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References

Afrika

Bennett 1899

Albert L. Bennett, *Ethnographical Notes on the Fang*. The Journal of the Anthropological Institute of Great Britain and Ireland **29** (1899), 66–98.

Metallurgy amiong the Fang is limited to the working of iron. The native word for iron is Eki. The Fang among whom I lived did not possess the knowledge of smelting, buit I was told that "other Fang far away in the bush, especially the Nqui (dwarfs), dug the minkok eki (stones of iron) out of the earth, melted it, traded with the eki (iron)." Iron is put to various uses. One of the most important uses of money among the Fang is the making of beki. Beki is made up in bunches ten beki in each bunch; a bunch of beki is called ntet. The amount of dowry paid in beki is usually counted in hundreds, kuliki bi kei, ntet awom (bring me one hundred beki).

I have never seen any native made wire. Imported brass wire is in great demand and mostly used as a continuous armlet. The coil usually reaches from wrist to elbow, and is considered extremely mbung (handsome), and kept highly polished. Imported brass is obtained in trade and made into armlets, anklets, finger and toe rings. It is also used for ornamentation of guns.

Vansina 2006

Jan Vansina, *Linguistic Evidence for the Introduction of Ironworking into Bantu-Speaking Africa*. History in Africa **33** (2006), 321–361.

According to their known distributions, the earliest words related to iron working in Bantu languages were all introduced from non-Bantu guages spoken on the Nigerian plateau or in Adamawa. Even though distributions are probably still incomplete for lack of data from many non-Bantu languages, they—and especially the distribution of °-bo#lo#—fit quite well with an archeological record that documents a very introduction of ironworking into northern and central Nigeria and some adjacent sites in Cameroon and the Central African Republic. phrase ntúla bo#lo# "to forge iron" used in Mbula just north of the upper Benue summarizes this well. It neatly captures both a more western distri bution for °-túd- and a more eastern one for °-bo#lo# in a single phrase. From these places ironworking spread southwards along several pathways into Bantu-speaking lands, a spread that started long before 420 BCE. The evidence for this stems from the distribution of °-bo#lo# "bloom," °-túd- "forging" and °-(j)o#ndo "sledgehammer." These three words strongly support the thesis that ironworking (smithing and probably iron smelting as well) were introduced into the Bantu speaking subcontinent from Cameroon and Nigeria. In addition there is no evidence at all for other introduction of the technology into the subcontinent from anywhere else.

Aktuell

Daly 2018

Martin Daly, *Partitioning aggression*. PNAS **115** (2018), 633–634.

Defining Wrangham's titular "two types of aggression" proves to be as tricky as defining the overarching concept. After explaining that the two types are distinguished by their "aims" and that the "goal" of reactive aggression is "only to remove the provoking stimulus," Wrangham seems to contradict himself by writing, "Note that the term 'reactive aggression' refers to the nature of the aggressive act rather than the reason for acting aggressively." [...] By this point, the distinction is getting murkier rather than clearer, apparently because the two types of aggression have no agreed-upon definition in the literature that Wrangham reviews.

Goldenberg 2018

Amit Goldenberg, Smadar Cohen-Chen, J. Parker Goyer, Carol S. Dweck, James J. Gross & Eran Halperin, *Testing the impact and durability of a group malleability intervention in the context of the Israeli–Palestinian conflict*. PNAS **115** (2018), 696–701.

Fostering perceptions of group malleability (teaching people that groups are capable of change and improvement) has been shown to lead to short-term improvements in intergroup attitudes and willingness to make concessions in intractable conflicts. The present study, a field intervention involving 508 Israelis from three locations in Israel, replicated and substantially extended those findings by testing the durability of a group malleability intervention during a 6-month period of frequent violence. Three different 5-hour-long interventions were administered as leadership workshops. The group malleability intervention was compared with a neutral coping intervention and, importantly, with a state-of-the-art perspective-taking intervention. The group malleability intervention proved superior to the coping intervention in improving attitudes, hope, and willingness to make concessions, and maintained this advantage during a 6-month period of intense intergroup conflict. Moreover, it was as good as, and in some respects superior to, the perspective-taking intervention. These findings provide a naturalistic examination of the potential of group malleability interventions to increase openness to conflict resolution.

