Liste erstellt am 2015-07-02

References

Afrika

Bostoen 2015

Koen Bostoen, Bernard Clist, Charles Doumenge, Rebecca Grollemund, Jean-Marie Hombert, Joseph Koni Muluwa & Jean Maley, *Middle to Late Holocene Paleoclimatic Change and the Early Bantu Expansion in the Rain Forests of Western Central Africa*. Current Anthropology **56** (2015), 354–384.

This article reviews evidence from biogeography, palynology, geology, historical linguistics, and archaeology and presents a new synthesis of the paleoclimatic context in which the early Bantu expansion took place. Paleoenvironmental data indicate that a climate crisis affected the Central African forest block during the Holocene, first on its periphery around 4000 BP and later at its core around 2500 BP. We argue here that both phases had an impact on the Bantu expansion but in different ways. The climate-induced extension of savannas in the Sanaga-Mbam confluence area around 4000–3500 BP facilitated the settlement of early Bantu-speech communities in the region of Yaoundé but did not lead to a large-scale geographic expansion of Bantu-speaking village communities in Central Africa. An extensive and rapid expansion of Bantu-speech communities, along with the dispersal of cereal cultivation and metallurgy, occurred only when the core of the Central African forest block was affected around 2500 BP. We claim that the Sangha River interval in particular constituted an important corridor of Bantu expansion. With this interdisciplinary review, we substantially deepen and revise earlier hypotheses linking the Bantu expansion with climateinduced forest openings around 3000 BP.

Killick 1991

David Killick, *Iron smelting in natural-draft furnaces, A little-known extractive process*. Journal of The Minerals, Metals & Materials Society **43** (1991), iv, 62–64.

The iron formed was initially carbon-free, implying that the furnace atmosphere was not as high as might be expected from the very high fuel-to-ore ratios employed. Once the bloom was formed, however, it sat in the base of the furnace for many hours and was carburized by solid-state diffusion to as high as 0.8 wt. % C, although it was typically very inhomogeneous.

Although the technical data are sparse, it appears that natural-draft furnaces were considerably less productive and more wasteful of fuel than bloomeries blown by a forced draft. Why then should some societies have chosen to smelt iron by natural draft? Some scholars suggest that natural-draft furnaces require much less labor—there are no bellows to pump. If the fuel consumption cited above was typical, however, the supposed labor advantage of a natural over a forced draft is illusory—the labor saved at the bellows is more than offset by the labor required to prepare the additional charcoal.

The only hypothesis that I can suggest is that natural-draft smelting may have been favored in societies where there was intense competition for labor during the smelting season, since charcoal could be prepared in slack periods of the year and stored until needed. The prodigious appetite of these furnaces for charcoal

need not have been a major disadvantage, as it was plentiful in the dry woodlands where natural-draft smelting was most favored.

Killick 2015

David Killick, *Invention and Innovation in African Iron-smelting Technologies*. Cambridge Archaeological Journal **25** (2015), 307–319.

Sub-Saharan Africa is often characterized by Europeans as a region that saw no significant technological change from the adoptions of agriculture and ironworking until the European colonization of the entire continent after 1880. This article criticizes this view by exploring the distinction between invention and innovation, using African iron smelting as a case study. It argues that there is in fact much evidence for the invention of new technologies in recent African prehistory, but that very low population densities precluded innovations in mass production and transportation.

Aktuell

Ahmed 2015

Syed Sohail Ahmed et al., *Antibodies to influenza nucleoprotein cross-react with human hypocretin receptor 2*. Science Translational Medicine **7** (2015), 294ra105. DOI:10.1126/scitranslmed.aab2354.

Syed Sohail Ahmed, Wayne Volkmuth, José Duca, Lorenzo Corti, Michele Pallaoro, Alfredo Pezzicoli, Anette Karle, Fabio Rigat, Rino Rappuoli, Vas Narasimhan, Ilkka Julkunen, Arja Vuorela, Outi Vaarala, Hanna Nohynek, Franco Laghi Pasini, Emanuele Montomoli, Claudia Trombetta, Christopher M. Adams, Jonathan Rothbard & Lawrence Steinman

The sleep disorder narcolepsy is linked to the HLA-DQB1*0602 haplotype and dysregulation of the hypocretin ligand-hypocretin receptor pathway. Narcolepsy was associated with Pandemrix vaccination (an adjuvanted, influenza pandemic vaccine) and also with infection by influenza virus during the 2009 A(H1N1) influenza pandemic. In contrast, very few cases were reported after Focetria vaccination (a differently manufactured adjuvanted influenza pandemic vaccine). We hypothesized that differences between these vaccines (which are derived from inactivated influenza viral proteins) explain the association of narcolepsy with Pandemrix-vaccinated subjects. A mimic peptide was identified from a surface-exposed region of influenza nucleoprotein A that shared protein residues in common with a fragment of the first extracellular domain of hypocretin receptor 2. A significant proportion of sera from HLA-DQB1*0602 haplotype–positive narcoleptic Finnish patients with a history of Pandemrix vaccination (vaccine-associated narcolepsy) contained antibodies to hypocretin receptor 2 compared to sera from nonnarcoleptic individuals with either 2009 A(H1N1) pandemic influenza infection or history of Focetria vaccination. Antibodies from vaccine-associated narcolepsy sera cross-reacted with both influenza nucleoprotein and hypocretin receptor 2, which was demonstrated by competitive binding using 21-mer peptide (containing the identified nucleoprotein mimic) and 55-mer recombinant peptide (first extracellular domain of hypocretin receptor 2) on cell lines expressing human hypocretin receptor 2. Mass spectrometry indicated that relative to Pandemrix, Focetria contained 72.7 % less influenza nucleoprotein. In accord, no durable antibody responses to nucleoprotein were detected in sera fromFocetria-vaccinated nonnarcoleptic subjects. Thus, differences in vaccine nucleoprotein content and respective immune response may explain the narcolepsy association with Pandemrix.

