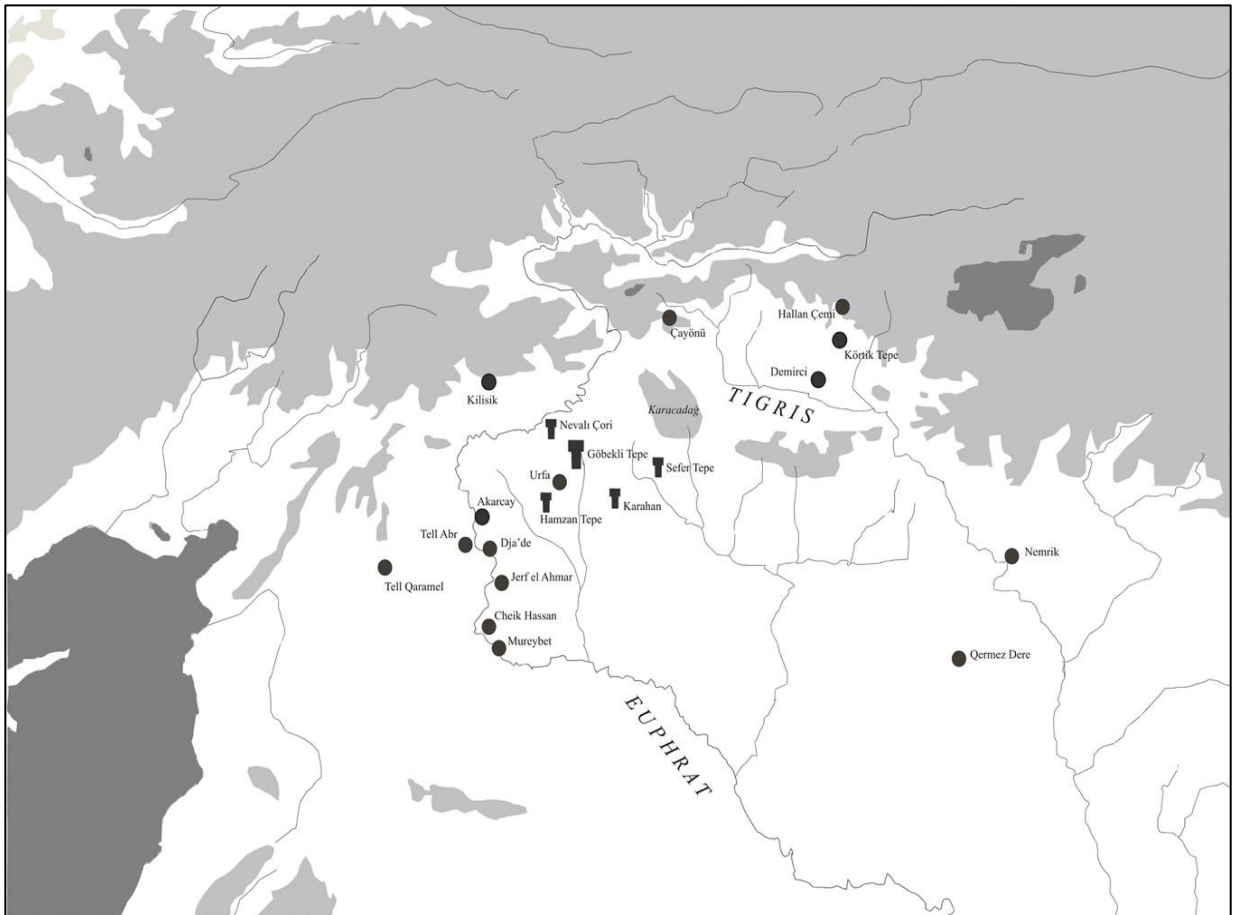


Figure 2. Distribution of sites with T-shaped pillars and with simple limestone stelae (Photo credit: Klaus Schmidt, German Archaeological Institute).

Up until now, archaeologists have concentrated their energy on Göbekli Tepe before excavating other parts since there are still many missing elements. Therefore, the priority is not to excavate other sites but to protect them until they will be excavated. Many of them were briefly studied with archaeological surveys and rescue excavations as in the example of Nevalı Çori due to the rising waters as a result of the construction of Atatürk Dam. The discovery of the T-shaped pillars started with the cult building of Nevalı Çori as part of the excavations conducted between the years 1983 and 1991. The German Archaeological Institute found similar T-shaped pillars in Göbekli Tepe when they started to excavate the area in 1994 (Moetz and Çelik 2012).

The discoveries of T-shaped pillars continued in other sites, such as Karahan Tepe and Hamzan Tepe at the end of the 1990s. Previous studies suggest the number of T-shaped pillars to be 266 in Karahan Tepe, according to the records (Moetz and Çelik 2012). Even though the geomagnetic map results indicated that there might be 200 more T-shaped pillars under Göbekli Tepe, it is interesting to note that Karahan Tepe has a potential to surpass Göbekli Tepe regarding the number of T-shaped pillars. Hamzan Tepe also shows similar characteristics with both sites. Discoveries also continued with other sites such as Urfa Yeni Yol, Sefer Tepe and Kilisik in the following years (Moetz and Çelik 2012). All discovered sites are important sources not only to understand the characteristics of T-shaped pillars but also to deepen our understanding regarding Göbekli Tepe.

Diverse Interpretations and the Problem of 'The First Temple' Narrative

Göbekli Tepe is clearly an important archaeological site when we consider its architecture, monumentality, age, and the usage of T-shaped pillars with highly elaborated decoration. Even so, the actual purpose of the Neolithic site remains uncertain. On the one hand, Göbekli Tepe has been associated with terms such as sanctuaries, ritual spaces, pilgrimage sites, and temples since its first discovery (Banning 2011). Klaus Schmidt, a German archaeologist who started to excavate the site in 1996 and continued until his death in 2014, developed this interpretation of Göbekli Tepe (Banning 2011). He emphasised and argued that these buildings can be considered as temples or ritual spaces instead of domestic settlements for several reasons. Firstly, he pointed out that the structures do not have any evidence to prove domestic use such as ovens, fireplaces, and other types of indicators (Banning 2011). Secondly, he stressed the differences between Göbekli Tepe and usual Neolithic house types (Banning 2011). The extensive relief decorations with animals and the monumentality of the space might also strengthen the idea of a ritual space rather than domestic use. The lack of domestic settlements in the site enhanced the possibility of it being a centre of ritual space, possibly a pilgrimage site, where other Neolithic hunter-gatherers would come and participate (Banning 2011).

On the other hand, the interpretation of the site might not only be limited to the temple narrative. Other archaeologists started to challenge previous interpretations. For instance, Edward Bruce Banning points out several important aspects in his article titled 'So Fair a House: Göbekli Tepe and the Identification of Temples in the Pre-Pottery Neolithic of the Near East' in 2011. He mainly analyses the previous clarifications made by Klaus Schmidt and questions why these kinds of interpretations are common among archaeologists (Banning 2011). Certain terms including but not limited to cult, temple, or ritual spaces are often used by archaeologists; however, archaeologists often do not clarify what they mean by these terms. According to Banning, archaeologists who are affected by today's systems and current space division might have a tendency to project the same understanding while interpreting the Neolithic sites and people. Humans might have separated houses from the spaces of worship after several centuries of change and secularisation in the course of history (Banning 2011). Notwithstanding, many ethnographic and anthropological investigations show that people can have the same places to practice both functions (Banning 2011). This can also be valid for Göbekli Tepe. In other words, we have

very limited understanding about the people who lived in Göbekli Tepe to clearly define the site as a temple or a domestic place. The possible scenario is that they could have used the site for both functions. Therefore, Banning (2011: 624) opposes the western narrative of profane versus sacred division, which is often embraced and used by archaeologists. He also challenges Klaus Schmidt not by stating that his interpretation of a ritual space was incorrect, but also arguing that Göbekli Tepe could have both functions. Schmidt (2000: 51) identifies the enclosures without a roof as accessible from the top; however, Banning (2011: 626) suggests that these enclosures could have had roof structures made out of wooden beams between the T-shaped pillars for domestic use.

Public Outreach at Göbekli Tepe

Although archaeological excavations and scientific research regarding Göbekli Tepe constitutes a major part of academic investigation, they should be coupled with extensive public outreach activities in order to provide a better understanding of the site for all people. Therefore, the last section of the research paper shall investigate current trends regarding the outreach at Göbekli Tepe and discuss why archaeologists and stakeholders should develop better outreach projects while allowing diverse understandings of neolithization in Anatolia and sedentism in complex communities.

The article titled 'But what is it good for? – Experiences in Public Outreach of the Göbekli Tepe Project (DAI)' written by Jens Notroff and Oliver Dietrich (Dietrich and Notroff 2019) successfully investigates the media scope of Göbekli Tepe and categorises the increasing popularity in two waves. They claim that the first wave of popularity started around 2007 when Göbekli Tepe began to appear in major journal and magazine covers such as *Science*, *Smithsonian*, *Archaeology* and *National Geographic*, foreign language and English books such as 'Cygnus Mystery' and 'Magicians of the Gods', respectively written by Andrew Collins and Graham Hancock, along with educational and pseudo-archaeological documentaries and TV shows such as 'Stories from the Stone Age', 'Homo Sapiens', 'The Human Journey', 'Göbekli Tepe – The World's First Temple' and several episodes of 'Ancient Aliens' in the History Channel. The second wave of popularity also continued with other documentaries such as 'Human Evolution', 'Cradle of the Gods', 'The Green Planet' and 'Story of God'. The eventual consequences of these highly non-academic and pseudo-archaeological sources were the formation and spread of erroneous narratives of 'Garden of Eden' and of interstellar visitors (Dietrich and Notroff 2019: 292). The authors argue that the reason behind those narratives is the lack of communication strategies and inability of some archaeologists to provide information to the public effectively (Dietrich and Notroff 2019: 289). Even though archaeologists and excavation teams are often busy with scientific research, the outreach should also be part of their work. If the public interest and questions remain unaddressed, other people who do not have proper information might attempt to fill this gap by creating false narratives, which eventually become the mainstream (Dietrich and Notroff 2019).

As a response to that, a website and online blog were launched by the German Archaeological Institute as part of the Göbekli Tepe Project to beat those narratives. It is named 'The Tepe Telegrams' and it aims to fill the gap by providing scientific answers to debated questions (Dietrich and Notroff 2019: 293). Visitors to the website generally come from western countries where English speaking populations are high. The countries with the most visitors are respectively the United States, Turkey, and Germany (Dietrich and Notroff 2019: 295). The website currently does not provide Turkish language options. According to an interview I conducted with a PhD candidate Julia Schönicke from the German Archaeological Institute's Göbekli Tepe Project team, there was an idea to offer a Turkish language option in the website couple of years ago, however it has not been done yet (Schönicke 2020).

Considering the Turkish public and the overall competency to speak English, many people who cannot speak English will probably struggle accessing scientific data and cannot benefit from 'The Tepe Telegrams'. Once again, it creates a gap and leaves room for non-scientific narratives in the context of Turkey. How will this gap be filled in Turkey? This brought me to discuss a public survey titled 'The Relationship Between the Public and Archaeology in Turkey' conducted by the Safeguarding Archaeological Assets of Turkey (SARAT) Project in May 2018. The survey was organized by KONDA Research and Consultancy upon the request of the SARAT team. 3.601 interviews were conducted with people from 103 districts of Turkey's 29 provinces in all regions (SARAT 2018: 3). The Project specifies this public survey to be a novel investigation in terms of its topic and scope. According to the results, 37% of the Turkish population obtain information about archaeology through television, followed by museums with 35% and internet with 34% (SARAT 2018: 12). The rest can be seen in Figure 3.

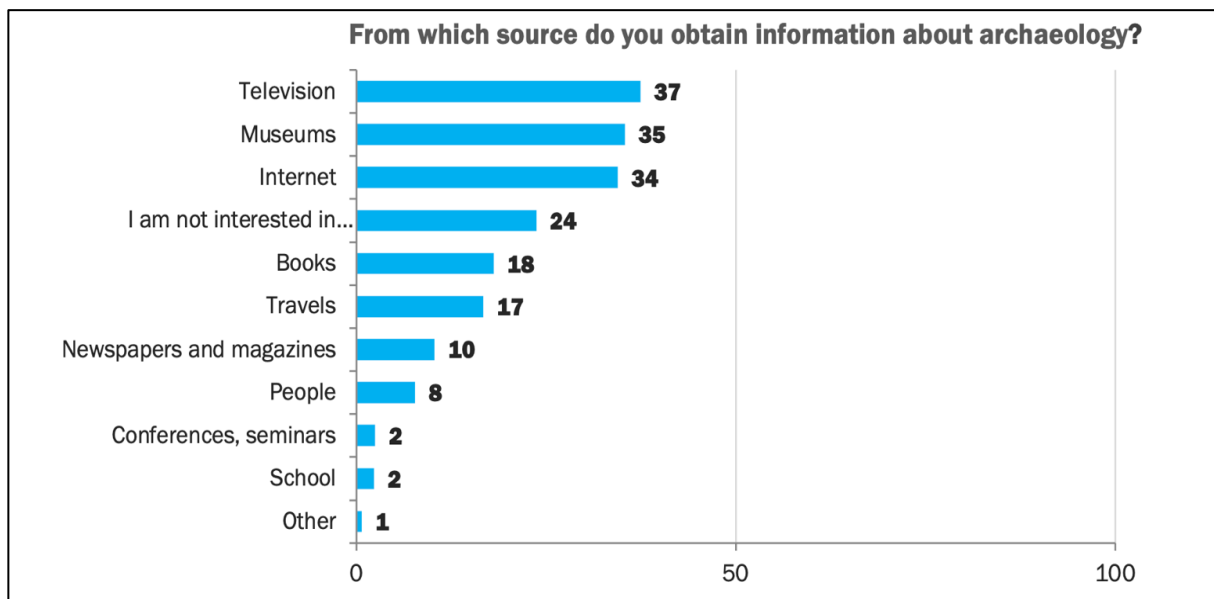


Figure 3. Top 3 instruments that people obtain information about archaeology according to the Safeguarding Archaeological Assets of Turkey Project's public survey (Image credit: SARAT).

The survey also shows that Göbekli Tepe is ranked in the top 10 most known sites in Turkey. Göbekli Tepe has a very interesting position considering the rapid changes in the last couple of years which significantly increased the site's overall popularity, especially in Turkey. This sudden increase might create further gaps and will probably be filled with pseudo-archaeological narratives if archaeologists and communication specialists do not design more informative tools. There are several reasons behind Göbekli Tepe's renewed popularity in Turkey. First, the site was newly inscribed as a UNESCO World Heritage Site on 1 July 2018. Second, the government has declared 2019 the year of Göbekli Tepe and planned various activities inside and outside of Turkey as part of the tourism promotion (Clare 2020: 86). It increased the overall visibility of the site as well as the visitor numbers when we compare the 2018 and 2019 visitors' statistics (DÖSİMM 2018; DÖSİMM 2019). In 2018, Göbekli Tepe was ranked 19th with 70.420 visitors (DÖSİMM 2018). One year later in 2019, it jumped to the eighth position with over 400,000 visitors (DÖSİMM 2019). If we analyse the list carefully in the last five years, we will see the deep-seated archaeological sites are mostly ranked in the top ten without a major change in the list. For instance, Hierapolis in Denizli, Ephesus in İzmir, Göreme National Park and the Rock Sites in Nevşehir and Troy in Çanakkale have been occupying the top ranks on the list continuously together with the other popular sites (DÖSİMM 2018; DÖSİMM 2019). Therefore, the jump from 19th position to

eight indicates that Göbekli Tepe will create room for itself among other most known archaeological sites and will consolidate its position in the future (See Figure 4).

2018			2019		
1	Denizli Pamukkale Hierapolis Archaeological Site	2.189.529	1	Denizli Pamukkale Hierapolis Archaeological Site	2.557.868
2	İzmir Ephesus Archaeological Site	1.555.559	2	İzmir Ephesus Archaeological Site	1.855.694
3	Nevşehir Göreme National Park and the Rock Sites	1.113.409	3	Nevşehir Göreme National Park and the Rock Sites	1.403.444
4	Çanakkalae Troy Archaeological Site	534.233	4	Nevşehir Kaymaklı Underground City	632.970
5	Nevşehir Kaymaklı Underground City	533.850	5	Çanakkalae Troy Archaeological Site	582.491
6	Aksaray İhlara Valley	492.672	6	Aksaray İhlara Valley	566.917
7	Nevşehir Derinkuyu Underground City	378.834	7	Nevşehir Derinkuyu Underground City	456.369
8	Antalya Aspendos Archaeological Site	328.401	8	Göbeklitepe Archaeological Site	400.195
9	Hatay Çevlik Archaeological Site	267.920	9	Antalya Aspendos Archaeological Site	320.856
10	Antalya Myra Archaeological Site	252.077	10	Antalya Myra Archaeological Site	274.605

19. Göbeklitepe

Figure 4. Comparison of the most visited sites in 2018 and 2019 according to the DÖSİMM Museum Statistics.

Another indication to support this argument comes from the virtual tour statistics. When most museums were closed due to the COVID-19 pandemic, virtual museums tours were launched to allow visitors to experience the sites from their home. It seems that Göbekli Tepe is also leading with a significant margin in the virtual list with 3.383.985 online visitors, overtaking its closest rival over 1.5 million visitors (DÖSİMM 2020). Furthermore, we continue to see the domination of popular shows and advertisement projects. For instance, *Rafadan Tayfa 2: Göbeklitepe* has become the most popular Turkish animation production made in Turkey and reached many people according to the newspapers (Osterlund 2020). In addition, *'The Gift'*, or *Atiye* in Turkish, was released as the second Turkish original series on Netflix. It excited the Turkish public as the first archaeological science fiction series ever shot in the country, which became a very big hit shortly after its release (Osterlund 2020). Both the series and the animation were released in the last days of 2019 and a Google Trends search shows what was the impact in general. The animation was only released locally, but the impact of the Netflix series went beyond Turkey as it was released in other countries as well. The Google Trends search indicates that Göbekli Tepe reached its peak in the search engine on 29 December 2019, both in Turkey and worldwide, two days after the series was released (See Figure 5).

Despite the fact that the animation aims to create a connection between cultural heritage in children and their parents, I believe the series was highly pseudo-archaeological and portrayed Göbekli Tepe in the midst of a mysterious treasure hunt without scientific archaeological interpretations (Osterlund 2020). Another campaign emerged with the slogan of 'Zero Point in Time' by Doğu Group as a result of a deal between the Turkish government and a private sector company to promote tourism (Osterlund 2020). It also portrays Göbekli Tepe as the origin of civilizations and religion. Although it includes archaeological investigations and digital outreach of the site with a well-designed web page, it still consolidates the narrative of the first temple.

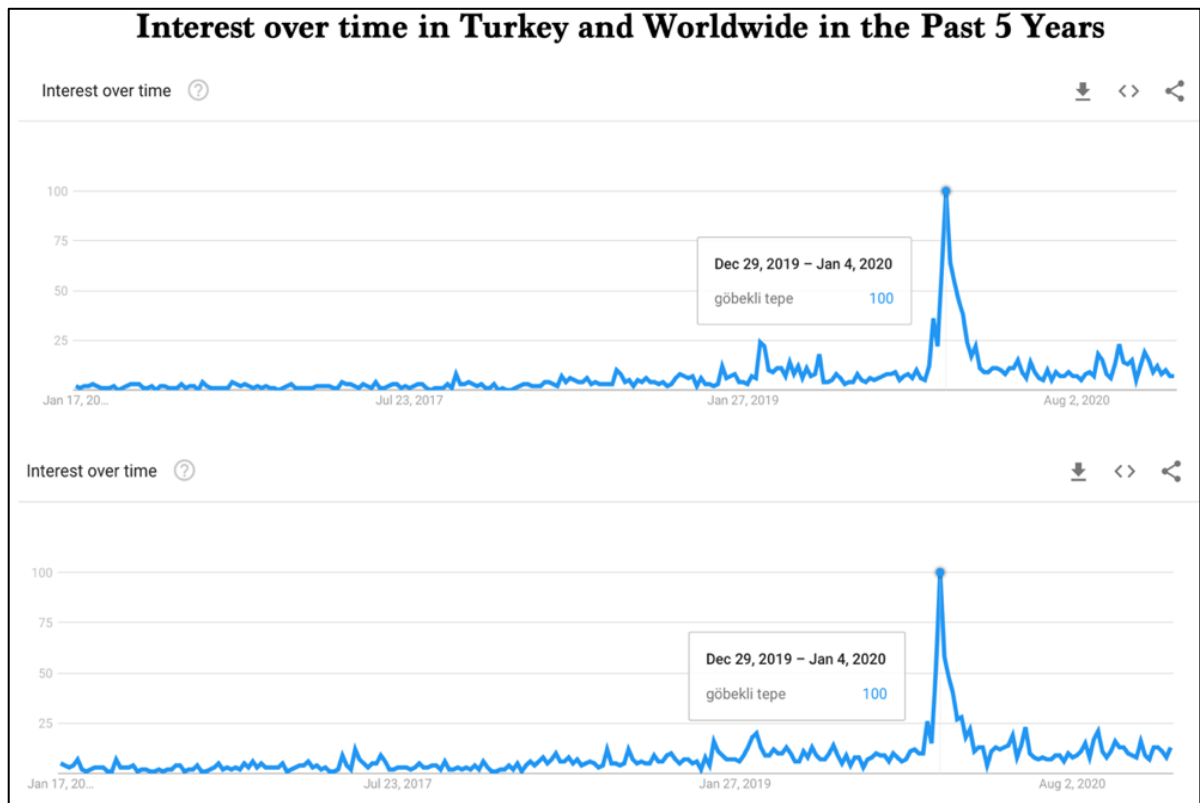


Figure 5. Google Trends search of Göbekli Tepe from 18 January 2021, Turkey and Worldwide.

Conclusion

Göbekli Tepe is one of the most significant discoveries of the last couple of decades and enriches our understanding about the Neolithic Period. The observed cultural and monumental components of T-shaped pillars can be seen not only in Göbekli Tepe, but also in several other sites around the region. We can extrapolate two major points as an outcome of these investigations: First, the distribution of the sites that are similar to Göbekli Tepe with T-shaped pillars are not limited to mountainous areas (Moetz and Çelik 2012). Most of them were located in hilly topographies such as Göbekli Tepe, Karahan Tepe, Hamzan Tepe, and Urfa Yeni Yol. Nevertheless, the existence of sites located in plains and valleys such as Nevalı Çori, Sefer Tepe and Kilisik indicate more diverse geographies (Moetz and Çelik 2012). Second, the distribution of T-shaped pillars in various locations significantly indicates a complex cultural network in the region (Moetz and Çelik 2012). In the future, archaeologists will be able to reveal this extensive connection between the sites and include them in the context of Göbekli Tepe for a more comprehensive outreach that reflects the overall importance of the region. Besides, the Minister of Culture and Tourism Nuri Ersoy announced their plan to call the area of Göbekli Tepe as *12 tepe*, 12 hills since there are more sites with T-shaped pillars (Agency 2021). Although the details about the plan will be announced in September 2021, it will be a positive development to create a more comprehensive narrative about Göbekli Tepe and its surrounding regions in the larger context.

Furthermore, there are several interpretations of the site argued by different scholars on the basis of different evidence, which I believe should be equally represented in the public discourse. Because we have various and diverse interpretations about Göbekli Tepe and its purpose, our public outreach should also be designed in a way to provide diverse definitions instead of representing only one interpretation. What we see today is either dominated by a single interpretation of the temple function

and pilgrimage site, often mentioned as the oldest temple in the world, or several other pseudo-archaeological narratives which are completely far from scientific research. The reason behind this can be associated with the lack of communication and outreach strategies, which eventually creates a gap that will be filled with non-scientific interpretations. Considering the lack of Turkish resources compared to English ones, the gap is even bigger in the context of Turkey. Growing popularity of Göbekli Tepe in recent years both due to government efforts and as an outcome of popular TV shows widens this gap, which should be filled with relevant scientific resources. This can only be achieved through diverse public outreach strategies via fostering diverse interpretations of the site instead of consolidating the one and most desirable for tourism. The growing popularity and public visibility are not necessarily positive outcomes if they are not accompanied by a comprehensive archaeological understanding, which will help people to understand diverse definitions of Göbekli Tepe. In the future, both archaeologists and stakeholders should open a new dialogue to discuss public outreach at Göbekli Tepe and consider redesigning some of the elements for more informative and inclusive communication.

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The 4-D in Archaeology: Diversity, Dissemination, Disclosure and *Diversión* (fun). History of the Davalillo Castle, Current State and Activities for Archaeological Heritage Teaching

Isaac Martínez Espinosa¹ and Belén Martínez Pérez²

Abstract

In recent years, archaeological and historical dissemination have been adapted to new educational trends based on greater student participation in order to expand their skills in the world of the humanities. Urraca, as a heritage research group, has focused part of its work on the creation of educational activities and resources using various recycled materials, using games and modern educational techniques to teach the importance of heritage in La Rioja. In this piece, we will deal with the diversity of activities used for the dissemination of heritage elaborated for the centennial CVNE winery (*Compañía Vinícola del Norte de España*) and the project that they are going to carry out with the restoration of the Davalillo Castle acquired in 2019. This work was designed in the interest of the winery and its project for raising awareness about the region and the recovery of a part of its historical, archaeological, architectural, and intangible heritage that would otherwise have been lost. The project, not previously implemented, laid from the beginning the foundations of respect for heritage, making the Davalillo Castle of CVNE and Urraca's proposal one of the regional references concerning the care and disclosure of heritage and the Middle Ages (AD 1052-1527).

Keywords: archaeology, diversity, heritage, disclosure, and education

Introduction and Methodology

Introduction

During the Middle Ages, the current Autonomous Community of La Rioja (Central Northern Iberia), previously divided between the Kingdoms of Castile, Navarra and Aragon, was a territory of border and exchange for people, cultures and lifeways that have created their unique idiosyncrasy. Due to this border character, a diverse set of defensive architectures, built around the communication routes, became icons of the region.

The scarcity of specific bibliography on the castle and in medieval documentation, especially up to the 13th century, hinders our work as researchers on the Castle of Davalillo. The research should be based more on the study of archaeological sources and archaeology of the architecture in order to obtain better information. We are faced with an architecture on a very interesting strategic hill; close to a land communication route existing since Roman times and to the natural border offered by the Ebro River.

Due to the enormous efforts made by public and private entities to maintain heritage, its disclosure and dissemination is necessary in order to understand its diversity. To do this and focusing on the restoration that is going to be carried out in the Davalillo fortress in La Rioja, Spain, we designed a series of activities developed for all educational levels. The objective was to raise awareness about the protection of the archaeological, historical, landscape and monumental heritage of the Castle of Davalillo from childhood to adulthood. Heritage is the entire legacy that has been transmitted to us

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through culture, history and art to this day and our obligation is to maintain it and, if possible, improve the conditions in which it is preserved. Diversity in activities does not only refer to the ages to which they are intended, there is also attention to disabilities and care for the environment through the use of recycled materials in all of them.

The main objective of the historical-geographical context in the original restoration project is to serve as one of the bases of the restoration project. Due to the limits of this article, a condensed version has been described. We need to understand the geographical space in which the Castle of Davalillo is located in order to be able to discern the idiosyncrasy of its construction. In the same way, it is essential to know the historical evolution in the current Autonomous Community of La Rioja during the medieval period and more specifically in the centuries in which this architecture was active, between the 12th and 16th centuries.

Methodology

A deductive methodology, based on fieldwork and desktop analysis, has been implemented/used between 21 October 2019 and 13 December 2020.

The fieldwork lasted throughout the elaboration of the restoration project and has consisted of consulting bibliographic and archive resources, namely the archives of Navarra (AN), General of Simancas (AGS), Real Chancillería of Valladolid, Historical National of Madrid (AHN), Nobility of Toledo (AHNob), San Millán (SM) San Asensio (AS), Provincial de La Rioja and Diocesan of Logroño, Calahorra and Santo Domingo de la Calzada (ACL and ACSD). Due to the Covid-19 restrictions, special measures had to be taken to consult the archive in person and part of the work was done through the PARES website. The bibliographic references have been reviewed, listed and the necessary information was extracted, providing the basis to compare the data obtained in the archives with the original documentation. The consulted digital libraries were Academia.edu, Mendeley and Dialnet. The physical libraries visited have been the Public Library of La Rioja, Library of the University of La Rioja, Rafael Azcona Public Library, Library from the Autonomous University of Madrid, and the National Library. The archival data has been very scarce and contributed little to elaborate the history of the castle. The disclosure and dissemination of archive materials has been complex due to security measures, such as the use of masks, plastic gloves, and the impossibility of using public technological elements including scanners and photocopiers that are usually available to users. As well as private elements, like portable scanners, high-resolution cameras, and other copying methods, we depended on the reprography services of the estate which took up to four months to provide the information.

The second part of the work, the desktop work, is divided into different phases. The first was the organisation of different information that we had obtained and systematised through the use of files and tables, with which we extracted the main data. Subsequently, with the data already organised chronologically, a diagram of what the study of the castle was going to be like was elaborated. Finally, this written work was divided into different sections. The elaboration of the historical context is based, for the most part, on the study and transcription of the documents, using bibliographic references when it has not been possible to consult the original document. We tried not to make a general context of La Rioja in the Middle Ages, but an approach to the medieval history of the village of Davalillo and its castle. Between May and August, the different activities developed in previous months were prepared, including building prototypes of different games and activities.

Geographical and Historical Contexts

Geographical Context

Talking about La Rioja is an anachronism since it is a political space that arose definitively and independently on 9 June 1982. Despite this statement, this concept will sometimes be used to define the space and the historical events that occurred in the space, which today occupies La Rioja. This space was occupied by different Kingdoms such as Castile, Aragon or Navarra, whose borders were also dynamic. Since the arrival of the Muslims in 711 in the Iberian Peninsula and until the definitive incorporation into Castile in 1076, La Rioja is a space in which the fluctuation of the borders led to disputes, first between Muslims and Christians and later between Castilians and Navarrese.

La Rioja is a geographic space of enormous contrasts between its northern and its southern parts. La Rioja occupies an area of 5034 km², approximately 1% of the Spanish territory. We can divide it into two large areas, the Ebro Valley area and its tributaries in the north, and the mountains in the south. There is a great difference in altitudes that go from 300m above sea level in Alfaro, to the east; up to 2262m at San Lorenzo, the highest peak in the Sierra de la Demanda in the southwest, the entire community of La Rioja sloping to the east. The natural limits of the mountains of Toloño, Cantabria and Codés, the Obarenes mountains and the river Ebro act as a political border in most of the northern part of the Autonomous Community. It is on the southern slope of this river Ebro that San Asensio is built, the town in which the castle is located, having a perfect view of all the mountain ranges of the northern slope from the north side of Davalillo hill (coordinates: 42° 32' 20.6" N 2° 43' 57.7" W), next to the river terraces. The meander in which the Castle of Davalillo sits is marked by the villages of Briones, San Vicente de la Sonsierra and the Collado de las Espinillas, San Asensio (García Arnáez 1994: 26). On the west side is the funnel created by the approach of the Obarenes mountains with the Sierra de la Demanda, which will continue to the south joining the Picos de Urbión, the Sierra Cebollera, the Cameros Nuevo and Viejo and in the Rioja Baja (east), the small mountains of La Hez, Hayedo de Santiago, Achena, Yerga, Peñalosa, Alcarama and Cabezas. Finally, the east slope runs along the Alhama riverbed.

Historical Context of Medieval Davalillo: 1052-1527

In these border spaces, with a warlike environment for the control of the territory, it is where the castles, fortresses, architectures, and defensive systems appeared on the Northern Border. In La Rioja, we can affirm that there were a good number of defensive architectures, more than 130 (Martínez-Espinosa 2019: 278-279). The construction of fortresses was a process that occupied the entire medieval period from the 5th century and lasted until the first half of the 16th century, in total about 1100 years.

After several centuries, the disputes between Muslims and Christians for peninsular control were directed towards southern borders. The Christian Kingdoms adopted a new model of territorial control promoted by the Kingdom of León, Navarra and the County of Castile. The *Tenencias*, small areas controlled by a Lord, developed mainly around the pilgrimage routes to Santiago de Compostela, were not hereditary at first and had different sizes and importance. They were ruled by the *Tenentes* that depended on the kings or other lords; at their side, there were administrative officials known as *Merinos*. These *Tenencias* would evolve into lordships to perpetuate themselves centuries later as the most important in the area of Davalillo and San Asensio, with the family López de Haro dominating almost all of La Rioja. The struggles between these noble families for territorial control led to the birth of fortresses such as Davalillo, which at the time would have two different *Tenencias*, one for the village and one for the castle, originating a duality of power that was detrimental and that would end when the town of Davalillo depopulated.

There were numerous changes in the *Tenencias* and the control of La Rioja during the 10th and early 11th centuries. When Sancho Garcés IV, the king of the Nájera-Pamplona kingdom, died, the control of the territory went to Alfonso VI of Castile in the year 1076 and a big part of the La Rioja area passed under Castilian control. According to the testimony of Mosén Diego Ramírez Ábalos de la Piscina, the hill on which Davalillo is located was first inhabited by a knight of the Ábalos family, towards the end of the 10th century or in the first half of the 11th. The same author cites Father Anguiano, who attributes the founding of the village and the raising of the fortress to Aznar Aznares de Ábalos, giving Aznar Aznares his surname after the death of Sancho Garcés IV (Goicoechea 1949: 98). The village appears as part of the privileges of crops and vineyards owned by the monastery of Santa María la Real de Nájera and confirmed by King Don García and his wife Estefanía, dated between 1052 and 1054 as a complete forest and a windmill in the village called Davalillo³ (AHN. Santa María la Real de Nájera, Privilegios: 54), as was mentioned in the text.

Davalillo appears in three other donation documents. The first donation is dated February 1078 and is made to the Monastery of San Millán de la Cogolla, signed by Don Fortún Albaroz and his wife Toda⁴: the monastery of Ascensio, next to the village of Davalillo (SM. archive 6. No. 34). In that same document, Didaco Albaroz appears as lord of *Dabaliellos* (*Becerro Galicano Digital*: fol. 154). The second donation is attributed to Mayor, wife of Diego Gudestioz, who surrenders to San Millán with her assets in Torremontalbo and San Pedro in 1086 and it refers to:⁵ another field close to the road to Davalillo / and in Davalillo a plot in the middle of the village / and in Davalillo my portion of the field (*Becerro Galicano Digital*: fol. 154). Aznar Aznares signed the third document in 1096. He gave San Millán de la Cogolla the crops that he owned in Torremontalbo claiming it was another field close to the road to Davalillo⁶ (*Becerro Galicano Digital*: fol. 204), as was mentioned in the text. Moya Valgañón *et al.* (1992: 196) say that the castle would be built during the reign of Alfonso VIII, in the second half of the 12th century, to strengthen the border with the Kingdom of Navarre, and more likely after 1177, as it did not appear in a document issued by Sancho VII in 1177 for the English Parliament showing the castles of the area.

Alfonso VI became the most important monarch in the 11th century, and during his reign, towns that previously benefited from the Kingdom of Pamplona, for example, Nájera, lost strength in favour of others such as Calahorra, Logroño or Santo Domingo de la Calzada. During the 11th and 12th centuries, there was a transfer of territorial control of Davalillo and its possessions from the King to García Ordóñez and Urraca, based in Nájera, which implied that some small *Tenencias* became dependent on larger ones. This transfer of control caused the rise of some very important families in the 12th century, such as the Ramírez de Arellano, Lords of Cameros, but also caused territorial disorders and fights between fortresses that depended on the Kings and lords, for example, the control of Davalillo and Briones was very important to control the Ebro River. These struggles lasted until the reigns of Alfonso VII and Alfonso VIII, practically the entire 12th century until a new territorial reorganisation in 1182.