Keywords: intergroup conflicts | psychological interventions | mindsets | emotions

Significance: The importance of psychological factors in conflict resolution has been well established in laboratory experiments. However, these factors have rarely been examined in longitudinal field experiments. The goal of the current project was to address this gap by comparing the effectiveness of psychological interventions during a period of extensive violence in the Israeli–Palestinian conflict. An intervention that spoke to the idea that groups can change and improve over time (a group malleability intervention) proved superior to a control intervention in improving attitudes, hope, and willingness to make concessions, even 6 months after the intervention. These findings provide evidence from a longitudinal field experiment that group malleability interventions can increase openness to conflict resolution.

Jiang 2018

Junjie Jiang, Zi-Gang Huang, Thomas P. Seager, Wei Lin, Celso Grebogi, Alan Hastings & Ying-Cheng Lai, *Predicting tipping points in mutualistic networks through dimension reduction*. PNAS **115** (2018), E639–E647.

pnas115-E00832-Supplement.docx

Complex networked systems ranging from ecosystems and the climate to economic, social, and infrastructure systems can exhibit a tipping point (a "point of no return") at which a total collapse of the system occurs. To understand the

dynamical mechanism of a tipping point and to predict its occurrence as a system parameter varies are of uttermost importance, tasks that are hindered by the often extremely high dimensionality of the underlying system. Using complex mutualistic networks in ecology as a prototype class of systems, we carry out a dimension reduction process to arrive at an effective 2D system with the two dynamical variables corresponding to the average pollinator and plant abundances. We show, using 59 empirical mutualistic networks extracted from real data, that our 2D model can accurately predict the occurrence of a tipping point, even in the presence of stochastic disturbances. We also find that, because of the lack of sufficient randomness in the structure of the real networks, weighted averaging is necessary in the dimension reduction process. Our reduced model can serve as a paradigm for understanding and predicting the tipping point dynamics in real world mutualistic networks for safeguarding pollinators, and the general principle can be extended to a broad range of disciplines to address the issues of resilience and sustainability.

Keywords: tipping points | mutualistic networks | dimension reduction | complex systems | nonlinear dynamics

Significance: Complex systems in many fields, because of their intrinsic nonlinear dynamics, can exhibit a tipping point (point of no return) at which a total collapse of the system occurs. In ecosystems, environmental deterioration can lead to evolution toward a tipping point. To predict tipping point is an outstanding and extremely challenging problem. Using complex bipartite mutualistic networks, we articulate a dimension reduction strategy and establish its general applicability to predicting tipping points using a large number of empirical networks. Not only can our reduced model serve as a paradigm for understanding the tipping point dynamics in real world ecosystems for safeguarding pollinators, the principle can also be extended to other disciplines to address critical issues, such as resilience and sustainability.

Moore 2018

John C. Moore, *Predicting tipping points in complex environmental systems*. PNAS **115** (2018), 635–636.

Jiang et al. (10) then argue that these results indicate that the low dimension and tractable 2D reduced network models captured the dynamics of the high dimension and not tractable 59 real network models with both slow and abrupt changes in environmental conditions sufficiently to study the emergence of tipping points. Eigenvalue-based stability analyses of parameter regimes that did not possess tipping points generated steady-state population estimates consistent with the simulations. A closer examination of the parameter regimes that did generate tipping points could tie the thresholds to changes in specific parameters. When the resilience function was incrementally increased to reflect the removal of pollinators from the system and the intrinsic rates of growth for plants and pollinators were low the system exhibited a tipping point with dynamic behavior without hysteresis behavior. When the resilience function based on the decay rate (death rate) of the pollinators was increased, the tipping point exhibited hysteresis behavior.

