

Christian Bentz & Eva Dutkiewicz: Information encoding in the Paleolithic

Geometric signs are abundant in paleolithic mobile art as well as cave art. There are plenty of hypotheses regarding their meaning and function. However, these are necessarily hard to test and remain controversial. We here propose to take a step back and ask: what can we say about the basic statistical properties of paleolithic signs in comparison to other sign systems such as proto-cuneiform and modern writing? To tackle this question we focus on a clearly circumscribed corpus of mobile objects from cave sites of the Swabian Aurignacian. We compare the sign sequences on these objects in terms of their "statistical fingerprint" to the earliest proto-cuneiform tablets of the Uruk periods, as well as a diverse set of modern day writing systems. While paleolithic sequences are clearly distinguishable from modern day writing systems, they, surprisingly, fall inside the range of the earliest proto-cuneiform, and are hard to distinguish from these. At the face of it, modern humans of the Swabian Aurignacian of c. 40 000 years ago have already developed sign systems which have the information encoding potential of the earliest proto-cuneiform. However, while proto-cuneiform subsequently developed into full-blown writing systems within c. 500-1000 years, the sign systems of the Swabian Aurignacian remained stable in terms of their information encoding potential over at least 5000 years, and then disappeared.

Amy Clark: The Origin and Evolution of the Home: An Archaeological Perspective

The home is the place where we eat, sleep, relax, and perform numerous domestic tasks. It is where our children learn and grow and where we socialize and bond with our kin. The home therefore fulfills a basic physical need by providing protection from the elements, yet it is so much more. It is the place where culture is perpetuated and where we nurture our most important social bonds. Given that our species is distinctive for its hyper sociality and reliance on culture, the home is arguably the most important physical locale in the human story. Homes evolved along with humans in a coevolutionary relationship that resulted in the species we are today. The archaeological record is dominated by living spaces, especially for the Paleolithic period. Therefore, we have a long record of evolution of the home and a focus on the spaces themselves – and how they changed over time – might give us a new perspective on the evolution of our species and our relationship with the physical world.

Marlen Fröhlich, Tübingen: Environmental affordances in great ape communication: Insights from studies on wild and captive orangutans

Human language is an exceptionally plastic and productive signalling system. We can study the origins of our unique communicative plasticity by examining how non-human primates flexibly adjust their communication in response to the social and physical environment. Long-term studies that estimate the extent of plasticity in great apes' communicative behaviour are inefficient. Therefore, a more fruitful research avenue may be to compare individuals of the same species living in multiple populations and research settings that differ in environmental affordances. These contrasts allow us to directly test how the use and repertoire of signals respond to the relevant differences in socio-ecological conditions. Here, I summarise our recent work on wild and zoo-housed orang-utans of two species (*Pongo abelii*, *P. pygmaeus*), focusing on gestural repertoires and repair (i.e. repetition and elaboration of initial gestures after communicative failure). I will also demonstrate how the flat substrate and direct lines of sight afforded by zoo settings can trigger the use of "novel" non-vocal signals. Overall, orang-utans exposed to more social and terrestrial conditions showed remarkable plasticity in their non-vocal communication. As great apes are also highly innovative in the non-communicative domain, this general plasticity may have facilitated the evolution of language in the hominin lineage.

Miriam Haidle: Creating a space for communication: evidence from early human evolution

Human culture has two main fields: subsistence and attention. In human evolution, the culture of attention has been enormously diversified and created completely new forms of communication. In this talk, I will draw your attention to the interdependencies of spatial, auditory, and visual culture to direct focus. Our closest living relatives, the chimpanzees, are a social, tool using and communicative species. However, different from humans, their culture of attention is limited. Based on subsistence behaviour, early humans created situations and social places that fostered cooperation and communication - both direct and triadic. Base camps, fireplaces, simple architectural structures, the use of special environments such as deep caves and the creation of somehow restricted areas such as burial sites show the interplay between an increasingly conscious direction of focus and a change in subsistence.

Kenan Hochuli: Shadow, fire, and facewall - architecture and interaction in evolution

Face-to-face interaction is considered the 'natural ecological niche' of language (Schegloff 2006). However, this niche has significantly evolved throughout human history. While social interaction was once confined to "natural ecologies," it now occurs within complex, purpose-built architectures. To illuminate this evolution, I will showcase video sequences of macaque interactions in shaded areas, human activities around a fire, and social rituals in digital meetings on platforms like Zoom. These examples will help us examine the configurations of copresence that emerge from the interplay between architecture, temperature, and light.

Linda Hurcombe: Ephemeral structures, sleeping safely, and language as evolutionary advantages

[TBA]

Bjarne Kortmann: 3D Computer Graphics for Interaction Studies

As archaeologists, we may reflect on our ways of interpreting finds and contexts, or our methods of excavation and documentation, thus in a way interrogating our own interactions with our environment. Yet what we find and analyze in our daily work are not interactions, but the products of past interactions. What follows is the attempt to reconstruct interactions from this mixture of finds and contexts. It could be said that interactions are not our data, they are our results.