Editor's Summary: New reports of narcolepsy increased after the vaccination campaign against the 2009 A(H1N1) influenza pandemic in some countries but not others. Now Ahmed et al. examine differences between the vaccines used and find a potential mechanistic explanation for the vaccine-specific effect. They found a peptide in influenza nucleopeptide A that shared protein residues with human hypocretin receptor 2, which has been linked to narcolepsy. The vaccine used in unaffected countries contained less influenza nucleoprotein. Indeed, patients with putative vaccine-associated narcolepsy produced antibodies that cross-reacted to both the influenza and the hypocretin receptor 2 epitopes. Although these data do not demonstrate causation, they provide a possible explanation for the association of this particular influenza vaccination with increased reports of narcolepsy.

Almécija 2015

Sergio Almécija, Ian J. Wallace, Stefan Judex, David M. Alba & Salvador Moyà-Solà, *Comment on "Human-like hand use in Australopithecus africanus"*. science **348** (2015), 1101.

Skinner and colleagues (Research Article, 23 January 2015, p. 395), based on metacarpal trabecular bone structure, argue that Australopithecus africanus employed human-like dexterity for stone tool making and use 3 million years ago. However, their evolutionary and biological assumptions are misinformed, failing to refute the previously existing hypothesis that human-like manipulation preceded systematized stone tool manufacture, as indicated by the fossil record.

In our opinion, it is overly risky to draw profound conclusions about hominin paleobiology based solely on a comparative sample of two taxa (Pan versus Homo).

Bakshy 2015

Eytan Bakshy, Solomon Messing & Lada A. Adamic, *Exposure to ideologically diverse news and opinion on Facebook*. science **348** (2015), 1130–1132.

s348-1130-Supplement.pdf

Exposure to news, opinion, and civic information increasingly occurs through social media. How do these online networks influence exposure to perspectives that cut across ideological lines? Using deidentified data, we examined how 10.1 million U.S. Facebook users interact with socially shared news. We directly measured ideological homophily in friend networks and examined the extent to which heterogeneous friends could potentially expose individuals to cross-cutting content. We then quantified the extent to which individuals encounter comparatively more or less diverse content while interacting via Facebook's algorithmically ranked News Feed and further studied users' choices to click through to ideologically discordant content. Compared with algorithmic ranking, individuals' choices played a stronger role in limiting exposure to cross-cutting content.

Despite the slightly higher volume of conservatively aligned articles shared, liberals tend to be connected to fewer friends who share information from the other side, compared with their conservative counterparts: Of the hard news stories shared by liberals' friends, 24 % are crosscutting, compared with 35 % for conservatives.

After adjusting for the effect of position [the click rate on a link is negatively correlated with its position in the News Feed], we estimated the risk ratio comparing the likelihood that an individual clicks on a cross-cutting content relative to a consistent content to be 17 % for conservatives and 6 % for liberals, a pattern that is consistent with prior research.

Barucca 2015

Paolo Barucca, Jacopo Rocchi, Enzo Marinari, Giorgio Parisi & Federico Ricci-Tersenghi, *Cross-correlations of American baby names*. PNAS **112** (2015), 7943–7947.

pnas112-07943-Supplement1.mov, pnas112-07943-Supplement2.mov, pnas112-07943-Supplement3.mov, pnas112-07943-Supplement4.mov

The quantitative description of cultural evolution is a challenging task. The most difficult part of the problem is probably to find the appropriate measurable quantities that can make more quantitative such evasive concepts as, for example, dynamics of cultural movements, behavioral patterns, and traditions of the people. A strategy to tackle this issue is to observe particular features of human activities, i.e., cultural traits, such as names given to newborns. We study the names of babies born in the United States from 1910 to 2012. Our analysis shows that groups of different correlated states naturally emerge in different epochs, and we are able to follow and decrypt their evolution. Although these groups of states are stable across many decades, a sudden reorganization occurs in the last part of the 20th century. We unambiguously demonstrate that cultural evolution of society can be observed and quantified by looking at cultural traits. We think that this kind of quantitative analysis can be possibly extended to other cultural traits: Although databases covering more than one century (such as the one we used) are rare, the cultural evolution on shorter timescales can be studied due to the fact that many human activities are usually recorded in the present digital era.

Keywords: clustering | cultural evolution | cultural traits | complex systems

Significance: Societal and cultural transformations are very general and debated topics, both by scientists (e.g., sociologists) and by public opinion (e.g., artists, music producers, brand manufacturers, and advertising agencies). Although almost everyone would be able to express a position on such arguments, it is much more difficult to support such an opinion based on scientific evidence. In this work we analyze the case of American baby names and describe the evolution of tastes of parents regarding the choice of the name during the years of the last century. Using quantitative methods we find that a deep transformation occurred at the end of the 20th century and suggest that this might be studied from a quantitative sociological point of view.

Callaway 2015

Ewen Callaway, *Genome results rekindle legal row*. nature **522** (2015), 404–405.

Cerling 2015

Thure E. Cerling, Francis H. Brown & Jonathan G. Wynn, *On the Environment of Aramis, Concerning Comment and Replies of August 2014*. Current Anthropology **56** (2015), 445–446.