Altpaläolithikum

Roebroeks 2017

Wil Roebroeks, Sabine Gaudzinski-Windheuser, Michael Baales & Ralf-Dietrich Kahlke, *Uneven Data Quality and the Earliest Occupation of Europe—the Case of Untermassfeld (Germany)*. Journal of

Paleolithic Archaeology (2017), preprint, 1–27. DOI:10.1007/s41982-017-0003-5.

The database regarding the earliest occupation of Europe has increased significantly in quantity and quality of data points over the last two decades, mainly through the addition of new sites as a result of long-term systematic excavations and large-scale prospections of Early and early Middle Pleistocene exposures. The site distribution pattern suggests an ephemeral presence of hominins in the south of Europe from around 1 million years ago onward, with occasional short northward expansions along the western coastal areas when temperate conditions permitted. From around 600,000–700,000 years ago, Acheulean artefacts appear in Europe and somewhat later hominin presence seems to pick up, with more sites and now some also present in colder climatic settings. It is again only later, around 350,000 years ago, that the first sites show up in more continental, central parts of Europe, east of the Rhine. A series of recent papers on the Early Pleistocene palaeontological site of Untermassfeld (Thuringia, Germany) makes claims that are of great interest for studies of earliest Europe and are at odds with the described pattern: the papers suggest that Untermassfeld has yielded stone tools and humanly modified faunal remains, evidence for a 1 million years old hominin presence in European continental mid-latitudes, and additional evidence that hominins were well-established in Europe already around that time period. Here, we evaluate these claims and demonstrate that these studies are severely flawed in terms of data on provenance of the materials studied and in the interpretation of faunal remains and lithics as testifying to a hominin presence at the site. In actual fact, any reference to the Untermassfeld site as an archaeological one is unwarranted. Furthermore, it is not the only European Early Pleistocene site where inferred evidence for hominin presence is problematic. The strength of the spatiotemporal patterns of hominin presence and absence depends on the quality of the data points we work with, and database maintenance, including critical evaluation of new sites, is crucial to advance our knowledge of the expansions and contractions of hominin ranges during the Pleistocene.

Keywords: Early Pleistocene | Lower Palaeolithic | Europe | Hominin dispersal | Bone modifications | Pseudo-artefacts

Anthropologie

Akhilesh 2018

Kumar Akhilesh, Shanti Pappu, Haresh M. Rajapara, Yanni Gunnell, Anil D. Shukla & Ashok K. Singhvi, *Early Middle Palaeolithic culture in India around 385–172 ka reframes Out of Africa models*. nature **554** (2018), 97–101.

n554-0097-Supplement.pdf

Luminescence dating at the stratified prehistoric site of Attirampakkam, India, has shown that processes signifying the end of the Acheulian culture and the emergence of a Middle Palaeolithic culture occurred at 385 ± 64 thousand years ago (ka), much earlier than conventionally presumed for South Asia1. The Middle Palaeolithic continued at Attirampakkam until 172 ± 41 ka. Chronologies of Middle Palaeolithic technologies in regions distant from Africa and Europe are crucial for testing theories about the origins and early evolution of these cultures, and for understanding their association with modern humans or archaic hominins, their links with preceding Acheulian cultures and the spread of Levallois lithic technologies2–20. The geographic location of India and its rich Middle Palaeolithic record are ideally suited to addressing these issues, but progress has been limited

by the paucity of excavated sites and hominin fossils as well as by geochronological constraints1,8. At Attirampakkam, the gradual disuse of bifaces, the predominance of small tools, the appearance of distinctive and diverse Levallois flake and point strategies, and the blade component all highlight a notable shift away from the preceding Acheulian large-flake technologies9. These findings document a process of substantial behavioural change that occurred in India at 385 ± 64 ka and establish its contemporaneity with similar processes recorded in Africa and Europe2–8,10–13. This suggests complex interactions between local developments and ongoing global transformations. Together, these observations call for a re-evaluation of models that restrict the origins of Indian Middle Palaeolithic culture to the incidence of modern human dispersals after approximately 125 ka19,21.