In the 12th century, due to pressure from the Navarrese Kingdom in the north, as well as from the Muslim world and the Kingdom of Aragon in the east, new *Tenencias* were born, such as Cervera de Rio Alhama in Rioja Baja, and Davalillo, Haro and Navarrete near the River Ebro. The defensive architectures gave benefits to their lords and monarchs, who in turn made donations to the great Riojan monasteries such as San Prudencio de Monte Laturce in Clavijo, San Martín in Albelda, Santa María la Real in Nájera

³ *Una ebdomada integra et unum molino in termino istius uille quem tenuerunt homines de Daualiellos.*

⁴ *Ascensio monasterium, iuxta vicum Davaellum situm.*

⁵ *Alia terra latus via de Davalillo / Et in Davaliellos uno solare un media villa / et in Davaliellos dimidietatem mee portionis.*

⁶ *Alia terra latus via de d'Avaliellos.*

or San Millán de la Cogolla. Some families donated smaller monasteries to these of greater importance. In this century, María López donated the monastery of San Miguel de *Davaliellos* to Santa María la Real de Nájera (Moya Valgañón *et al.* 1992: 194). In 1138, María Lópiz, on behalf of her father Lope Gonzalvez and her mother Toda López, donated Nuestra Señora de Davalillo to Esteban, the prior of Santa María la Real de Nájera⁷: and in the same way I donate the monastery of San Miguel of Davalillo to the monastery of Santa María la Real of Nájera (AHN. Nájera. Carp. 1030, nn. 17-18). On 14 March 1175, Alfonso VIII donated to the monastery of Cluny the church of Santa María la Real de Nájera with all its inheritances and rights, among others the monastery of San Miguel and the village of Davalillo:⁸ I donate the monastery of San Miguel with the town of Davalillo and its inheritances (AHN. Nájera. Carp. 1030, n. 24), as mentioned in the text.

During the 13th century, the most important towns were those that were located along the pilgrimage routes to Santiago de Compostela. Given the importance of the castle of Davalillo, Alfonso X gave San Asensio the Jurisdiction of the *Tenencia* Haro, disassociating the population of Davalillo from the monastery of San Millán in exchange for tax exemption from the Salinas de Añana salt mine. Davalillo appears in a document dated 1237 as one of the churches of La Rioja. In Calahorra, during May 1257, a concord was signed in which the parish of Davalillo appears, belonging to the Najera arch priesthood along with others. In the last quarter of the 13th century, the exclusion of the four most important families in the area during the succession to the throne of Castile, among them the López de Haro family, later prompted the Castilian Civil War. On 23 July 1286, Sancho IV of Castile granted the salt that it had in the Salinas de Añana salt mine to the monastery of San Millán, without having to pay taxes, in order to exchange Gembres, San Juan and Davalillo in payment for Sajazarra. In 1296, Davalillo appeared together with Logroño, Nájera, Santo Domingo de la Calzada, Briones, Santa Cruz de Campezo, La Puebla de Arganzón, Treviño and Peñacerrada, in a *Hermandad Concejil*, the union of the councils of several localities to face bandits or attacks (Moya Valgañón *et al.* 1992: 194-195).

Between the 14th and 15th centuries, large-scale defensive architectures, such as the Davalillo Castle, fell into disuse in favour of Fort-Towers. These were born, in many cases, as payment by the monarchs to the nobles for some help provided and in which the nobles left their mark through heraldry. In 1350, Davalillo was under the bishop's control, through the diocese; specifically in the arch priesthood of Nájera and the monasteries that had fifteen pieces of old coin⁹ of which Davalillo paid one (ACL. Eight-page paper notebook 220 x 145 mm).

In the 14th century, due to the Castilian Civil War (1351-1369), the importance of the village of Davalillo was greater and Martín Pérez was the representative of the village in the Cortes of Burgos, the most important place of representatives of Castile, in 1315. In 1367, the castle appears for the first time in a document in which Enrique II of Trastámara hands over to Carlos II of Navarra a series of hostages in certain enclaves, among which is the fortress. After the Castilian Civil War, the Davalillo castle remained in the hands of the Manrique family while Juan I of Castile donated the village to Sancho López de Puelles in 1389 (Moya Valgañón *et al.* 1992: 195, 196). At the end of the century, on 23 November 1392, in the Castle of Davalillo, Don Rodrigo de Portugal, Abbot of Valvanera's monastery, signed the purchase of the Anguiano estate by the monastery he controlled (Goicoechea 1949: 98).

In a document signed in Madrid on 4 May 1400, Enrique III granted the Count of Treviño Pedro Manrique the possession of the Castle of Davalillo for 6,000 *maravedís*, having it in possession for this amount, also

⁷ *Et similiter dono Sancte Marie de Naiara monasterium Sancti Michaelis de Davaliellos.*

⁸ *In Daualellos monasterium Sancti Michaelis cum ipsa uilla et omni sua hereditate.*

⁹ *Procuraciones de moneda vieia.*

receiving another 2000 (AGS. EMR Tenencias. Leg. 2). The castle of Davalillo is mentioned in documents of 1401, 1402 and 1408¹⁰: by order of the King, the 20 inhabitants of the Castle of Davalillo have no obligation to pay tax for living in it (AGS. EMR 1 and 2, Leg. 1), as was mentioned in the text. In the middle of the 15th century, we have once again news of the castle in the testamentary document of *Adelantado* Pedro Manrique, signed on 20 September 1440 in Valladolid (Moya Valgañón *et al.* 1992: 196). In this document, he granted his eldest son Diego Manrique, Duke of Nájera, the *Tenencias* of the castles of Davalillo and *Vellivio* (Bilibio). In 1458, Diego Manrique, the first Count of Treviño, requested that an accounting was made to recover the fortresses of Albor and Davalillo and, if so, both places to be delivered to the heirs of Diego de Puelles, the Lord of Autol (Goicoechea 1949: 98). In 1462, Davalillo appeared in the Coin Tribute of Enrique IV: Davalillo contributed 333 *maravedís* and San Asensio with more than double, 720 (Moya Valgañón *et al.* 1992: 196), which implied a decrease in the population of the village of Davalillo, compared to San Asensio.

In 1465, Davalillo-San Asensio was acquired from the Puelles family by María Enríquez, belonging to the Velasco house, something that generated tensions between the Manriques and the Velascos, who yearned for control of the area, and which led to the strengthening of the villages' fences (Moya Valgañón *et al.* 1992: 196). It seems that the relationship between the Manriques and the Puelles was not only limited to Davalillo and San Asensio, but that Puelles had control in Anguciana, Cihuri and Autol (Moya Valgañón *et al.* 1992: 48), several localities with benefits. In addition to the document of 1465, it has been possible to verify the interest that the crops around Davalillo, located towards Briones, Montalbo (Torremontalbo) and San Asensio aroused, especially the possession of vineyards and fields that not only the Manriques, but also other families held. For example, the Zúñiga family already appeared as possessors of vineyards in the areas between Davalillo and Uruñuela. In a document dated 11 June 1468, we see the sale of Davalillo and San Asensio to María Enríquez de Lara (Sancho Velasco's wife) by Pedro de Puelles, the lord of Autol (AHNob. Astorga, C.4, D.11). The Castle of Davalillo is mentioned in a document from 1447, in which it is exempted from paying tithes to the Monastery of Valvanera. In another document, dated to 27 August 1470, the Counts of Treviño and Miranda regained the castle from the hands of Sancho Velasco (Goicoechea. 1949: 99). On 9 May 1488, the canons of the Santo Domingo de la Calzada give a perpetual census to Don Sancho de Velasco, Lord of Arnedo, Davalillo and San Asensio, the Ajuarte farm with all its rights and belongings, with the load of 200 bushels of bread mixed every year (ACSD. Four-page paper notebook. Archive 28/10). The Manriques would recover the castle in 1491, being linked to the monastery of Santa María la Real de Nájera, but still owned by the crown. Davalillo is also mentioned in a document dated to 27 April of that same year in the Cathedral of Santo Domingo. Pedro Sánchez de Arratia and Alonso Fernández de Castillo, attorneys for the council of Davalillo and San Asensio, were forced to pay 200 bushels of mixed breed every year to the Cabildo of the *Catedral de la Calzada*, the person in charge of the cathedral's economy (ACSD. Six-page paper notebook. Archive 28/11).

On 29 November 1505, Juan Bernardo de Quirós took possession of the fortress in the name of the Duke of Alba, giving him 68,000 *maravedís* as a pledge. In 1507, Don Fadrique Álvarez de Toledo, Duke of Alba, requested different amounts of money from towns and *Tenencias* in possession of the Duke of Nájera, such as Redecilla, Ocón, Navarrete and Davalillo:¹¹ for the Tenure of Davalillo, a thousand Ducats (AGS. CSU, Se 2/0375: 1-7) as was mentioned in the text. Between 1511 and 1515 we have several documents in which the village of Davalillo is mentioned, but not the fortress. They are mostly lawsuits of which we have numerous examples throughout the 16th century, such as in 1511 and 1512 when Juana I of

¹⁰ *El castillo de Davalillo tiene del rey por merçed que non paguen monedas veynte vezinos del dicho castillo.*

¹¹ *Por la tenença de Davalillo mile ducados entre otras.*

Castile proposed a commission to the bachelor Montes de Oca on the possessions and tributes of the towns of Davalillo and San Asensio. In 1512, the queen required the judges of Logroño and Santo Domingo de la Calzada for information on the boundaries and landmarks of the villages of Briones, Davalillo and San Asensio. In June 1515, Don Antonio Manrique de Lara, Duke of Nájera, received from Juana I the possession of the village of Davalillo with all the rights to the income and places of his dominion, claiming from some families of Briones, such as the Balmaseda family, the tithes for the possessions they had in San Asensio and Davalillo. Throughout the century, there were some disputes over the recipients of the patrimonial benefits of both villages, such as the one that occurred in 1527 between Diego de Hegueruela and Juan de Nestares with Pedro López de Davalillo (AGS. CRC, Chronicle, book 159: 8).

Disclosure of the Castle of Davalillo: Current State and Activities

Due to the scarcity of documents, we do not know all the data on the construction of the castle, its date, who ordered it to be built and the techniques they used. The information obtained by the archaeological excavations will (2022-2023) be of great importance to describe the history of the castle. In order to explain this unknown history, a series of activities were developed to involve students from three years of age to postgraduate studies, gradually being able to learn about the heritage diversity that the castle offers from an early age. The activities designed for the youngest students are intended to make them understand different issues related to the construction techniques of the castle, the work of the archaeologist and the importance to understand the unknown history or the different parts which make up a castle. For this, prototypes of original games related to defensive architectures and diversity in archaeology have been developed, as well as dissemination through new technologies. In the same way, for university, postdoctoral and professional students, scientific conferences on archaeology and history and archaeological campaigns have been proposed, expanding on the previously documented knowledge. Our aim is to create a dynamic knowledge about archaeological diversity that grows as the castle restoration project does, trying to reach as many audiences as possible and creating adequate knowledge for everyone.

Davalillo Castle: Current State

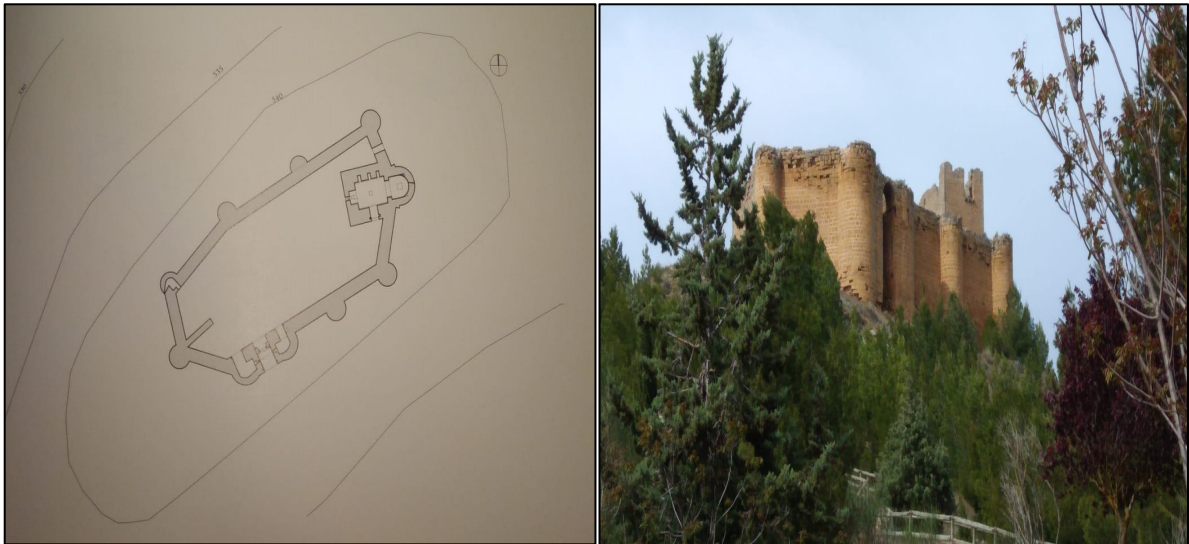
It is a defensive architecture with a castle-fortress typology. The tower has four floors and is located within the parade ground. Its walls are made of sandstone and crowned with battlements both on the walls and on the towers. The windows in Figure 1 are smaller in the lower part and square in the upper part (see Figures 1-2).

Its defensive structure is well-preserved because the stones have not been used to build other buildings, but it has lost stones at its base because of the wind and the rains. It has an irregular heptagonal shape with an east-west orientation, a square tower on its east side and seven smaller towers in the wall (Figures 3-6).

To enter the courtyard, you must cross a high double arch and a lintel that was added later (Figure 7). The courtyard is spacious and empty today, but it surely contained outbuildings and other interior constructions in the past because of the marks preserved inside the walls, as visible for example in Figure 8.

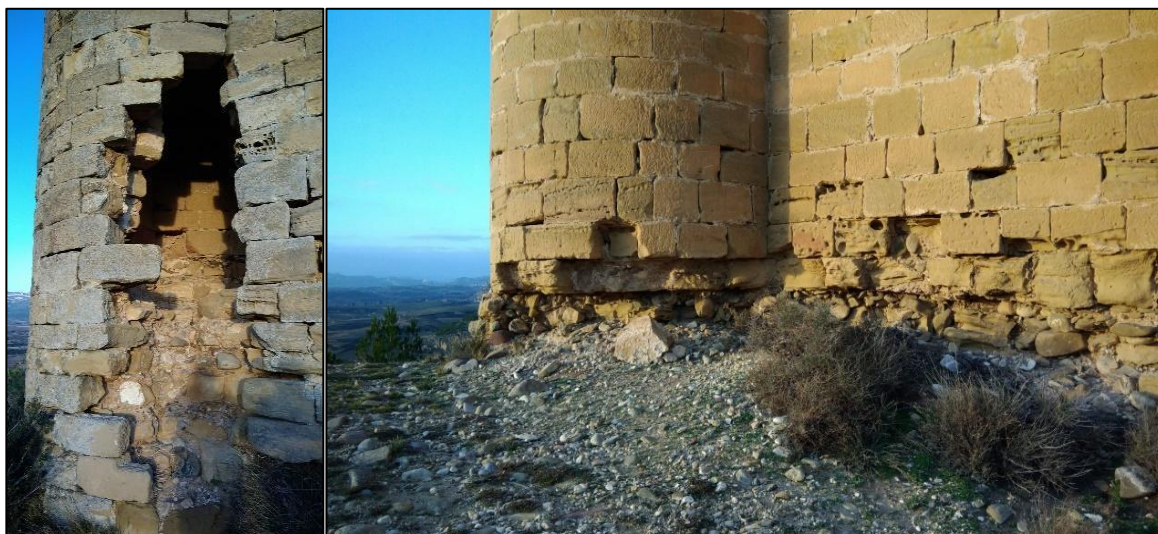


Figures 1-2. *Tower of the castle outside and inside* (Photo credit: Authors).



Figures 3-4. *Shape of the Castle* (left) (Pascual 2006: 321) *Castle of Davalillo* (right) (Photo credit: Authors).

In order to broaden the options for the Davalillo Castle restoration project, a didactic proposal was developed. Every historic building deserves the opportunity to have its past explained through activities for all ages. It is a way to guarantee the future of this fortress through the disclosure of its past. To do this, a series of methodologies were developed for different educational levels. The activities have been framed in the Organic Law of Education (8/2013, 9th December, *Ley Orgánica de Educación*).



Figures 5-6. Corners on the west wall (Photo credit: Authors).



Figures 7-8. Main gate. Outside (left) and inside (right) (Photo credit: Authors).

The main objective of this work is to enhance the defensive architecture and the efforts to recover it for use. For this, original, creative, and educational experiences were created among users and professionals in order to ensure a future for the site and the castle. The recovery work undertaken on this defensive architecture will help showcase the various layers that comprise its great wealth: the archaeological heritage; artistic heritage, visible through the study of the works of art belonging to the castle and found in the museum of La Rioja; its landscape, studied through the changes that have occurred over the centuries; the environmental aspects, shown through the study of animal and plant species; and its geography, which will be shown through the study of the nearby geographical features. All the activities shown below have an average duration of two hours, of which 25% of the time is used to raise awareness about the archaeological and heritage diversity of the environment. The rest of the time is dedicated to the history of the site and the activities.

Activities

Teaching in general, and heritage education in particular, have evolved remarkably in the last 50 years, having undergone a great revolution since the beginning of the 21st century. Currently, new educational currents are committed to teaching through projects, teamwork, inclusive language and transversal concepts such as recycling and the enhancement of different types of heritage. Despite everything, and although heritage is of great importance in education, the introduction of heritage diversity and its dissemination is being very complex and slow in Spanish educational centres, and with great differences depending on the autonomous communities. As a working group, we have developed 15 activities in which we deal with questions about different types of archaeological, historical, artistic, and environmental heritage. For this paper, we have developed a series of activities that are briefly described in the following paragraphs. The main objective of the activities is to raise awareness about heritage, as well as its present and future protection. We consider that through the mixture of non-formal, learning by experience, enjoyment of learning, and transversal competencies (feminism, teamwork, leadership, solidarity, recycling, or respect), it is easier to develop empathy and respect for the heritage. The following table lists out how those activities can be useful for education and in heritage diversity, to understand that there are different types of heritage such as environmental, archaeological, artistic, architectural, or geographical. Table 1 provides a brief explanation of some of the activities:

Table 1. *Heritage activities.*

Activity	How does it work in education?	How to use it in heritage diversity?
Archaeologist Trade	<ul style="list-style-type: none"> - Communication - Autonomous learning - Teamwork - Association of ideas - Planning 	<ul style="list-style-type: none"> - To approach Archaeology and the Archaeologist trade
Congresses	<ul style="list-style-type: none"> - Dissemination - Diversity - Communication - New technologies - Partnership 	<ul style="list-style-type: none"> - Dissemination about heritage diversity
Crossing the boat bridge	<ul style="list-style-type: none"> - Teamwork - Motivity - Communication - Strategies - Association of ideas 	<ul style="list-style-type: none"> - To learn about history - To know the meaning of the environment

Building a medieval arch	<ul style="list-style-type: none"> - Motivity - Teamwork - Visuospatial function - Selective attention - Planning 	<ul style="list-style-type: none"> - To develop architectonic and structural skills - To recognise architectonic elements
Archaeological cubes	<ul style="list-style-type: none"> - Fine motor skills - Selection of the information - Diversity of roles - Communication 	<ul style="list-style-type: none"> - To discover diversity in an archaeological site - To know more about how archaeologists work - To care about movable heritage

Archaeologist trade (see Figure 9): it is intended for young people between 8 and 13 years old and fosters understanding of the archaeologist trade. There will be two elements. The first one will be different posters with different kinds of products. The second one will be cards with several cohabitation groups. Some examples could be 'family with babies', 'elder couple' or 'student flat'. The participant should put together each card with the proper poster. After that, they reflection about their decision. To continue, we will explain how archaeologists use the objects to interpret the past, similarly, to how they have done in the activity.

Congresses: it is intended for bachelor, master's degree, post degree and doctoral students. The main objective of these congresses is to disseminate the archaeological findings discovered during the archaeological campaigns, to share knowledge about similar topics, for example, archaeology of architecture, the different heritages, and the experts' opinions.

Crossing the boat bridge: it is intended for young people between 8 and 18 years old or more (depending on the level of difficulty recommended by the monitors). Given its dynamic nature, it is a simple but efficient activity for these ages, from our experience. It is intended to talk about archaeological evidence which does not exist anymore and disseminate the importance of bridges in border areas, over all those provisional ones that were created with boats. To do this, using recycled cardboard tiles, teamwork will be developed, and the complexity involved in crossing a bridge with these characteristics and its dangers will be taught. The entire team must cross the bridge together. There will be bands along the 'bridge' and in each of them there will be a participant. There will only be an empty band in the middle of the bridge once all the participants are on it. The team will be divided and situated in opposite directions. The ones on the right side should leave the bridge from the left side, while the left side will do it from the right side.

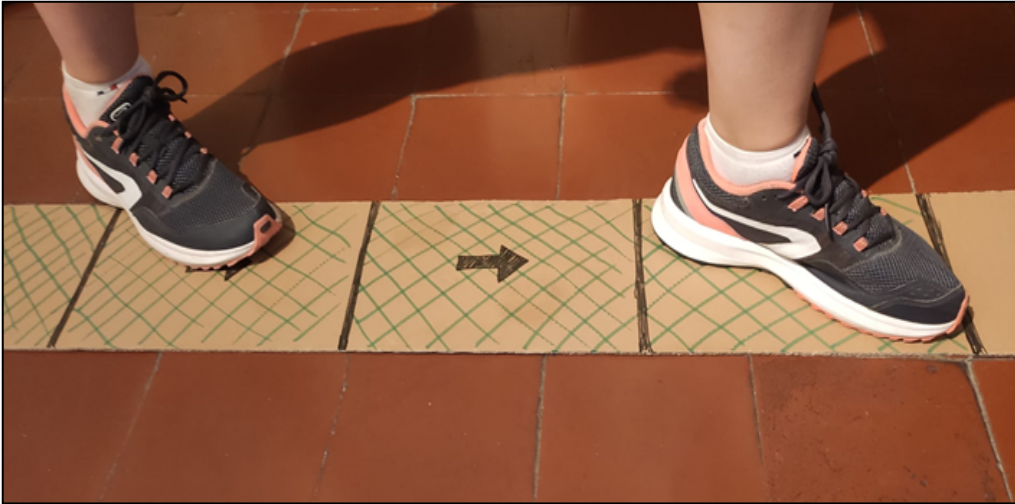


Figure 9. Boat bridge (Photo credit: Authors).

Building a medieval arch (see Figures 10-11): it is intended for children between 3 and 12 years old. It consists of the reconstruction of a medieval arch. The activity is divided by age groups. Up to 6 years old, it consists of decorating stencils drawn on arches using paints and stickers. For 6 to 12 years old, an arch is rebuilt with recycled wine boxes.



Figures 10-11. Building a medieval arch (Photo credit: Authors).

Archaeological cubes: it is intended for participants between 6 and 13 years old to understand how an archaeological site works. If possible, each participant will be given a basket filled with gravel and different soils, and boulders disposed of in levels. In some of the levels there will be materials simulating archaeological objects like ceramic pieces, fake bones, or stone tools. The students will make a record of the process and discoveries in their template or 'archaeologist book'.

We must also bear in mind that through these activities other qualities are developed for students, such as knowledge, autonomy, self-concept, the ability to work in a team and the emotional intelligence and sensitivity of the students and their relationship with respect to heritage and environment. 95% of the materials used in the activities come from waste and recycled materials from the wineries.

Conclusions

The Castle of Davalillo is a landmark building within the Riojan identity. It is located in a space where it manages to defend both the passage through the Ebro River and the nearby land communication routes. Despite the scarcity of documentation on Davalillo's castle, the diverse types of documents (religious, civil, notarial protocols or royal and noble documents) provide us with basic information on the medieval history of the village of Davalillo. We still have many things to know about the history of the castle, such as who ordered it to be built, in what year, what the payment conditions were or what were the first families that ran it, among others. It is a relatively short history because its decline as a defensive building began very early, in the first half of the 13th century. In the 15th century, it would still retain some of its importance, although less than the towns surrounding it, such as Haro or Briones, which defended the border, or Nájera, used to control the pilgrimage routes to Santiago de Compostela.

To obtain information about the castle, we will have to wait for the results of the archaeological work that will be carried out from spring 2022 onwards. With these archaeological activities, we intend to know various aspects, such as the internal organisation of the castle, of which no data has been preserved, as well as the organisation of the town of Davalillo that was found on the side of the hill and of which few remains have been found until now. In the same way, the archaeological pieces that are found will be analysed and studied to further complete the castle's history and be able to build the Davalillo museum.

Due to the conditions caused by COVID-19, the way of working in archives and libraries has been made more challenging; for example, the continued use of sanitary masks, gloves, and the impossibility of consulting historical documents for more than a few hours, due to the need to quarantine and disinfect them. In the same way, we have had to rethink how we carry out our activities to avoid large gatherings and continuous contact between the students, as well as the need to propose alternatives depending on their ages.

As we have highlighted throughout the article, there are many types of heritage that the current ruin of Davalillo Castle offers us. As the archaeological campaigns unfold and the different groups of schoolchildren begin using the facilities, the activities will be put into practice, not only those aimed at facilitating the understanding of archaeological heritage for all ages, but also those aimed at contributing to the knowledge of the landscape, the history, art and geography of a unique space in La Rioja.

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3D Models as Tools for the People: A Conversation with Stakeholders of the Hillfort of Coaña (Asturias, Spain)

Aida Loy¹

Abstract

3D models are a commonly used tool within archaeological and heritage work. But most of the time those 3D models and reconstructions do not leave the academic sphere, even when they could be great tools to communicate and engage with a non-specialized audience. To show how useful these models are, I present a 3D reconstruction of an Iron Age hillfort in Asturias (Spain) and the work that was done with it as an engagement tool. This reconstruction depicts how the hillfort could have looked like in the Iron Age according to the latest archaeological evidence. As for engagement, I present the results of surveys conducted on and off-site with three groups of stakeholders, shedding light on how we could improve communication between digital archaeologists and the public.

Keywords: hillfort, communication, stakeholders, 3D model, 3D reconstruction

Introduction

From excavations to lab research, 3D models are proving to be an essential tool for archaeologists and heritage professionals. Many times, these specialist-made reconstructions are only used for the research projects and are abandoned when the project culminates, never meeting the general public. However, the models can be used as a communication tool between the researchers and the non-specialized audience, where every angle of the archaeological sites could be experienced. 3D reconstructions enhance the understanding of any archaeological site but can contribute even more to public understanding when the site is not well-preserved, or it was severely altered during different periods of occupation. Additionally, these models create open communication with the different stakeholders of a site, which can help on several levels.

This article presents a project developed as a Master thesis project that attempted to understand how archaeologists and heritage professionals could use 3D models as tools to communicate with different stakeholder groups. As well, it tries to understand how useful it is for these non-specialised stakeholders and whether they would like to access more 3D models or not. To make this, I created a 3D reconstruction of how the hillfort of Coaña (Asturias, Spain) would have looked like during its occupation in the Iron Age following the available archaeological data.

Archaeological Framework

Coaña is an Iron Age (500-19 BC) hillfort Asturias, Spain (Marín 2009). The hillfort is part of the *Castro* culture, which existed in the northwest of the Iberian Peninsula (Figure 1) (Marín 2009; Maya 1989; Villa 2002, 2007). While materially this culture presents similarities across all its territory – for example, round houses and villages built in high terrain and next to water sources (Marín 2009; Maya 1989; Villa 2002, 2007), there are also local differences (Maya 1989). For example, the materials used to build specific elements, such as saunas, are only present in the western part of the territory; or stone mortars, only present in Coaña's area. Coaña, discussed in this study, is situated in the Navia River valley, on top of a hill and next to a stream (Figure 2) (Marín 2009; Maya 1989; Villa 2002, 2007).

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Figure 1. Location of Coaña within Spain (generated and edited by the author from Instituto Nacional Geográfico Español).

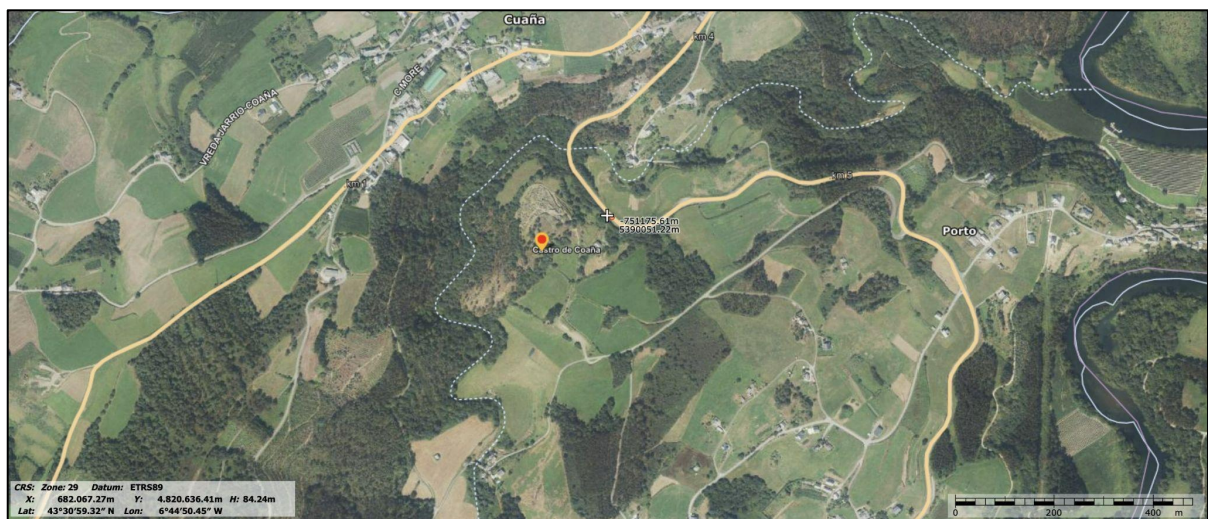


Figure 2. Coaña hillfort in its surroundings (generated and edited by the author from Instituto Nacional Geográfico Español).

Timeline

The most extended occupation of the hillfort occurred during the Iron Age (500-19 BC) (Marín 2009). Nonetheless, the first settlement in the area dates to the Final Bronze Age (c.1000-800 BC) (Marín 2009; Menéndez and Villa 2013; Villa 2013; Villa and Menéndez 2015). This first settlement consisted of wood huts only in the highest part of the hill (Menéndez and Villa 2013). In the late Bronze Age, the Castro culture started to emerge (c.1000-800 BC) (Marín 2009; Maya 1989; Villa 2002, 2007; Villa and Menéndez 2015). As the settlement grew, its boundaries extended down the hill, with its maximum expansion occurring during the Iron Age. From 19 BC onwards, the Romans took control over the region and resettled the site, which resulted in a mix of hut typologies and changes in the internal arrangement of Coaña, as well as other hillforts in the region. In the 2nd century AD, the hillforts, including Coaña, started to be abandoned (Marín 2009; Maya 1989; Villa 2002, 2007). From that moment on, the hillfort

was slowly covered by soil, surviving in the collective memory and legends of the local inhabitants, until the 19th century, when the first excavation happened (García y Bellido and Uría 1940; Jordá 1983; Villa 2013).

History of the Investigation

Coaña is one of the best-researched hillforts in Asturias, and for this reason, it was a perfect candidate for the proposed project. Pedro Canel Acevedo, a local author, first mentioned it in 1818 in the magazine “*Gaceta de Madrid*” (García y Bellido and Uría 1940; Jordá 1983; Villa 2013). In 1878, a local expert, José María Flórez y González, carried out the first archaeological excavation of the site, digging some of the huts (Flórez 1878; Villa 2013). Between 1939 and 1942, two archaeologists, Antonio García y Bellido and Juan Uría Rúa, completed a systematic excavation of the site during which they found almost all the huts. They subsequently published several articles (García y Bellido 1940; 1942; García y Bellido and Uría Rúa 1940; Uría Rúa 1941) and completed a reconstruction drawing of what they thought Coaña would have looked like during its Iron Age occupation (García y Bellido 1942: 216).

The next mention of Coaña was in 1959 (Carrocera 2003; Jordá 1983; Villa 2013), when the archaeologist Francisco Jordá Cerdá continued the excavations and summed up his work in an archaeological guide published in 1969 and reissued in 1983 (Jordá 1983). Between 1982 and 1983, another archaeologist, José Luis Maya (Carrocera 2003; Jordá 1983; Menéndez and Villa 2013; Villa 2013), joined Jordá and they excavated the hillfort again, uncovering some new huts and structures, as well as re-examining some previously excavated areas of the site (Carrocera 2003; Jordá 1983; Menéndez and Villa 2013; Villa 2013). Between 1985 and 1991, a team led by Elías Carrocera (Carrocera 2003; Menéndez and Villa 2013; Villa 2013) took over the excavations with the aim of preserving the huts, as many of the walls maintained their original height (Carrocera 2003). This is the reason why all the walls in Coaña are today topped with moss, as this plant works as concrete, keeping the walls together. Apart from the conservation work, the team also took various samples and carried out lab analyses that led to an understanding of the vegetation and fauna (Carrocera 2003, 170-172) that could have been found in the area throughout history.

The latest excavation happened between 2008 and 2009. Led by archaeologists Ángel Villa Valdés and Alfonso Menéndez Granda, it focused on areas that had not been excavated, like the defensive walls in the east side of the hill and the sauna structures (Menéndez and Villa 2013; Villa 2013).

Hillfort Internal Organisation

The highest area was the first occupied, being inhabited in the Bronze Age. It is known as the *Acropolis*. The *Acropolis* is mostly empty today, surrounded by a wall and with signs of huts. The second area, known as the North Neighbourhood, presents several huts, where the majority of archaeological investigations have been focused. Several walls also surround it, and pits and a gate can be found on the east side. While it was traditionally believed that the hillfort only had these two main areas, the first with religious purposes and the latest dedicated to habitation, according to the latest excavations (Menéndez and Villa 2013) both of these areas and other non-excavated areas in other areas of the hill could have been inhabited.

Domestic Huts

The hillfort is mainly formed of familial huts. The huts present differences and similarities depending on the time of their construction and use. The Iron Age huts are round or have rounded corners while the Roman constructions have straight angles. The Iron Age ones do not have separate spaces within the construction and have a hearth in the middle of the hut. The Roman ones seemed to have had some

internal divisions, and possibly had several floors, as some huts have stairs on the outside. All of them, no matter the time of their construction, were built in local stone, mainly slate. In some of these huts, some elements indicate that they were used as habitation by families and not for other specialised functions.

One of these elements are the wall benches (Figure 3), or stone benches attached to one of the walls, generally in front of the door (Villa 2008). Many of these are still visible in Coaña, and it is not unreasonable to assume, due to its presence in the *Castro* culture, that all the huts had one of these, but some have just been lost.



Figure 3. *Iron Age hut with continuous bench on one of its walls in Coaña (Photo credit: Author, 2019).*

Another of these elements are the decks (Villa 2008), although not all the huts have them (Figure 4). Generally, these decks consist of a curved wall in front of the door of the hut, but sometimes they are two straight walls in front of the door. They seem to have acted as protection against the elements, such as torrential rains (a common occurrence in this area) or high winds. They also seem to have been used as extra storage and working spaces, as shown by the materials found during the excavations (Carrocera 2003; García y Bellido and Uría 1940; Jordá 1983; Maya 1989; Villa 2013). These decks are also present in other sites, so they seem to have been a common characteristic of the *Castro* culture.



Figure 4. Iron Age hut with curve deck in Coaña (Photo credit: Author, 2019).