The first, and principal, of our issues concerns the gross misrepresentation of our work. Neither White (2014) nor Suwa and Ambrose (2014) addresses this topic. We are disappointed that they continue to misrepresent our work with false and disingenuous statements.

Suwa and Ambrose (2014) discuss issue 2 and, in their reply, agree with our analysis (Cerling, Brown, and Wynn 2014) that only a single paleosol analysis (one of 85 analyses; i.e., <2 %) indicates a high fraction (160 %) of woody cover.

White (2014) now claims fluviatile deposition at Aramis, apparently disavowing the later (Ambrose, WoldeGabriel, and White 2011) position. However, he does not address why the 2011 claim was made or what has changed for them to again reverse their position. Suwa and Ambrose (2014) did not address issue 4.

Crosston 2015

Matthew Crosston, *Jihadi Janes and Johns, The Seduction of the Islamic State for 'Westerners'*. Modern Diplomacy **2015**, May 9. <http://moderndiplomacy.eu/index.php?option=com_k2&view=item&id=675:jihadi-janes-and-johns-the-seduction-of-the-islamic-state-f>.

In short, one can live 'in the West' and never feel a true part 'of the West.' This is not semantics. Nor is it a matter of dismissively sneering at people who are supposedly too lazy or too unwilling to assimilate the values of Western civilization. Rather, it is a complex interwoven sociological failure that fuses together politics, economics, geography, religion, and psychology. While that failure makes too many feel isolated from the dream of the West, it does not stop people from still wanting to believe in some form of greatness and destiny: people will always love to dream.

Errico 2015

Alessia Errico, *Judge by actions, not words*. nature **522** (2015), 393.

Sexist comments made by my former boss Tim Hunt are not an indication that he is biased against women, argues Alessia Errico.

After my career in research ended, I became an editor. I know the weight of words; however, facts and actions are much more important. A year after that first consortium conference, and wearing a different jumper, Tim and I again headed for the annual meeting. This time, I had a different kind of shock. Tim suggested that I should be the speaker, not him, because it was my research. Tim's action led to other group leaders leaving the stage to their postdoctoral fellows.

Gegenfurtner 2015

Karl R. Gegenfurtner, Marina Bloj & Matteo Toscani, *The many colours of 'the dress'*. Current Biology (2015), preprint, 1–2. DOI:10.1016/j.cub.2015.04.043.

Lafer-Sousa 2015

Rosa Lafer-Sousa, Katherine L. Hermann & Bevil R. Conway, *Striking individual differences in color perception uncovered by 'the dress' photograph*. Current Biology (2015), preprint, 1–2. DOI:10.1016/j.cub.2015.04.053.

Lam 2015

Lui Lam, *From physics to revolution and back*. science **348** (2015), 1170.

As a boy, I was not interested in science; I was interested in girls. Upon graduating from high school in Hong Kong, I did not particularly want to work in science; I just wanted a job, because I rarely left the dinner table with my stomach full. For graduate school, I went to Columbia University with a scholarship.

Today, China is making progress scientifically, but there is still some distance to go. The Cultural Revolution sacrificed a whole generation of scientists. Among all the problems this created, it led to a scarcity of experts who could act as academic judges. Qualitative assessment was replaced by counting papers—a poor substitute. The damage lingers.

After 6 years, I left China and returned to the United States—not for scientific or political reasons, or due to material want, but for family. During a visit to the United States with our daughter, my wife announced that she intended to stay.

Forced to choose between the motherland and a daughter, I chose my daughter. I left China on good terms.

Lawler 2015

Andrew Lawler, *Making Contact*. science **348** (2015), 1072–1079.

Some of the last isolated tribes are emerging from Peru's rainforests.

These are not the uncontacted people of romantic imagination. Most of these groups had traumatic interactions with industrial society about a century ago, when the upper Amazon filled with tens of thousands of outsiders eager to make a fortune from rubber. The difficult and dirty work of tapping the white sap from rubber trees was assigned to indigenous people, who long ago had learned to use the sap to make waterproof shoes or balls. In return, the tribes often received only basic supplies like hammocks, machetes, and clothes; they lived in what amounted to slavery. Scholars estimate that as many as 250,000 natives in Peru and Brazil, or one in 10, died. Some tribes escaped into the forest, relying on deep knowledge of the ecosystem for all of their needs. They fashioned bows and arrows from local materials to kill game, made poisons to fish, and used diverse plants for medicine and ceremonies. Some groups abandoned traditional skills such as farming and canoe construction in order to avoid detection.

Lazer 2015

David Lazer, *The rise of the social algorithm*, *Does content curation by Facebook introduce ideological bias?* science **348** (2015), 1090–1091.

The specific deliberative issue that Bakshy et al. examine is whether Facebook's curation of news feeds prevents the intersection of conflicting points of view. That is, does a "filter bubble" emerge from this algorithmic curation process, so that individuals only see posts that they agree with? Their answer, after parsing the Facebook pages of ≈10 million U.S. individuals with self-declared ideologies, is that the curation does ideologically filter what we see. However, this effect is modest relative to choices people make that filter information, including who their friends are and what they choose to read given the curation.

Parreira 2015

Bárbara R. Parreira & Lounès Chikhi, *On some genetic consequences of social structure, mating systems, dispersal, and sampling*. PNAS **112** (2015), E3318–E3326.