Therefore, archaeology has adopted many methods to record objects and spaces in great detail, so that traces of these interactions are not lost. Traditionally restricted to two-dimensional representations, these records have begun to include digital, three-dimensional representations. Beyond documentation, three-dimensional models are used for digital simulations, analyses of different kinds and science communication, to colleagues or to the public.

This talk will present the existing uses of 3D computer graphics in archaeology and suggest applications for the field of interaction studies, intended as a stimulus for methodological considerations.

Marta Lorenzon: Exploring the Past, Building the Future: Earthen Architecture in the Mediterranean through Architectural Studies, Sensory perceptions and Experimental Archaeology

This paper explores the sensory perception of earthen architecture by integrating sensory archaeology, phenomenology, and experimental archaeology, with a particular emphasis on the production of earthen building materials. Through the examination of ethnographic data, the research provides fresh insights into how individuals interacted with and experienced earthen architecture in their daily lives, focusing on case studies from the Mediterranean region, notably Crete and Egypt. Drawing from surveys conducted among both skilled and semi-skilled manufacturers, as well as from experimental and ethnoarchaeological fieldwork, the study analyzes the multisensory experiences involved in the creation of the built environment and the linguistics domains used to characterise it. This holistic approach contributes to a deeper understanding of the sensory dimensions associated with earthen architecture in ancient societies.

Lesley McFadyen & Gavin Macgregor: Drawing Drumadoon – Understanding Place Making, Building and Interaction in the Past

This talk is about a new project located at Drumadoon Farm, Isle of Arran, Scotland that brings together archaeology, art, ecology, and geology in group drawing exercises with students of archaeology and artists. More broadly, it is about drawing our thinking and drawing together. It looks at how we account for patterns of inhabitation in our archaeological drawings and other artworks, and the ebb and flow of these forces with, against, and often in spite of the architecturally bounded. Initially, from walking-drawing through a particular area of the landscape, we explore the relationship between building and not-building in landscapes, and how tensions between the past, present and future of place are revealed. The work that follows on from this opens up discussion on how we draw the everyday performance of lively space, and it explores ways in which to value the human and the non-human in landscapes. It is a mark-making process, and a critical way of thinking through drawing, that leads to a different kind of account of memory and place.

Steven Mithen: Language and the Neolithic

Ever since the first words emerged languages have been continually evolving under the influence of both biological evolution and cultural change. In this presentation, I will consider how the transition from mobile hunting & gathering lifestyles to settled farming communities may have impacted on language evolution, using a case study from the Neolithic of the Levant. The Neolithic involved not only a change in how food was acquired, but provided the first permanent architecture, some of which was monumental in scale. Patterns of social interactions within regions, localities and individual settlements changed, which likely changed the vocabularies, grammar and diversity of spoken languages. In the absence of any written texts or other insights into the spoken languages of the Neolithic, this is inevitably a speculative enquiry. But with the known interaction between language, culture and thought, the topic cannot be avoided if we wish to understand the transition to farming, the most significant event in world history.

Karolin Obert: Semantic specificity in dense forest environments – a view from Amazonia.

One way of explaining why languages are the way they are is looking at the evolution of language structures with respect to their use. Linguists have shown that grammars code best what speakers do most (DuBois 1987; Bybee 2000; Evans 2003:16). Assuming that what we do most is deeply rooted in culture and the environment, linguistic structure is very likely shaped by them. And yet, uncovering the footprints of culture and the environment in linguistic structures is a difficult endeavor as these aspects can be intangible and encoded in less overt ways. One example is the verbal lexicon in Dâw and Nadëb, two related languages (Naduhup family) spoken by traditionally mobile foragers in Northwestern Amazonia. The largely monomorphemic verb inventory shows a high degree of semantic specificity across domains detailing multiple aspects of actions expressed by these verbs.

Here, I explore the semantic domains of motion and carrying in these two languages, showing how these classes of verbs shadow the environment, practices of subsistence and affordances in dense tropical forest in fine-grained ways through a set of monomorphemic verb roots. The data underscore that such linguistic features can emerge and adapt in response to the spaces we inhabit and to the affordances and (socio)cultural practices tied to them.

Graham Skeate: Considering Space within the Sociomaterial Arrangements of Glasgow's Showpeople

Black-and-white photography was chosen to capture the integration –and textures– of the winter quarters of Glasgow's Showpeople. Dalmarnock, Parkhead and Cuningar Loop were visited, documented, and contextualised through the following photographic narrative. Concentration was on their winter quarters, but more specifically, on the sedentary/transient interactions that have shaped them. Within these entwinements are elements of distinction due to unpredictable collaborations with sedentary-minded city authorities, as well as potential opportunities for building upon the inherent innovations of their design assemblages.