Communal Hut

Close to the east entrance and next to what is thought to be the Roman *forum* is the communal hut (Figure 5) (Jordá 1984; Maya 1989; Villa 2007). The hut, which has benches along its walls but no hearth, is the longest hut of the whole hillfort (Jordá 1984; Maya 1989; Villa 2007). For these reasons, it is possible that this structure was a multi-purpose communal hut used mainly in pre-Roman times.

Defensive Elements

All the areas in Coaña are surrounded by walls that encircle each area individually. Previously, it was thought that they had a defensive purpose, but current investigations tend to think that their main purpose would have been to prevent the hill from collapsing (Menéndez and Villa 2013; Villa 2013). The walls are coupled with pits, sometimes several series of them in front of a single wall.

Special Constructions: Saunas

The saunas are two unique buildings at the entrance of the North Neighbourhood and next to the *Acropolis*. These buildings are special as they are only present in a small area within the western extent of the *Castro* culture, and even within this area, they vary greatly in structure. Researchers are not able to agree about the function or dating of these structures (Camino 2003; Jordá 1984; Ríos 2002; Villa 2018). The most accepted theory (Camino 2003; Jordá 1984; Ríos 2002; Villa 2018) is that they were buildings similar to a sauna, but no more details are available about their specific uses. They seem to have had great importance as they present elements made with materials brought from some distance, unlike

the other constructions in the hillforts, and contain decorative architectural elements. Given the uncertainties around their chronology and use, they were left out of the reconstruction.



Figure 5. *Communal hut in Coaña (Photo credit: Author, 2019).*

The Model

As shown above, there is a lot of information about Coaña and about the culture it belongs to. For these reasons, Coaña was an ideal candidate for the model, which was the key element of the project. Making a reconstruction is always tricky as it is impossible to know with 100% accuracy how a site has looked like in the past. Considering, however, that the best way to get closer to the truth is through archaeological information we have from this site and from similar ones, the above archaeological review was essential to the 3D model making process. The idea was to create a 3D reconstruction of the North Neighbourhood of Coaña as it might have appeared in the Iron Age according to the archaeological data summarized previously, as such a reconstruction would be the tool to start communicating with the different stakeholders.

Reasons to Choose this Site

As mentioned, there were several reasons to choose this site. The main one was how well-known Coaña is due to all the excavations that were carried out in the hillfort. Additionally, the blank spots left by these investigations can be filled with research from other hillforts of the area or even from ethnography of the region. The ethnographical information (Carrocera 2003; Camino 2016; Krüger 1949) provide us, for example, with a good idea of how the huts could have been roofed. Coaña has a site

museum with a small exhibition about the *Castro* culture and that offered the possibility to join guided visits. This site museum and the guides encourage a higher number of visitors in the site as well as longer stays. Because of its popularity, Coaña is taken care of regularly by the regional government conservationist. Finally, about how easy it was to contact people. The local community is a small and semi-rural one, this made it easier to contact a bigger number of them. In addition to the local community, the area of Coaña is visited every summer by a great number of tourists, since it is convenient and a good opportunity for people while visiting the area.

Other Reconstructions

There have been other reconstructions of the hillfort made previously to this project. Two of them follow the archaeological record. The first one was a drawing made by Antonio García y Bellido around 1940 (García y Bellido 1942), showing how he imagined the hillfort could have looked during the Iron Age. Although many of the structures have been proven different from how they were portrayed in the drawing, this model is still present in many modern texts about Coaña.

Since Coaña is the most researched hillfort in the region, at the Regional Archaeological Museum of Asturias (Oviedo, Spain) there is also a model (Figure 6) also showing how the hillfort could have looked like during the Iron Age.

Concerning 3D reconstructions, there are some in online repositories, but none have been made by archaeologists or closely following archaeological data – instead, they represent what can be seen currently in the site. Even though these models have the potential to be useful, they have some errors that render the interpretations inaccurate for use in this project. These errors are mainly based on the misunderstanding of the dating of the site’s structures.

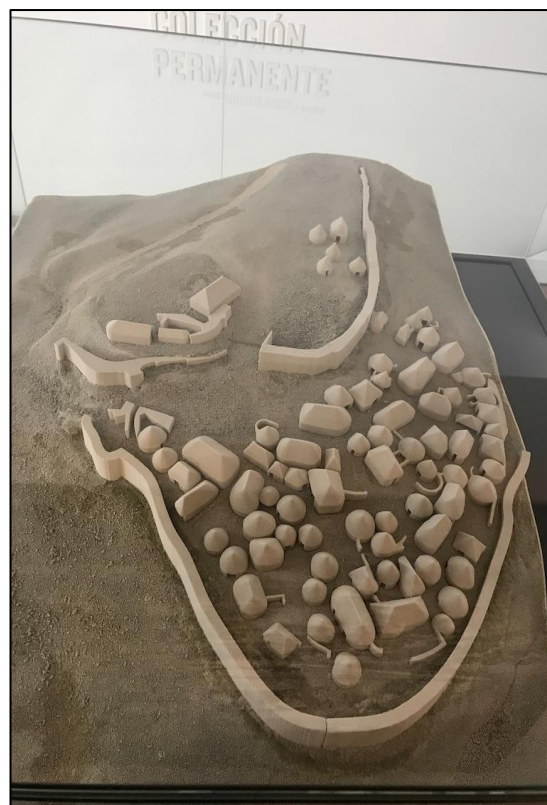


Figure 6. Model of Coaña in the Regional Archaeological Museum of Asturias (Photo credit: Author, 2019).

Communicating the Model

Keeping an open communication of the process was important for the transparency of the project. This communication happened through different social media. For social media, I created specific profiles for the project on Facebook (Castros3D), Instagram (@castros3d), Youtube (Castros3D) and the online 3D repository Sketchfab (Castros3D). On Instagram and Facebook, I posted regularly about the process of the project, including the creation of the model. On Youtube, I uploaded videos of the modeling process, so anyone could watch them and follow along with its creation. Finally, on Sketchfab, I uploaded two models – one in an early stage and the second in the final version, to which I added some information about the hillfort itself. In retrospect, this online communication proved to not be sufficient and an added, more traditional communication with media, like local newspapers would be more useful.

Modeling

In order to create my model, the first step after gathering all the archaeological data was to photograph the walls and the hillfort, to gather information on textures, heights and their spatial distribution. The next step was to modify a topographical map provided by the Archaeological Museum of Asturias with the Software Autodesk to only show the huts that were clearly from the Iron Age, according to their morphology. The ones that clearly dated to Roman times were deleted and those which seemed to have changed in Roman times were modified (following the map) to approximate how they could have looked like in the Iron Age. The saunas were also excluded due to all the uncertainty regarding their date.

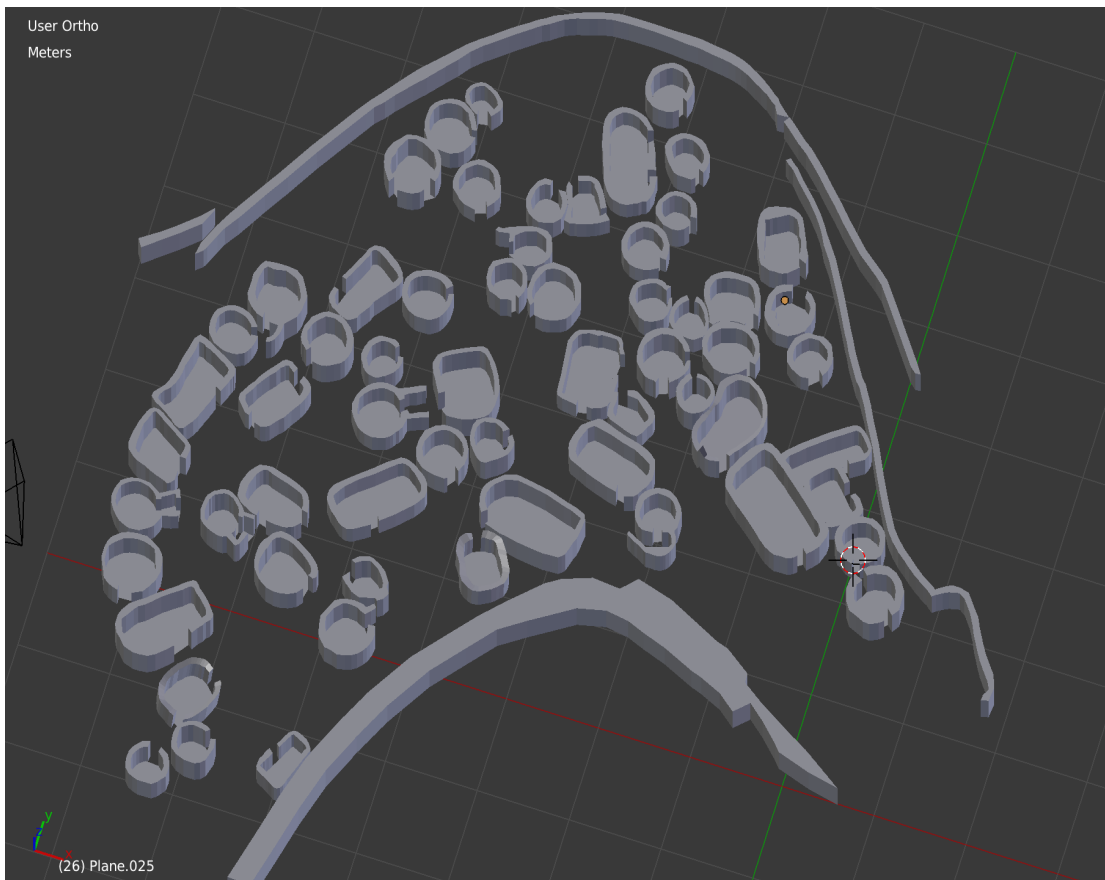


Figure 7. Image of the model with the risen walls (Photo credit: Author, 2019).

The model was then made using the free-to-use software Blender version 2.79. The first step was to create the floor faces following the lines of the map that was used in the background. I used cycles render with the measurements changed to metric units and an Ortho-Top view. I joined the last two vertexes of the last face with the first two vertexes of the first face to create the ground and then deleted the face that was covering the door. For the defensive walls, I did the same, but I did not close the structure. Following the archaeological information closely, three different heights were given randomly to the huts with a value between 3m and 4m (Flórez 1878; García y Bellido 1940). Currently, one of the huts still has walls with a height of 4m so this one kept the same height. From the faces created for the floor, I raised the walls with the different measurements individually for each hut, as well as for the defensive walls and the decks (Figure 7). The roofs were made following the shapes seen in ethnographic sources (Ayán 2001; Camino 2016; Carrocera 2003; Krüger 1949). According to these sources, I made them with a conic shape supported by one pillar in the middle or two for the longer huts (Figure 8). For the decks, I created roofs following the shape of the individual huts.

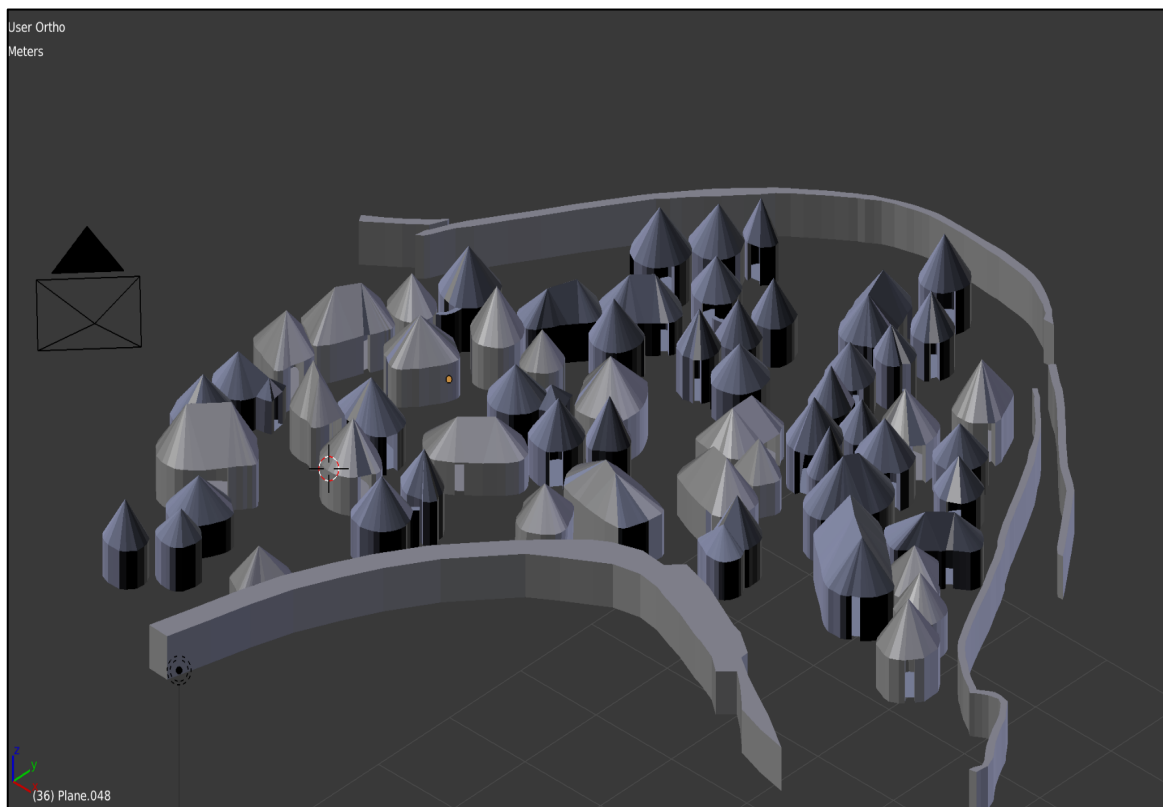


Figure 8. *Model with the roofs* (Photo credit: Author, 2019).

To be able to render the model and add colour it was necessary to set the light and the camera. The light was set to imitate the sun and the camera was moved manually to focus on the hillfort from where the gate is today, in the east. Once this was done, the model was rendered with the rendering engine Cycles. The last step was to add colour to the model. In this case, there are three groups of colours: for the walls, for the roof and for the huts' walls. The walls and roofs were made in a solid colour, as they were all modified and are additions of the 3D model - they do not exist at the site. For the huts, I created textures using the nodes tool of Blender (Figure 9) and adding textures from the pictures taken in the hillfort. In total, 20 textures with 20 different pictures.

Due to a limited time frame imposed by this project being my master thesis, the model reconstruction (Figure 10) lacks a topographical model or better textures. Nevertheless, I considered that the model was detailed enough for people to understand it, and to facilitate communication about the site. Thus, I considered the objective of the project to be fulfilled.

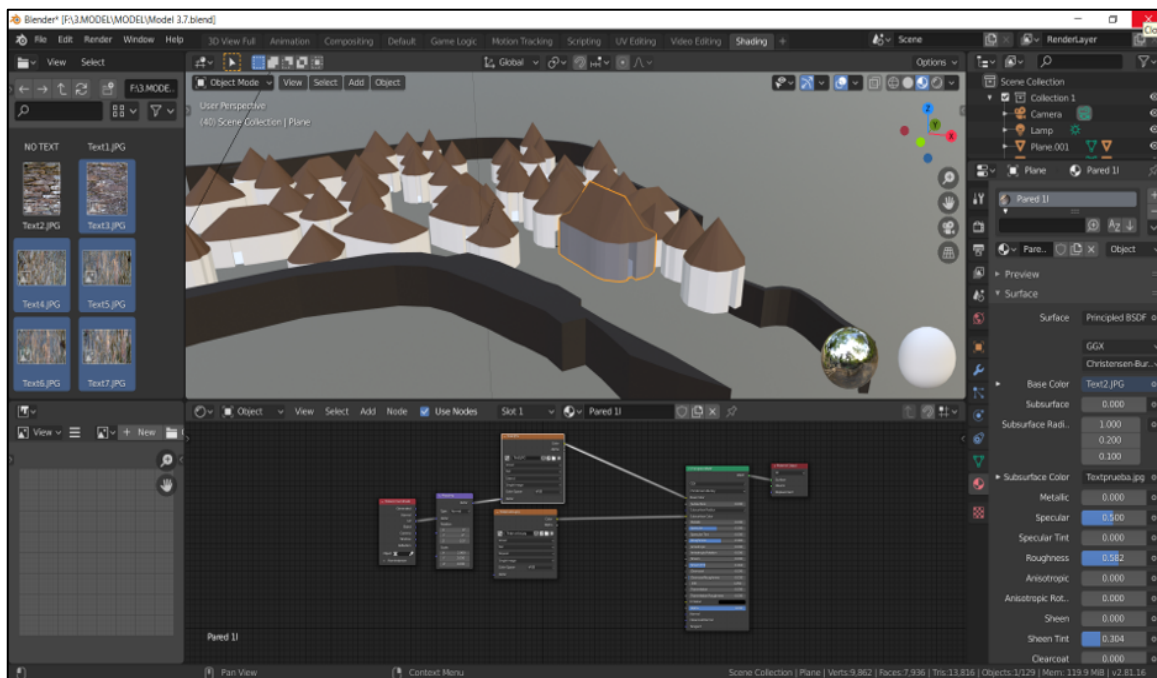


Figure 9. Process of adding the textures to the huts (Photo credit: Author, 2019).

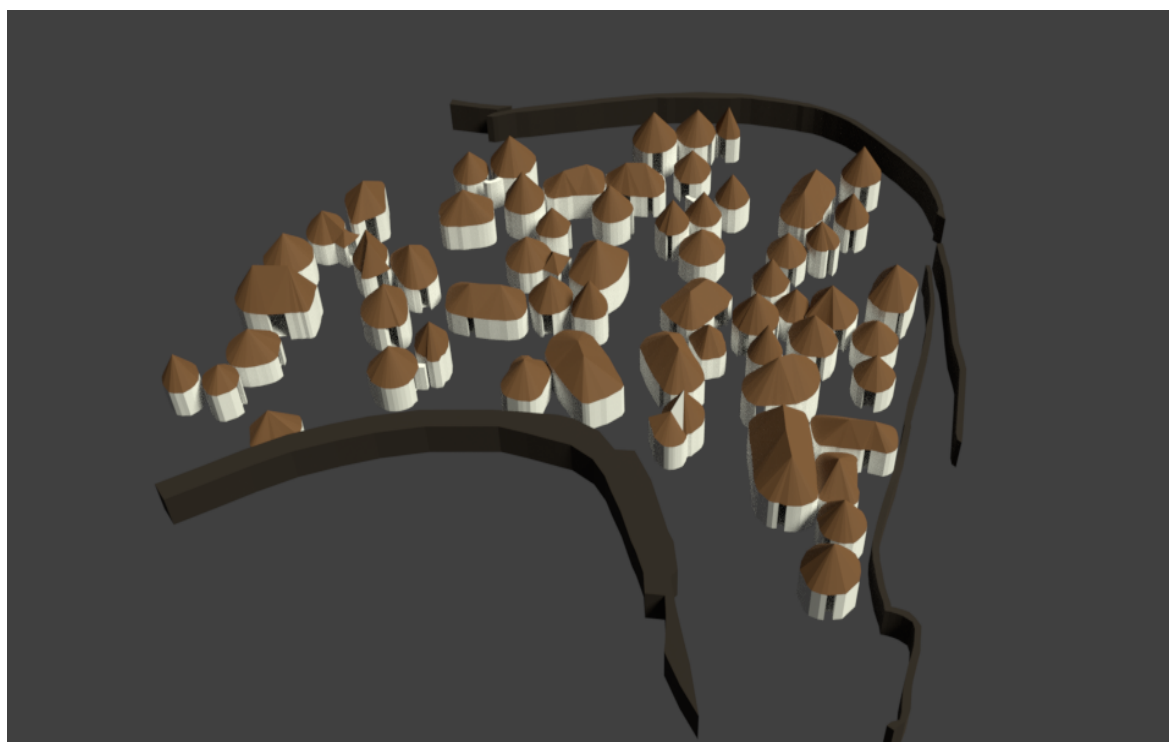


Figure 10. Reconstruction model of Coaña (Photo credit: Author, 2019).

Stakeholders

Stakeholder is a wide term that we use in heritage management to describe anyone who deals with a heritage element in any way, positive or negative (Castillo 2015). In the case of this project, I decided to select three main groups of these stakeholders to collect the data from. The three groups are the local community, visitors to the site and online visitors to the model. Even when there are several stakeholders and several criteria to choose groups to collect the data, I chose these three according to two different criteria. For local communities and visitors, they seem to be some of the most interested and necessary groups for the conservation of the site and the development of more models like this one despite heritage professionals and governments. The online visitors were surveyed to get to know the participation of people online and how much they could relate to a site even when they have not visited it in real life. These online visitors accessed the model and the surveys through the social media component of the project. The 'local community' was the community of the municipality of Coaña and the municipalities around it (Coaña, Navia, El Franco, Boal and Villayón). The online visitors were addressed as the group that would have, allegedly, more experience with 3D models and reconstructions.

To collect the data about their opinion on 3D models and how useful they find them I created three different surveys (one specifically for each group) (Figures 11-13). The surveys were made both in person in Coaña's site museum and online. Most of the people who answered in person did it after visiting the hillfort.

SURVEY QUESTIONS FOR LOCAL COMMUNITY
A. Gender
B. Age
C. Profession
D. Place of residence
1. Have you ever visited Coaña? When was your last visit?
2. Do you understand the hillfort (disposition, culture...)?
3. Do you usually visit archaeological sites?
4. Do you think Coaña is important for this area (culture, tourism...)?
5. Do you think it is important to invest money on the hillfort (maintenance, update of the didactic room, educational materials, keep the excavations going...)?
AFTER SEEING THE MODEL
6. Now that you have seen the model do you understand the hillfort better, equal or worse? What has changed?
7. Do you think this kind of models is useful? Why?
8. Would you like this kind of model to be available more often?
9. Do you have a different opinion of the hillfort now?
10. Is there something that you would like to see on Coaña or wish that the people in charge would do something different with?

Figure 11. Survey for the Local Community.

SURVEY QUESTIONS FOR VISITORS
A. Gender
B. Age
C. Profession
D. Place of residence
1. Is it the first time you visit Coaña? If not, how many times? When (more or less)?
2. Do you usually visit archaeological sites? Do you have any preferred time period or you just visit whatever is available on your surroundings?
3. Have you ever visited another hillfort? Which one?
4. Did you understand the hillfort with the available materials (map, didactic room...)?
5. Have you followed the guided visit?
AFTER SEEING THE MODEL
6. Now that you have seen the model do you understand the hillfort better, equal or worse? What has changed?
7. Do you think this kind of models are useful? Why? 8. Would you like this kind of reconstructions to be available on more archaeological sites?
9. Do you think you would see the hillfort differently if you see it now?
10. Do you have any suggestions about what you would like to see in this or another archaeological sites?

Figure 12. Survey for the Visitors in the site.

SURVEY QUESTIONS FOR ONLINE VISITORS	
A.	Gender
B.	Age
C.	Profession
D.	Place of residence
1.	Are you interested in History and Archaeology?
2.	Do you usually visit archaeological sites?
3.	Do you usually access online archaeological materials (3D models, virtual visits...)?
4.	Have you actually been to the Coaña hillfort?
5.	Now that you have seen the reconstruction, would you like to visit Coaña? Why?
6.	Would you like to have access to more reconstructions like this one?
7.	Do you think this kind of projects is useful? Why?
8.	Would you like this kind of 3D models to be available during the actual visits to the sites?
9.	How did you find this project and this survey?
10.	Do you have any suggestions?

Figure 13. *Survey for the Online Visitors.*

Results

About the results, we need to be clear that they are not conclusive as the participation was not high enough (22 people from the local community, 43 visitors and 42 online visitors). Further and longer research would be the best to know with higher accuracy what the impact and reception of this model is. Even with this problem, I consider it relevant to check the results that came out of this project, as they may be a good starting point for future work.

The questions were made for every group and treated separately, except the ones related to genre, age and origin. In these answers, it was shown that the participation was higher with women (Figure 14). This may be because they are more interested in archaeology, they may have been more interested in participation, or the methods of approaching participants had a bias (women represent the 82% of surveyed people).

Concerning age (Figure 16), the largest groups were young adults between 20 and 29 years old in the local community (54%) and as online visitors (57%), and adults between 40 and 49 years old in the visitors' group (30%). Regarding origin, from which the local community was excluded, within the visitors in the hillfort that were Spanish, only 21% were from the same region (Figure 15), and 44% were from Madrid. Within the online visitors, the percentages were close, but 52% of the people who answered were not Spanish.

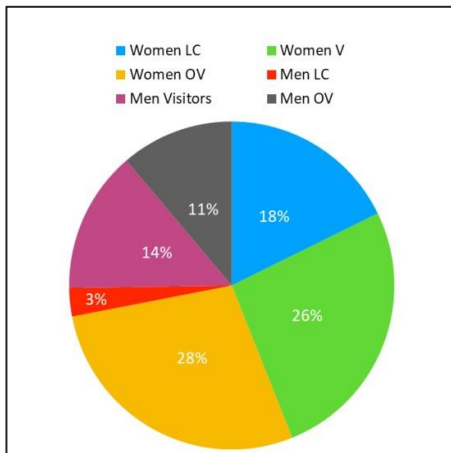


Figure 14. Percentage of women vs. men surveyed.

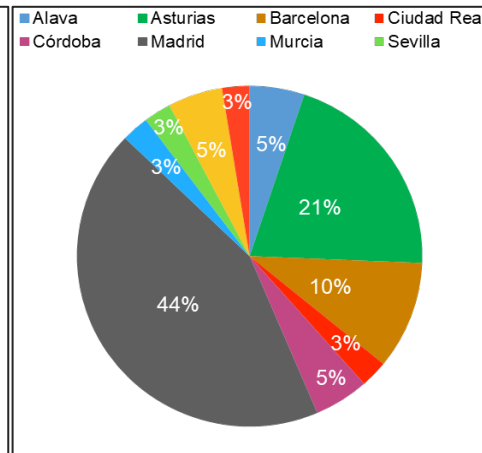


Figure 15. Percentage of visitors from each Spanish region.

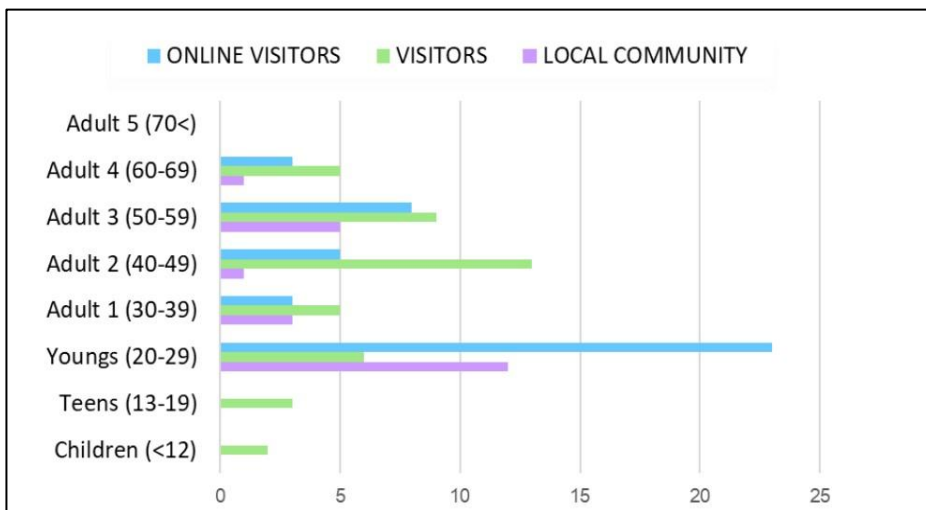


Figure 16. Age groups.

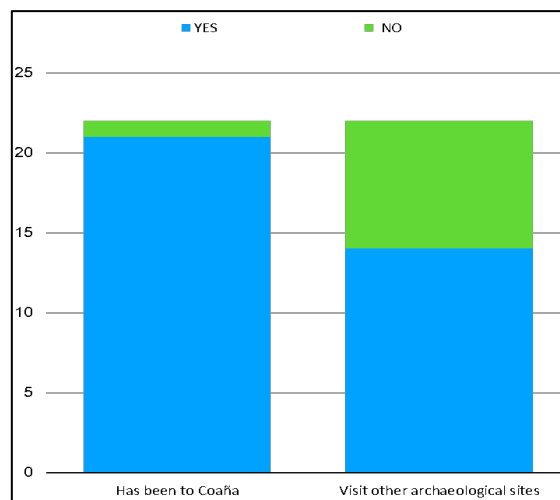


Figure 17. Local community that has been to Coaña and visits other archaeological sites.

Local Community

From the local community group, most participants had visited the site before (81%) and some of them (63%) affirmed they normally visit archaeological sites (Figure 17).

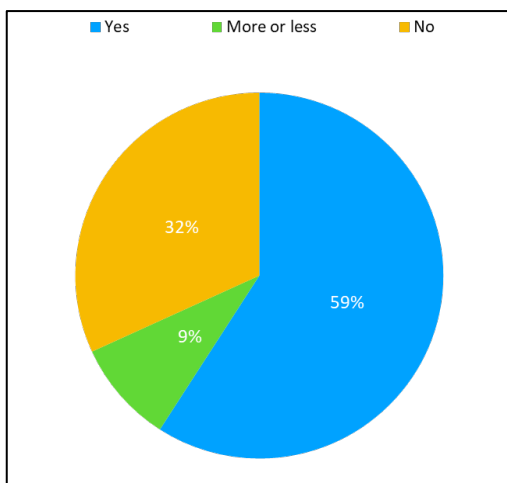


Figure 18. Percentage of local community who understand the site or not.

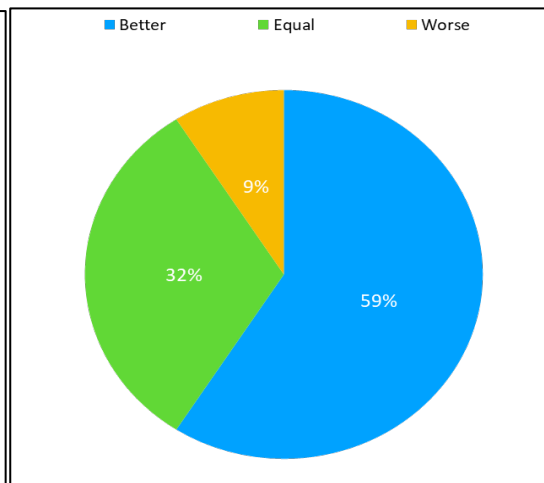


Figure 19. Percentage of the local community about the improvement after seeing the model.

Everyone within this group thought that investing money in the hillfort is important and went further to assert that investment in other archaeological sites in the area was also important. Just slightly over half of respondents (59%) claim to understand the site, its disposition, its history, among others (Figure 18). And the same amount said that the understanding improved once seeing the 3D model (Figure 19).

Even though most participants did not need the model to understand the site, they thought that the model could be a useful information tool (77%) and most of them (90%) would like to see the model available more often, mainly in the site itself (Figure 20).

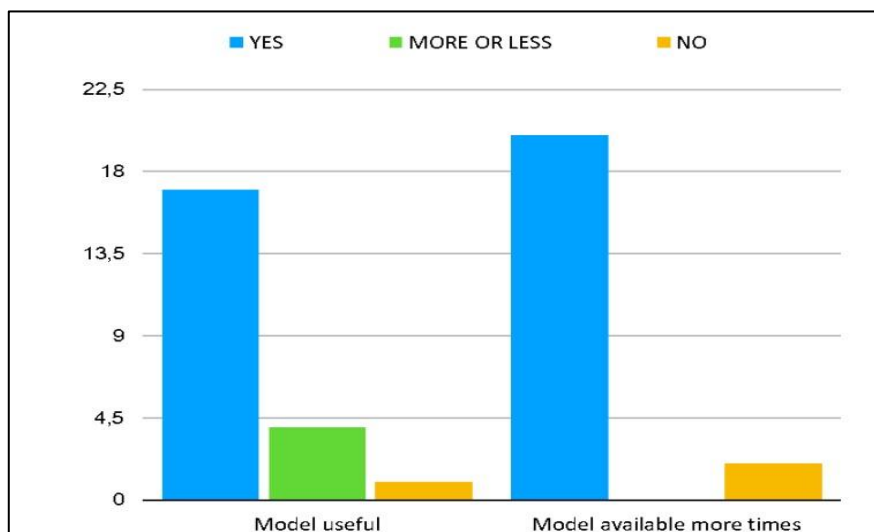


Figure 20. Local community who thinks the model is useful and it should be available more times.

Visitors

Most of the visitors were in Coaña for the first time (81%) and only 58% of them had visited other sites of the Castro culture, even though most of them (86%) usually visit other archaeological sites.

Less than half of them (42%) claimed to understand the hillfort (Figure 21) with its location, history, or distribution, from the printed information available at the site. This percentage grew (53%) when they followed the guided visits (Figure 22) and also if they saw the model (Figure 23) and discussed or asked about it (98%).

All respondents found the model useful and would like to see it more often. They also wanted to see other models like this in different archaeological sites.

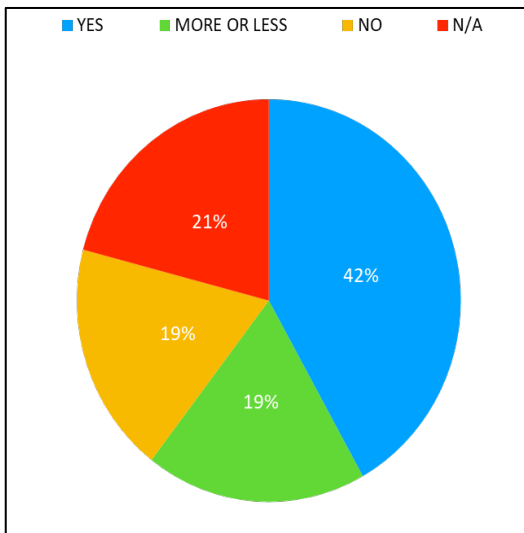


Figure 21. Percentage of visitors who understand or not the hillfort just with the printed materials.

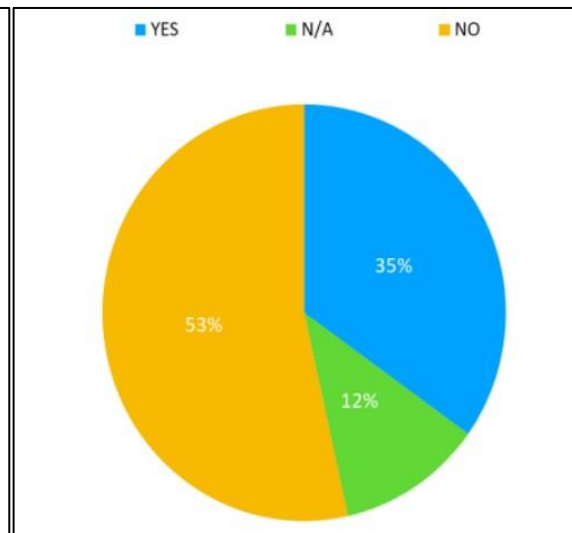


Figure 22. Visitors who followed one of the guided visits.

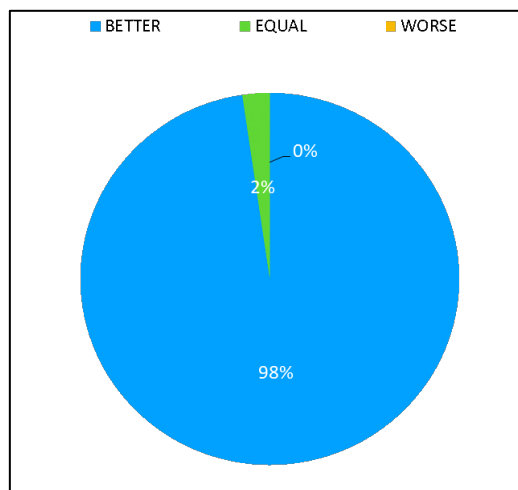


Figure 23. Percentage of visitors who improved their understanding after seeing the model.