Many species are spatially and socially organized, with complex social organizations and dispersal patterns that are increasingly documented. Social species typically consist of small age-structured units, where a limited number of individuals monopolize reproduction and exhibit complex mating strategies. Here, we model social groups as age-structured units and investigate the genetic consequences of social structure under distinct mating strategies commonly found in mammals. Our results show that sociality maximizes genotypic diversity, which contradicts the belief that social groups are necessarily subject to strong genetic drift and at high risk of inbreeding depression. Social structure generates an excess of genotypic diversity. This is commonly observed in ecological studies but rarely reported in population genetic studies that ignore social structure. This heterozygosity excess, when detected, is often interpreted as a consequence of inbreeding avoidance mechanisms, but we show that it can occur even in the absence of such mechanisms. Many seemly contradictory results from ecology and population genetics can be reconciled by genetic models that include the complexities of social species. We find that such discrepancies can be explained by the intrinsic properties of social

groups and by the sampling strategies of real populations. In particular, the number of social groups and the nature of the individuals that compose samples (e.g., nonreproductive and reproductive individuals) are key factors in generating outbreeding signatures. Sociality is an important component of population structure that needs to be revisited by ecologists and population geneticists alike.

Keywords: sociality | social structure | mating system | genotypic diversity | inbreeding avoidance

Significance: Many species live in socially structured populations, forming cohesive units with kin structure. Yet, sociality has been neglected by population geneticists under the assumption that social groups can be seen as small demes subjected to significant genetic drift. Such demes are usually considered to be susceptible to inbreeding, with inbreeding avoidance becoming a major force explaining dispersal strategies. We find that social structure is highly effective in maintaining high genotypic and genetic diversity levels, without invoking sex-biased dispersal or inbreeding avoidance mechanisms. These findings should change the way we perceive social groups.

Pringle 2015

Heather Pringle, *In Peril*. science **348** (2015), 1080–1085.

As contacts spike, critics fear that Brazil's once-vaunted protection of isolated tribes is crumbling.

Skinner 2015

Matthew M. Skinner et al., *"Human-like hand use in Australopithecus africanus"*, *Response to Comment*. science **348** (2015), 1101.

Matthew M. Skinner, Nicholas B. Stephens, Zewdi J. Tsegai, Alexandra C. Foote, N. Huynh Nguyen, Thomas Gross, Dieter H. Pahr, Jean-Jacques Hublin & Tracy L. Kivell

Almécija and colleagues claim that we apply a simplified understanding of bone functional adaptation and that our results of human-like hand use in Australopithecus africanus are not novel. We argue that our results speak to actual behavior, rather than potential behaviors, and our functional interpretation is well supported by our methodological approach, comparative sample, and previous experimental data.

Note added in proof: Recently described preOldowan stone tools from Kenya, named the Lomekwian [S. Harmand et al. (16)], are relevant to this discussion and particularly interesting, as they occur at least 0.5 Ma before the appearance of the genus Homo.

Voigtländer 2015

Nico Voigtländer & Hans-Joachim Voth, *Nazi indoctrination and anti-Semitic beliefs in Germany*. PNAS **112** (2015), 7931–7936.

Attempts at modifying public opinions, attitudes, and beliefs range from advertising and schooling to "brainwashing." Their effectiveness is highly controversial. In this paper,we use survey data on anti-Semitic beliefs and attitudes in a representative sample of Germans surveyed in 1996 and 2006 to show that Nazi indoctrination—with its singular focus on fostering racial hatred—was highly effective. Between 1933 and 1945, young Germans were exposed to anti-Semitic ideology in schools, in the (extracurricular) Hitler Youth, and through radio, print, and film. As a result, Germans who grew up under the Nazi regime are much more anti-Semitic than those born before or after that period: the share of committed anti-Semites, who answer a host of questions about attitudes toward Jews in an extreme fashion, is 2–3 times higher than in the population as a whole. Results also

hold for average beliefs, and not just the share of extremists; average views of Jews are much more negative among those born in the 1920s and 1930s. Nazi indoctrination was most effective where it could tap into preexisting prejudices; those born in districts that supported anti-Semitic parties before 1914 show the greatest increases in anti-Jewish attitudes. These findings demonstrate the extent to which beliefs can be modified through policy intervention. We also identify parameters amplifying the effectiveness of such measures, such as preexisting prejudices.

Keywords: cultural transmission | indoctrination | persistence | anti-Semitism

Significance: Attempts at modifying public opinions, attitudes, and beliefs range from advertising and schooling to "brainwashing." Their effectiveness is highly controversial. We demonstrate that Nazi indoctrination—with its singular focus on fostering racial hatred—was highly effective. Germans who grew up under the Nazi regime are much more anti-Semitic today than those born before or after that period. These findings demonstrate that beliefs can be modified massively through policy intervention. We also show that it was probably Nazi schooling that was most effective, and not radio or cinema propaganda. Where schooling could tap into preexisting prejudices, indoctrination was particularly strong. This suggests that confirmation bias may play an important role in intensifying attitudes toward minorities.

Wekerle 2015

Hartmut Wekerle, *Vaccination and narcolepsy: Immune link found?* Science Translational Medicine **7** (2015), 294fs27. DOI:10.1126/scitranslmed.aac7091.

In some children, vaccination against H1N1 inf uenza spurred production of antibodies to brain receptors linked to the sleep disorder narcolepsy (Ahmed et al., this issue).

Behind this alarm was an observation by European epidemiologists that the number of cases of narcolepsy—a serious sleep disorder—increased 17- to 25-fold after large-scale H1N1 vaccination programs. At first glance, the numbers seem dramatic, but upon detailed inspection are less so. First, the increase was observed in some but not all countries that had launched vaccination programs, and second, the absolute numbers of patients affected was minute. In Finland, for example, the number of children with newly diagnosed narcolepsy was less than 70 (with an incidence rate of around 6 in 100,000), whereas in other countries with similar vaccine programs, no additional cases were reported. Furthermore, post-vaccination narcolepsy was not a general vaccination problem but rather was observed with just one vaccine.

