

Introduction: Interactions, Trade and Mobility in Archaeology

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The Graduate Archaeology at Oxford (GAO) International Conference 2021 was a virtual conference that brought together graduate students and early career researchers from more than 20 different countries from the 7th to the 9th of May. Over these three days, 30 speakers, 11 posters and 3 key-note speakers presented their innovative research. The theme of the 2021 GAO Conference was very dear to the organisers, while it was found to be relevant to many recent research projects. Moreover, the conference was set up and took place during the COVID-19 pandemic, which significantly affected how interactions, trade and mobility are conceived and occur. Virtual posters with breakout rooms were adopted to simulate the interactions and dynamics that would normally take place at an in-person conference.

According to the Oxford English Dictionary (2021), the term interaction means “reciprocal action” or “action or influence of persons or things on each other”. More interactions, involving a different number of agents, can form an interrelated system called a network (Oxford English Dictionary 2021). Interactions require some degree of movement, that is “a journey, outing, commission, or other significant activity undertaken by a person or group of people” (Oxford English Dictionary 2021). When people move with the purpose of settling a different locality either for an unlimited or temporary period of time, it is possible to talk about migrations. Movements are not restricted to people, but involve also the objects and the ideas that accompany humans on the journey. The social and political complexities behind matters of interaction, trade, and mobility have recently been the object of significant attention from the media, the effect of which can also be seen in the archaeological field. The GAO International Conference 2021 provided young researchers with the opportunity to share their work and ideas related to this topic within the wider archaeology community. Each of the three days was dedicated to a different aspect: social interactions, economy and trade, and maritime network. These will now be discussed in turn.

Social Interactions

The interactions between peoples have been much studied and debated both in relation to contemporaneous events and to ancient history and prehistory, especially in light of their social implications. In the last decade, mass migrations resulting from warfare and poor economic conditions brought back in the spotlight interactions between different cultures. Issues of mobility and movement through space highlight the importance of

how humans interact with landscapes and seascapes. The concept of “connectivity”, that is “the various ways in which microregions cohere, both internally and also one with another”, was coined by Horden and Purcell (2000: 123) to express the Mediterranean tendency towards interaction across the different areas.

Studies on connectivity have come to focus on both the relations between contacts and material culture and on the effect that these can have on the social practices and identity boundaries (van Dommelen and Knapp 2010; Maran and Stockhammer 2012), as well as on the applications of complex system theory and network analysis to past interactions (Bentley and Maschner 2007; Knappett 2011; Brughmans 2013; Knappett 2013). Network analysis emphasises the relationship between different entities, which is fundamental for understanding their behaviour (Brughmans 2013: 625). Moreover, connectivity works both on a local and wider scale, which are related by means of feedback, with each scale constantly affecting the other one (Saltini Semerari 2017: 544). In a context of social competition, contacts have a significant impact on the social structure of communities, highlighting their social organisation and the existence of different roles and statuses (Feuer 2011: 519; Saltini Semerari 2017: 544). As a result, the dynamic nature of connectivity can result in either the presence of a relationship between different communities, called entanglement by Hodder (2012), or in the interruption of contacts, that is disentanglement (Saltini Semerari 2017).

Social-network analysis associates the presence of similarities in material culture across different sites with the existence of connections between these (Blake 2014: 19). When combined with graph theory, it is possible to represent concepts such as density, direction and distance (Scott 2017). Linares Matás and Lim show how spatial analysis technique and remote sensing proved to be successful methods for investigating interactions across natural passageways. In this context, a different methodology is adopted by Wein, who uses archaeological semiotics to incorporate how individuals within spatial networks transform the material that moves among sites. In particular, this study examines movement of two sets of decorative antefixes, produced between 600 to 500 BCE and 499 to 460 BCE, within transportation networks in central Italy, to address questions about the lasting effects nodes within a network have on antefix designs over time.

In terms of interactions, frontiers and borders become *ad hoc* contact zones, that is the space where historical and

geographical cultures encounter (Pratt 1992: 8; Blake 1999: 39). Contact zones are liminal areas where encounters are not affected by the structures and hierarchies of these cultures, and are characterised by the possibility of creating different identities through various processes of encounter (Feuer 2011: 518–519; Stockhammer 2011: 45, 49; Girella *et al.* 2016: 7). Giamakis examines the ways in which social interactions shaped and were shaped by different identities as well as the role of agency in the material manifestation of these phenomena by focussing on the Archaic Macedonian kingdom (600–480 BCE). Agency is fundamental also in the paper by Park, Conte and Oh, who created an agent-based model that simulates the diffusion of a new technology in a hypothetical community. In particular, they focus on the initial distribution of early adopters and differential preference rates for a newly introduced ceramic technology referred to as “TMP” in proto-historic Korea.