Online Visitors

The purpose of surveying this group was to know how much people could care for heritage they had not seen before, as well as how much a model alone could be understandable to an unfamiliar audience. The majority of this group is familiar with archaeology and history (95%), they visit archaeological sites (64%) and also access online archaeological material (66%) (Figure 24).

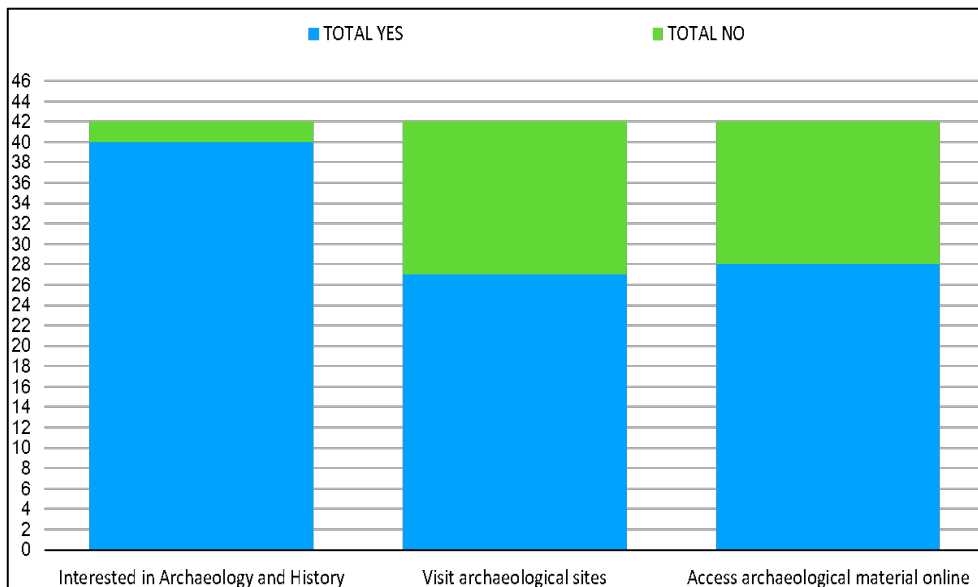


Figure 24. Online visitors who are familiar with archaeology, visit archaeology sites and access archaeology resources online.

When asked about their reception of projects like this with 3D material, almost all of the online visitors (97%) explained that they will often seek out 3D models if they know about them; and they stated that they found this kind of projects useful (97%) and would like models like this available on the site while visiting (95%) (Figure 25).

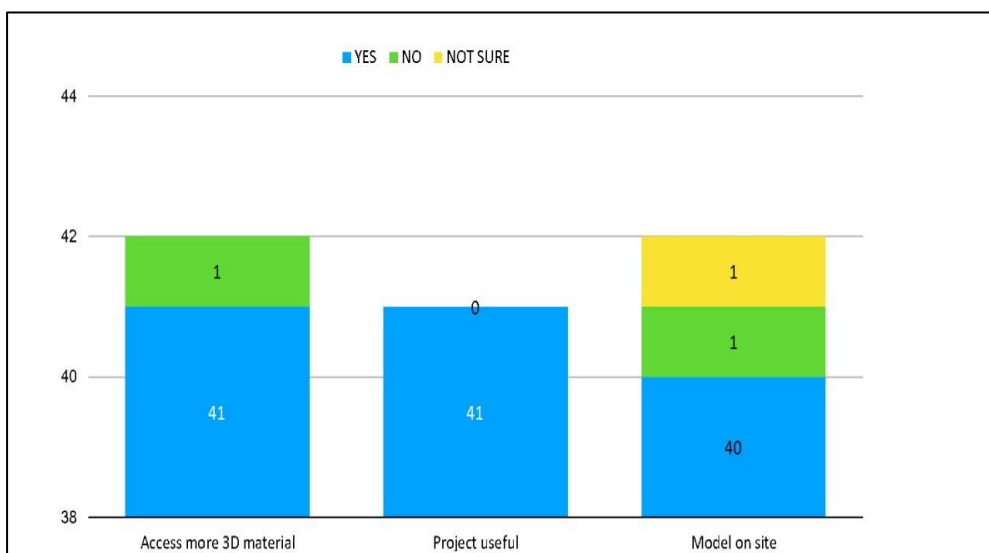


Figure 25. Online visitors who would like to access more 3D models, who found these projects useful and who would like to see models on the sites.

When asked about how they found out about the project, most of them (67%) did it through friends, who visited Coaña and did the survey there themselves, my own friends and friends of my friends (Figure 26). It is important to point out that (19%) of them found the project through social media.

It would be interesting to see if this group would have changed during the pandemic this last year (2020-2021) as more people started accessing cultural sites and resources online.

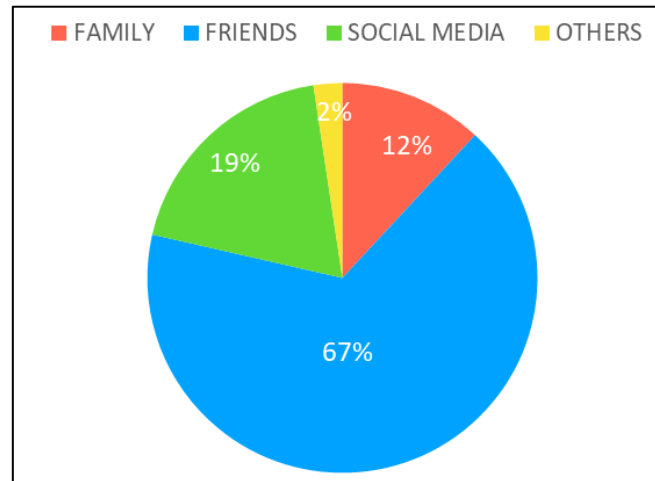


Figure 26. Percentage of how the online visitors found out about the project.

Conclusions

Despite the small number of participants, there are a few generalizations to be made from the recurrent topics within all the participating groups. The surveys show that most people found 3D models interesting and useful and would like to know about more projects like this one that would give them access to more sites. However, most people would not like to lose the physical presence of the site.

There is further work to be done for this research to reach its maximum potential. More time is needed to collect more data and reach a bigger number of stakeholders. Perhaps more diverse groups of stakeholders could be added to the conversation. This bigger reach would be easier to get if traditional media were in use together with social media that already proved to be useful in this research. The model also needs improvement, in particular adding the topography, to help people understand what they are seeing better. Finally, to make this model really useful in different contexts, the addition of a possible 3D reconstruction of the Roman period would be an ideal development.

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Session 7

Archaeology of ‘Scapes’: Diversity in Environment and Perspective

Caitlin Jacobson¹ and Isaac Martínez Espinosa²

Introduction

Archaeological research involves studying environments that compose various ‘scapes’, including but not limited to landscapes, seascapes, spirit-scapes, knowledge-scapes, soundscapes, eco-scapes and virtual-scapes. By studying the changes that have occurred in these different scapes over millennia, archaeologists try to reconstruct characteristics of scapes (e.g., sounds, aromas etc.), and offer new insights about the ways in which past peoples might have responded to their environments.

In recent years, studying scapes as complex systems as undeniably induced a paradigm shift in our understanding of humanity, cultures, and archaeological settlements. As the study of scapes incorporates multidisciplinary approaches from the humanities and sciences, and is carried out not only on sites, but also in laboratories and virtual platforms, we now have a more holistic understanding of past societies, and cultures.

Papers in This Session

In this session, we aimed to provide a platform for an open discussion of archaeological research focusing on various ‘scapes’ and incorporating a variety of techniques, methods, perspectives, and research lenses. In doing so, we hoped to conduct a review of the scapes research from different parts of the world and asked how these can propel archaeological research forward.

All our contributors presented us with interesting research that informed our understanding of past scapes in a variety of ways. Out of fourteen papers, four are published in this volume:

In ‘An Icarus’ Eye View? GIS Approaches to the Human Landscape of Early Iron Age Crete’, Dominic Pollard (University College London) presented the everlasting discussion on ‘Dark Ages’ in a new light. He challenged the traditional theories pertaining to this period, and presented us with a spatial relationship between social, political, and religious realms of ancient Cretan society.

Pablo Barruezo-Vaquero and David Laguna Palma (University of Glasgow and University of Granada) inquired into the interrelationship between humans and non-humans from a cognitive and biological perspective in their ‘On the Integration of Landscape Archaeology Within the Framework of Human Ecodynamics: Some Theoretical Considerations’. The authors emphasised the significance of material interrelationships for understanding the complexity of past socioeconomics and proposed Human Ecodynamics as a method enabling the study of landscapes as systems.

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In 'The Site of an Unidentified Greek settlement? New Surveys of a Periphery in Eastern Sicily: Proper Alignment of Participating Institutions', Michael Bratell (University of Gothenburg) examined the Greek colonisation in the Coda Volpe, a district of Eastern Sicily, by utilising a topographical reconstruction of the site, and an analysis of ancient sources.

Finally, in 'Cultural Economy: A Study on the Vernacular Architectural Construction of Mishing Tribe of Sonitpur District, Assam', Mou Sarmah (Durham University) examined the history and characteristics of Stilt Houses (Chang Ghar). In the light of the current challenges and threats facing these structures, Sarmah highlighted the vital tradition of sustainable living in Assam, and how the notion of sustainability translates into landscape studies.

Acknowledgements

We would like to thank all presenters for their participation and interest in the session, and the CASA Committee for giving us the opportunity of organising Session 7. Lastly, a special thanks goes to all the speakers who presented at the CASA 4 Conference, but are not published in this volume:

- Anton Larsson, Stockholm University
A Stench of Sulphur: The 'Disasterscapes' of Scandinavian Landslides
- Ashwini Lakshminarayanan, University of Rome 'La Sapienza'
Female Donors in Gandhara Buddhist Landscape
- Aura Bockute, University of Glasgow
Woodlands in the Foreground: Insights from a Mesolithic Landscape Vegetation Reconstruction
- Cristina Sanna, University of Southampton
The Past on Display: The Etruscan Museumscape
- Priyanshu Mehta, Panjab University
A Case Study of Earthen Dwellings in the Eco-scape Of Western Himalayan District of Kangra, Himachal Pradesh, India
- Sara Mura, Universiteit van Amsterdam
A Sensory Approach to Phoenician and Punic Funerary 'Scapes'
- Simran Kaur Saini, Lady Shri Ram College for Women
Step Wells and the Shifting 'Scapes': Adaptive Re-use of Baolis of Delhi
- Tiffany Treadway, Cardiff University
Traditions of the 'Separate': Creation of Wetland Deposition Knowledge-Scapes
- Yueying Chen, Shanghai Jiao Tong University
Analysis of the Evolution and Mechanisms of Fishing Villages in the Yangtze River Basin with Space Syntax
- Zichan Wang, University of California, Los Angeles
Understanding Resilience and Diversity from the Perspective of Ecoscope: The Late Neolithic (c. 2300-1800) Central Plains of China as A Case Study

An Icarus' Eye View?: GIS Approaches to the Human Landscape of Early Iron Age Crete

Dominic Pollard¹

Abstract

This article explores how GIS and spatial statistical methods can be effectively utilised to illuminate aspects of settlement patterning difficult to interpret on a purely visual basis, whilst not losing sight of the lived, dwelt landscape. In Greece, the centuries between the end of the Bronze Age and the Classical era were once considered a 'Dark Age'. On Crete, this sense was underlined by the perceived cultural achievements of the preceding Minoan era, from which the island's Early Iron Age (EIA) inhabitants were seen to have dramatically declined. Though such views are increasingly challenged, ongoing disparities in archaeological research mean that even today relatively few EIA sites have been thoroughly excavated. As such, certain influential narratives about the period are based on sites only identified through survey, and these have traditionally been interpreted in a largely intuitive manner. Here, settlement locations, routes between sites, and the modelling of viewsheds and agricultural catchments are all mustered to provide a systematic, but humanised account of the shifting occupation of one landscape in east Crete. The results challenge traditional accounts and illuminate the relationship between the 'points on a map' of GIS and the social, political, and religious structures of past societies.

Keywords: GIS, landscape, Late Bronze Age, Early Iron Age, Crete, settlement change

Introduction

The relationship between the archaeological study of past landscapes and the use of Geographic Information Systems (GIS) has been long and, at times, fraught. The New or processual archaeology of the 1960s and 70s stimulated the first systematic attempts to study and model past human settlement, behaviour, and movement within the landscape, including through computational methods. The homeostatic view of culture promulgated by Binford (1962: 218–20), wherein human societies adapted to the changing conditions of the external, natural world, lent itself to the application of methods for modelling connections between human behaviour and the affordances of the environment. The size, type and distribution of sites (Sanders *et al.* 1979), patterns of subsistence (MacNeish 1978), and the possible extent of ancient 'territories' (Renfrew 1976) were at various points assiduously mapped, and from these theories of social process inferred.

Such approaches were soon criticised though, as more mutable, phenomenological, and locally contingent views of the landscape arose, particularly within Anglophone archaeology, as part of the post-processual movement of the 1980s and 90s (epitomised by Tilley 1994). Within this context, notions of a quantifiable and external 'natural' world were unpicked, and the embeddedness of human life within the landscape – indeed, their mutually constitutive relationship – brought to the fore. Out of this social turn in landscape studies, and under the influence of related developments in anthropology (especially Appadurai 1990), there have arisen many other 'scapes' hitherto largely untheorized: task-scapes (Ingold 1993), sea-scapes (Rainbird 1999), knowledge-scapes (Montes-Landa *et al.* 2021), and more. GIS, still in its infancy at the time, was dismissed by some as a woefully inadequate tool for investigating the multiplicity and sensorial complexity of past human 'scapes', while the practice of

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cartography itself was attacked by others as a tool of colonialism and social dominance (Harley 1989). One perennial objection has been that GIS offers only a ‘bird’s eye view’, a detached, dehumanised survey of the landscape, presented in a manner people in the past never would have experienced it (Tilley 2004: 218).

As in many areas of archaeology, these post-modern critiques have prompted, among some scholars, a continuing, reflexive engagement with the theoretical underpinnings of their work, while many have simply ‘carried on their business as usual’ (Aldred and Lucas 2018: 31). This situation is far from ideal. There have been undeniable advances in the power of GIS, and many aspects of past human habitation and behaviour within the landscape can now be modelled, sometimes with striking accuracy. But these methods in isolation are insufficient. Fleming, no sympathiser to the most outré, phenomenological approaches in landscape research, is nonetheless cautious of the allure of computational methods. He is surely right to warn that, ‘[a]t the end of the day, computers are only obeying orders... For as far into the future as I can see, we will depend on the interaction between the human eye and the human brain’ (Fleming 2012: 468). What is needed is a more actively theoretical approach to GIS in landscape research, and an attempt to address directly and innovatively the more human, experiential qualities of the lived landscape, as well as its physical and economic affordances (see papers in Gillings *et al.* 2018). The present paper attempts just this, through a case study examining the major changes in settlement that occurred on Crete at the dawn of the Early Iron Age (EIA; see Table 1).

Table 1. *Approximate absolute dates, ceramic phases, and the periods and ages into which these are, in turn, grouped, for the era under discussion. Abbreviations used throughout this paper are given in brackets. The pairs of dates for the Bronze Age phases correspond to the so-called High and Low Chronologies, which result from differing approaches to dating the period, namely radiocarbon dating, and the cross-dating of Aegean and Egyptian pottery sequences.*

Age	Period	Ceramic Phase	Absolute Dates BC
Bronze Age	Neopalatial	Middle Minoan (MM) III	1875/50-1750/00
		Late Minoan (LM) IA	1750/00-1625/00
		LM IB	1625/00-1470/60
	Final Palatial	LM II	1470/60-1420/10
		LM IIIA1	1420/10-1390/70
		LM IIIA2	1390/70-1330/15
		LM IIIB	1330/15-1200/1190
	Post-Palatial	LM IIIC	1200/1190-1050
		Subminoan (SM)	1050-970
	Iron Age	Early Iron Age	Protogeometric (PG)
Geometric (G)			810-710
Orientalising (O)			710-630
Archaic (A)			630-480
Classical		480-323	

Context of the Present Study

Historical Background

Crete, the largest of the Greek islands, was home during the Bronze Age (c.3000-1100 BC) to the so-called Minoan culture which, from the early second millennium BC, was organised around a number of administrative, political and ritual centres known conventionally as 'palaces'. The earliest iterations of these were significantly reworked, and new ones constructed, in the Neopalatial period, MM III-LM I, what is typically considered the highpoint of palatial society, when evidence across the Aegean points to an era of trade, cultural interaction, and perhaps even colonisation stimulated by developments on Crete (Rehak and Younger 1998: 100-149).

All but one of these palaces were destroyed toward the end of this period, however, with only that at Knossos continuing into the Final Palatial period, LM IIIA-B, perhaps now under the control of groups from the mainland of Greece, commonly dubbed 'Mycenaeans' (Watrous and Blitzer 1997). Interestingly, the eastern third of the island (including the area discussed below) was seemingly unintegrated into the territory of the palace at this time (Bennet 1987). Knossos, and a possible second palatial centre in west Crete, were ultimately destroyed, by mid-LM IIIB at the latest, and state-level administration disappeared from the island for several hundred years (Dickinson 2010).

These destructions form part of a wider phenomenon known as the Late Bronze Age (LBA) collapse, which saw many contemporary state societies in the Eastern Mediterranean disrupted or extinguished. Suggested causes include earthquakes (Nur and Cline 2000), droughts (Bryson *et al.* 1974), civil unrest and economic decentralisation (Sherratt 1998), but a popular theory centres on the so-called 'Sea Peoples', a mysterious association of ocean-going raiders and pirates, known especially from Egyptian texts and iconography (Cline and O'Connor 2003). Some see the Sea Peoples as responsible for the wave of destructions, while others consider them an object of Egyptian propaganda, and at most a reflection of an unstable time in which populations became more mobile, and the line between trading and raiding was distinctly blurred (Broodbank 2013: 461-66).

At this time on Crete, in LM IIIC, many sites in lower-lying or coastal areas were abandoned and new ones – often termed 'refuge sites' – founded in higher, defensive locations (Nowicki 2000). These movements in some sense herald the shift from the Minoan era into that of the EIA. This period, once dubbed the 'Greek Dark Ages', was long viewed as literally and culturally impoverished, relative to the preceding Bronze Age and subsequent Classical era (Kotsonas 2016). Though such characterisations are now unpopular, and interest in the field has grown rapidly in recent decades, well-excavated EIA settlements remain relatively few. However, through intensive survey and, in particular, prospection by dedicated researchers like Krzysztof Nowicki (2000), we know of the existence of a great many sites across the island at this time, particularly in these defensible locations.

A fundamental debate persists over what prompted the founding of these defensible sites. To some, the trigger was threats from the Sea Peoples, however construed, forcing groups to flee inland (Nowicki 2000). For others, though, local social, political and subsistence concerns saw communities, in the absence of state-level governance, seeking security through the founding of clusters of interdependent villages in strategic locations (Haggis 2001). Given this impasse, GIS offers a potentially powerful tool by which we might better model and understand the environmental and social factors bound up in the

contested settlement changes, and move beyond simple questions of where people lived – i.e. settlements or sites – to the landscapes within which they dwelt (sensu Ingold 1995), the fields, paths, hunting grounds and meeting places through which individuals moved and interacted with each other, and the land they considered home.

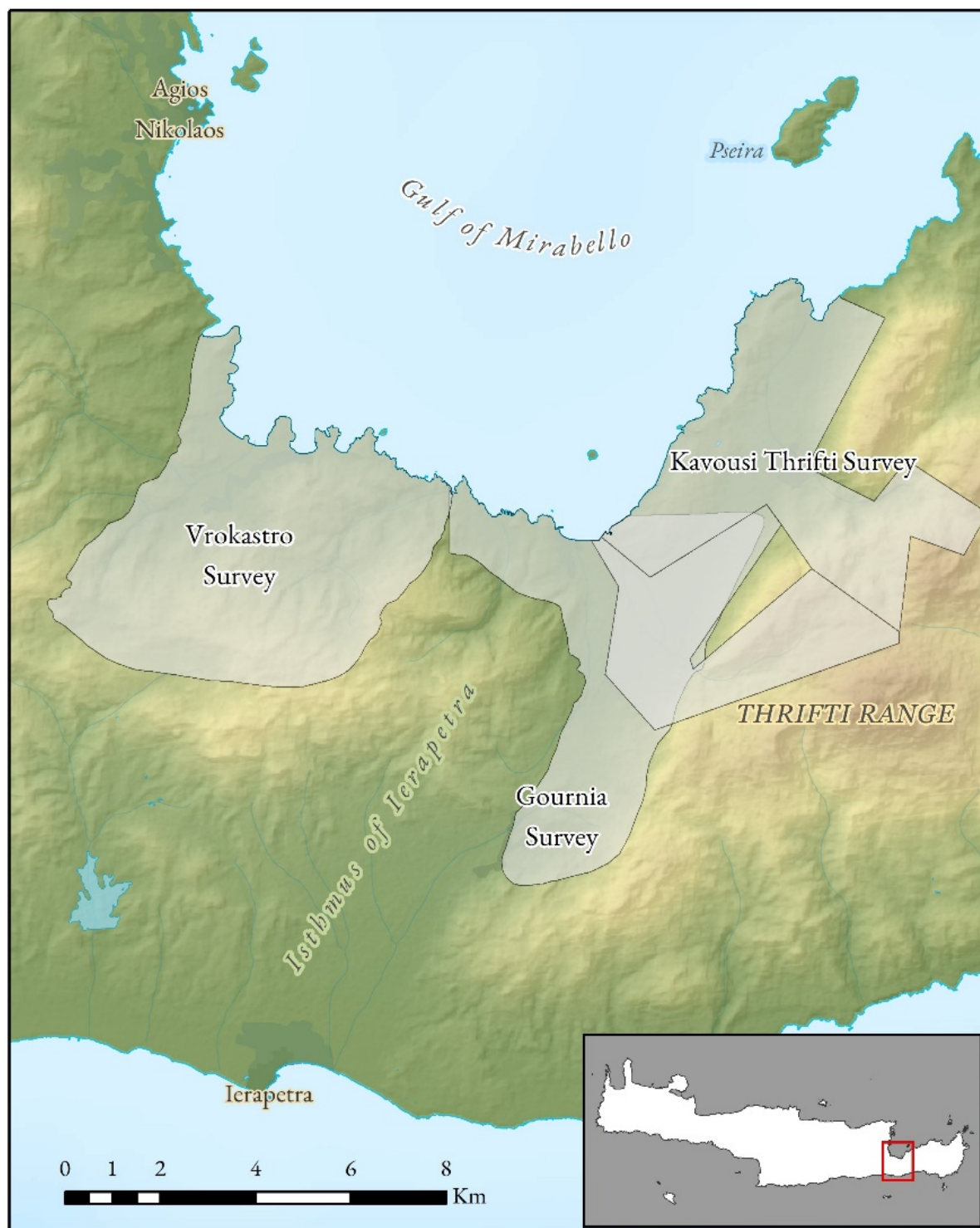


Figure 1. The Isthmus of Ierapetra and the Bay of Mirabello, showing the extent of the three survey projects undertaken in the region.

The Survey Region

The following case study concerns the Isthmus of Ierapetra by the Bay of Mirabello, located in the eastern third of the Crete, and the island's narrowest point (Figures 1 and 2). This area is central to debates around the defensible sites of LM IIIC, not only because several have been excavated and identified through survey here, but because the apparent clustering of these sites into groups is the basis for the argument against sea-borne threats mentioned above. These have been suggested to form loci of inter-reliant communities, perhaps oriented towards the cooperative exploitation of upland economic resources, rather than points of refuge (Haggis 1993). No fewer than three archaeological surveys were conducted in the Mirabello in the 1980s and 90s: the Kavousi Thifti Survey to the east (Haggis *et al.* 2005), the Vrokastro Survey to the west (Hayden 2005), and the Gournia Survey in the centre (Watrous *et al.* 2012).

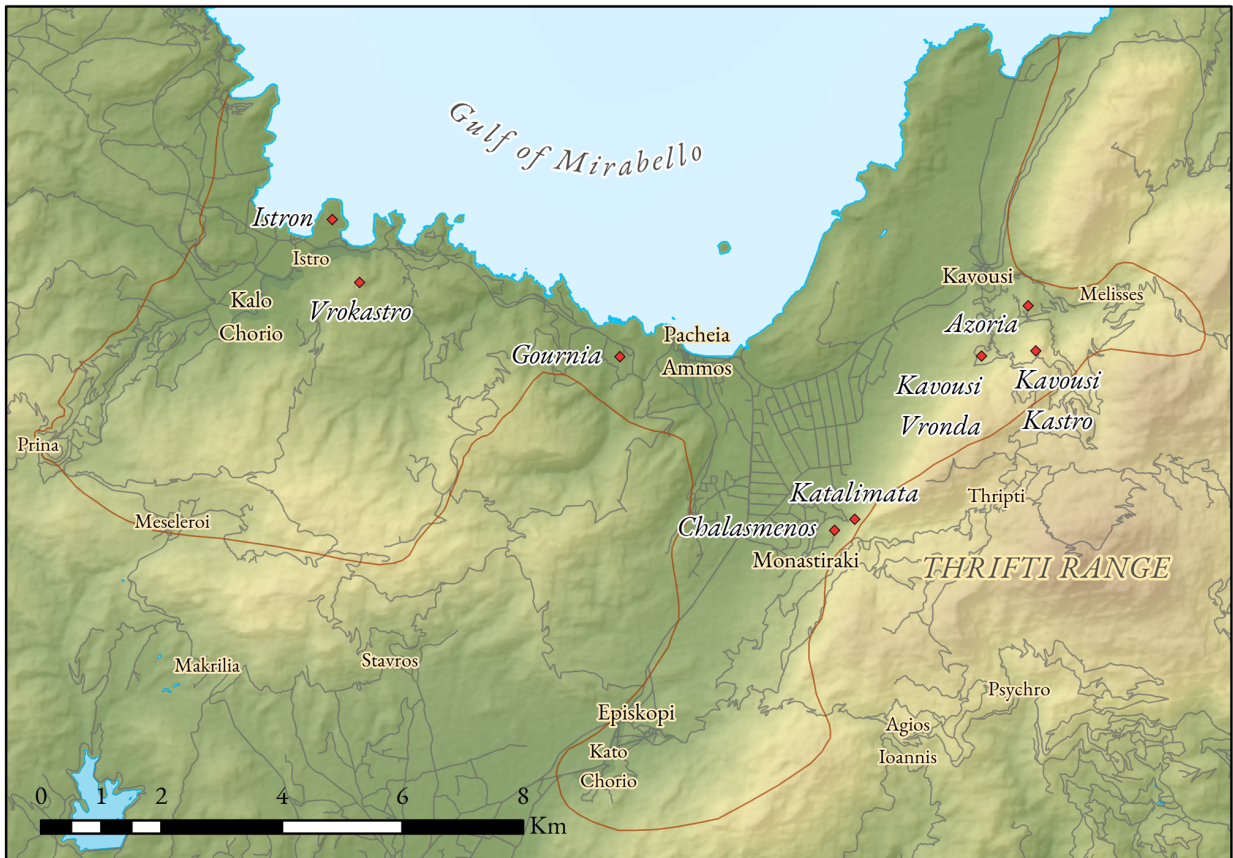


Figure 2. The combined survey regions, showing the modern villages and towns, with sites mentioned in the text.

Importantly, these surveys covered roughly the same periods, defined and identified sites in similar ways, and so produced data which are relatively conducive to an integrated GIS analysis. In preparation for this study, each survey publication was digitised, using the printed maps and ArcGIS. For the Kavousi survey, site areas were plotted to scale in the printed maps, and these were simply traced. However, for the other two surveys sites were represented by points, with areas given in accompanying tables, and as such these were rendered as circles of the given area. Table 2 details some of the important settlements for the period under discussion. All but the site of Istron have been excavated, at least in part, and so offer a range of further archaeological evidence beyond merely their locations.

Table 2. *Important settlements mentioned in the text.*

Site	Periods in use	Description
Gournia	LM I-IIIB, LM IIIC?	An important Minoan town, probably the pre-eminent regional centre until its final abandonment in the 13 th century. Situated just west of Pacheia Ammos on the north coast.
Vrokastro	LM IIIC-G, O?	Founded around 1200 BC on a rocky hill above the bay, its location is defensive, but also notably very near the coast, complicating its identification as a refuge site.
Monastiraki Katalimata	LM IIIC	An archetypal refuge site, set on a series of rocky ledges halfway up the side of the Kha Gorge. Founded and abandoned in LM IIIC.
Monastiraki Khalasmenos	LM IIIC, PG?	Probably founded by groups leaving Katalimata in mid-LM IIIC. Situated on a hill by the Kha Gorge, in a much more accessible location. Also, relatively short-lived, however.
Kavousi Vronda	LM IIIC, PG?	One of several sites in the Kavousi area, of which Kastro and Azoria are the other two most important. All three were founded around the same time in LM IIIC. Vronda is on a flat hilltop, lower than Kastro and roughly level with Azoria. Notably abandoned before the more defensible Kastro.
Kavousi Kastro	LM IIIC-LG/O	Another characteristically defensible settlement on a rocky peak above Azoria and Kastro. Despite this it was occupied for some five centuries.
Azoria	LM IIIC-A	First settled around 1200 BC, and eventually grew into a major Archaic town, following the abandonment of Kastro.
Istron	LM IIIA-B, O-A	Site identified through survey on a promontory on the north coast, below Vrokastro. In O-A it seemingly became a large port or harbour settlement.

Methods

In analysing the settlement patterns of the Mirabello across this period, I will here discuss four methods: logistic regression, pair correlation functions, visibility analysis, and least-cost path networks.

Logistic Regression Analysis

Logistic regression analysis was used to identify environmental variables which may have impacted on settlement locations in a given period, what are known as ‘first-order effects’ (Baddeley *et al.* 2016). The approach begins with a set of raster maps representing the chosen variables (see Table 3 for details).

Table 3. Variables used in the logistic regression analysis. All variables were standardised to have values between 0 and 1.

Variable	Explanation
Elevation	Vertical height in meters above sea level.
Slope	Angle or steepness of the land in degrees.
Aspect	Cardinal direction the land faces, standardised as degrees away from north.
Flat land	Amount of land (i.e., a count of cells) with slope <10 degrees, in a 2.5km radius around each cell.
Topographic wetness	Modelled accumulation of water in landscape, based on slope and upslope contributing area. Given in arbitrary units.
Distance from the coast	Euclidean distance in meters from the nearest point on the coast.
Ridges	Landform classification derived with Landsurf software. Scaled 0-1.
Channels	Landform classification derived with Landsurf software. Scaled 0-1.
Short-distance visibility	Visibility at distances of up to 500m based on cumulative viewshed analysis of 10,000 points dropped randomly in mapped area. Scale thus 0-10,000 based on how many times each cell was judged 'visible'.
Long-distance visibility	As above but up to distances of 2500m.
Bedrock	Euclidean distance in meters from nearest major bedrock boundary. Such boundaries have been suggested as important locales for springs.
Offshore visibility	Visibility as above but using 1000 points set 500m offshore.

Then, within the area of every site, a number of points proportional to the site's size is randomly generated and allocated the values of the environmental variables in that location. Then a similar number of random points is generated anywhere *outside* the bounds of the sites for the chosen period, to provide a random 'wider landscape' signal, and the two sets of points are submitted to the regression analysis, to identify which variables exhibit correlations with site presence (or absence) in the chosen period. To examine more specifically the settlement choices made in one period versus those of others, the same process is repeated with the second sample of random points being dropped within the bounds of sites from all periods *other than* that under investigation. In both cases the regression is run 1000 times, and the results are presented as a boxplot which summarises the correlation coefficients across all iterations. Positive and negative correlations are shown on the y-axis, with each of the variables on the x-axis, and the proportion of the 1000 iterations in which the variable was considered significant shown at the top. Those selected more than 70% of the time are highlighted.

Pair Correlation Functions

Pair correlation functions (PCF) are aimed at assessing the attractive or repulsive tendencies of sites, over and above the first-order effects identified as significant in the regression analysis. Evidence of such clustering or dispersion can therefore offer clues as to social processes operating alongside topographic and environmental concerns, and these are termed 'second-order' effects. Points within sites of a given period, and within the wider landscape, are simulated as above, but in the case of the

wider landscape, the distributions are constrained by the environmental variables already found to correlate with site presence/absence. An algorithm then determines the relative dispersion and clustering of sites in increasingly distant bands around each point. This process is again run 1000 times. In the resultant plot, the light grey background represents the range of expected variation in site distribution, based on the 1000 simulations of the 'wider landscape' signal, while overlain in dark grey is the actual signal produced by the sites. When the dark grey signal extends above or below the light grey, it can thus be taken as a reasonable indication of significant clustering or dispersion in the documented sites at the scale indicated by the x-axis, and these areas are shown in red and blue for clarity. This, and the regression analysis above, were run using the statistical software R, based on the code employed by Bevan and Spencer (2018).

Visibility Analysis

In visibility analysis, lines of sight are simulated between every point, and given an elevation map, the algorithm can work out which lines of sight are blocked, and which are clear, producing a set of lines connecting all the intervisible sites in a network. The networks produced here are based on Čučković's (2016) Visibility analysis plugin for QGIS.

Least-cost Paths

Least cost-path analysis identifies the least costly route between pairs of sites, based on a cost surface, where each pixel represents an incurred cost for moving across it. My cost surface combines a map of slope, and modern land cover values taken as a proxy for past land cover. An algorithm (known as Dijkstra's algorithm) moves outward from each point to cover all pixels on the map, noting their cost and from this calculating the cheapest route, i.e. that which should take the least time to walk. The present analysis made use of the UNICOR software, which is optimised to perform this operation for a large network of points, and which renders the resulting network as a raster image where more frequently used paths are accorded higher values (Cushman *et al.* 2013). These paths were modelled, in the first instance, between all sites in each period, and then between 100 random points dropped either side of the Isthmus of Ierapetra, to model possible routes across the region, in relation to which settlements may have been strategically located.

Summary

These methods all provide windows onto important aspects of human dwelling in the landscape, not just where people live, but how they coordinate this with other groups, which other sites they can see and be seen from, and how they are bound into wider networks of movement and connectivity.

Results

Preliminary Observations

Turning to the survey data (Figure 3), in the Neopalatial period, there was dense occupation of the lower-lying valleys of the Mirabello area, something suggestive of both high population and extensive agricultural production. There was widespread depopulation in the subsequent LM IIIA-B, however, following the destructions that left only Knossos a still-functioning palace, and during which time this region, as noted, probably lay outside of its control. In LM IIIC, the upland settlement clusters emerged around Vrokastro, Monastiraki, and Kavousi, a pattern which looks quite different from either preceding period. There was then relatively little change into the PG-G periods, though we know from excavation that a number of earlier sites were abandoned over the course of this phase.