White 2015

Tim D. White, Gen Suwa & Stanley H. Ambrose, *Reply to Cerling et al.* Current Anthropology **56** (2015), 447–448.

At the risk of spoiling what may be their quest for an academic "reply-athon" record, we invite Current Anthropology readers (at least those who are still actually reading) to consider the merits of each annoyance.

A close look at the four "issues" that continue to annoy Cerling, Brown, and Wynn (2015, in this issue) shows that each of them has been conjured by the deliberate mischaracterization of our published results. We welcome any new data that they might bring to the topic, but we would also welcome them to expand their horizons to more holistically consider all of the diverse and independent lines of relevant data that now bear on the paleobiology of Ardipithecus ramidus, even if most of these are inconvenient to an orthodox view no longer explanative of hominid origins (White et al. 2015).

Winkler 2015

Alissa D. Winkler, Lothar Spillmann, John S. Werner & Michael A. Webster, *Asymmetries in blue–yellow color perception and in the color of 'the dress'*. Current Biology (2015), preprint, 1–2. DOI:10.1016/j.cub.2015.05.004.

Anthropologie

Hublin 2015

Jean-Jacques Hublin, *How Old Is the Oldest Human?* Current Biology **25** (2015), R453–R455.

A 2.8 Ma old mandible unearthed in Ethiopia fills the gap between ape-like australopithecines and representatives of the genus Homo. It pushes the origin of large-brained hominins further back in time and highlights the complexity of the human evolutionary tree.

Leppard 2015

Thomas P. Leppard, *The Evolution of Modern Behaviour and its Implications for Maritime Dispersal During the Palaeolithic*. Cambridge Archaeological Journal (2015), preprint, 1–18. DOI:10.1017/S0959774315000098.

Oceans and seas are more frequently thought to have been barriers to than enablers of movement for archaic hominins. This interpretation has been challenged by a revisionist model which suggests that bodies of water facilitated the dispersal of pre-moderns. This paper addresses the revisionist model by defining maritime dispersal as a series of cognitive and organizational problems, the capacity to solve which must have arisen during the evolution of Homo. The central question posed is: knowing the type of social and cognitive configuration necessary for strategic maritime dispersal, and knowing the social and cognitive capacities of hominin species implied in the revisionist dispersal model, how likely is it that such species possessed the capacity to undertake purposive maritime colonization? Available data suggest that the evolution of modern cognitive architecture during the Late Pleistocene correlates positively with increasing evidence for maritime dispersal in the Upper Palaeolithic, and that behavioural modernity is implicated in the appearance of strategic maritime dispersal in Homo. Consequently, it is likely that deliberate trans-oceanic seagoing is restricted to Anatomically Modern Humans, and possibly Neanderthals.

Archäologie

Tencariu 2015

Felix-Adrian Tencariu, Marius Alexianu, Vasile Cotiugă, Viorica Vasilache & Ion Sandu, *Briquetage and salt cakes, An experimental approach of a prehistoric technique*. Journal of Archaeological Science **59** (2015), 118–131.

The paper describes the background, objectives, progress and results of a series of field experiments concerning the production of salt cakes using ceramic vessels known as briquetage, conducted within the framework of a larger research project concerning the ethnoarchaeology of the salt springs from the extra-Carpathian

areas of Romania. The approach was based on the existing archaeological data – description of briquetage sherds and their discovery contexts, as well as on ethnoarchaeological accounts and previous experimentations. The experiments allowed some valuable observations on the distinct aspects of this chaîne opératoire: modelling and firing the briquetage vessels; exposure to fire of the recipients filled with brine or a salt slurry of varied concentrations; the amount of time needed for crystallization and hardening of the salt, dependent on the fuels used and temperatures reached; ways of extracting the salt cakes from the ceramic coat; assessment of the effort (i.e. labour and raw materials) involved by the whole process. All the failures, challenges and eventual successes encountered during the experiments granted an insight into an ancient technique, described mainly a priori in the archaeological literature. Also, it gives a hint in understanding the appreciable importance and value of salt in times when this essential mineral was not available as it is today.

Keywords: Chalcolithic | Brine evaporation | Briquetage | Salt cakes | Experiment | chaîne opératoire

Bibel

Faust 2015

Avraham Faust, *The "Philistine Tomb" at Tel 'Eton, Culture Contact, Colonialism, and Local Responses in Iron Age Shephelah, Israel.* Journal of Anthropological Research **71** (2015), 195–230.

Tomb C1 at Tel 'Eton (Israel) is a unique Iron Age I elite burial cave (excavated in 1968 by Gershon Edelstein). The finds include many metal artifacts, seals, beads, and dozens of ceramic vessels, including Philistine bichrome pottery. Although some have interpreted the finds as reflecting Philistine occupation at Tel 'Eton, the ethnic composition of the region and the cultural significance of various objects suggest that the interred were members of the indigenous Canaanite elite. By combining the current understanding of cultural interaction in the region during Iron Age I and similar processes elsewhere, the present study reexamines this tomb and the associated finds. This will enable us to gain new insights into the interaction between the various groups that inhabited the region, internal developments within Canaanite society, and the nature of local responses to colonialism.

In the first phase of Iron Age I, immediately after the settlement of the foreign group(s) in the southern coastal plain and during what is usually called the monochrome phase, this Aegean-inspired, foreign-looking pottery is not seen in any non-Philistine (Canaanite) sites in the Shephelah (as well as in other regions). At this stage this pottery served in ethnic negotiations between groups, and as an ethnic marker (though within Philistia itself it might have had additional, internal meanings; Faust n.d.). Not only does the lack of this Aegean-inspired pottery in non-Philistine sites show that it was ethnically sensitive, its growing popularity within Philistia itself during the Iron Age I clearly signifies that it was important (for boundary maintenance) for the Philistines too.