The awareness of belonging to specific ethnic groups implies the existence of boundaries separating them from the others, which however can be crossed when different ethnic groups interact with each other (Barth 1969: 10–15). An example of this is provided by Papageorgiou, looking at the site of Tell Kazel in the Akkar plain, where cultural interaction within the settlement reproduced cultural differentiation, as a process of ethnic negotiation.

Economy and Trade

By looking at the changes and distribution of material culture, it is possible to speculate on the trajectory of movements of goods, which can be distinguished into reciprocity, redistribution and exchange. Reciprocity “denotes movements between correlative points of symmetrical groupings”, while redistribution “designates appropriational movements toward a centre and out of it again” (Polanyi 1957: 250). Exchange can be defined as “the mutual appropriative movement of goods between hands” and can take place within a market system, that is the meeting of a number of persons desirous of acquiring, and disposing of, goods through acts of exchange under an economic institution comprising supply and/or demand parties (Polanyi 1957: 266–267). When exchange takes place within a market system, it is referred to as trade, implying the recognition of their exchange value (Polanyi 1957: 257–258; Jung and Pacciarelli 2017: 188). While, trade can more generally refer to “a relatively peaceful method of acquiring goods which are not available on the spot” (Polanyi 1957: 257), looking at the relation between the parties involved, it is possible to distinguish between gift trade, administered trade, and market trade. Gift trade takes place within a context of reciprocity, within a ceremonial environment, while the formal relations linking the agents participating in administered trade are based on treaties and usually controlled by the government (Polanyi 1957: 262).

Different trading methods involve the so-called central places, that is redistributive centres with a fundamental

importance civilisations (Renfrew 1975: 12) and different from gateway cities, which are usually located near the border of their different cultural regions to connect and control trading activities with the external world (Burghardt 1971: 269–270; Hirth 1978: 37). According to Hirth (1978: 37), gateway communities develop as a result of increased interregional trade and rely on the presence of a dendritic market system, that is the gathering of exporting goods at dispersed local marketplaces, to then be moved to strategic cities and by middlemen to port cities; consumer goods are moved along the same steps but on the opposite direction (Johnson 1970: 83–92).

Commercial trade can be divided into directional and freelance commercial trade. Directional trade is characterised by the presence of specific destinations for exchanging products along the journey (Renfrew 1972: 470–471). From an archaeological point of view, this can be identified through the concentration of a large quantity of specific goods in a single location, indicating a systematic reception of goods (Renfrew 1972: 471). According to Cline (1994: 86), freelance commercial trade could take place by means of cabotage or tramping, that is travelling along the coast without losing sight of it and stopping at each port (Braudel 1949: 103–108). These ports where ships systematically stop during their journeys are known as ports of call (Oxford English Dictionary 2021).

Different types of material culture can be analysed to study and identify how goods were exchanged. Pottery is notoriously an excellent marker for exchange as very receptive of local trends and technologies, and De Mitri looks at pottery distribution to study the networks and trade routes that affected the Salento peninsula between the late Roman and the beginning of Byzantine period in the Adriatic Sea and the Aegean-Eastern Mediterranean. Via the study of the distribution of unguent vessels in funerary contexts, and specifically from the necropolis of Pithekoussai, Greger discusses the interregional perfume trade in the late Geometric and early Archaic period. Among the topics discussed is the socio-economic perspective of bulk trade and the shipment, storage and utility of perfumes. Through the combined study of the amphoras and other trading patterns visible in the archaeological record and the study of the available epigraphic sources, De Luque Morales and Medina Luque provide an image of the olive oil trade in Baetica during the Imperial times. Via the use of geographic systems, the authors attempt to analyse, manage and represent space in Baetica and the phenomena that occur in it. Finally, Wright provides an image of the economic and trading patterns introduced along the Red Sea during the 1st c. CE via the study of the available archaeological material (mainly Roman wares) in combination with the narratives from *Periplus Maris Erythraei*. Precisely, the part of the *Periplus* considering the Persian Gulf constitutes the most problematic one. This paper reveals this complicated trading system with several different patterns introduced and the archaeological record changing the image scholars had so far considering the Persian Gulf.

Pottery is not the only means through which trade and exchange can be identified. In this volume, Gautam explores a series of religious structures attributed to the Gurjara Pratihara Dynasty of North India (circa 8th to 12th century CE), looking at the development of trading patterns introduced between 12 temples that probably served as 'arteries of trade' as well as centres of cultural exchange in the period discussed. The identification of similarities in the architectural remains, combined with the study of potential connections via river or land, provides a new idea considering North India's trade routes during the 8th to 12th c. AD.