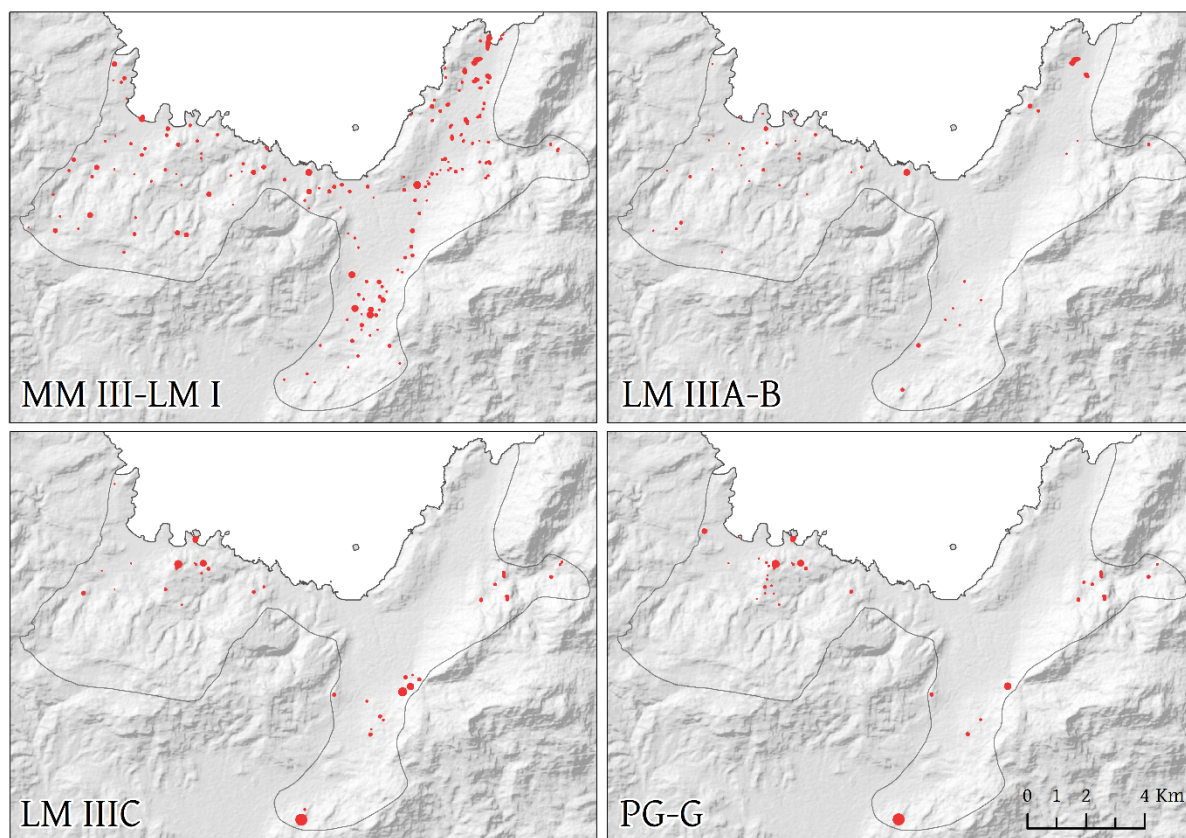


Figure 3. Survey sites recorded from each of the three Mirabello surveys, corresponding to the periods between MM III and G. Site sizes have been slightly exaggerated for visual clarity.

Table 4. Summary data on the combined survey sites from each period.

Period	Total sites	Total area (m ²)	Continuing sites	Percentage continuity
MM III-LM I	158	789,052	--	--
LM IIIA-B	45	142,865	37	82.2
LM IIIC	36	362,059	13	36.1
PG-G	36	401,765	21	58.3

Though the number of known sites in LM IIIC declines (see Table 4), there is actually growth in the total settled area, and thus perhaps population. Though the sites may have been founded in more remote locations, then, they were not necessarily smaller or transient than those that preceded them. Also of note, some 82% of all LM IIIA-B sites continued from LM I, suggesting a thinning out of habitation, but one where the fundamentals of settlement location perhaps did not change. Only just over a third of LM IIIB sites continued into IIIC however, implying a much more significant reorientation of settlement.

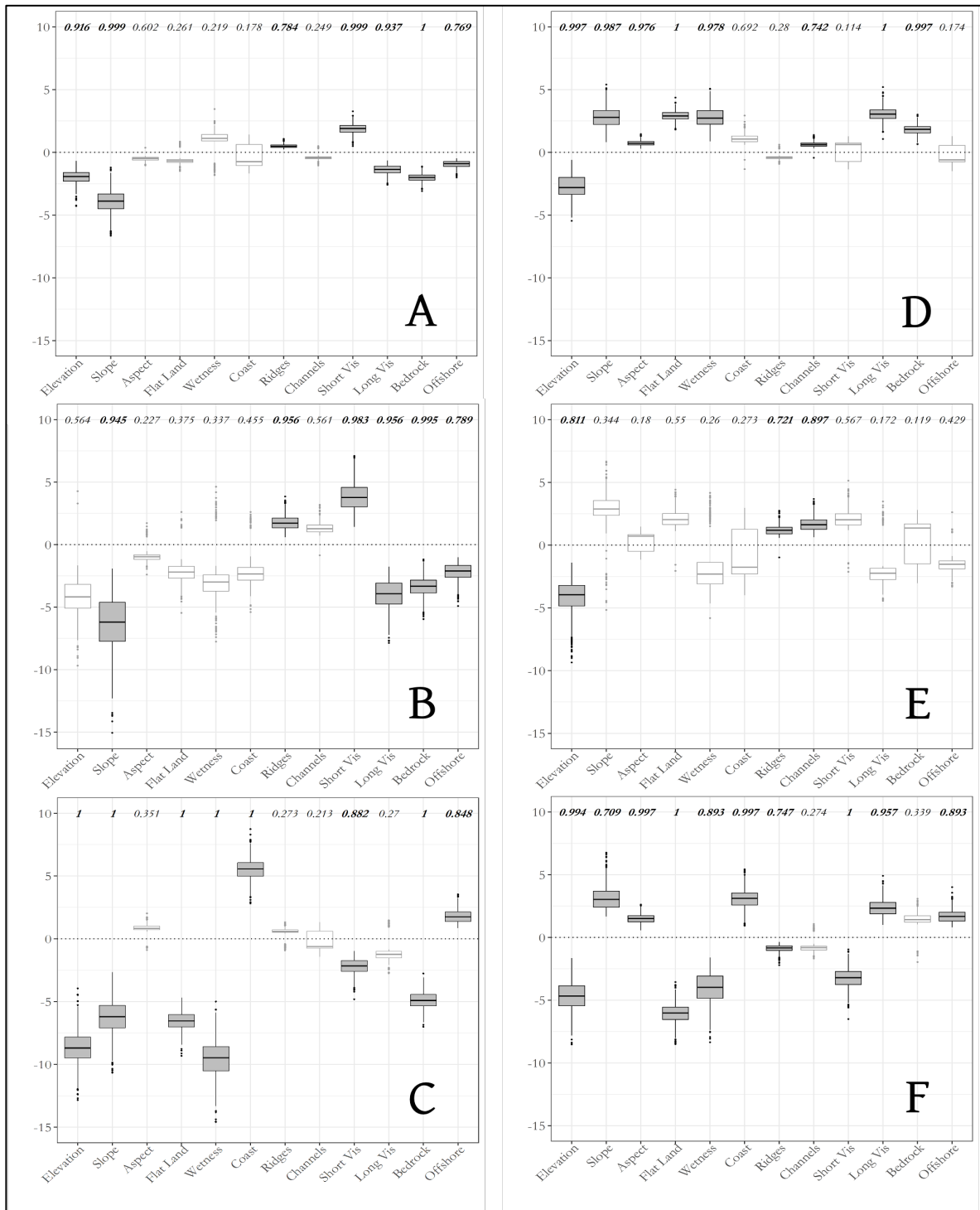


Figure 4. Boxplots summarising correlation coefficients from 1000 iterations of fitted logistic regression analysis. The y-axis corresponds to positive and negative correlations, the x-axis to the environmental variables, and the numbers along the top to the proportion of the 1000 iterations in which that variable was selected as significant by a stepwise Akaike Information Criterion (AIC) procedure. The first column comprises regressions based on random, 'wider landscape' point simulations, for A) MM III-LM I, B) LM IIIA-B, and C) LM IIIC. The second column comprises regressions based on points from within the bounds of sites from other periods, for D) MM III-LM I, E) LM IIIA-B, and F) LM IIIC.

Logistic Regression Analysis

Turning to the logistic regressions (Figure 4) and beginning with those conducted against random points in the wider landscape, most striking is how similar the Neopalatial (MM III-LM I) and Final Palatial (LM IIIA-B) signals are. Despite differences in correlation strength, both show tendencies for low slopes, a slight preference for ridges, and a positive correlation with good short-scale visibility counterpointed by negative correlations with good long-distance and offshore visibility. These factors probably all pertain to occupation of the low-lying agricultural land of the Ierapetra valley, further evidence that, despite significant depopulation occurring between them, the general character of settlement in both periods was similar. The most important contrasts in LM IIIC are the strong negative correlations with flat land and topographic wetness (i.e., soil moisture), and positive correlation with coastal distance. This is exactly what we would expect for sites founded inland and up high, with the land more rugged and less well watered. Reduced local visibility but increased offshore visibility may likewise be suggestive of the priorities of those living in these locations.

For the results comparing against sites from other periods, significant for our purposes are the positive correlations with flat, well-watered land – again, good agricultural land – in MM III-LMI². Interestingly, compared to other sites, this period registers good long-distance visibility – the opposite of what was seen against the random wider landscape pattern – likely to result again from the dense settlement of the valley bottoms, with their uninterrupted northeast-southwest views.

In the subsequent LM IIIA-B period, there is a slight positive correlation for sites on ridges and in channels but otherwise few clear environmental correlates. This may be due to the uneven thinning out of Neopalatial settlement represented by LM IIIA-B, where in other periods more active choices about settlement location were made.

For LM IIIC, flat land and soil wetness again correlate negatively, and sites appear to be further from the coasts. The correlations with visibility are likewise similar to those from the ‘wider landscape’ regression. That these signals are consistent across both regressions suggests they are robust indicators of these sites’ topographic features, and so hint at the underlying motivations of their founders.

Pair Correlation Functions

Looking at the PCFs (Figure 5), in the Neopalatial period, apart from some clustering on small scales, the distribution of sites is largely consistent with the modelled random distribution, constrained by the identified environmental correlates. That is, it may have been types of land, and not the spatial relationship between sites *per se*, which most influenced settlement distribution. The LM IIIA-B signal is again less clear. Sites cluster a little at short distances and around 2000m but otherwise are somewhat dispersed. This pattern is difficult to interpret and may again result from the unsystematic depopulation following LM I.

² The consistently negative correlations with elevation are, in Figure 5: A-C, probably the result of the ‘wider landscape’ including significant mountainous and upland areas rarely settled by human populations, making settlements of all periods appear ‘low-lying’. In D-F, they largely result instead from the settlement pattern of the O-A periods, which included a great number of, probably agricultural, settlement loci in the elevated, Meseleroi valley (see Figure 9). This is the only period to show positive correlations with elevation when measured against sites from other periods.

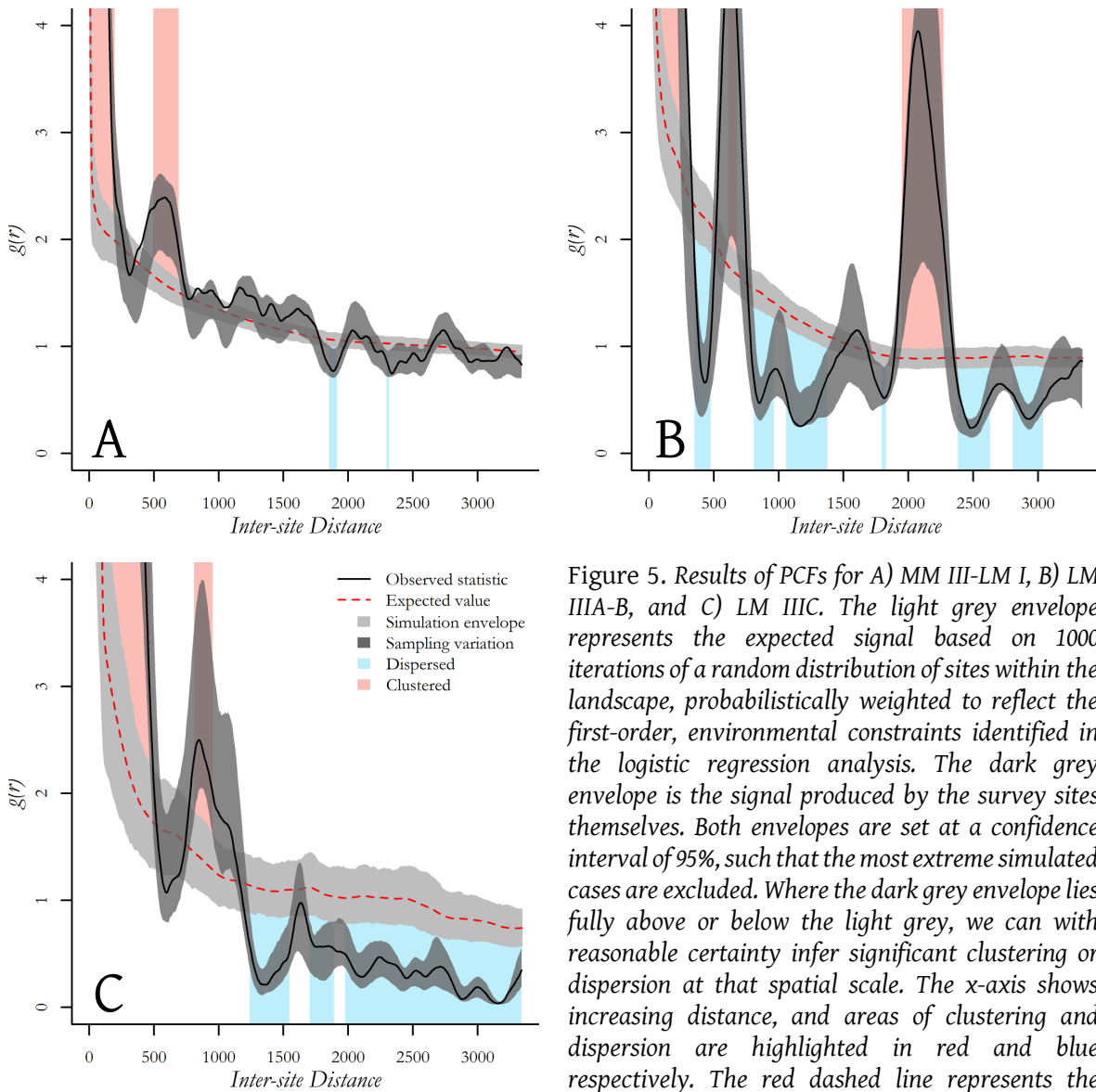


Figure 5. Results of PCFs for A) MM III-LM I, B) LM IIIA-B, and C) LM IIIC. The light grey envelope represents the expected signal based on 1000 iterations of a random distribution of sites within the landscape, probabilistically weighted to reflect the first-order, environmental constraints identified in the logistic regression analysis. The dark grey envelope is the signal produced by the survey sites themselves. Both envelopes are set at a confidence interval of 95%, such that the most extreme simulated cases are excluded. Where the dark grey envelope lies fully above or below the light grey, we can with reasonable certainty infer significant clustering or dispersion at that spatial scale. The x-axis shows increasing distance, and areas of clustering and dispersion are highlighted in red and blue respectively. The red dashed line represents the average or 'expected' value from the envelope for the random signal, and the black line reflects one of the 1000 iterations based on the survey sites.

In LM IIIC, though, there is a strong division between local clustering of sites, and more distant dispersion. This was intuitively visible in the map of site distribution, but the fact that the pattern holds *above and beyond* the effects of the first-order variables lends credence to the theory that the clustering of sites in this period was an active strategy on the part of these communities, not merely a product of the types of locations they settled in.

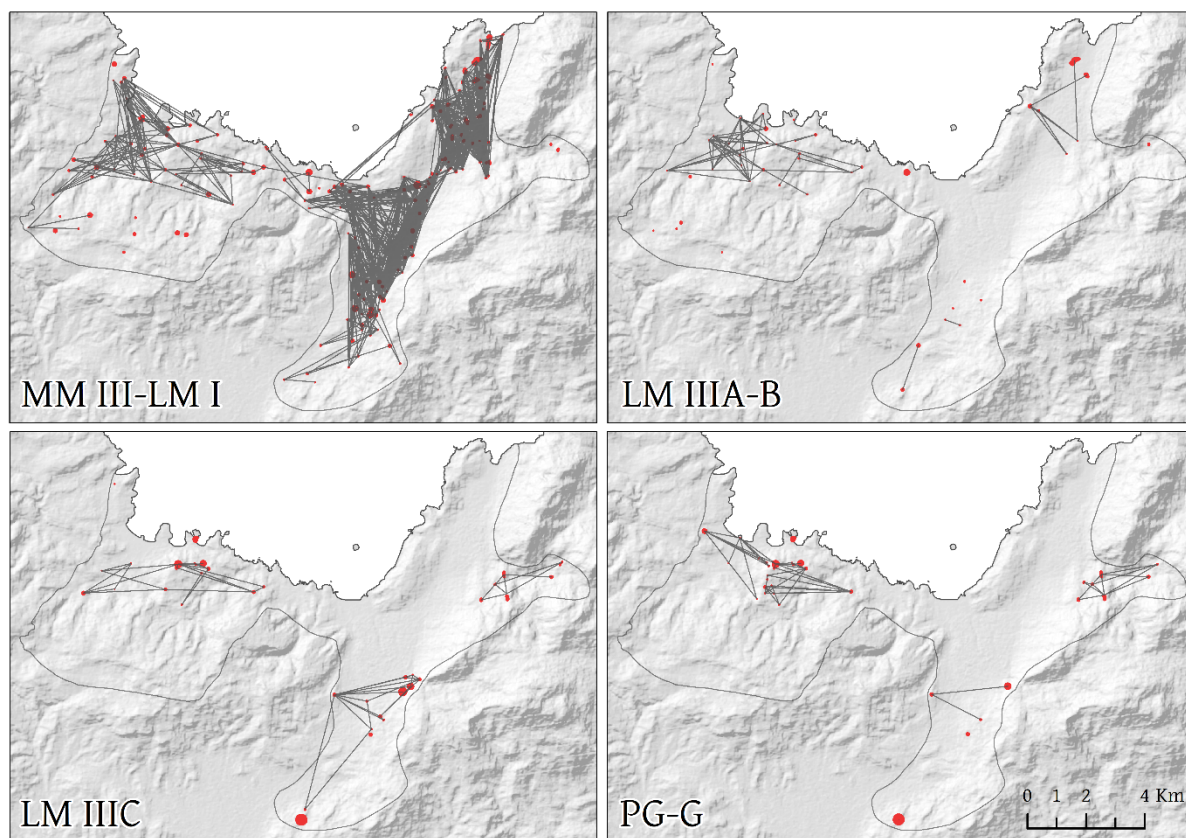


Figure 6. Networks of intervisibility in each survey period.

Visibility Analysis

As seen in Figure 6, MM III-LM I exhibits a dense network of intervisible sites in the Ierapetra valley, but also a substantial network to the west around Istron and Vrokastro. This latter remains in some form but, with the emptying of the lowlands to the east, the whole network breaks down in LM IIIA-B, something in line with the evidence from the logistic regressions. The LM IIIC pattern is again very striking, however; the identified site clusters were not only close by, but also clearly formed networks of intervisibility. Such relationships are borne out in the real world, as seen in Figure 7, taken at the site of Kavousi Vronda, with Kavousi Kastro and Azoria both clearly within view. The evidence so far would seem to suggest a degree of structure and intentionality in the emergence of these LM IIIC settlement clusters, raising questions for the theory of a simple flight from the coasts.



Figure 7. View of Azoria and Kavousi Kastro, looking west from Kavousi Vronda.

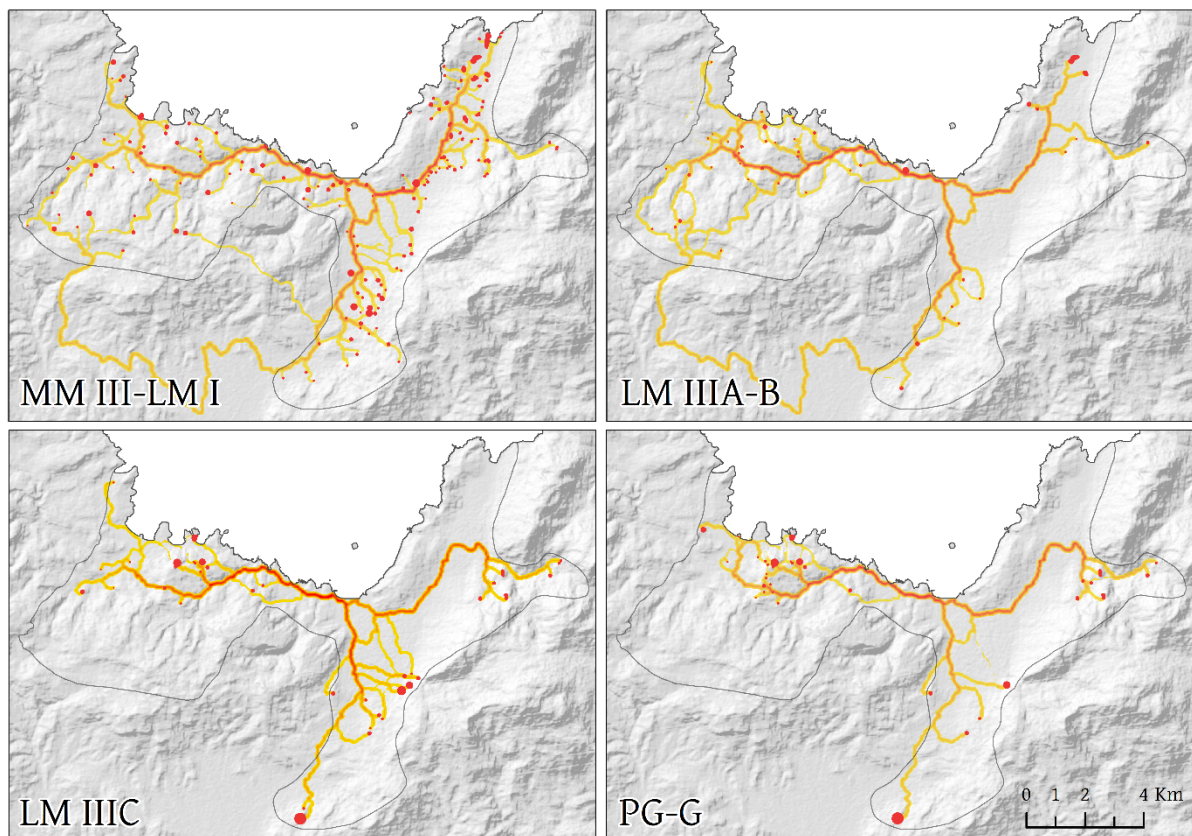


Figure 8. Cumulative least-cost path networks, calculated by the UNICOR software, with colour and thickness of the resulting paths reflecting the number of individual routes passing through each point in the landscape (red being high, yellow low).

Least-cost Paths

The results of the path analyses (Figure 8) complement these insights, and prompt others. The network in the MM III-LM I periods is dense and finds its major axis running along the coast past the site of Gournia (in the centre of the figure). This network attenuates into LM IIIA-B, but again Gournia is to be found along the major route connecting east and west. This route continues, though Gournia is by then abandoned, in LM IIIC, and the southern route disappears, with the PG-G network remaining largely the same. Importantly, though, the broad strokes of the network, particularly across the valley, remain constant in all periods – at least as predicted by the simulations.

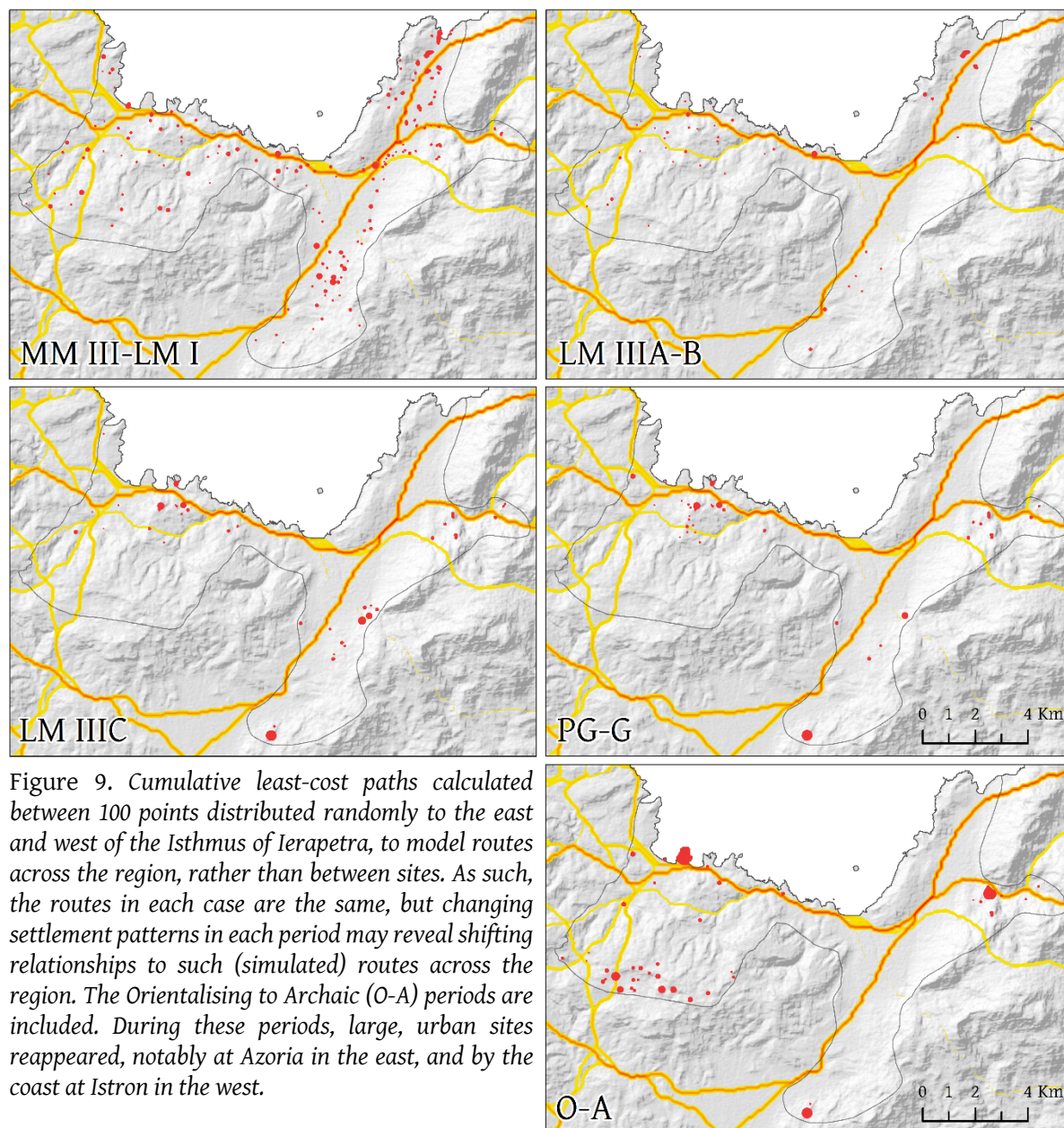


Figure 9. Cumulative least-cost paths calculated between 100 points distributed randomly to the east and west of the Isthmus of Ierapetra, to model routes across the region, rather than between sites. As such, the routes in each case are the same, but changing settlement patterns in each period may reveal shifting relationships to such (simulated) routes across the region. The Orientalising to Archaic (O-A) periods are included. During these periods, large, urban sites reappeared, notably at Azoria in the east, and by the coast at Istron in the west.

In the path networks modelled between random points set east and west of the survey region (Figure 9), Gournia's position is shown again to be strategic, commanding the main northern route along the coast. It is notable that in both MM III-LMI and LM IIIA-B, settlements appear closely aligned with these hypothetical routeways. The settlements of LM IIIC are not located closer to these routes as such, but do appear frequently to overlook them. The Kavousi sites sit upon a major route of access to the isthmus, and command views over two more. Similarly, Vrokastro towered above the coastal path once dominated by the lower-lying Gournia. Looking briefly ahead to the O and A periods, the large, nucleated settlements of Azoria and Istron, which grew out of the earlier Kavousi and Vrokastro village clusters, are in turn ideally placed to oversee these vital pinch points.

Discussion

It is worth briefly recapitulating what has emerged from the foregoing analyses. Human settlement around the Bay of Mirabello was, in the Neopalatial period, centred on lower-lying, flatter, better-watered areas which, in conjunction with the dense and numerous sites of the Irapetra Valley, appears indicative of an in-filling of agricultural land, likely in the context of high population. The results of the PCFs, in turn, imply that such land was sought out primarily for these characteristics, rather than through any particular concern with the spatial relationship between different settlements. Significant depopulation seems to have accompanied the Final Palatial era, but the general environmental correlates of settlement appear to have remained similar, in-keeping with the idea that occupation at this time was a vestige of, rather than a departure from, the Neopalatial era. In LM IIIC, however, significant changes occurred, with sites founded further from the coast, in more remote locations, and with definite compromises made in the relative accessibility of good agricultural land.

These developments have been noted before (Nowicki 2000; Haggis 2001), though it is reassuring that the statistical analyses bear out earlier, more intuitive inferences. The aim of this paper, however, was to move beyond generalising, bird's eye views to illuminate aspects of the experiential qualities of human settlement in this period, and several of the analyses offer the potential to do just this.

Firstly, the divergence in the PCF results for the MM III-LM I and LM IIIC periods is highly suggestive of changing priorities and concerns among the inhabitants of the region. Where those in the Neopalatial period seem to have been able to seek out areas of occupation guided largely by a desire or need for more agricultural land, the populations of LM IIIC were acting under quite different pressures. The pattern of local clustering, and regional dispersion is indicative of groups which prioritised the organisational, defensive, and stabilising effects of close-knit, cooperative communities above the immediate proximity or fecundity of their fields. This is reflected further in the intervisibility of the resulting clusters of villages and hamlets. It is tempting, though purely speculative, to infer modes of rapid signalling or communication between these settlements, their proximity and mutual visibility offering significant defensive opportunities. All this implies stark contrasts in the nature of socio-political coordination between the two periods. The dense occupation of the lowlands in the Neopalatial is probably a reflection of the relative stability and centralisation brought about by the palatial states. In LM IIIC, meanwhile, groups would have been fragmented and essentially autonomous. Clustered settlements offered a localised mode of socio-economic integration, without the need for large, superordinate political structures.

These facts in turn betoken a more precipitous social climate for LM IIIC, and the noted correlations with offshore visibility might imply this instability encompassed seaborne threats. But the locations of many of these sites were not only remote but also commanding – like Monastiraki by the Kha Gorge, Vrokastro with its views across the bay, and the Kavousi cluster. Wallace (Wallace 2010: 145) is no doubt

correct in arguing that, for inhabitants of the area, the villages, indeed the communities themselves, came to be thought of, and navigated to, through the mnemonic geography of their striking locations. It may be no coincidence that these and later settlements were sited overlooking major routes through the region. The monitoring of access in and out of the isthmus would have been of strategic advantage both when defence was of primary importance, and later when larger settlements like Azoria and Istron were emerging as regional, even territorial centres.

There is likewise good evidence of movement and communication between these sites. An important religious rite in LM IIIC involved a type of female figurine dubbed ‘Goddesses with Upraised Arms’, which were placed on benches in town shrines alongside other ritual paraphernalia (Prent 2009). Such figurines have been found at a number of sites around the Mirabello, and recent petrographic analysis on those from Khalasmenos suggests they had been made in several locations in the wider region and brought to the site, perhaps as part of regional religious gatherings (Chlouveraki *et al.* 2010; and see Gaignerot-Driessen 2014).



Figure 10. *Left, view of the Monastiraki settlements, at the dramatic entrance to the Kha Gorge. Right, view east from Vrokastro, with the Kha Gorge (Monastiraki) and the Kavousi cluster visible in the distance.*

Such evidence is a powerful reminder that, in the debate over causes behind these upland settlements, we often forget that their inhabitants did not simply live out their lives within the bounds of their villages. Besides agriculture and religious rites, trade and exchange, marriages, conflicts and reconciliations would all have prompted journeys between villages, meaning that, despite these being distant from the former centres of occupation, people would have continued crossing and re-crossing the land inhabited by their ancestors. This was suggested clearly in the present analysis by the stability of the simulated path networks across all periods, with certain routes likely to have been maintained over centuries. One tantalising implication may be the persistence of cognitive geographies, with local knowledge, ancestral claims, and even myths forming part of the inheritance of each generation which could have weathered dislocations in settlement patterning. Such persistence in topographic meaning may be suggested in the later Geometric period by burials and ritual activity identified among the by-then abandoned houses of Khalasmenos and Kavousi Vronda (Tsipopoulou 2009: 131).



Figure 11. View of Azoria from Kavousi Kastro, looking onto the coastal plain below. A probable major routeway ran down the valley behind the site, which in turn overlooked another route along the coastal plain.

Conclusion

The foregoing analysis may not resolve conclusively the question of whether settlement changes at the end of the LBA on Crete resulted primarily from external threats. However, it suggests, at the very least, that this explanation alone is insufficient. The techniques employed here have pointed repeatedly to active, communal decision-making on the local level, aimed at ensuring a balance of stability, security, and accessible, workable land. Far from entrenching a discrete, site-based reading of the archaeological evidence, these methods have illuminated several aspects of the wider dwelt landscape, and the networks of mobility, visibility, and connectivity which continued to bind together the more spatially fragmented groups of the final BA and EIA. The persistence of routeways, of fields, of local myths and knowledge of the landscape were all, despite their archaeological invisibility, hinted at by the analysed and simulated patterns of human settlement and movement around the Bay of Mirabello.

Many questions remain, but it is hoped the present case study demonstrates the subtle tools GIS can bring to probing past settlement dynamics. Provided we remain mindful of the human groups we are ultimately interested in, and the ways in which the landscape was a potent, meaningful, and contested aspect of their lives, these methods can enrich our understanding of periods for which well-excavated settlements are fewer in number, or where survey has supplied the requisite data to rigorously apply such techniques. And finally, wherever possible, we should get out into the landscapes studied via GIS, because however good our models, they will always be the richer when supplemented by empirical, tangible experience of the places under investigation. In such a way, we can do one better than the ill-fated Icarus, in his fabled flight over Crete, by not only enjoying the bird's eye view, but also by setting our feet, and with any luck our theories, back on solid ground.

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On the Integration of Landscape Archaeology Within the Framework of Human Ecodynamics: Some Theoretical Considerations

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Abstract

The archaeology of 'scapes' focuses on understanding how space shaped and was shaped by ancient people. Said differently, we study the interrelationship between humans and non-humans – either from a cognitive or biological perspective. In the case of Landscape Archaeology, albeit applicable to the rest of 'scapes', this material interrelationship is fundamental for understanding the complexity of past socioeconomics.

As a subdiscipline, Landscape Archaeology has been in constant development. Historical Ecology has been arguably one of the most important theoretical influences for understanding landscapes, making the study of Human Ecodynamics (HE) its main aim. Recent implementations of HE in landscapes studies has enabled the study of the human-natural system(s) through both space and time, acknowledging their bidirectional agency, and a non-lineal nature of landscapes wherein humans and non-humans interact at different scales.

However, it is necessary to (re)consider our field in order to enact the study of Landscape Archaeology following these principles. We should encompass complexity and diversity, integrating multiple datasets in a coherent framework. It is thus our aim to bring to the fore some of these considerations, to lay out a basis for an enhanced Landscape Archaeology. Seeking this, we will entangle theoretical reflections with their applicability through computational ontologies—arguing in favour of the latter as a better method of representing and organising multiple datasets for HE.

Keywords: human ecodynamics, landscape archaeology, theory, digital archaeology, computational ontologies.

Why Human Ecodynamics?