Later, during the bichrome phase, things changed. Although it was still an ethnically sensitive trait for both Philistines and non-Philistines (especially Israelites, who continued to avoid it), the Canaanite elite in the political periphery of Philistia began to use this pottery to advertise their status (cf. assertive style; Wiessner 1990). The adoption of Philistine items for status purposes by members of the elite, such as those who were buried in this tomb, led to its later usage by other members of the group, and hence its existence in all the sites discussed here.

Keywords: Elite burials | Culture contact | Colonialism | Tel 'Eton | Philistines | Canaanites

Biologie

Giljov 2015

Andrey Giljov, Karina Karenina, Janeane Ingram & Yegor Malashichev, *Parallel Emergence of True Handedness in the Evolution of Marsupials and Placentals*. Current Biology (2015), preprint, 1–7. DOI:10.1016/j.cub.2015.05.043.

Recent studies have demonstrated a close resemblance between some handedness patterns in great apes and humans [1–3]. Despite this, comparative systematic investigations of manual lateralization in non-primate mammals are very limited [4, 5]. Among mammals, robust population-level handedness is still considered to be a distinctive human trait [6, 7]. Nevertheless, the comprehensive understanding of handedness evolution in mammals cannot be achieved without considering the other large mammalian lineage, marsupials. This study was designed to investigate manual lateralization in non-primate mammals using the methodological approach applied in primate studies. Here we show that bipedal macropod marsupials display left-forelimb preference at the population level in a variety of behaviors in the wild. In eastern gray and red kangaroos, we found consistent manual lateralization across multiple behaviors. This result challenges the notion that in mammals the emergence of strong "true" handedness is a unique feature of primate evolution. The robust lateralization in bipedal marsupials stands in contrast to the relatively weak forelimb preferences in marsupial quadrupeds, emphasizing the role of postural characteristics in the evolution of manual lateralization as previously suggested for primates [8–10]. Comparison of forelimb preferences in seven marsupial species leads to the conclusion that the interspecies differences in manual lateralization cannot be explained by phylogenetic relations, but rather are shaped by ecological adaptations. Species' postural characteristics, especially bipedality, are argued to be instrumental in the origin of handedness in mammals.

In Brief: Strongly pronounced handedness is traditionally considered to be a distinctive human trait. Giljov et al. show forelimb preferences in kangaroos, comparable in strength with human handedness, but oppositely directed. The contrast in manual lateralization between bipedal and quadrupedal marsupials emphasizes the link between posture and handedness.

Datierung

Fattahi 2015

M. Fattahi, *OSL dating of the Miam Qanat (KĀRIZ) system in NE Iran*. Journal of Archaeological Science **59** (2015), 54–63.

JAS059-0054-Supplement.doc

This article presents the first direct absolute dating method of a Qanat system obtained through optically stimulated luminescence (OSL) dating of grains in spoil heaps, using feldspar single-grain, feldspar multigrain and quartz multi-grain samples. This novel and highly promising approach to improving our understanding of the chronology of Qanats is more important than the final age results.

Hitherto, dating of Qanats has been based on indirect evidence from historical reports or archaeological investigations of nearby settlements. This study demonstrate the ability of OSL to date this type of subterranean irrigation feature, which is important in the study of both the archaeology of human settlement and palaeoenvironmental change in arid regions. This method can also be used for dating wells and handmade ditches and canals.

Our results show that advanced irrigation technologies existed at Miam in what is now north-east Iran much earlier than previously thought. Dating the now disused Qanat at 3.6–4.3 ka makes it the oldest known. Single-grain dating of sand-sized feldspar that overlie construction spoil show that the Miam Qanat was maintained until at least 1.6 ka. The early development of Qanat irrigation indicates that the causes of widespread societal collapse in eastern Iran in the Bronze Age might not have been driven purely by climatic pressures.

Keywords: Qanat | OSL | Dating | Iran

Jungpaläolithikum

Pastoors 2015

Andreas Pastoors, Tilman Lenssen-Erz, Tsamkxao Ciqae, Ui Kxunta, Thui Thao, Robert Bégouën, Megan Biesele & Jean Clottes, *Tracking in Caves, Experience based reading of Pleistocene human footprints in French caves*. Cambridge Archaeological Journal (2015), preprint, 1–14. DOI:10.1017/S0959774315000050.

Some of the painted caves in southern France preserve human footprints from the Ice Age of 17,000 years ago. Research has so far dealt with them sparsely and through a morphometric approach only. In 2013 three indigenous hunters/trackers from the Kalahari had an opportunity to read several spoor accumulations in four caves on the basis of their indigenous knowledge. As a result of this morpho-classificatory approach to track readin,g they produced new hypotheses on prehistoric cave visitors. Most spectacular is the narrative which the trackers generated from the footprints not far from the clay bison at Tuc d'Audoubert. Further research is planned to inspect more tracks and look into the epistemological status of the indigenous tracking method.

Kultur

Ježek 2015

Martin Ježek, *The Disappearance of European Smiths' Burials*. Cambridge Archaeological Journal **25** (2015), 121–143.