Maritime Networks

Networks, trade, and mobility are all terms to be examined for the purposes of an international graduate conference such as this one. The analysis of maritime landscapes and their installations, as well as the study of potential shipwrecks can add further evidence to this endeavour. As a result, the entire third day of the conference was solely dedicated to Maritime Archaeology, aiming to present new studies, and approaches for the interpretation of Maritime Networks in Archaeology. This section analysed the construction and expansion of networks through the study of contacts and exchanges between different regions, alongside the wider network of human relations associated with the sea and the economic, political, warfare, and even religious activities that might have occurred. For the purposes of this section different types of maritime landscapes and their networks were examined, including those in the coasts, the rivers, the lakes, and naturally the open sea.

Harbours, as centres of commerce and interaction, influence various aspects of past societies, including the surrounding cultural landscape, which usually adjusted and developed according to the region's social and economic demands. A particular type of port city are ports of trade, that is settlements where commercial exchanges and encounters can be conducted in stability as economic institutions and that can be independent, controlled by native people or by traders (Chapman 1957; Polanyi 1957; 1963; Luke 2003: 4–5). Both gateway cities and ports of trade can be referred to as hubs of interaction (cf. Iacono *et al.* 2020). The study and interpretation of marine installations and other architectural constructions in the coasts, river mouths, or in every other marine environment, provides the core of connections and a stable base for communications both literally and figuratively. Furthermore, through the study of potential anchorages and opportunistic harbours (Leidwanger 2013). In his paper, Nakas discussed two different harbour realities: the well-organised harbours and those operating more on a regional level within the context of the Roman Mediterranean. The article presents the ways these interacted with each other and the ways this dialectic relationship influenced contemporary commerce and seamanship during the Roman times. Similarly, Čelebić discusses the nature of Roman harbours and anchorages on the Eastern Adriatic coast. Different case studies are being

discussed and explored while the surrounding landscape and antiquities are included in this endeavour. QGIS was also used to identify potential visual connections between the harbours and the surrounding landscape.

Several other archaeological aspects can be investigated including ceramic assemblages located both to the coasts and underwater, anchors and harbour equipment, that can shed light on further maritime activities that might have taken place in a marine environment. In addition, the study of shipwrecks and their cargoes constitute another principal example in the analysis of maritime networks since the different types of vessels were the main transporters and simultaneously the most complex ones in matters of technology. Karampas and Theodoulou presented the history of maritime archaeology in Crete for over 100 years, showing how this not-well known sub-discipline turned into one of the most exciting research activities on the island. Furthermore, the analysis and interpretation of the available maritime evidence indicate Crete's intertemporal role in the Mediterranean maritime networks. In this context, Tzovaras discusses the issues of the looting of Early Cycladic cemeteries and the illicit trafficking of antiquities, leading to the loss of priceless contextual information and provenance. In that respect, the Aegean lead boat models are re-examined to prove their authenticity, reconstruct their context and, eventually, enhance our knowledge about the EBA boatbuilding traditions and seafaring prowess.

Last but not least, through the interpretation of maritime cultural landscape (MCL), a case study can be studied in direct relation to its material culture, activities, and networks. Delacruz provides an interdisciplinary analysis of the Saronic gulf via a network model aiming to provide a clear image of the cult practices and socio-economic relations introduced between several cult sites. The network modelling tools used aim to address cost-based and relational considerations, such as proximal point analysis (PPA), social network analysis (SNA), and path optimisation, aiming to provide quantifiable affirmation between the sites and their relationships and reveal how they may have shifted over time. Of course, for the examination of the MCL "sources should include interviews, archaeological surveys, archival material, place-names, historical sources, cartographic material, iconographic sources, and so on" (Westerdahl 2011: 738). A step further into understanding seafaring society and how seafarers would have used maritime space and networks is through ethnography. These studies, based on living knowledge (including place names-toponyms, beliefs, and practices) and memory, aim to provide evidence for a more realistic perception of past human thinking in correlation with time, space, weather and, generally, with the encompassing landscape, seascape, and connections.

Overall, the success of this conference was in bringing together young scholars from all around the world, especially considering the different nature of interactions due to the difficult times we all experienced during the

pandemic. Indeed, this gathering was a great chance to share new discoveries, studies, and information from a great range of sites and different cultural backgrounds, creating a true international identity for the GAO 2021. We hope that the thought provoking aspect of the conference and this volume will act as a springboard for future studies and research in this continually developing field.

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