By bringing up theoretical considerations on Landscape Archaeology, we argue that the integration of this sub-discipline within a broader framework - Human Ecodynamics - can effectively enrich landscape research. Firstly, we succinctly explain what we understand by landscape before delving into the concept of Human Ecodynamics, its theoretical-methodological implications and its dynamic with the landscapes – which will demonstrate their mutual connection. Finally, this paper will briefly exemplify how to implement Human Ecodynamics into landscapes studies through digital technologies (computational ontologies). Overall, the aim is to argue in favour of the potentialities brought by this new approach.

Three caveats should be considered in this text:

- Human Ecodynamics is a concept that is not normally referred to as a *paradigm*. Rather, it is often used for defining one aim or 'object of study'. We explore here the concept as if it were a *paradigm*.

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- Human Ecodynamics and Historical Ecology are not normally used as interchangeable concepts. Yet, we fail to see a real distinction between both; we argue that one reinforces the other and vice versa.
- When referring to both humans and non-humans, we use the concepts of 'agents', 'actors', 'beings', and 'entities' interchangeably unless specified otherwise. This is done purposefully because we attempt to break down the distinction between culture/nature.

'Scapes' in Landscape Archaeology

In this section we aim to present the epistemological state of Landscape Archaeology, introducing and conceptualising a few key concepts, including our understanding of what a landscape is.

Landscapes might be conceived of as a space which encompasses, as a sole unit, nature (physical environment and non-human entities), settlements, 'sacred' places, productive areas and associated structures, common ways of movement, and the symbolic perception of all these features (Criado-Boado 1988; David and Thomas 2016; Knapp 2018; Martín Civantos 2008; Moreland 2010;). In effect, multiple elements are present in a 'single reality', all forming the landscape (Malpica 2009). This definition is nonetheless somewhat incomplete or vague, and, therefore, we further develop some of these aspects.

We should be cautious with words such as landscape or space. We have initially used landscape as if it only concerns land. However, this scape or space can also refer to maritime environments or seas. Moreover, the concept of space has nuances in archaeology because it denotes an undetermined 'topology' devoid of time (Hodder 1988). Since the archaeological study of landscapes focuses on past cultures, it is convenient to move from the concept of space to the concept of place – an apprehended space imbued with cultural meaning (Criado-Boado and Santos Estévez 1998; Hamerow 2018):

A 'place' is a location that has been inscribed significance of some sort, whereas 'space' is characterised by an emptiness and by a lack of significance. One could say that 'space' is the raw material from which 'place' is created by filling it with 'meaning' (Egeler 2019: 7-8).

Above we have used the word 'nature' in a broad and integrative fashion, excluding humans. Hence, nature would include the physical environment in its geographical meaning, non-human biotic elements, and abiotic factors—atmosphere, topography, water streams, soil composition, vegetation, etc. (Malpica 2009; Martín Civantos 2008). In other words, here nature would include every and all non-human agents.

Yet, landscapes are anthropic artefacts (Martín Civantos 2008). People, either in the past or present, live in a given landscape; their (social) actions and beliefs leave traces on it (Binford 1982). As Trigger (1967: 158) argues, every social relation and process is reflected in settlements and, by extension, in the landscape. Precisely for this, all human actions form part of the landscape, which is therefore social and cultural (Giacomorra 2006: 34). Human actions, moreover, have temporality and continually modify the landscape. Thus, landscapes reflect social processes of different cultures over time, in this way becoming historical palimpsests (Martín Civantos 2011; Tello 1999). In this sense, it can be argued that landscapes are the cultural expressions of past societies i.e., the epidermic manifestation of economic, social, cultural, and political changes of given populations. We, therefore, can arrive at the conclusion that landscapes are historical, cultural, and socioeconomic (Criado-Boado 2017; Martín Civantos 2011).

The perspective hitherto explained has mostly to do with socioeconomics. Yet, we have already made a reference to the phenomenological properties of landscapes, which are equally fundamental. Phenomenology gained recognition during the 1990s (Criado-Boado and Santos Estévez 1998; Tilley 1994), influenced by post-processual symbolism (Hodder 1987). Adding up to the concept of cultural landscapes, phenomenology asserts that a landscape is not just used and transformed, but also sensed, experienced, and lived (Bruck 2005; Darvill 2015; Malpica 1996; Prendergast 2015; Van Dyke 2014). In so doing, it recognises the role of our senses and cognition in perceiving landscapes. This adds individual, as well as collective, and subjective nuances to the understanding of landscapes (Martín Civantos 2008), imbuing them with symbolism. With this subjectivity, phenomenology entangles both dynamics of synchrony and diachrony: the former because there are different perspectives (ideological and cognitive) about a landscape in a concrete historical moment; the latter because the perception and cognition about the landscape varies through time. From an ontological perspective, phenomenology helps in shifting away from the current hegemonic logic—i.e., western capitalism—by recognising other non-modern perspectives (Criado-Boado 1988).

Through this approach we can explain, for example, the articulation of stories, legends, and beliefs enmeshed in concrete places of the landscape, or analysing the built environment. Such a symbolic aspect is mediated by cognition in an interplay between individual and collective experiences that changes the human understanding of places. This is one of the main analytical roles of sky and soundscapes, especially in what pertains to the senses of sight and ear in relation to the landscape (Cross and Watson 2006; Scarre 2006; Silva 2015). It is in this way that phenomenology demonstrates how landscapes are ideationally (e.g., stories) or actively (e.g., symbolic buildings) shaped by humans. And, at the same time, these places, which allow for the articulation of legends or myths, shape humans' perception. This demonstrates that landscapes are therefore material and immaterial (Criado-Boado 2017) and compels us to look at landscapes through the eyes of a specific culture (Malpica 2009).

In sum, phenomenology asserts that landscapes transmit individual and collective sensory perceptions to humans. Humans, in turn, articulate these perceptions in their mind and ascribe symbolic aspects to landscapes. This constant process, which involves the participation of humans and non-humans, is what allows humans to 'socialise' the landscape (Egeler 2019). Such a process makes the landscape 'one-of-a-kind' for different cultures and even individuals (Gunnell 2019; Knapp and Ashmore 1999; Martín Civantos 2008). This is, in other words, what explains the mythopoeia of landscapes.

There is one final aspect of the landscape that connects its symbolic and temporal properties. As said before, landscapes reflect human actions in the environment. Many of such actions promote cultural knowledge about the environment. This knowledge is potentially an important asset in our present because it tells us about the failures and successes of past cultures, allowing us to learn from the past (McGovern 2011). As it has been demonstrated, we can recover such traditional knowledge through archaeological and ethnographic analysis (Hicks *et al.* 2019; Martín Civantos 2018). Hence, it can be said that this process of knowledge-recovery turns landscapes into connective apparatuses between different historical periods; between the past and present. And since this knowledge is important in the present, it entangles our research with societal endeavours.

This brief overview sheds some light on how to understand the landscape. In sum, the landscape in landscape archaeology has full meaning only understood as the result of the human action over the physical environment—in a dialectical interrelationship (Malpica 2009; Martín Civantos 2008; Tello 1999). Yet, as happens with many of the authors cited so far, the degree of interaction between humans and non-humans is sometimes vaguely defined. Consequently, we might, for example, conceptualise

climate as separated from humans; but, thoroughly considered, such an interrelationship is more subtle and interlaced because the climate is directly or indirectly affected by anthropogenic actions.

In any case, we can argue that the study of landscapes entails complexity due to their essence. Landscapes are complex because they entangle dynamics of diachrony, synchrony, and agency (Criado-Boado 2017; García-Contreras 2019; Opitz, Nuninger and Fruchart 2012). They are too from the perspective of symbolism and phenomenology (Bruck 2005; Criado-Boado 2017; Van Dyke 2014). Finally, this complexity increases when we add the dimensionality of social entanglement carried by the landscape (Martín Civantos 2007a; Martín Civantos and Bonet García 2015). For this reason, the landscape is not a 'closed' entity with exact measurements and is better defined as a huge archaeological site to be decoded (Martín Civantos 2007b).

Consequently, we must expand our gaze from the micro or regional scale towards an integrative scale of scapes. In a methodological lens, this implies the integration of data that is often left aside (as noted by Opitz, Nuninger and Fruchart 2012). Indeed, it is a matter of scale; we need to scale our approach to landscapes from the perspective of the cultures which inhabited them. This turn aims to break *ad hoc* frontiers, territories, etc. (Orejas 1998). We assume greater issues will arise by broadening our lens because we complexify our approach towards landscapes, but we gain a wider picture of the past.

The study of landscapes or *scapes*, therefore, requires a holistic framework. Such a framework must necessarily allow us to research within *long durée* timescales (Alonso González and Navajas Corral 2015; Byock and Zori 2013; Fairclough 2012; Feinman 2015; Fleming 2012). An enhanced approach to landscapes should moreover encompass a social commitment (Fernández Fernández, Martín Civantos 2018). The practitioners of Human Ecodynamics (HE), who explicitly focus their research on understanding the landscape, seek a holistic framework that, we argue, can enrich Landscape Archaeology by better studying the complexity of landscapes (Crumley *et al.* 2017). This makes the study of landscapes the crux between more traditional archaeological studies and Human Ecodynamics and/or Historical Ecology (Crumley 1994, 2017).

Human Ecodynamics

Goals and Features

The term Human Ecodynamics has gained traction since 1995 (McGlade 1995). Although its definition remains fuzzy (Holm 2015; Roigé Oliver 2019), it can be conceived as a 'paradigm' that goes hand in hand with the development of Historical Ecology (Crumley 1994). Human Ecodynamics refers to the historical and long-term study of the interrelationships between humans and the environment through both space and time, assessing the agency that both these entities have on each other. It aims, therefore, to study dynamical human-natural systems (Harrison and Maher 2014; McGlade 1999). Its practitioners and supporters advocate for using this knowledge in the present through different practices (Costanza *et al.* 2007; Crumley 2017; Dugmore *et al.* 2013; Hicks *et al.* 2019; McGovern 2014; Nelson *et al.* 2015).

From the definition above, it is sensible to argue for a connection between HE, which is an explanatory theory of reality and evolution, and Latourian Actor-Network-Theory (ANT) (Latour 2007). If ANT proposes that both humans and non-humans have agency, HE states that 'structures are maintained only by constant energy/matter and entropy exchange, in which the action of positive feedbacks of environmental and cultural processes drive the system to new evolutionary states' (McGlade 1995). Therefore, Human Ecodynamics integrates a vision in which humans and non-humans are interlinked in a coevolutionary dynamic and, consequently, it seeks the study of synergies between both entities (Maher and Harrison 2014; McGlade 1999). This is again in line with ANT, for which reality is explained

through multiple connections in an ever-shifting, non-linear, network made of humans and non-humans (Latour 2007). In sum, both HE and ANT stress the study of synergies following nonlinear causal explanations.

Thus, the concept of non-linear dynamics is fundamental for HE as a means to explain synergies. The concept of non-linearity stems from the so-called 'theory of chaos' (Lorenz 1963; McGlade 1995), which, shortly speaking, means that in a composite deterministic system change might occur in a non-deterministic way but within the limits of the system. According to chaos theory, small actions/agents do not necessarily beget small changes. But change and contingency are constant and necessary for the system to generate ever-new bifurcations, 'which in turn provide the conditions for renewal of higher entropy production.' (McGlade 1995, 1999). One of Human Ecodynamics' assets is that it takes into consideration this vision of non-linear dynamics of causality, introducing it through the concept of heterarchy (uncertain number of agents affecting in different time-spaces at diverse rates (see Crumley 1994: 12):

Ecosystem structure is viewed as a series of weakly coupled sets within a hierarchy of process rates involving biotic interaction (competition, predation, mutualism etc.) and abiotic factors (climate, edaphic and historical constraints). The non-linear couplings in these processes are further complicated by human action - whether as the result of uncoordinated stochastic events or by a series of policy-directed interventions. [...] since different levels in the organisational hierarchy of the natural world and its human component involve different dynamical processes, these can usefully be isolated for analytical purposes (McGlade 1995: 121).

This breaks the simplistic models of cause-effect (Maher and Harrison 2014:2; McGlade 1995) and, applied to the study of landscapes, puts archaeology in line with the principle of entropy (as inferred from McGlade 1995). From this perspective, chaotic changes and instability do not break the system but are the generators of new states within such a system. This non-equilibrium state is the positive feedback of the system (McGlade 1999).

Non-linear insights are moreover interesting for achieving a *rapprochement* between the temporality of social phenomena and the non-linear temporality of the structural dynamics articulating the historical processes (McGlade 1999). This, naturally, includes non-human phenomena, interlaced with humans, in a long-term, dynamic, perspective. Understood as a complex system, the landscape is a system composed of different constituent actors (humans and non-humans). In this context, such a *rapprochement* refers to the different paces of change between humans and non-humans processes and events. Time is key here, for there is a myriad of temporalities in contingent socio-natural systems. Some of these tempos are related to the human sphere (e.g., political, technological), but these are always receiving influence and influencing the temporalities of 'nature'; so, dependable inter-temporalities define mutual social-nature dynamics (McGlade 1999). For example, climate-induced changes in the North Atlantic currents may cool the Northern Hemisphere (Boulton *et al.* 2014), plausibly affecting different ecosystems and their populations (e.g., changes in fish catch and flora) (Baruah *et al.* 2021), which might result in socioeconomic variabilities with different outcomes for people living in coastal or inland areas. Needless to say, these multi-temporal changes will affect the landscape. Thus, the interplay of temporalities and chaotic changes is what constitutes landscapes as contingent systems. HE, therefore, introduces quite an interesting lens for understanding more nuanced temporalities compounding historical socio-natural landscapes. Hence, the need for a multiscalar, temporal, and spatial frame (Crumley 1994). This multiscalar *rapprochement* has important

implications for understanding landscapes, as well as history in itself. Considering the aim of this text, we find it useful to ponder over such implications, which will be done in the next section.

Epistemological Implications

HE implies that history is the coevolution between humans and non-humans. In fact, it challenges the way we normally envision history as the evolution of three compounding factors: society, economy, and political dynamics. This triad can be encompassed within the term of 'sociohistorical system' (Marquardt 2019), which is in a continual dialogue (influencing and influenced by) the physical-natural system. Hence, non-human factors are so ingrained and interlaced that they must be acknowledged as compounders and/or modifiers within this dynamical, non-linear, system. This makes the case that sociohistorical system can only be truly understood if conjoined with the natural system, and vice-versa – which is another parallel with ANT:

It is not clear whether there exist relations that are specific enough to be called 'social' and that can be grouped together in making up a special domain that can function as 'a society'. The social aspect seems to be diluted everywhere and yet nowhere in particular (Latour 2007: 2).

This is arguably an epistemic disruption, accounting for a non-linear, entangled, explanation of structural emergence within the human-natural systems (McGlade 1999). Having said that, this disruption sets the space for an integrated history of humans and environments as coupled systems (Amundsen 2014; Dugmore *et al.* 2014; Fitzhugh *et al.* 2018; Maher and Harrison 2014). Following Crumley's thinking (2017), this has important consequences in terms of how we archaeologically approach the study of landscapes. A framework for mobilising all this theory into practical research has been proposed: a dialectical framework (Marquardt 2019). This framework serves not only to highlight the mutual interrelationship between humans and non-humans, but perhaps more importantly, to articulate different temporal and structural scales—assessing and articulating the multiple interrelationships which can happen within the system in these ecodynamics.

Further, it is not uncommon to read different approaches to the methodology of Landscape Archaeology. The idea is clear: it needs to make use of different disciplines. But the way of deploying them is rather varied, ranging from multi to interdisciplinarity (Barceló 1998; Fairclough 2012; Malpica 2009; Martín Civantos 2008). And so, debates normally revolve around the problem of how to deal with our subject-of-study instead of defining the subject-in-itself, i.e., epistemology versus ontology. We argue that HE can bring some new answers to this debate, both in terms of epistemology and ontology. To expand this argument, in the next lines of this section we deal with some epistemological considerations while in the next section we will discuss the subject-of-study in ontological terms.

So far, we have concluded that landscapes are the product of dialectical interactions between humans and non-humans. Yet, it remains open to how to approach the study of landscapes. Human Ecodynamics brings to the fore some epistemological implications of interest. Recent studies consistently show the importance of combining different methods, and even theories, in an operational way to research human-environmental interactions (Contreras 2017). It has also been proposed to follow a heterarchical vision and use all the necessary means, depending on the context and available sources of information (Crumley 1994). These sources should be managed to understand landscapes, and, in the case of Landscape Archaeology, the role of the historical development of humans. All sources can be equally important to this end in as much as they offer some insight to the general question previously asked; said differently, theories and methods hinge on the questions pursued. Following this stream of argumentation, we contend that our research is thus a heterarchical endeavour and, as such, we

propose that a transdisciplinary framework (e.g., Acosta Naranjo and Domínguez Gregorio 2014; Lethbridge and Hartman 2016) is likely more useful due to its fluidity and integrativeness.

In this sense, the study of HE represents a sort of holism because it entangles multiple disciplines from a wide spectrum of fields: Ecological History, Environmental and Landscape Archaeology, Environmental Anthropology, Environmental Humanities, Ecology, Geology, Computational Sciences, etc. (Acosta Naranjo and Domínguez Gregorio 2014; Buckland 2013; Constanza *et al.* 2007; Martín Civantos 2018; McGlade 1995; Ortega Santos 2007). All of these are useful by themselves because they bring 'relevant information to bear on the study of human-environment interaction [but] none adopts a truly integrative approach' (Crumley 1994: 4). From our point of view, therefore, these different tendencies reflect not divergences but a common path: holism, a convergence of disciplines; they all create a 'toolbox' (Crumley 2005). Indeed, as Constanza *et al.* (2012) argue, synthesis must take place in our research. As such, this is one of the most important contributions of Human Ecodynamics: gathering different perspectives (disciplines) and pointing towards the need of joining them in a common framework (synthesis). Similar to the concept of a parallax, different views give different perceptions of an object; their integrated sum in a coherent framework might yield a refined image of it (Figure 1).

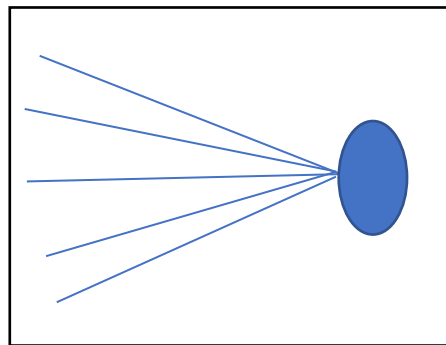


Figure 1. *Parallax view, or different perspectives observing the same object (Drawing by the authors).*

On the other hand, in a world-system, socio-environmental changes and impacts on local scales may affect extensive areas. Historical-cultural-ecodynamics, therefore, are almost impossible to fully comprehend without a comparative, long-scale gaze (Crumley 1994, 2017; Contreras 2017; Fitzhugh *et al.* 2018; Maher and Harrison 2014; McGovern 2014). In this spirit, it has been proposed to integrate multiple regions to understand changes in human-environment systems (Crumley 1994; Marquardt 2019; McGovern *et al.* 2019), generating a multifractal account of these interrelationships and of landscapes.

Both things, holistic and long-scale approaches, create a framework where multiple datasets are necessary. Such a data-driven approach forces us to enter the realm of Big Data (Fitzhugh *et al.* 2018). Drawing on large and heterogeneous datasets becomes essential as it allows for aggregation, archiving, utilisation, and synthetisation of knowledge (Fitzhugh *et al.* 2018; Travis and Holm 2016). This is especially compelling for HE, which makes use of a wide range of datasets from diverse fields.

Some perils must be highlighted, though. Heretofore, the archaeological study of Human-environment interactions has some important limitations (Contreras 2017). This has led to the development of a research framework where studies normally use data in very limited fashions. For example, it is not uncommon to use variate data, sometimes from random proxies, from which to infer correlations among such datasets; but this procedure offers weak conclusions. This becomes an issue because correlations do not explain by themselves the real complexities of the human-natural systems shown

by HE. Correlation is simply not enough (Contreras 2017). Instead, we should aim for creating compelling explanations about complex interactions by correctly using the data (Contreras 2017; Huggett 2020). Linking multiple datasets in a meaningful manner is therefore fundamental for deploying Human Ecodynamics in all its potential. In sum, refined epistemologies are arguably necessary for studying these ecodynamics in a data-integrative way (Moore *et al.* 2015). Yet, it remains open how to better achieve such approaches to create and present grand narratives. Seemingly, the only requisite is coming to terms between micro-level processes and macro-level dynamical and long-term structuring (McGlade and Van der Leeuw 1997). The final section of this paper brings new possibilities offered by computational ontologies which might help with this issue. Yet, before that, it is necessary to ponder on some ontological implications brought by HE.

Nuancing Ontological Principles

If we consider it carefully, HE attempts to describe a whole system, its components, and what defines them. This singular approach points towards reversing our workflow. In a specific sense, Human Ecodynamics forces us to think firstly in ontological terms rather than in the epistemological aspects of our research. Maybe, we must first understand what the object of our study is in its most fundamental form, not just define it (e.g., humans in the past). If so, this implies thinking in ontological terms, as Ontology's fundamental task is reasoning about beings and the being (*Dasein*) in the (past) world (*in-der-Welt*) (González-Ruibal 2001, following a Heideggerian conceptualisation). For this reason, we argue that there is a connection between Ontology and HE or archaeo-historical studies, more so if non-humans are integrated into our research (Fahlander 2017; González-Ruibal 2001; Harrison 2015). In what follows, we will examine some ontological insights offered by HE.

We have already hinted at some of HE's ontological insights by mentioning ANT and heterarchy. For example, Human Ecodynamics helps in rethinking our ontologies because it unites a divide between humans and non-humans, giving agency to both in a heterarchical way (as explained in p.5 in this chapter). As a consequence, some beings will have more importance than others, depending on the *state of affairs* (following Latour 2007 terminology). This opens new ontological inquiries on how we define our world and the beings that inhabit it. At the same time, such a proposal diverges from some ontological approaches (posthumanism, monism, dualism, etc.) with clashing principles (Díaz de Liaño and Fernández-Götz 2021):

The first clash is the exacerbation of human agency versus the equalisation of humans/non-humans' agency by some streams of posthumanism and speculative realism. If the former nullifies non-humans, the latter shifts away from human exceptionalism and heterarchy (Díaz-Guardamino and Morgan 2019). The problem with exacerbation is that, in many cases, this is used for rendering equal agency (in the form of guilt) to all humanity as the causal explanation for the destruction of non-humans. Such argument, nonetheless, hinders a thorough understanding of the 'Anthropocene' and shadows socio-political explanations (Díaz de Liaño and Fernández-Götz 2021; González-Ruibal 2018). Meanwhile, equalising humans and non-humans risks losing the point of coevolution, potentially replicating anthropocentric perspectives (Bauer 2018; Díaz de Liaño and Fernández-Götz 2021), and may fall into a metaphysical error (see below).

The second clash is between dualism and monism. The first inexorably divides humans from non-humans (or things) as separate ontic realities; the second sees no ontological distinction between humans and non-humans—everything is nature (for example, Urquijo Torres and Barrera-Bassols 2009). They both present similar problems to those explained above: dualism overemphasises humans whilst

monism might fail in accurately analysing social explanations and causations (Díaz de Liaño and Fernández-Götz 2021).

It is imperative to resolve this conflict of principles because it denies a coherent understanding of coupled human-nature assemblages. The good news is that collective research can shed some light on this if we a) assume the presence of these contradictions; b) explicitly follow philosophical reasonings; and c) enhance our theories in a dialectical dynamic of continual refinement with new data.

We argue that Human Ecodynamics is well-placed to offer answers to the clashes mentioned above because it stands on more neutral grounds (Figure 2). Its theoretical outset, recognising the existence of non-linear interrelationships between human and non-humans, is fundamental. On the one hand, it offers all existing entities some degree of relational and causational freedom and entanglement on a scale of impact and action within a given space-time and bioculture. We argue that this freedom, which is fluid and dependent on different 'states of affairs', respects the agency of humans and non-humans without forcing an anthropocentric notion of agency (*sensu* the warning of Díaz de Liaño and Fernández-Götz 2021: 2-3). With this, it refines approaches, as those mentioned above, that exacerbate humans' agency.

As a consequence of this last idea, we argue that HE considers historical human actions in the environment as a sometimes-special force without falling into an exacerbated, anthropocentric dualism. This line of argumentation also serves to defy the problems of posthumanism highlighted above, i.e., obviating heterarchy and humans' capacity depending on the moment. One could add here Derrida's criticism of the metaphysics of presence (Derrida 1970). Derrida states that philosophical enquiries normally privilege the essence of 'present' presence instead of recognising the existence of 'void' presence in the form of absence. Derrida's position is that we should recognise not absence of presence but rather presence of absence. Applying our argument, we reify and reinforce a false nature/culture dichotomy when not acknowledging human's absence-presence (as pointed out in Bauer 2018; Crumley 1994; Ingerson 1994). For example, when analysing a 'virgin' forest we do not see active human action; yet humans took part in the creation of this 'undisturbed' forest by not using it (presence of absence). What we observe is a mutual, dialectical, interrelationship in all the processes concerning human ecodynamics. This is in line with the idea of co-evolutionary dynamics while it integrates the principles of ANT.

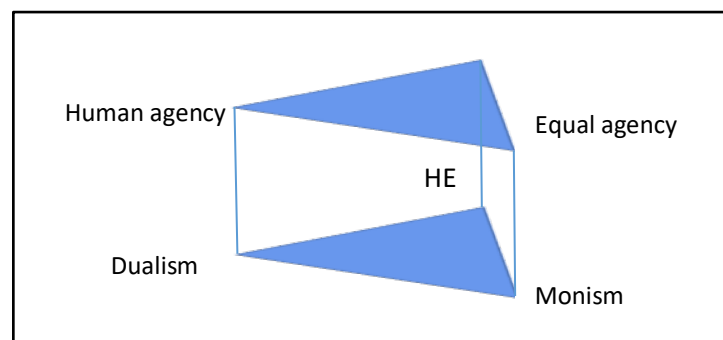


Figure 2. *Ontological class of principles, as extremes and related. HE appears as a middle-ground possibility nuancing these contradictions (drawing by the authors).*

Overall, in our opinion, HE renders a simple but precise description of what we might carefully call reality. Hence, it might help in fixing some philosophical-ontological issues. In practice, this means to move beyond epistemological barriers to answer more profound, ontological, inquiries of importance

in pursuit of enhancing our knowledge. Such questions have implications for analysing the landscape, as we might get a more accurate understanding of its complexities. Equally, its heterarchical approach embraces social explanations (Marquard 2019) and connects HE with political-ecological analyses (Bauer 2018). In light of this, HE arguably enhances our understanding and study of landscapes. And this enhancement retroactively impacts Landscape Archaeology by complexifying our approach to different scapes. We argue that this complexification enriches Landscape Archaeology, as explained in the next section.

Complexifying the Scape

Landscape Archaeology is a well-developed subfield that commonly engages with theoretical reflections. Yet, it presents a few issues. One of its main problems is that its epistemological and methodological focus comes at odds with the complexity of landscapes. This is to say that, consciously or not, Landscape Archaeology focuses almost exclusively on the human factor (*cf.* Barceló 1998; Buxó, Layton and Ucko 1999; Malpica 2018; Martín Civantos 2007a, 2008; McGlade, Ortega Ortega 1998; Palet and Picazo 1998;). Such an issue is arguably understandable: archaeology focuses on the human past. The problem is the degree of focus, i.e., the ontological understanding of what we study and the epistemological ordering and management of the disciplines and the data they produce. Our aim is and should always be understanding past realities with humans at the centre of our enquiries. But getting to the core of these enquiries when researching landscapes means de-centering our perspective to some extent. It is not possible to grasp human realities without knowing how other non-human elements or beings influenced humans. This stance means not to lose sight of the subject of our research—humans—but to give non-humans a slightly larger degree of importance in our explanations about past realities.

In ontological terms, this proposition should not be confused with a flat model of reality. Our approach simply acknowledges that humans, in their intersubjectivity (*sensu* Sbriglia and Žižek 2020), are more influenced by—and sometimes have a greater influence on—non-humans than is often recognized (similar to Latourian ANT). Consider as an example an ecosystem, or socio-ecosystem, in which all the different compounding elements are interrelated. Yet, in such systems, not all its features have the same relevance, impact or interactions.

There remains a need for understanding the whole 'human-natural' system without losing sight of its constituents and the different interrelationships happening within this system. The case of quantum entanglement in theoretical physics (Einstein *et. al.*1935) is an interesting parallel. As explained by L. Susskind (2011:82), quantum entanglement means 'that you can know everything there is to know about a composite system and yet not know everything about the individual constituents'. This paradox is arguably applicable to the current state of Landscape Archaeology; we might have a fair image of a landscape through archaeological analysis and yet not have a refined insight of how different non-human factors functioned within that very system.

Even if the solution to this conundrum is far from being resolved, one possible solution in archaeology might lie at the data level. There is a need for articulating micro-scale datasets to meet macro-scale questions which, in turn, can refine our image and understanding of Human Ecodynamics. In this spirit, we argue that Digital Archaeology might help to resolve this issue because one of its streams deals with the problem of data linkages for better-representing knowledge through, for instance, computational ontologies. The next section will briefly exemplify this with a project which aims to represent HE, using a computational ontology. Because the project mobilised multivariate data for representing such a narrative, we argue that it demonstrates how HE-driven research might bolster the data issue that we have highlighted in this section.

due to the CIDOC CRM language and coding development (Pálsson and Opitz 2019), which allows to network/interlink *n*-times data from the different datasets compounding the ontology. Following this process has allowed us to map classes and subclasses within the ontology without strictly respecting the domain-hierarchy implemented at the beginning of the development. In spite of this, all the data is always connected to some class or domain, thus creating a *narrative* about HE. This is to say that the data is heterarchically managed, linking micro-scale datasets to meet macro-scale questions.

We would like to argue the existence of a connection between computational ontologies and philosophical ontology. Computational ontologies allow us to model reality, from simple to quite abstract or complex things, in a process that involves defining and conceptualizing connections between different entities (Barruezo-Vaquero 2021). This, in reality is an ontological effort and, ideally, it should be guided by philosophical concerns. For example, our computational ontology represents profound interrelationships among entities and/or beings and describes a selected number of domains of the ontological reality. This means that it models a concrete spectrum of reality, according to diverse ontological insights from those who develop this digital tool (Barruezo-Vaquero 2021; Pálsson and Opitz 2019). These insights reflect our understanding, as researchers, of how Human Ecodynamics operates. Through this, we are producing a model capable of representing how beings and things are and behave within some specific ontological domains. In so doing, DataARC pulls together new understandings of what 'bioculture' and 'human ecodynamics' mean. With this, it shifts away from dualism/monism by showing an utter, complex, interrelationship between humans and non-humans. Indeed, the ontology offers a partial, fluid, and likely accurate vision of coupled systems in line with Marquardt’s dialectical framework (2019) and McGlade’s non-linearity (1995). Our cybertool, DataARC’s ontology, which is based on the CIDOC CRM language, adjusts to and represents the principles of HE in the North Atlantic.

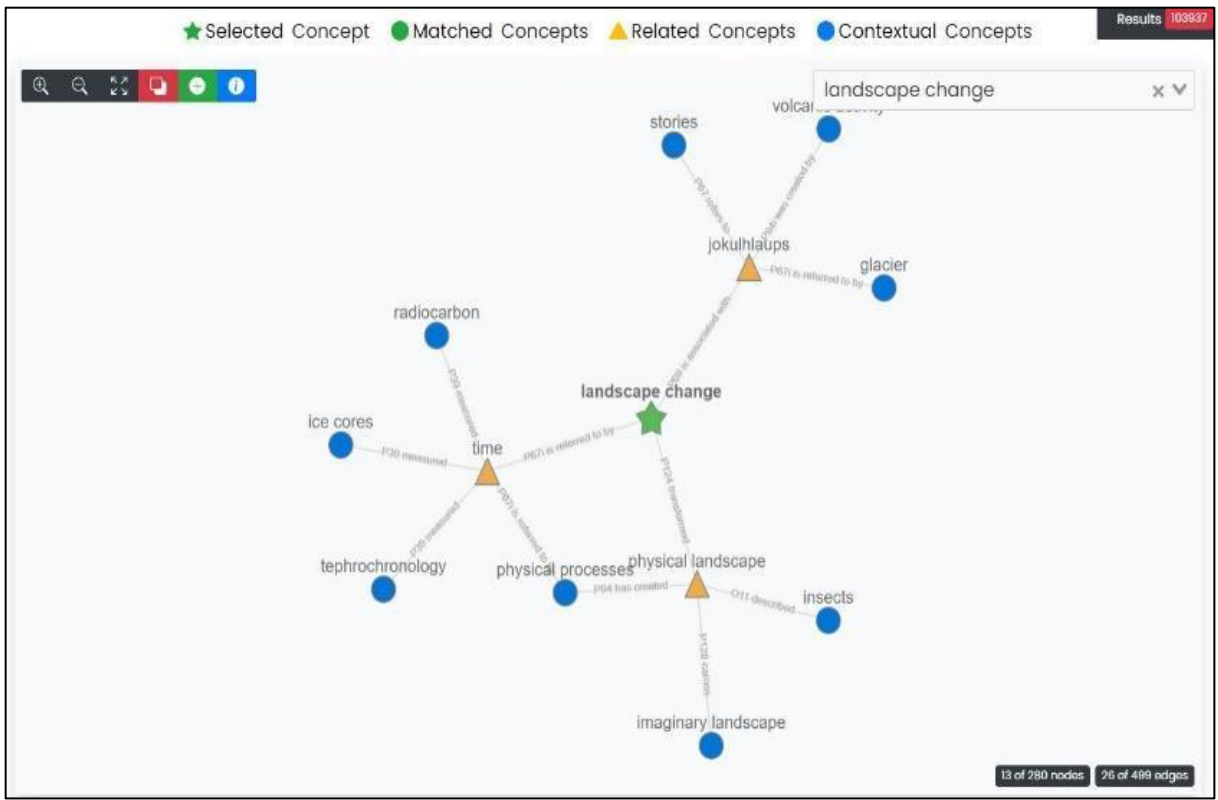


Figure 4. Interlinked data showing connections if the tool searches ‘landscape change’ (a state of affairs) (Source: DataARC Project).

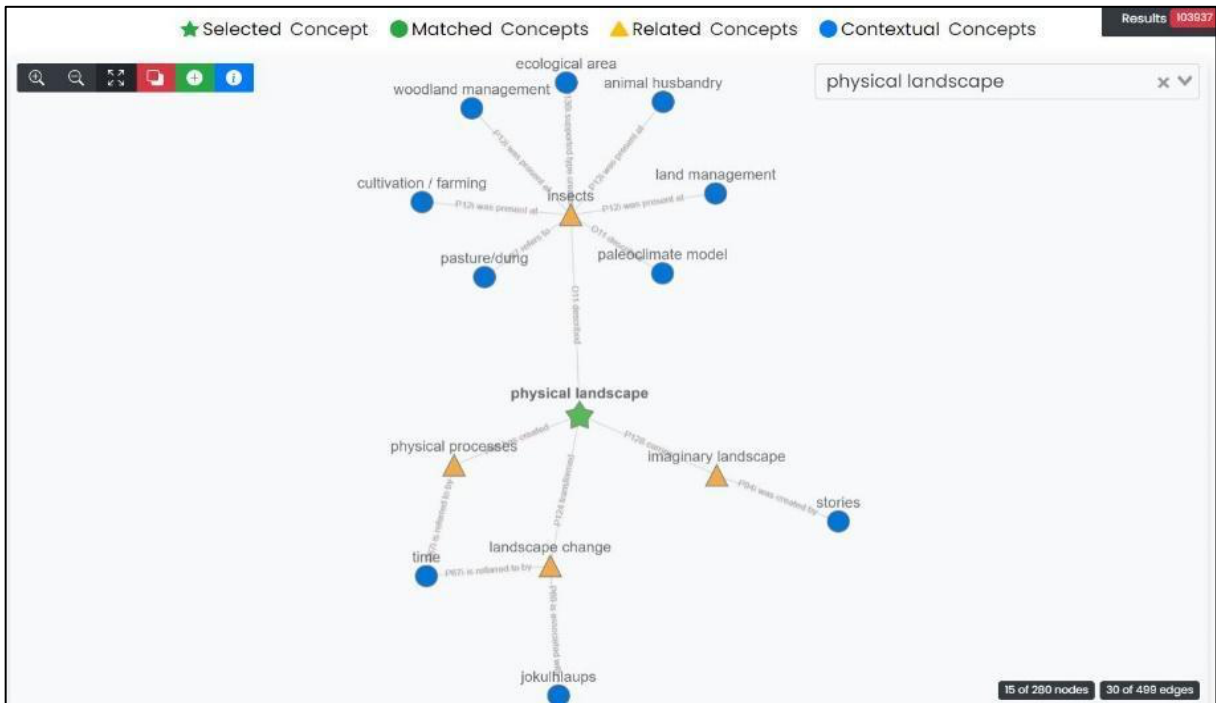


Figure 5. Interlinked data showing connections after the tool searched ‘physical landscape’ (another state of affairs and another distribution within the network). Comparing this figure and Figure 4 demonstrates how to represent contingency and multiscalar analysis (Source: DataARC Project).