Prestigious burials furnished with tools used in metalworking appear from the Eneolithic to the Early Middle Ages. The social status of the deceased has become a subject of a longrunning discussion, one that typically ends with a statement on the prominent standing of individuals mastering the processing of metal in ancient societies. This notion is inspired by the ideas of V.G. Childe, and modern attempts to connect theMarxist–Leninist approach with the completely opposing phenomenologist approach result in a vicious circle. Obvious burials of rulers and children with forging tools document that an interpretation seeking highly respected craftsmen in 'smiths' burials' is flawed. The author sees the origin of the habit of equipping burials with forging tools in ritual metallurgy: the attributes of buried leaders who, through the use of forging tools, secured the prosperity of their community during rituals, became themselves symbols of elite standing. As in the case of burial furnishings, the performance of ritual metallurgy also depended on the organization of society, thus resulting in differences in the chrono-geographical distribution of burials with forging tools: in the period in which burials furnished with forging tools decline in the Mediterranean, their number peaks in central Europe; their occurrence ends in Viking Age Scandinavia.

MacGinnis 2014

John MacGinnis, M. Willis Monroe, Dirk Wicke & Timothy Matney, *Artefacts of Cognition, The Use of Clay Tokens in a Neo-Assyrian Provincial Administration.* Cambridge Archaeological Journal **24** (2014), 289–306.

The study of clay tokens in the Ancient Near East has focused, for the most part, on their role as antecedents to the cuneiform script. Starting with Pierre Amiet and Maurice Lambert in the 1960s the theory was put forward that tokens, or calculi, represent an early cognitive attempt at recording. This theory was taken up by Denise Schmandt-Besserat who studied a large diachronic corpus of Near Eastern tokens. Since then little has been written except in response to Schmandt-Besserat's writings. Most discussions of tokens have generally focused on the time period between the eighth and fourth millennium bc with the assumption that token use drops off as writing gains ground in administrative contexts. Now excavations in southeastern Turkey at the site of Ziyaret Tepe — the NeoAssyrian provincial capital Tušhan — have uncovered a corpus of tokens dating to the first millennium bc. This is a significant new contribution to the documented material. These tokens are found in association with a range of other artefacts of administrative culture — tablets, dockets, sealings and weights — in a manner which indicates that they had cognitive value concurrent with the cuneiform writing system and suggests that tokens were an important tool in Neo-Assyrian imperial administration.

Schon 2015

Robert Schon, *Weight Sets, Identification and Analysis.* Cambridge Archaeological Journal **25** (2015), 477–494.

Standardized weights and measures play an important role in the economies of complex societies. Traditionally, archaeometrologists have employed individual weights as their basic units of analysis and, as a result, they have been able to address a limited range of questions concerning the economic role of weights. I propose a shift in emphasis from individual weights to sets of weights as the primary units of analysis. Using cases from the Aegean Bronze Age, I present a method for reconstructing sets of weights, offer criteria for their analysis and discuss the implications of this new perspective.

Ur 2014

Jason Ur, *Households and the Emergence of Cities in Ancient Mesopotamia.* Cambridge Archaeological Journal **24** (2014), 249–268.

The world's first cities emerged on the plains of Mesopotamia (modern Iraq and Syria) in the fourth millennium bc. Attempts to understand this settlement process have assumed revolutionary social change, the disappearance of kinship as a structuring principle, and the appearance of a rational bureaucracy. Most assume cities and state-level social organization were deliberate functional adaptations to meet the goals of elite members of society, or society as a whole. This study proposes an alternative model. By reviewing indigenous terminology from later historical periods, it proposes that urbanism evolved in the context of a metaphorical extension of the household that represented a creative transformation of a familiar structure. The first cities were unintended consequences of this transformation, which may seem 'revolutionary' to archaeologists but did not to their inhabitants. This alternative model calls into question the applicability of terms like 'urbanism' and 'the state' for early Mesopotamian society.

Kupfer

Leusch 2015

Verena Leusch, Barbara Armbruster, Ernst Pernicka & Vladimir Slavčev, *On the Invention of Gold Metallurgy, The Gold Objects from the Varna I Cemetery (Bulgaria)—Technological Consequence and Inventive Creativity.* Cambridge Archaeological Journal **25** (2015), 353–376.

This paper discusses the invention of gold metallurgy within the Southeast European Chalcolithic on the basis of newly investigated gold objects from the Varna I cemetery (4550–4450 cal. bc). Comprehensive analyses, including preceding gold finds, shed new light not only on the technical expertise of the so far earliest known fine metalworkers, but also on the general context and potential prerequisites in which the invention of gold metallurgymay be embedded. Here, these structural trajectories as well as the unprecedented inventions connected to this early gold working will be highlighted in order to contextualize the apparently sudden appearance and rapid development of this new craft.

Methoden

Mimno 2015

David Mimno, David M. Blei & Barbara E. Engelhardt, *Posterior predictive checks to quantify lack-of-fit in admixture models of latent population structure.* PNAS **112** (2015), E3441–E3450.

Admixture models are a ubiquitous approach to capture latent population structure in genetic samples. Despite the widespread application of admixture models, little thought has been devoted to the quality of the model fit or the accuracy of the estimates of parameters of interest for a particular study. Here we develop methods for validating admixture models based on posterior predictive checks (PPCs), a Bayesian method for assessing the quality of fit of a statistical model to a specific dataset. We develop PPCs for five population-level statistics of interest: within-population genetic variation, background linkage disequilibrium, number of ancestral populations, between-population genetic variation, and the downstream use of admixture parameters to correct for population structure in association studies. Using PPCs, we evaluate the quality of the admixture model fit to four qualitatively different population genetic datasets: the population reference sample (POPRES) European individuals, the HapMap phase 3 individuals, continental Indians, and African American individuals. We found that the same model fitted to different genomic studies resulted in highly study-specific results when evaluated using PPCs, illustrating the utility of PPCs for model-based analyses in large genomic studies.