Callaway 2018

Ewen Callaway, *Femur findings remain a secret*. nature **553** (2018), 391–392.

Fresh take on human ancestry struggles to be accepted.

Callaway 2018

Ewen Callaway, *Israeli fossils hint at early migration*. nature **554** (2018), 15–16.

Bones suggest humans left Africa 180,000 years ago.

[...] says John Shea, an archaeologist at Stony Brook University in New York. "We tend to think of Israel as part of Asia for geopolitical reasons, but it is really a transition zone between North Africa and western Asia," he says. "Plenty of Afro-Arabian animals live there, or did so until recently," including leopards, lions and zebras. "Homo sapiens," Shea says, "is just another such Afro-Arabian species."

Archäologie

Kerig 2013

Tim Kerig, *Introducing Economic Archaeology*, *Examples from Neolithic Agriculture and Hallstatt Princely Tombs*. In: Tim Kerig & Andreas Zimmermann (Hrsg.), *Economic archaeology*, *From structure to performance in European archaeology*. Universitätsforschungen zur prähistorischen Archäologie 237 (Bonn 2013), 13–28.

Economic approaches to archaeology are certainly not new, but economics in the strict sense are seldom applied. Economics can add new perspectives on some important archaeological questions. Even if the theoretical assumptions of economists are far from being unified, the field offers a framework for rational explanation in terms of costs and benefits. After giving short working definitions of concepts of economy and economic archaeology, the usefulness of an economic perspective will be exemplified by 1) a linear model of labour input and yields that can explain, even predict, economic and societal changes becoming obvious at some points in the evolution of the Neolithic, 2) the explanation of the richness and the spatial arrangement of Early Celtic princely tombs in terms of marginal utility. Those economic explanations add different and useful insights to the variety of archaeological interpretations by identifying specific conditions, limitations and margins of human action.

Bibel

Delitzsch 1902
: Friedrich Delitzsch, *Babel und Bibel, Ein Vortrag.* (Leipzig 1902). Reprint 2017.

Delitzsch 1920
: Friedrich Delitzsch, *Die Grosse Täuschung: Kritische Betrachtungen zu den AT Berichten über Israels Eindringen in Kanaan, die Gottesoffenbarung vom Sinai und die Wirksamkeit der Propheten.* (Stuttgart 1920). Reprint 2017.

Joosten 2016
: Jan Joosten, *Pseudo-Classicisms in Late Biblical Hebrew.* Zeitschrift für die Alttestamentliche Wissenschaft **128** (2016), 16–29.

  Several words and expressions turn up in ancient Hebrew texts with two sets of meanings: one old, genuine, and more often than not paralleled in cognate languages, and one late and secondary, with echoes in the ancient versions and exegetical writings. To all appearances, these are words that were reused in a meaning based on scriptural exegesis after their original meaning was forgotten. Pseudo-classicisms show that scriptural interpretation had become an institution at the time of the late biblical books. They also show that interpretation led to re-appropriation, with later authors making a strong claim to continuity with earlier writings that had become authoritative. They provide strong evidence of diachronic evolution in ancient Hebrew. CBH and LBH are not the same language, nor even contiguous chronolects: they are separated by a period of time long enough to allow for the forgetting of many expressions, their reinterpretation in an unrelated way, and their revivification with the new meaning.