In sum, the DataARC Project is an interesting case in HE-based research because it further merges most of the theoretical concepts guiding this paradigm by harnessing Digital Archaeology. The ontology straightforwardly represents human-environment interactions in an ever-shifting *state of affairs*. Thus, the ontology serves to render the non-linear complexities in time-space and scale-structuration happening in the ecodynamics of socio-natural systems. No doubt, this serves for better understanding the complexities of the landscape through transdisciplinary lenses and ‘from the ground-up’ in ways such as articulating small bits of data to create grand narratives. This is to say that computational ontologies, if following HE, can offer more refined insights about the landscape, demonstrating the utility of HE and ontologies as epistemological and ontological tools.

Conclusions

Landscape Archaeology, the way it is now, appears incomplete. It is generally accepted to be integrative of disciplines and often regarded as interdisciplinary. But the very nature of landscapes sets them up as the ideal subject of transdisciplinary approaches (Turner *et al.* 2018). It is in this sense that we lay our argument in favour of enlarging Landscape Archaeology’s scope. As seen, Human Ecodynamics offers a new framework for achieving this enlargement towards, possibly, transdisciplinary research. Digital technologies, such as computational ontologies, have been shown to be of great aid in such a transdisciplinary framework. This is more so if they are thoroughly developed for representing complexity, as DataARC does with HE. In our case, computational ontology aids in clarifying the agency of different human/non-human agents within a system—enhancing shallower insights, as those realised by Bauer (2018), and creating better grand narratives. This can be said to be an epistemological advancement, as it is a data-driven approach that embraces theory.

It remains open if this movement towards an ontological, theoretical, reflection backed by a constant dialogue with new results and data means an additional movement to post-disciplinary approaches. This would necessarily mean questioning reality and its human and non-human agents. Perhaps this questioning, integrated into a dialectical-research framework, i.e., dialoguing with new data, is the only way forward. We shall see.

It is clear, nonetheless, that Human Ecodynamics lays the foundation for fixing some clashes of ontological principles. It also refines our understanding of History and Archaeology by presenting social evolution as a compounded, discontinuous, narrative (McGlade 1999). The implementation of HE might complement—and possibly expand the theoretical underpinning of—other series of studies that already recognise interlaced socio-natural dynamics and whose focus is on understanding anthropogenic impact in the Holocene (Ferrarol *et al.* 2018). As a consequence, it offers a framework for enhancing Landscape Archaeology, our understanding of landscapes, and improving our societal impact. We thus claim that HE is a valuable approach for both Landscape Archaeology and the archaeological community.

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The Site of an Unidentified Greek Settlement?: New Surveys of a Periphery in Eastern Sicily

Michael Bratell ¹

Abstract

My recent MA dissertation examined the archaeological potential in the Coda Volpe district of eastern Sicily, where the presence of necropoleis indicates potentially unidentified settlements. Recent initial surveys near the Simeto delta where there have been no previous systematic studies, prospecting or geophysical surveys, suggest the location of a ‘periphery’. As landscapes are discursively constructed along established theories, locating peripheries can yield new dimensions between the material and landscapes. Given the current lack of understanding in this area, it is possible to see the potential of Coda Volpe, which is essentially such a periphery. Sicilian archaeology began with Paolo Orsi on Etna’s slopes, in the central mountains and on the coasts. This traditional narrative is broadened by the inclusion of a Coda Volpe and a re-evaluation of Carmelore-evaluation Carmelo Sciuto Patti’s interpretation of the possible location of Symaetus. This paper explores the potential for archaeology in Coda Volpe with a focus on the Archaic age.

Keywords: archaeological survey, Greek colonisation, Archaic age, Sicily, Simeto, Symaetus, periphery, micro-archaeology, decolonisation, knowledge-scapes

Introduction

There is a current gap regarding archaeological ‘emergencies’ in the Coda Volpe district of Eastern Sicily, not due to an absence of ancient settlement layers, but rather because these areas have never been subjected to systematic study, prospecting, or archaeological surveys (Brancato and Manganello 2018: 91, transl. Bratell 2020: ix).

The period of Greek colonisation in the Mediterranean has been described as a field of research with potential for archaeology (Finley 1971). Moses Finley (1971) once argued that archaeology stood to make its most significant contributions after having first sufficiently been adapted to the quality and quantity of ancient sources, in fields like the period of Greek colonisation. This idea also appears in *Between Artifacts and Texts*, a global survey by Anders Andrén (1997: 33) of the relationship between texts and artefacts from historiographical, methodological, and analytical perspectives. This study positions itself to build on these notions and examine them further.

Andrén’s analysis of the crucial relationship between written and material remains in ancient societies employs examples from 12 major disciplines in historical archaeology and summarises their role in five global methodological approaches. Referring to Anthony Snodgrass (1983, 1985 in Andrén 1997), Andrén goes on to warn that one should not expect any equivalence between artefacts and texts created in past activities with very different levels and scale. Great similarities instead suggest circular evidence, and the role of archaeology is therefore most important in marginal, lesser-known areas – in temporal and spatial ‘peripheries’.

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Figure 1. *Masseria Primosole, San Demetrio (CT) where new archaeological surveys are underway. Between Lentini and Catania in eastern Sicily. From left: Niklas Kärrman, Michael Bratell, Rodolfo Brancato, Maria Teresa Magro and Letterio Villari 2020 (Photo credit: Author).*

The Archaic age in eastern Sicily (synonymous with the period of Greek colonisation, 734–480 BC), is still shrouded in doubt and mystery, not least since the written record of the first wave of colonisation was set down several centuries later. It is, for instance, worth noticing how many foundation dates for Greek colonies tend to line up neatly. This be approached carefully even though some discrepancies in the sources have been accounted for. Calling for a critical approach, a tendency to ‘set the historical record straight’ seems necessary, especially regarding the foundation dates of Greek colonies. A useful parallel is perhaps the semi-mythical (but still plausible) foundation of Rome on April 21, 753 BC—a legendary date handed down from Varronian chronology (Forsythe 2005: 94). Early foundation dates are ultimately rather uncertain.

There are also discrepancies regarding the founding of Rome, with some accounts being strikingly different. One such alternative story, ‘older and more fabulous’, casts Rome as an Arcadian colony founded by the oikist Evander (Strabo *Geogr.* 5.3.3). To trace Rome’s origins back to a larger colonisation puzzle that, aside from Greeks, also included Etruscan, Phoenician and Italic tribes is, however, not altogether unlikely. This kind of hybridity dynamic is evident in Greek cohabitation and the expulsion of indigenous settlers in Lentini and Syracuse—or in the distance between those cities and Pantalica (Sicels). Other Archaic poleis, in both Magna Graecia and Sicily, are within comfortable travelling distance, such as Pithekoussai (Greek, Phoenician, Etruscan) and Etruscan Capua (45km). By comparison, Coda Volpe is located at approximately equal distance to the archaic *poleis* of Catania and Lentini (14km).

Approaching ancient sources with sufficient caution makes reconstructing complex and geographically widespread events plausible, firstly by focusing on the archaeological record. With a grasp of the research regarding Archaic Greek Sicily (De Angelis 2016; Graham 1982; Holloway 2004; Tsetskhladze 2006), it is possible to suggest areas suitable for new inventory and geophysical survey, in accordance with hitherto established methodologies (Ammerman 1981; Andrén 1997; Renfrew and Bahn 2012). More specific reference can be made to a methodology for identifying settlements in eastern Sicily using field survey (Leone 2007: 56). Comparisons with other studies (Brancato and Manganeli 2018; Leone et

al. 2007; Nevett *et al.* 2017) offer new perspectives on Greek cities (Nevett (2017: 156) with detailed analysis of living quarters using an interdisciplinary, multi-scalar framework for focusing, through micro-archaeology, on both formal functions and social aspects in the built environment (Nevett 2017: 202).

In brief, new areas suitable for field survey are identifiable after a comparative analysis of relevant archaeological dig reports, ancient sources, and a reconstruction of the ancient topography. This basic methodology is extendable to other theatres of Greek colonisation in general, and for this study, Archaic Euboean colonies in the Mediterranean in particular. A significant reference in this regard is Chalkidiki in Northern Greece (Cambitoglou and Papadopoulos 1994; Nevett *et al.* 2017; Snodgrass 1994; Vokotopoulou 1994), with many understudied former Euboean Archaic colonies in need of new survey (for a full list, see Graham 1982: 160–162).

After having outlined considerations for approaching the Archaic age, the following sections now explore the potential for archaeology in Coda Volpe.

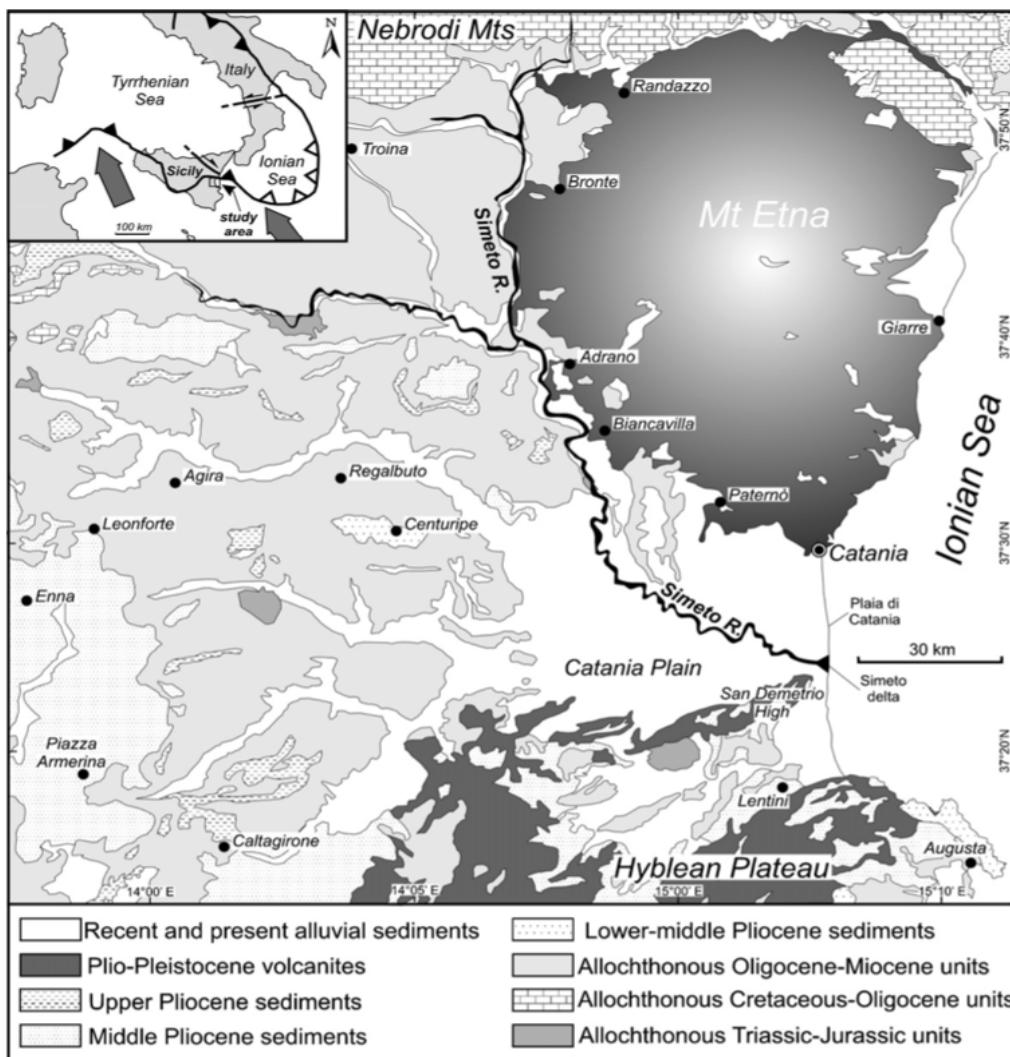


Figure 2. Lithological setting of the Simeto River drainage basin and San Demetrio High: Plio-Pleistocene volcanites and Upper Pliocene sediments/calcareous rock (Longhitano and Colella 2007: 196, with the permission of the publisher).

Unidentified Settlements and Locating a Periphery

Focusing on eastern Sicily, in the southern and rural outskirts of Catania, we find ourselves in the foothills of San Demetrio High, the north-eastern corner of a calcareous-vulcanite ridge extending from the Hyblaeen Mountains (Brancato and Manganelli 2018; Fisicaro 1996; Lentini 2001; Rizza 2000) (Figure 2). Here lies Contrada Coda Volpe, or 'Fox's Tail' district, within a short distance to the mouth of the Simeto River and next to the fertile Catania Plain. The existence here of both Greek and Roman necropoleis indicates the presence of unidentified nearby settlements (Brancato and Manganelli 2018: 103–104). The question is, what kind of settlements? The lowest part of the Simeto was, for instance, once thought to be the location for Morgantia (Sale *et al.* 1747).

Morgantia was founded, according to Strabo, by the Morgetes, a people of Italy, who crossed over into Sicily with the Siculi and built this city at a small distance from the mouth of the Symaethus, now La Giaretta. Thucydides, Syllax and Pliny place it near the conflux of the Chrysas, now the Dittaino, and the Symaethus. There are now no traces remaining of this city.

Another settlement, also thought to be located somewhere near the mouth and lower section of the Simeto, is Symaetus (Sciuto Patti 1880; Uggeri 2004). The appearance this winter of a necropolis on the right bank of the Simeto River, although it is the only clue we have so far, is very important to pointing out precisely the site where Symaetus was built. This I believe no longer leaves any doubt not only as to its existence but also as to the site where it stood (Sciuto Patti 1880).

There are also Aitna and stations from the Antonine Itinerary, such as Capitoniana, whose locations are still unknown (Pfundtner 2013). Circumstantial as these clues may seem, it is important to note that where San Demetrio bounds the Catania Plain must once have been an area of great importance, for both monitoring the fertile Catania Plain and controlling movements inland along the river (Sciuto Patti 1880). This is partially self-evident, the Simeto being not only the largest river in Sicily but also being navigable throughout antiquity (Mori 1936).

Furthermore, Coda Volpe is an area without any previous systematic study, prospecting, or geophysical survey (Brancato and Manganelli 2018) with an unidentified settlement (Brancato and Manganelli 2018). These circumstances are indicative of the existence here of a 'periphery', a term previously used by Lise Nordenborg Myhre (2004) to explain how the Scandinavian Bronze Age landscape appears to have been formed, reformed, and discursively constructed along established theories. It is possible to see parallels with Coda Volpe district in comparison with better studied areas on the coast such as Lentini and Megara Hyblaea or in the mountainous interior such as Morgantina. Nordenborg Myhre's (2004) geographical area had never been studied entirely based on its own terms and conditions, as is also the case with the Coda Volpe district. As San Demetrio and the Simeto river create a natural border area, it makes sense to compare, and also study Coda Volpe in its own right as a periphery of Catania, Lentini or Syracuse.

Similarly, the archaeological material in Nordenborg Myhre's (2004) study area in southwestern Norway had previously been compared to other areas and then only studied as a periphery or colony of Denmark. Nordenborg Myhre show a development scheme for new knowledge is created, where only what fits into the expected model is kept and other material is neglected or given a less prominent significance. As the centre and periphery had been identified, this was allowed to explain development and dissemination from Denmark. An impression thus emerged of a coherent and indivisible overall picture between the centre and the periphery. The periphery, reduced to Denmark's perceptions and interpretations, invariably 'ceased to exist' outside this dual power relationship. Nordenborg Myhre's approach was to instead explore this margin as a refraction area of change, reflected in the different

A cultural hybrid between Sicels and Greeks is also a possibility, as is in nearby Lentini. In summation, there are perhaps several agencies at play throughout the cultural chronology of the Coda Volpe district. It is in this respect— and in a more general perspective— that future work is planned (Bratell 2020) while also considering more critical viewpoints from within archaeology, not least regarding North-European archaeological practice in its encounter with other cultures. Post-colonial theory with concepts such as ‘exoticism’ and ‘creolisation’ (Källén 2001) provides useful perspectives for understanding between archaeologists from Gothenburg or Catania and residents in the Coda Volpe district. Källén's (2001) main theoretical concepts are used as a guide to highlight how a local population, or even Italian authorities or archaeologists, otherwise can risk becoming ‘the other’, which is something that can happen in the initial contacts as well as in the subsequent fieldwork.

A ‘creolised archaeology’ has been described as preferable for producing a wealth of locally anchored understanding by open communication that enriches the production of knowledge and prevents ‘simple’ solutions to practical archaeological problems (Källén 2001: 59). These are some theoretical considerations thought useful for exploring the potential for archaeology in Coda Volpe. As previously mentioned, the existence of both Greek and Roman necropoleis indicate the presence of unidentified nearby settlements (Brancato and Manganelli 2018). A question worth asking is whether one of them could perhaps be the lost city of the *Symeithii*?

A Possible Location for Symaetus?

Previous archaeology in Sicily is extensive (including for the Archaic period), with Paolo Orsi—the father figure of Sicilian archaeology—having identified numerous prehistoric, ancient Greek and Roman settlements during the late nineteenth century, both in Sicily and in Magna Graecia (Holloway 2004: 8–20). Notwithstanding, the landmass of Sicily is so vast that it is natural to expect gaps in the archaeological record, with understudied areas such as Coda Volpe (Brancato and Manganelli 2018). This periphery could well be a ‘centre’, given its geomorphology and ancient topography, and a possible location for the lost city of the *Symeithii* (Plin. *Nat.* 3.14).

Symaetus (Figure 4) was suggested as being located nearby to this area, following a late-nineteenth-century discovery by Carmelo Sciuto Patti (1881) of a Roman necropolis near Simeto. This interpretation has been followed-up by two initial surveys (Brancato and Manganelli 2018; Bratell 2020) and two other unpublished and recent surveys in 2020–2021 with participation by the author and Gothenburg University in cooperation with the Archaeological Superintendency of Catania. Sciuto Patti assumed that Via Pompeia passed somewhere near this necropolis, and divided the area in three, with one stretch leading south towards Syracuse, one inland across the Catania Plain and another crossing the hilly ridge towards Lentini (Sirena 2011).

A good place to begin a more detailed survey might be in locations around where the Roman road split. Its exact location has, however, only been hypothesised (Brancato and Manganelli 2018). A discussion has continued regarding both the Roman necropolis (Sciuto Patti 1881) in what today is the Passo Martino district (Fiscicaro 1996; Uggeri 2004) and the Greek necropolis in San Demetrio (Brancato and Manganelli 2018). This study aims to contribute to the ongoing discussion about unidentified settlements near the mouth of the Simeto by including a periphery—Coda Volpe—with a re-evaluation of Sciuto Patti’s interpretation (for recent conclusions regarding the possible location of Symaetus see Bratell 2020).

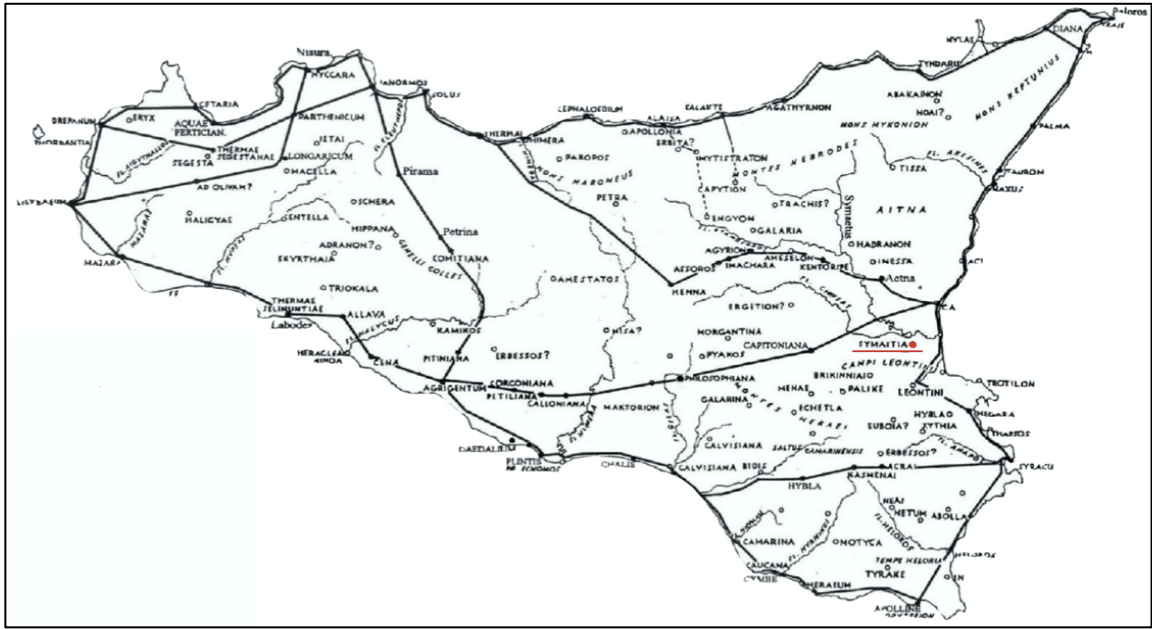


Figure 4. Map of Sicily (Uggeri 1997–1998) with ancient road network and proposed location of Symaitia/Symaetus (after Sfacteria 2016: 22, annotated by the author).

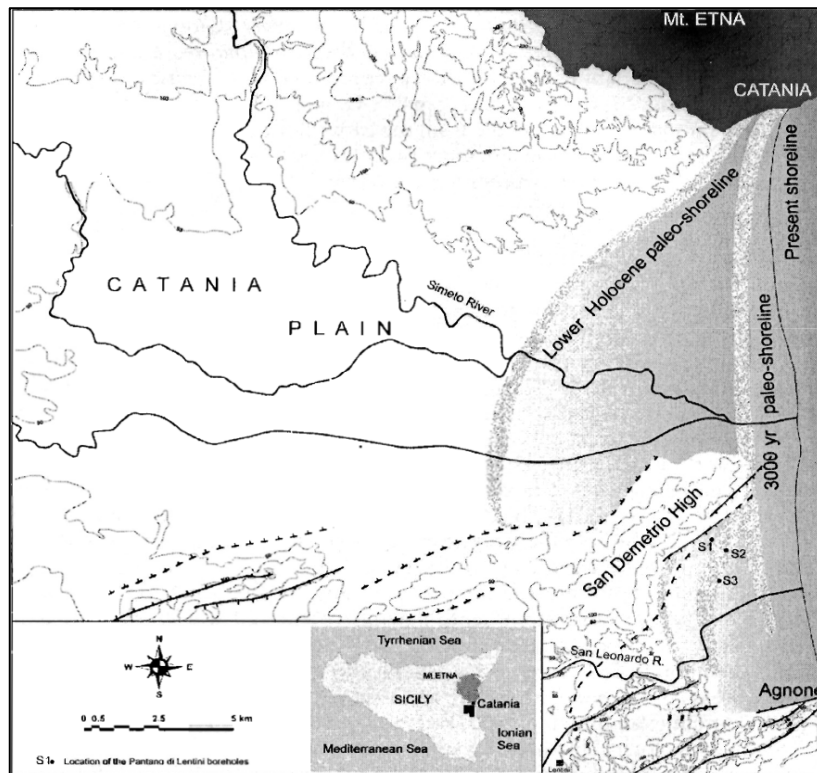


Figure 5. Paleogeographic evolution of the coastal sector of the Catania Plain during different stages of the Holocene sediment filling and development of sand barriers, noticing the paleo-shoreline c. 1000 BC (Monaco et al. 2004: 178, with the permission of the president of dell'Istituto Italiano di Paleontologia Umana).

Population Movements in a Periphery During the Bronze, Greek and Roman Ages

To explore the potential for archaeology in Coda Volpe it is necessary to reconstruct the ancient topography, especially during the Greek period. After data collection in locations suitable for settlement during the Archaic age, results from the data analysis were compared to the locations of the existing necropoleis. Using this approach, concentrations of pottery sherds from both Greek, Roman, and Medieval periods, were identified during field inventories on San Demetrio by Fabiana Cerasa, Maria Teresa Magro, Niklas Kärrman, and the author, in May 2021.

According to their own data collection on San Demetrio, Brancato and Manganeli (2018) suggest—with reference to the Neolithic age—that it is possible to hypothesise how the population has moved through the larger area between Catania and Lentini since prehistory. At the start of the first millennium BC, the geomorphological dynamics varied with respect to the north and south of San Demetrio. This could explain the presence of Roman tombs near Passo Martino, if so, the exact extent of marshland between San Demetrio and Catania's southern areas during various historical periods is still an open question. This observation by Brancato and Manganeli is more important for understanding the population during the Roman period, as the Plain of Catania slowly became more suitable for settlement over the centuries due to gradual deposits from the Simeto River.

The answer could partly come from the position of the three chronologically distinct burials known in the area: 1. Piana della Catena and Grotte San Giorgio (Bronze Age), 2. Coda Volpe (Greek age) and 3. Passo Martino (Roman age). According to Brancato and Manganeli (2018), the Greek necropolis in Coda Volpe suggests the existence of a settlement located on the Pleistocene terrace of the high structural section of San Demetrio. In contrast, the Roman necropolis would indicate a more modest attendance downstream, positioned along the current area of Passo Martino, more specifically near Masseria Porto, and linked to the management of the river passage. The different locations of the settlements could be explained if, during Greek times, the northeast tip of San Demetrio was still surrounded by water on both sides, with either marine or lagoon environments directly affected by different delta systems (Figure 5).

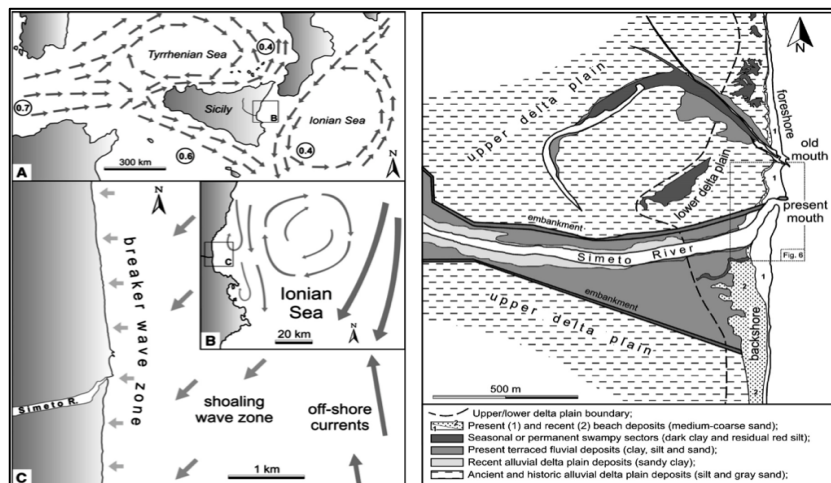


Figure 6. Left: Distribution and direction of the main sea-currents in the central Mediterranean (numbers express velocity in knots). (B) Clockwise circulation and S-directed offshore currents along the Sicilian eastern coast. (C) Offshore currents and wave motion active on the Catania Plain coastline. Right: Distribution of depositional environments in the subaerial Simeto River delta system (Longhitano and Colella 2007: 198, 199, with the permission of the publisher).

In Roman times, the shoreline affected by the Simeto delta system probably advanced, as indicated by the location of the discovery of Roman graves uncovered after a flood at 2m below the current ground level of the floodplain (Figures 6, 7). The constant tendency of the current industrial area of Catania to swamp would therefore lead one to hypothesise a section of the route of the Via Pompeia was significantly submerged but is still located between Passo Martino and the E45. Giovanni Uggeri (2004: 202) has argued that the lookout points and the ferries on the Simeto should be located 'further west, given that the last stretch of beach, la Plaia, had not yet formed' (Brancato and Manganelli 2018: 104).

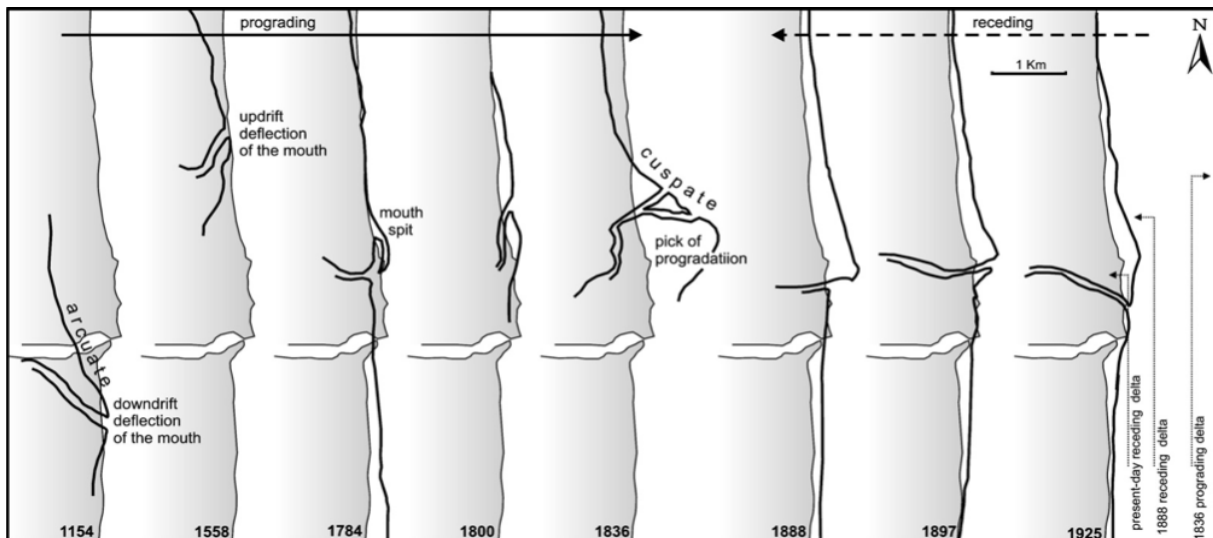


Figure 7. Evolution of the Simeto delta from 1154 to 1925. The delta shape evolved from arcuate to cusped, reaching a peak of progradation during 1836. Since this date, the delta has begun to recede until assuming its present-day morphology (Longhitano and Colella 2007: 214, with the permission of the publisher).

Ruralisation and Decolonisation

Coda Volpe is surrounded by Sicilian countryside, where sanctuaries are also to be expected. When equipped with buildings, these are consistently smaller and less refined than those in the cities. Sanctuaries found in parts of the countryside are typically directly connected to urban areas (de Polignac 1995 in De Angelis 2016: 92). De Polignac challenges the traditional model tracing the origins of a Greek city in kinship groupings, organised around a central shrine, suggesting also that Athens was atypical. More common in most Greek cities, according to de Polignac (1995), is instead a pair of religious sanctuaries, one at the centre and the other at the periphery (Mosshammer 1997).

Generally, sanctuaries were associated with the chthonic deities Demeter and Persephone, a natural fit for people moving from organised settlements into more rural, agricultural settings. Rural sanctuaries are also seen as marking the border between different states (De Angelis 2000: 116). It is difficult to trace the boundaries of the territories controlled by Lentini and Catania, but according to Thucydides, the border between the two Greek cities coincided with the lower course of the Simeto (Thuc. VI, 65, 1; Frasca 2009: 46), and possibly also the Coda Volpe district.

Laura Pfuntner (2019) has described how urban settlement in Sicily experienced a sharp contraction during the late Roman Republic, followed by a slow decline during the Principate. The landscape of Roman imperial Sicily did not, however, simply comprise decaying urban centres with emerging luxury villas. Many new settlements appeared during the Principate, such as Philosophiana, and the Romans rebuilt semi-urban, organised population centres, such as Naxos, for strictly economic (as opposed to

political) activity. To categorise these settlements is difficult. They were connected to the road system and agricultural activity, but regarding them as ‘road stations’ or ‘estate centres’ is insufficient (Pfundtner 2019: 225). Pfuntner's findings regarding urbanisation and de-urbanisation in Roman Sicily, rely on a solid empirical foundation, based on a detailed examination of the available archaeological data from excavations as well as surveys and tied to what the written sources tell us, not least the wealth of information coming from epigraphy (Göransson 2020).

The process of decolonisation was also not a matter of a ruralisation of the existing Greek poleis but, according to Pfuntner (2019), rather part of the much longer such process of the Hellenic world, referencing Asheri (1996). Economic centres developed alongside political and social ones, for example, Naxos and nearby Taormina. Naxos possessed monumentality and organisation but was loosely defined and limited as a settlement, seemingly with no independent political existence. Instead, Taormina, the *colonia* of the region, served as a political and administrative centre. Pfuntner (2019) argues that in poleis like Naxos, signs point clearly to a decolonisation of Sicily, the rule passing to Rome by way of the small number of loyal *colonia*: evident in how Hellenistic and Roman houses, storerooms and kilns surround and overlie the ship sheds of the classical polis.

Likewise, several Archaic Greek poleis were gradually abandoned through the same process, with emerging new networks of social, political, and economic activity. Settlements such as Segesta and Morgantina retained their economic role for a time, even after the loss of political and social status, while settlements on the north coast saw the appearance of economic centres, for instance, on coastal landings (Di Stefano and Leone 1985; Pfuntner 2019). The availability of building material and other resources within monumental urban centres caused the poleis to remain centres for settlement or to re-emerge as such. An example of this is the existence of lime kilns at the roadside settlement at Megara Hyblaea (Pfundtner 2019). Late antiquity would see further expanded settlements with an increase in material presence, as has been reported by archaeology (according to Ruggini and others in Pfuntner 2013). This was either because of ruralisation or a rural revival linked to the demands for agricultural products from Rome—after the founding of Constantinople and the subsequent Vandal takeover of the African provinces. This expansion resulted in large estates with elaborately decorated villas on the coast and in the interior of Sicily. In the southeast and along the southern coast, non-elite rural settlement with evidence of Christian communities becomes more visible, with rural churches (Pfundtner 2019) and burial areas (Pfundtner 2019).

The monumentalisation was focused on major city centres in Sicily during late antiquity. It is attributed to continued political stability and economic integration with the Mediterranean and evident in how Christian martyrs from, for instance, Hybla are buried at Catania (Pfundtner 2013). To explore the potential for archaeology in Coda Volpe it is necessary to locate possible ancient settlements in the area. Greek settlements could disappear, reappear, or become Roman, though no ancient author offers a detailed view. For Sicily's settlements under the Principate however, scholars have relied on the few contemporary texts: Strabo's *Geography*, Pliny the Elder's *Natural History*, and the late imperial collections of land and sea routes known as the Antonine Itinerary (Pfundtner 2019: 8) The Itinerary's Sicilian section is of interest in relation to a list of ethnicities, mentioned in Pliny, of unknown or uncertain location:

Acestaei, Bidini, Citarini, Echelienses, Egguini, Ergetini, Herbessenses, Herbitenses, Herbulenses, Ichanenses, Imacarenses, Magellini, Mutustratini, Noini, Paropini, Petrini, Scherini, Semelitani, Symaethii, Talarenses, Tissienses, Triocalini, Tyracinenses (Pfundtner 2013: 37).