Keywords: posterior predictive checks | admixture models | population structure | model checking | genomic data

Significance: Bayesian models, including admixture models, are a powerful framework for articulating complex assumptions about large-scale genetic data; such models are widely used to explore data or to study population-level statistics of interest. However, we assume that a Bayesian model does not oversimplify the complexities in the data, to the point of invalidating our analyses. Here, we develop and study procedures for quantitatively evaluating admixture models of genetic data. Using four large genetic studies, we demonstrate that model checking should be an important part of the modern genetic data analysis pipeline. Our

methods help to support inferences drawn from recovered population structure, to protect scientists from being misled by a misspecified model class, and to point scientists toward useful model extensions.

Neolithikum

Szécsényi-Nagy 2015

Anna Szécsényi-Nagy et al., *Tracing the genetic origin of Europe's first farmers reveals insights into their social organization*. Proc. Royal Society B **282** (2015), 20150339.

ProcRSocB282-20150339-Supplement1.pdf ProcRSocB282-20150339-Supplement2.xls

Anna Szécsényi-Nagy, Guido Brandt, Wolfgang Haak, Victoria Keerl, János Jakucs, Sabine Möller-Rieker, Kitti Köhler, Balázs Gusztáv Mende, Krisztián Oross, Tibor Marton, Anett Osztás, Viktória Kiss, Marc Fecher, György Pálfi, Erika Molnár, Katalin Sebők, András Czene, Tibor Paluch, Mario Šlaus, Mario Novak, Nives Pećina-Šlaus, Brigitta Ősz, Vanda Voicsek, Krisztina Somogyi, Gábor Tóth, Bernd Kromer, Eszter Bánffy & Kurt W. Alt

Farming was established in Central Europe by the Linearbandkeramik culture (LBK), a well-investigated archaeological horizon, which emerged in the Carpathian Basin, in today's Hungary. However, the genetic background of the LBK genesis is yet unclear. Here we present 9 Y chromosomal and 84 mitochondrial DNA profiles from Mesolithic, Neolithic Starcevo and LBK sites (seventh/sixth millennia BC) from the Carpathian Basin and southeastern Europe. We detect genetic continuity of both maternal and paternal elements during the initial spread of agriculture, and confirm the substantial genetic impact of early southeastern European and Carpathian Basin farming cultures on Central European populations of the sixth–fourth millennia BC. Comprehensive Y chromosomal and mitochondrial DNA population genetic analyses demonstrate a clear affinity of the early farmers to the modern Near East and Caucasus, tracing the expansion from that region through southeastern Europe and the Carpathian Basin into Central Europe. However, our results also reveal contrasting patterns for male and female genetic diversity in the European Neolithic, suggesting a system of patrilineal descent and patrilocal residential rules among the early farmers.

Keywords: ancient DNA | mitochondrial DNA | Y chromosomal DNA | Neolithization | Carpathian Basin | Central Europe

Religion

McVeigh 2015

Brian J. McVeigh, *The Super-Religiosity of Bronze Age Civilizations, Linguistic Evidence of Bicameral Mentality*. unknown (2015), preprint, 1–74. <http://academia.edu/attachments/37765734/download_file>.

Despite many valiant attempts, secular science has not satisfactorily accounted for the origin of religion. Though books on atheism that scientifically dismiss religion have garnered much attention in the popular imagination, they fail to explain adequately why superstitious beliefs, irrational behavior, and far-fetched storytelling characterize religious experience. Certainly it is not a difficult challenge to point out the scientific fallacies and logical inconsistencies of pre-Enlightenment, premodern peoples. After all, these religions were formed millennia before the

discoveries of modern science. Just peruse the Bible or any other sacred text and look for examples. Of course, it is more comforting for some of us to assume that such odd behaviors were not really believed in wholeheartedly by their Bronze Age practitioners. The point is that communing with the divinities, though a practice irretrievably lost to the modern mind, had a real world impact and thus demands explication.

Story or Book

Kiser 2015

Barbara Kiser, *Foragers, Farmers, and Fossil Fuels*. nature **522** (2015), 417.

Foragers, Farmers, and Fossil Fuels: How Human Values Evolve. Ian Morris. Princeton University Press (2015)

Energy capture — as a "brute material force" — shapes human values, argues archaeologist Ian Morris in this global-scale study of cultural variation. Looking at modes of capture from hunting and gathering to the agricultural and industrial revolutions, he avers that each determines population size, social organization and values. Now, writes Morris, our globalized society faces a "Malthusian collapse" — and a lurch towards new values — driven by nuclear weapons, climate change and digitization. With contributions from writer Margaret Atwood, sinologist Jonathan Spence and others.

Milam 2015

Erika Lorraine Milam, *Understanding our origins*. science **348** (2015), 1098.

How a long tradition of exceptionalism distorted our perception of human evolution

The Strange Case of the Rickety Cossack. And Other Cautionary Tales from Human Evolution. Ian Tattersall. Palgrave Macmillan, 2015. 256 pp.

Tattersall devotes the bulk of the book to documenting how paleoanthropologists, himself included, struggled in subsequent decades to transcend this linear account of human evolution and rethink assumptions ingrained by their own training. Embedded in this larger narrative, we catch vibrant glimpses of Tattersall's own history. Readers follow him to Djibouti, where he hides from a "drunken gang of Yugoslav sailors" who ransacked the hotel where he was staying. These almost cinematic renderings of life behind the scenes add personal texture to his otherwise scientific chronicle.