  Zahlreiche Wörter und Ausdrücke erscheinen in althebräischen Texten in zweierlei Bedeutung: einer alten, genuinen, meist nicht parallel zu verwandten Sprachen, und einer späten und sekundären, mit Anklängen an die alten Übersetzungen und exegetischen Schriften. Allem Anschein nach sind dies Worte, die nachdem die ursprüngliche Bedeutung vergessen wurde, in einer Bedeutung wiederverwendet wurden, die auf der Schriftexegese beruht. PseudoKlassizismen zeigen, dass die Schriftinterpretation zur Zeit der späten biblischen Bücher zu einer Institution geworden war. Sie zeigen auch, dass die Interpretation zu einer Wiederaneignung führt, wobei spätere Verfasser stark Kontinuität zu früheren Schriften forderten, die bereits als autoritativ galten. Sie liefern deutliche Hinweise zur diachronen Entwicklung des Althebräischen. CBH und LBH bilden nicht die gleiche Sprache, noch nicht einmal zusammenhängende Chronolekte: Sie sind durch eine Zeitspanne getrennt, die lang genug war, um es zu ermöglichen, dass viele Ausdrücke vergessen, in einer unabhängigen Weise neuinterpretiert und in neuer Bedeutung wiederbelebt wurden.

Na'aman 2016
: Nadav Na'aman, *The "Kenite Hypothesis" in the Light of the Excavations at Ḥorvat 'Uza.* In: Gilda Bartoloni, Maria Giovanna Biga & Armando Bramanti (Hrsg.), *Not Only History, Proc. Conf. in Honor of Mario Liverani, Sapienza–Università di Roma, Dip. di Scienze dell'Antichità, 20–21 April 2009.* (Winona Lake 2016), 171–182.

In light of this discussion, we may cautiously conclude that a general accord exists between the commonly held view of the origins of YHWH in the southern periphery of the land of Canaan—possibly among the Kenite (and Midianite) pastoral groups wandering there—and the findings from Horvat Uza, where groups of Kenites settled in the 7th century BCE. The personal names as reflected in the ostraca uncovered at the site are an indication of the devotion of the inhabitants to YHWH, and the absence of anthropomorphic figurines (and figurines of horse riders) points to an avoidance of making figurative representations in the place. Furthermore, the absence of anthropomorphic figurines at the site is exceptional in comparison with other sites all over the Kingdom of Judah (see the distribution map in Kletter 1996: 96) and may reflect the aniconic tendency of the Kenites who lived at Horvat Uza.

One serious limitation to this conclusion, however, is the fact that the documents and artifacts on hand reflect only the situation in the last century of the Kingdom of Judah, while a "black holeëxists in our knowledge of the long time span between the early Iron Age and the 7th century BCE. Nevertheless, the ostraca and figurines apparently reflect the cultic practice and religious beliefs of the Kenites who lived in Horvat Uza in the late First Temple Period and who may have maintained the inherited traditions of their ancestors who wandered in this area hundreds of years before their time.

Biologie

Zarulli 2018

Virginia Zarulli, Julia A. Barthold Jones, Anna Oksuzyan, Rune Lindahl-Jacobsen, Kaare Christensen & James W. Vaupel, *Women live longer than men even during severe famines and epidemics*. PNAS **115** (2018), E832–E840.

Women in almost all modern populations live longer than men. Research to date provides evidence for both biological and social factors influencing this gender gap. Conditions when both men and women experience extremely high levels of mortality risk are unexplored sources of information. We investigate the survival of both sexes in seven populations under extreme conditions from famines, epidemics, and slavery. Women survived better than men: In all populations, they had lower mortality across almost all ages, and, with the exception of one slave population, they lived longer on average than men. Gender differences in infant mortality contributed the most to the gender gap in life expectancy, indicating that newborn girls were able to survive extreme mortality hazards better than newborn boys. Our results confirm the ubiquity of a female survival advantage even when mortality is extraordinarily high. The hypothesis that the survival advantage of women has fundamental biological underpinnings is supported by the fact that under very harsh conditions females survive better than males even at infant ages when behavioral and social differences may be minimal or favor males. Our findings also indicate that the female advantage differs across environments and is modulated by social factors.