Pfuntner (2019) states that there is much scholarly controversy regarding the potential locations of these *civitates*, citing Wilson (1990: 36), who has assigned secure locations to 20 of them and tentative locations to 8 (he has classified the remaining 17 as unknown). Pfuntner (2019: 226) concludes that more archaeology is needed to gain a better grasp of the rural settlement landscape and to determine the relationship to urban centres in Roman and late antiquity Sicily. Though the location of the city of the Symaethii is unknown, Sciuto Patti's (1881) suggestion to search near the mouth of the Simeto, also points to San Demetrio and its necropoleis.

San Demetrio has already shown potential for archaeology by being studied as a periphery. During two surveys in which the author has participated in 2020–2021, cave environments were documented and Greek, Roman and Medieval pottery sherds were found that are currently under the care of the Archaeological Superintendency of Catania. The aim is to publish these surveys jointly in the future, adding new layers of knowledge and re-establishing lost links to the past of this neglected but rich cultural-historical landscape.



Figure 8. Coda Volpe district in San Demetrio (Photo credit: Kärroman).



Figure 9. Pottery sherds found on San Demetrio in 2021, from both Greek, Roman, and Medieval periods, currently in the possession of the Superintendency of Catania (Photo credit: Author).

Knowledge-Scapes in the Coda Volpe District

To further explore the potential for archaeology in Coda Volpe it is useful to regard it as an urban space surrounded by Sicilian countryside, and part of a social landscape of past communities. The archaeological evidence in Coda Volpe can be used to rediscover or reconstruct landscapes of practice and knowledge. Social landscapes can, for instance, be traced by reconstructing an urban space through discursive representations. Understanding discourse as 'spatialised' can provide a conceptual ground for further discussion by viewing knowledge, power, and representation in spatial terms. According to Berin Gür (2002), in her discussion of the transformation of Sultanahmet in Istanbul, an urban space can be defined as where discursive representations have a social and spatial existence, making it a space approachable as an archive, rendering spatial-social-political information visible. Gür (2002) describes Sultanahmet as an urban palimpsest whose archival structure has been shaped through discursive representations, each constructed on the preceding one—perhaps a useful model for understanding the Coda Volpe district in Catania as well. Gür's (2002) two mutually reinforcing points, namely that discourse is spatialised and that urban space becomes reconstructed through discursive representations, lead to her main claim that spatialisation is political. This view helps explain not only the way social and spatial relations are mutually inclusive and constitutive of each other, but also how society and space are simultaneously realised by social actors who think, experience, and create. This view on spatialisation connects mental and material space with spatial metaphors/symbols of the social (Gür 2002).

Gür concludes that the reconstruction of an urban space is therefore not an independent act: 'Urban space is the hegemonic construction of politics and of representations that seek to constitute a social identity' (2002: 250). The archaeological remains found throughout the landscape in Coda Volpe (cave environments and necropoleis in varying stages of reuse or destruction surrounded by large quantities of pottery sherds), stand as the materialisation of these politics and representations (Figures 1, 9). The conscious intervention of political domination into the social processes of urban space reconstruction can be recognised by referring to architectural evidence (Gür 2002). Gür's model is guided by an argument formulated by Lefebvre: 'It is space that produces reproduction of socio-spatial dialectics by introducing into it its multiple contradictions.' (1976: 19).

In this sense, space, as a dialectical component of the inseparable (social and spatial) relations of production, is where these relations are reproduced in 'a socially concretized and created spatiality' (Gür 2002: 238). In the Coda Volpe district, each political authority has made its social and physical existence felt by rebuilding on the previous one. The common point shared by these authorities is that the location, articulation, and restoration of the features are determined by politics. This visual evidence—characterised by terraces, no longer used for cultivation; cisterns and *saie*, for the collection and distribution of water; and stone quarries (Brancato and Manganeli 2018: 88), all illuminate the way in which, according to Gür's model, the social construction of the discourse is realised by the social production of the urban space. In this sense, Coda Volpe becomes an archive that juxtaposes layers of heterogeneous information. Its archival structure, poorly understood and in need of a new survey, is simultaneously constituted by and constitutive of politics, rendering Coda Volpe as the material-visual form of the knowledge of the productive processes (after Gür 2002). It is worth noting that the current state of neglect, marginality, and destruction visible in recent surveys, is clearly the result of modern political actions (or lack thereof) in Coda Volpe.

Table 1. Occurrence and distance of topographic units from Brancato and Manganeli's (2018) survey relative to Bratell, Kärroman and Henry's survey area.

About distance to Survey area	1km	2km	3km	4km
Greek necropolis, Coda Volpe	•			
Necropolis, Masseria Primosole		•		
Unidentified Greek settlement		•?		
Rock environments, Grotte San Giorgio			•	
Quarry, Grotte San Giorgio			•	
Isolated tomb, Grotte San Giorgio			•	
Cave environments, Grotte San Giorgio			•	
Unidentified Roman Settlement				•?
Passo Martino Roman Necropolis				•

Conclusions

Continuing in the footsteps of Paolo Orsi (1859–1935), archaeology in eastern Sicily has primarily been focused on Etna's surroundings: the mountainous region where Morgantina is located and the south-eastern, mostly coastal region with Pantalica, Megara Hyblaea, and Syracuse. Sicily's east-central region appears largely overlooked in terms of large-scale excavations. More specifically, the area between Catania and Lentini has never been systematically studied, prospected or geo-physically surveyed (Brancato and Manganeli 2018: 91), and Coda Volpe, essentially an area 'in between' more studied areas on the coast and the mountainous interior, appears to be part of a periphery. Myhre's (2004) approach instead explores this margin as a refraction area of change, reflected in the different dimensions and relationships of the artefacts located within the landscape that extend beyond the two-tiered division between centre and periphery.

A periphery is not created in a single moment nor with a single idea. Following Gür's (2002) discussion of Sultanahmet, Coda Volpe has instead been constantly reconstructed as an urban space, through processes emerging with the acts of discursive representations. As a transformed and socially concretised space, it is involved in the dialectical model of relations between spatiality, sociality and historicity (Gür 2002). This dialectical relation links Coda Volpe to its past and to its future and makes it a dynamic—not static—product of discursive representations. Coda Volpe currently suffers from neglect, marginality, and destruction because of modern-day politics (Bratell 2020; Cortese 2016).

By being studied as a periphery, San Demetrio shows much potential for archaeology. Greek, Roman, and Medieval pottery sherds have been found near cave environments, during recent surveys in 2020–2021, conducted by the author with the Archaeological Superintendency of Catania, adding new layers of knowledge, and re-establishing lost links to the past in this cultural landscape.

This paper aims to stimulate further work and discussion, hopefully adding to a better understanding of Coda Volpe's potential for archaeology, vis-à-vis the Greek and Roman periods (Table 1) in a

collaboration between the Archaeological Superintendency of Catania, ArchaeoTek Canada, the University of Catania, and the University of Gothenburg.

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Cultural Economy: A Study on the Vernacular Architectural Construction of *Mishing* Tribe of Sonitpur District, Assam

Mou Sarmah¹

Abstract

The increasing awareness about the environmental impacts of modern-day architectures in recent decades, has prompted many discussions surrounding alternative housing solutions, including the revival of vernacular architectures. The unique characteristics of vernacular architecture, combining sustainable construction materials and techniques with low energy consumption, makes them a sustainable architectural alternative. In light of a brief discussion on vernacular architecture and its advantages, this paper will focus on the traditional Stilt Houses (*Chang Ghar*) of Assam in India. By examining the historical development of this tradition, and the environmental challenges which might have prompted its use by the *Mishing* population in the Sonitpur District, this paper aims to answer how vernacular architecture can offer an excellent sustainable housing model for the rural landscapes of Assam.

Keywords: vernacular, architecture, sustainable model, *Mishing*, brahmaputra, yunnan, chang ghar, slit house, bamboo, cane, ulu khaire, floodplain

Introduction

This paper revolves around the theme of Archaeology of 'Scapes' while examining the relation between archaeology, anthropology, environment and architecture with a focus on the Stilt Houses (*Chang Ghar*), a type of vernacular architecture constructed and used by the *Mishing* population of Assam in India.

The term *vernacular architecture* was first used in the 19th century by the western architectural theorists to refer to the traditional rural buildings which were constructed by using traditional building methods and local materials in pre-industrial areas (Upton 1983: 266). These dwellings are the products of two important variables, namely, culture and environment (Mehta 2019: 33). The balance between these two variables produces an interactive and sustainable built environment (Oliver 1997: 44), which this paper intends to focus on in the context of *Chang Ghar* in Assam. First, the paper will explore the historical context in which *Chang Ghar* emerged, and then will examine the unique characteristics of these traditional houses, and how they have endured several environmental challenges presented by the landscape in which they are located. Finally, based on a qualitative study of 95 *Mishing* villages in Sonitpur district where interviews were conducted with local people, the paper will investigate why *Chang Ghar* has started fading away in recent decades, and how the revival of this tradition can induce a sustainable development in the region.

The Sonitpur District and The *Mishings* of Assam

This study was carried out in the *Mishing* inhabited district of Sonitpur in Assam. Sonitpur lies between 26° 28' 00" and 27° 02' 15" N latitude and 92° 19' 00" and 93° 47' 15" E longitude, and covers an alluvial tract between Brahmaputra River on the south and the foothills of the eastern Himalayas, covering parts of Bhutan, Kemeng and Subansiri districts of Arunachal Pradesh in the north (Figure 1). The Sonitpur District, covers a total area of 5,204 sq km and a population of 1,924,110. The population of the

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the *Mishings*, on the other hand, amounts to 49,028 according to the latest census (Census of India 2011). Before the discussion of the particular characteristics of the Sonitpur District and the use of vernacular architecture in the region by the *Mishing*, exploring the historical context in which the Mishings came to the region will be helpful to understand 1. the potential ethnic and cultural links of the Mishings to Southern China, and 2. the potential influence of this relationship on their architectural choices in Assam.

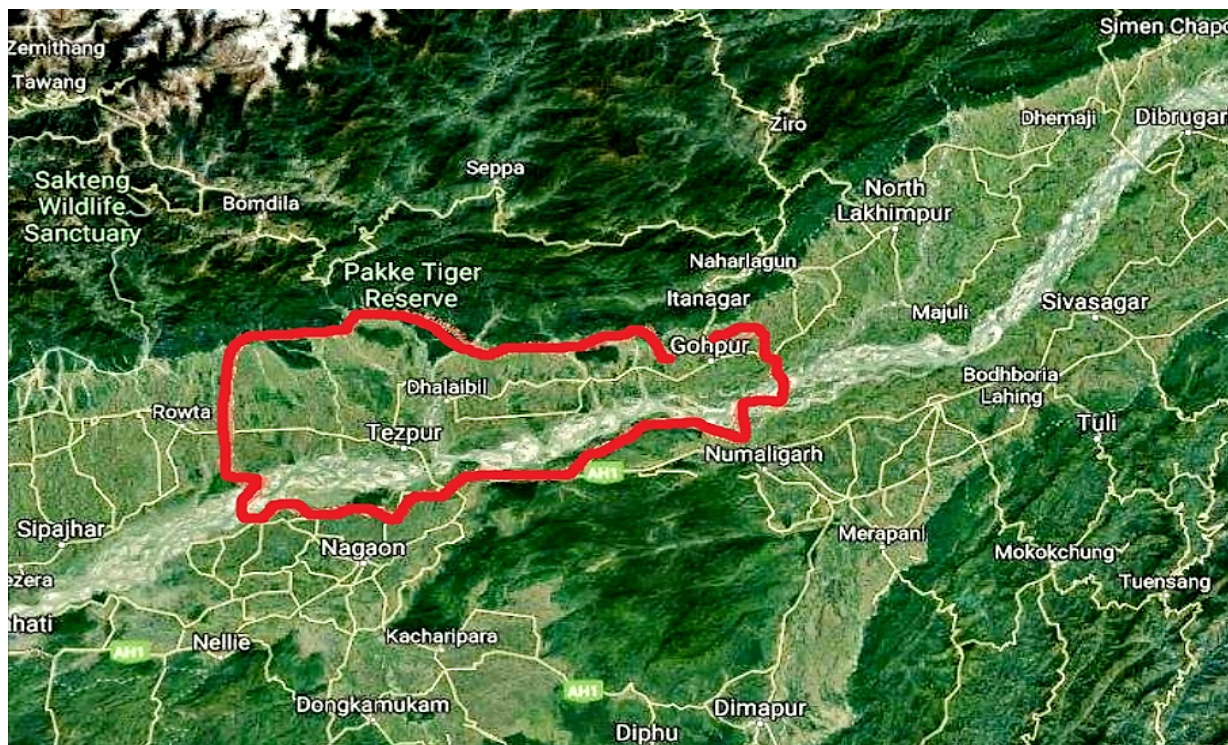


Figure 1. Sonitpur District Map showing Sonitpur District, Assam (Image credit: Author).

Who Are the Mishing and Where Do They Come from?

The archaeological evidence concerning the background of the *Mishing* tribes, although quite fragmented, has the potential to shed light on the origins of the *Mishing*, when analysed together with various historical chronicles. According to Ahmad Hasan Dani, the origins of the *Mishing* tribes can be traced back to the Neolithic times. The analysis of the material culture (e.g., Neolithic agricultural tools made of local rocks and bone) found at Sadiya, Abor Hills and Mishmi Hills, indicate considerable similarities between the Mishing material culture and the types of tools known from Yunnan in China. Furthermore, the traces of jadeite use --which is traditionally linked to the Yunnan province-- in these sites, further strengthen the relationship between the *Mishing* tribes and Yunan, and potentially indicate that the *Mishing* might have migrated to Assam from the Chinese province of Yunnan (Dani 1955: 98). Although the evidence explaining when and via which route the *Mishing* might have come to their current homelands is quite scarce,² it is generally believed that Mishings entered Assam through

² Prior to the first references made to the Mishings in the British records in the early nineteenth century, only two sets of sources refer to the *Mishings*. First, the Tibetan texts mention contact between Tibetans and *Mishing* tribes along the northern border of present-day Arunachal Pradesh in the fifteenth century. The other documents are the Ahom chronicles, which refer to conflicts between certain tribes along the southern border with Assam in the 19th century. The tribes themselves have no indigenous writing. However, Sanskrit sources, dated before both the Tibetan and Ahom sources, refer to the Kiratas in Kamarupa (lower Assam), who were assumed to be a yellow-

the mountain passes of Tibet, Nepal and Bhutan; routes through the Gangetic Valley and the Brahmaputra River westwards (Choudhury 1953; Grierson 1901; Guha 1937). Similarly, Suniti Kumar Chatterjee claims that the Tibeto-Burman groups might have dispersed in some tracts to the east of Tibet (the present-day Chinese province of Sinkiang) from where they began to spread eastwards and southwards. From this centre of dispersion, other Tibeto-Burman tribes could have dispersed into India, along the Brahmaputra River westwards, some of them settling in mountainous tracts to the North of Assam. We find the traces of these groups in the Balipara Frontier tract to the East of Bhutan (*Akas, Hrussos, Abans, Miris, and Deflas*) and in the Sadiya Frontier Tract (*Mishings*) (Chatterjee 1950). This is further supported by Linguistic studies of George Abraham Grierson who defines the *Mishings* as a group of 'North-Assam' people whose language can be classified within the Tibeto-Burman branch of the Sino-Tibetan language family (Grierson 1906: 94).

The writings of the Chinese monk Hiuen-Tsang (c. 630-643 CE) support these theories and further suggest a potential relationship between the Chinese and the *Mishings* of the North-East of ancient Kumarupa (Watters 2018: 38). On the other hand, according to Hiuen-Tsang, the *Mishings* might have been a trading group who navigated between India and China through the North-Eastern hilly routes, and eventually inhabited the hills (Yang 2004: 45). This claim can be substantiated by many fragmentary records in Chinese historical chronicles dated prior to the Tang dynasty (618-907 CE), referring to the exchange between China and India through jungles, forests, rivers, and mountains from Sichuan, Yunnan, Burma, and Assam to India (Yang 2004: 45). Damodar Prasad Singhal, in his *India and World Civilization*, for instance, highlights the overland routes through Nepal and Tibet to China, and through Assam and Upper Burma to Yunnan (Singhal 1969: 32), further substantiating the existence of these trade routes. Similarly, Chinese scholars Yu (1967: 22) and Yang (2004) underline the presence of trading routes between Yunnan and North East India already in the 2nd and 3rd centuries when silk, Sichuan cloth, bamboo walking sticks, ironware, glass beads, jewels, and emeralds, were exchanged between the two regions (Yang 2004: 49).

All in all, this vast landscape covering the trading routes between Yunnan and Assam might have potentially served for many people, including *the Mishings* as a route for trade and migration. The various theories and historical research outlined above indicate a likely ethnic and/or economic relationship between the people of Yunnan and *Mishing* of Assam, which might have also led to a potential cultural and artistic exchange between the two. The stark architectural similarities between the stilt houses of the eastern Asia and those of the *Mishing* hint at an exchange of ideas pertaining to craftsmanship and architectural practices between the people of Yunnan and the *Mishings*, which will be further explored below.

Stilt Houses of South Asia

The practice of stilt architecture is widespread in South Asia. The names used to define them usually hint at their physical features, devised to respond to particular environmental factors. For example, in Japanese, the term stilt house literally means high-floor housing (Ara *et al.* 2018: 44), specifically elevated from the ground to alleviate natural threats. In Chinese, on the other hand, they are called *Ganlan* (bamboo/wood-storied house), noting their material characteristics. They are built with relatively low cost natural material, making them accessible to economically challenged communities. For example, the *Ganlan* are built by numerous minority nationalities in Yunnan, Guizhou, Guangxi, Hunan and Sichuan, and can also be found in economically disadvantaged areas throughout south-

skinned ('Mongoloid') people who lived in the 'high hills'. However, it is hardly possible to precisely identify the *Mishings* in history based on these vague references and outdated racial classifications (Phukan 2002: 145).

eastern China (Ara *et al.* 2018: 44). The stilt dwellings in Southern China, are also raised above the ground, a practical choice that people might have made to ensure their protection from wild animals and seasonal floods (Ruan 2003: 355). Likewise, the principal elements of stilt architecture throughout much of Southeast Asia- are a raised structure built on 'posts' (*kritrig*), entered by means of a 'notched log ladder' (*kobang*), including a 'hearth' (*meram*), a 'storage rack above the hearth' (*ramre*, *raptaw* and *rubbo*), 'rafters' and a 'ridge-pole' covered in 'thatch' (Blust 1976, 1987; Blust *et al.* 1980).

The vernacular architectures of *Mishings*, the *Chang Ghar* shares many common characteristics with the stilt houses referred to above. As indicated in the previous section, these similarities might be indicating a potential cultural and technological exchange between Assam and other regions. Nevertheless, these similarities also point out similar environmental forces these different communities might have had to deal with by means of their architectural choices. The next section discusses these forces in great detail in the context of Assam, and explores how the architectural elements of the *Chang Ghar* are devised as adaptive responses to the specific environmental challenges.

Vernacular Architecture as a Response to the Environment

Architecture emerges from the social relationship, tempered by individual creativity (Guillery 2010: 56). The traditional and vernacular architecture is one such example that demonstrates individual creativity and 'the product of a way of thinking' (Leach:1997). The style of architecture in Assam is a creative reaction of several tribes to the environmental conditions of the region. To briefly outline these conditions, we first need to take a closer look at the Sonitpur District of Assam. The Sonitpur District falls in the sub-tropical climatic region, and enjoys a monsoon type of climate in which summers are hot and humid; with an average temperature of 29 °C. Winters extend from the month of October to February, and are cold and generally dry, with an average temperature of 16°C. Furthermore, all districts of Assam in Zone IV and V are 98.6% susceptible to earthquakes of severe destruction according to the seismic zonation map of India (BIS). Moreover, these zones regularly face heavy annual floods (Nath *et al.* 2008: 22).

The fluctuating temperatures, heavy rainfall, flood, as well as the possibility of earthquakes in the region, demands an architectural style that can successfully cope with all these challenging environmental effects. Therefore, the traditional dwellings of the region are built, keeping these geographical features in mind. In this context, vernacular architecture emerges as an appropriate choice of architecture, the reasons for which will be extensively discussed in the following section.

Vernacular architecture of Assam can be broadly divided into three stylistic divisions: tribal, non-tribal and intermediary (Singh *et al.* 2020: 45). The non-tribal style possesses primarily two typologies of architecture: the thatched-bamboo made *pajaghar* / *kutch*a variety and the Assam type (Singh *et al.* 2020: 48). The tribal houses can be broadly classified as stilt house (*Chang Ghar*) and bamboo house whereas the intermediary style is an amalgamation of both tribal and non-tribal styles (Singh *et al.* 2020: 48). This paper will particularly examine stilt houses (*Chang Ghar*).

The Architecture of Stilt House Construction (*Chang Ghar*)

Building Configuration

Architecture has always been shaped and influenced by nature, society and culture. The vernacular houses of *Mishing* community, are one such example the interplay between these notions can be observed. For example, the *Chang Ghar* is constructed preferably facing eastern cardinal direction

whereas the use of western direction is considered a taboo by many of the locals.³ As the *Mishing* believe that their God Doyi (Sun God) rises from the east, and the west is the direction where the departed are cremated, they tend to avoid building their houses facing the western direction. Moreover, they construct one residential house for each family, allowing room for growth and extension if the necessity arises. These details, although they are outside the scope of this research, provide us with ethnographic data concerning how family units operate within a larger community and what the living arrangements can tell us about the community dynamics.

Concerning the building material and elements, the main materials used for the construction of *Chang Ghar* are wood, bamboo and thatch. Each house initially includes an open area on the ground, known as *aoulang* or *lotta*, in front of the platform and under the protruding roof (Figure 2). The space below the platform is called *kritrig*. A notched wood or bamboo ladder (*kobang* / *kawbang*) with odd numbers of steps, supported with a bamboo handle (*lokgun* / *lagjun* / *pijun*), connect the platform to the ground. The initial area of the platform is an un-walled porch that is called *tung-goung* / *tungon*. The rear side also possesses a similar porch known as *yapkur* or *turpak*. From the *tungon*, a door called *tung gong ke yapong* or *yapgaw* opens inside the house. The floor is raised using stilts made of wood or bamboo. Thick bamboo splits are laid on the stilts to create the floor. The walls are tied together using *Jeing Ribv* (ropes made from cane). The roof is made from *Tase* or straw, *Ko: bung ekkam* (Toko leaves) and *Tara annc* (tal leaves) (Pegu 2018: 268-270).



Figure 2. Diagrammatic Representation of *Chang Ghar* (Photo credit: Author).

The inner space of the platform (*mesaw*) is symbolically separated by the fireplace called *mairam* / *meram* or *melung* which is set in the middle of the platform, dividing the platform into four areas of distinct names and uses (see Figure 3). A house usually possesses one *meram* that may increase as per need in a big house (*Dugdar Akum*) occupied by a joint family. A three-tiered hanging shelf above the fireplace is a typical feature of the *Mishing* house. The lowest shelf is known as the *pourab* / *perab* / *ramre*, the middle one is *rabbong* / *perab* / *raptaw* and the topmost shelf (loft) is known as the *kumbang* / *rubbo*. The house

³ Information on the ritualistic beliefs of the *Mishings* has been collected in the form of interviews which were conducted as a part of the fieldwork.

also has a backdoor (*eyapo-kuroku / turpak-yapgou*) which leads to the *yapkur* and to another ladder. Sometimes two additional open platforms are annexed.

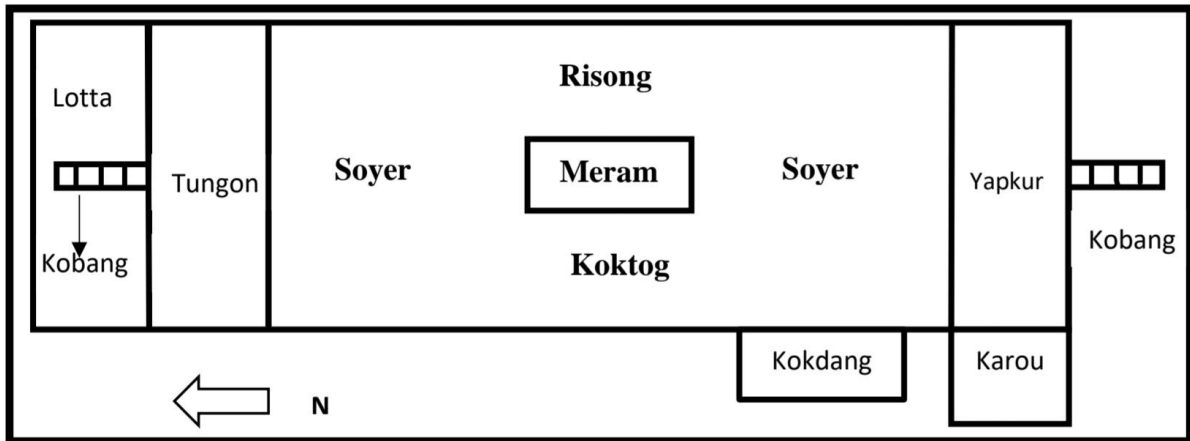


Figure 3: Floor layout of Mishing House (Image credit: Author).

Functional Configuration

The *Chaang Ghar* is an ingeniously designed multipurpose house, the size and elevated nature of which respond to necessities of its surrounding environment. Cultural practises and traditions that characterise this house type are mainly shaped by the climatic and ecological conditions of the locale. For example, all the materials used for construction are locally available and cost-effective. *Ulu Khaire*, bamboo, cane, wood are locally available materials and are light-weighted, causing much less destruction in times of natural calamities. It is important to highlight that the type of bamboo used for construction is *Bambusa balcooa* (*Bhuluka Bah*).

Houses are designed to have a courtyard, *lotta*, where a mortar called *ki-per* is kept for the husking of rice. Simultaneously, the area is also used for threshing or for meetings where weaving looms are occasionally located. The *tungon*, however, acts as an open-air balcony, used for meeting guests, as this space permits the sunlight to enter the main structure and is naturally ventilated by the cool breeze from the river. Since the floors of bamboo mats exhibit open slits, they also let air flow easily from underneath (Ara et al. 2018: 44).

Kritrig, on the other hand, is used for storing firewood or to keep the weaving loom. This platformed construction allows floodwater to flow underneath the main structure, without detrimentally affecting the house. Moreover, the floodwaters in a way functions as a flush, taking the dirt resulting from habitation to the great advantage of the inhabitants. Apart from this, the walls of the house are usually sparsely woven by bamboo, with some gaps left in between. In times of heavy flood, if the water level rises to the main platform of the house, these gaps/holes in the wall help drain flood water from the house. Another useful aspect of the house is the thatch roof which is used as a boat during floods. The material tying the roof components is made of cane tree which becomes flexible when in contact with water, making the roof an ideal boat for the people trying to navigate flood waters. Moreover, during floods, these raised houses help ensure sanitation as various health hazards can result from direct contact with floodwater.

Cooking is also practiced safely and efficiently thanks to the elevated nature of these houses. Storage sections within the house (*ramre*, *raptaw* and *rubbo*) are usually used to store smoked fish (*ngosan*) and grinded fish (*namsing*) with yum (*ange*) preserved in bamboo shoots. In times of flood, dried meat (*adin*)

which is usually preserved for the lean periods, is safely consumed by the inhabitants. The smoke released during cooking from the *meram* also helps with driving away insects as well as mosquitoes, and helps preserve the bamboo and cane products of the households (Sarma and Choudhury 2015: 135).

During the earthquakes, the presence of multiple bamboo posts holding the raised platform of the house ensures equal distribution of the earthquake waves (Das and Mukhopadhyay 2018: 940). Although *Chang Ghar* does not withstand earthquakes, its construction style and material keeps it light, often ensuring zero-fatal damage to life.

Another environmental issue faced by Assam is landslides against which *Chang Ghar* has a coping mechanism as well. In case of landslides, the platform construction of these houses allows the land falling from hills to rush downwards without affecting the main construction. In the worst case, if the land sliding downwards manages to break the bamboo posts, the house can freely stand on the land safely, afflicting relatively less harm on its inhabitants.

Apart from this, *Chang Ghar* provides shelter for people from wild animals, such as elephants which visit the floodplain frequently in search of a source of water. Moreover, vermin and pests, which are common in North-East India, are prevented from entering the houses owing to the house posts that are distinctively capped with larger-diameter discs at the top.

A Disappearing Heritage and a Landscape: Fading of Vernacular Architecture

In today's world, where sustainability and energy efficiency are essential in the building industry, vernacular architecture proves to be a viable alternative that is capable of providing its inhabitants a sustainable and energy-efficient life. However, the interviews conducted with the local people for this research revealed that, the advancement of technology and the change of landscape have been gradually dispelling the art and skills of this traditional architecture.

Nowadays, the villages in the district hold a greater number of modern concrete constructions than traditional houses. In some cases, a combination of both forms are seen, where the sparsely woven bamboo walls are replaced by cement or the aluminium sheets which are used instead of thatch roofs. The walls and floors are cemented and the bamboo posts which normally hold the entire structure upright, have been replaced by concrete posts. When asked about the reasons of this transformation, the locals interestingly pointed out 'westernisation' for their change of preference. Some respondents indicated that this shift was necessary to match the modern standards of a 'developed lifestyle'.

Moreover, the decreasing availability of natural construction material also motivates this depleting demand for vernacular structures. *Ulu Khaire*, which was used to locally grow in the floodplains, have been easily available to the *Mishing* population since they first inhabited these river sides. Yet, the interviewees stated that the recent cases of irregular Bangladeshi immigration have posed a threat to the growth of the *Ulu Khaire* in the region. The new-coming immigrants usually inhabit floodplains which provide them fertile land for agriculture, yet at the same time, hampering the habitat in which *Ulu Khaire* grow naturally. The interviewees reported that they find it increasingly harder to find *Ulu Khaire*. Because of this scarcity in recent years, the price of *Ulu Khaire* has increased drastically, making it economically unviable to be used as a building material by the tribes. Therefore, the interviewees admitted that they could not justify the cost of continuing to use *Ulu Khaire* in their houses. Similarly, the availability of bamboo and cane in the immediate surroundings is also affected. As the migrant population has been growing in the unused forested lands, bamboo and cane availability decreased, causing an increase in the price of these materials. Bamboo, which the tribes used to collect freely from the forests, is now sold at Rs. 200 per Bamboo.

Vernacular architecture used to consume minimal energy during the construction phase, and in the aftermath. The stilt designs which ensure maximum sun-gain and high thermal insulation usually minimise the need for major heating/air conditioning systems in these houses. However, the interviewees were concerned that with the increasing reliance on electrical tools and cheaply made construction materials, most of the modern constructions in Assam have begun to consume excessive energy. The use of electrical equipment and artificial ventilation choices, which are increasingly more preferred to maintain the thermal comfort conditions indoors, have led to an increased exploitation of non-renewable as well as renewable resources.

All in all, the changing face of the natural landscape and scarcity of natural resources, make vernacular architectural tradition no longer a desirable option in the region. Moreover, beside the depletion of forested areas, the disorganised settlement of the migrants have led to an eventual change in the demographic compositions of the floodplain which has resulted in several conflicts between the immigrant and local communities, an issue which makes proper planning and management of this landscape an urgency.

Discussion of Potential Sustainable Solutions

It is clear that recent changes in the landscape of Assam have forced local people to make a choice between their architectural tradition and economic sustainability. According to Mehta (2019: 33), the gap between the cultural and monetary value of traditional architecture can be bridged by a proper cultural economy plan- an emerging concept that can assist in promoting sustainability and highlighting the value and significance of traditional architecture.

The use of natural or naturally produced renewable materials in every sphere of life, is advocated across the world to effectively tackle the issues such as pollution, global warming, and unsustainable development (Guillery 2010; Mehta 2019; Oliver 1997). Vernacular architecture traditionally uses the materials that are naturally available (Leach 1997; Ottman 1998). In the case of the Chang Ghar, the *Mishing* people have been exploring, manipulating, and utilising the natural materials for centuries by using their indigenous knowledge and techniques. The eco-friendly and renewable nature of their architectural tradition is a much-sought quality in contemporary sustainable architectures (Pegu 2018: 263). However, in the light of recent developments in the region, the *Mishing* people are less likely to perpetuate this architectural tradition without being economically incentivised.

This paper proposes an economically viable solution: re-purposing of some vernacular architecture in the region. Some of these architectures, particularly those abandoned, can be converted into tourist centres and rental cottages to create the required economic incentive for the community. Some villages can be re-fashioned as tourism destinations where tourists can visit and gain invaluable insights into the housing tradition, culture and cuisine of the *Mishing* tribe. Moreover, a village-based vernacular ecotourism can give way to local participation, thereby, enhancing economic opportunities at hand and highlighting the culture in its economic context. In line with this idea, the Government of Assam has recently initiated a project called '*Amar Alohi*' to promote rural home-stay scheme, and to create self-employment opportunities for the youth in rural and semi-urban areas in potential tourist destinations (Annual Achievement Report, 2017- 18). Moreover, the government is currently working on welfare schemes to provide shelter to the needy and economically challenged groups living under Pradhan Mantri Aawas Yojana. In such schemes, the people can be encouraged to participate in the production of affordable cost-effective houses, a process through which the use of traditional housing materials, skill, and labour can be revived. In doing so, employment opportunities can be generated, which can subsequently help for the continuation of local traditions and a sustainable development in the region.

Conclusion

This paper explored the concept of -scapes which has increasingly permeated archaeological, and heritage practices, with a focus on the landscape of the Soniptur District where a unique vernacular architecture, the *Mishing* Chang Ghar was developed to tackle various environmental challenges of the landscape.

In general, environment and climate appears to be two strong determinants of architectural choices incorporated in stilt houses (Ara *et al.* 2018: 52). The stilt houses of Assam (*Chang Ghar*) are always built in the floodplains, near or above a source of water, elevated above the ground, to mitigate damage during floods. Beside protection, these buildings provide good ventilation, a useful space which people utilise to work, store implements, and use for other symbolic, social, and economic purposes.

Despite many advantages of traditional stilt houses, due to modernization and changing environmental and social conditions in Assam, the use of modern building materials have become increasingly widespread in recent decades, jeopardizing the continuity of vernacular architecture tradition. With the new waves of Bangladeshi immigration into Assam's floodplains, and the depletion of the natural habitat of the *Ulu Khaire*, bamboo and cane, the availability of vital housing materials has declined in recent years. As an economic consequence, the price of these materials increased, making vernacular architecture an economically unfeasible construction style for the *Mishing*.

This research, however, proposed that these challenges can be overcome by an implementation of large-scale economic and social incentives. Research shows that the domestic sector consumes the maximum energy to maintain the indoor temperature of houses (Mehta 2019: 167). Considering the fact that, the traditional architecture in Assam provides natural ventilation owing to its construction style that works harmoniously with the atmospheric conditions of the region, the virtues of the traditional vernacular architecture can be better promoted to the local community, by highlighting potential economic gains from using this type of housing. Moreover, local people can be encouraged to re-participate the production of traditional vernacular architecture, as part of government-supported development and tourism schemes, promising employment and economic growth in the region. Lastly, stricter measures for settling around forested and open lands where rich natural materials grow, can be implemented to protect the natural habitat and consequently maintain the sustainability of the raw materials used in traditional architecture.

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