Keywords: famines | epidemics | mortality | survival | gender

Significance: Women live longer than men in nearly all populations today. Some research focuses on the biological origins of the female advantage; other research stresses the significance of social factors. We studied male–female survival differences in populations of slaves and populations exposed to severe famines and epidemics. We find that even when mortality was very high, women lived longer on average than men. Most of the female advantage was due to differences in mor-

tality among infants: baby girls were able to survive harsh conditions better than baby boys. These results support the view that the female survival advantage is modulated by a complex interaction of biological environmental and social factors.

Judentum

Krauss 1902
: Samuel Krauss, *Das Leben Jesu nach jüdischen Quellen*. (Berlin 1902). Reprint 2017.

Müller-Kessler 2013
: Christa Müller-Kessler, *Eine ungewöhnliche Hekhalot-Zauberschale und ihr babylonisches Umfeld*, *Jüdisches Gedankengut in den Magischen Texten des Ostens*. Frankfurter Judaistische Beiträge **38** (2013), 69–84.

Klima

Marsicek 2018
: Jeremiah Marsicek, Bryan N. Shuman, Patrick J. Bartlein, Sarah L. Shafer & Simon Brewer, *Reconciling divergent trends and millennial variations in Holocene temperatures*. nature **554** (2018), 92–96.

Cooling during most of the past two millennia has been widely recognized1,2 and has been inferred to be the dominant global temperature trend of the past 11,700 years (the Holocene epoch)3. However, long-term cooling has been difficult to reconcile with global forcing4, and climate models consistently simulate long-term warming4. The divergence between simulations and reconstructions emerges primarily for northern mid-latitudes, for which pronounced cooling has been inferred from marine and coastal records using multiple approaches3. Here we show that temperatures reconstructed from sub-fossil pollen from 642 sites across North America and Europe closely match simulations, and that long-term warming, not cooling, defined the Holocene until around 2,000 years ago. The reconstructions indicate that evidence of long-term cooling was limited to North Atlantic records. Early Holocene temperatures on the continents were more than two degrees Celsius below those of the past two millennia, consistent with the simulated effects of remnant ice sheets in the climate model Community Climate System Model 3 (CCSM3)5. CCSM3 simulates increases in 'growing degree days'—a measure of the accumulated warmth above five degrees Celsius per year—of more than 300 kelvin days over the Holocene, consistent with inferences from the pollen data. It also simulates a decrease in mean summer temperatures of more than two degrees Celsius, which correlates with reconstructed marine trends and highlights the potential importance of the different subseasonal sensitivities of the records. Despite the differing trends, pollenand marine-based reconstructions are correlated at millennial-tocentennial scales, probably in response to ice-sheet and meltwater dynamics, and to stochastic dynamics similar to the temperature variations produced by CCSM3. Although our results depend on a single source of palaeoclimatic data (pollen) and a single climatemodel simulation, they reinforce the notion that climate models can adequately simulate climates for periods other than the present-day. They also demonstrate that amplified warming in recent decades increased temperatures above the mean of any century during the past 11,000 years.

Shakun 2018

Jeremy D. Shakun, *Pollen weighs in on a climate conundrum*. nature **554** (2018), 39–40.

Simulations by climate models show that Earth warmed during the Holocene epoch, whereas ocean sedimentary cores suggest that global cooling occurred. An analysis of fossil pollen samples now sides with the models.

Kultur

Dalton 1965

George Dalton, *Primitive Money*. American Anthropologist **67** (1965), 44–65.

Money traits differ where socio-economic organization differs. To concentrate attention on money traits independently of underlying organization leads writers to use the traits of Western money as a model of the real thing (while ignoring the structure of Western economy which accounts for the money traits). Then any primitive money which does not have all the traits of the Western model money is simply ruled out by definition-it is not money. This does not get us very far towards understanding primitive and peasant economies.

Two distinctions which allow us to contrast primitive and Western money are the distinctions between commercial and non-commercial uses of money, and between marketless economies, those with peripheral markets only, and market-integrated economies. In sum, money has no definable essence apart from the uses money objects serve, and these depend upon the transactional modes that characterize each economy: as tangible item as well as abstract measure, "money is what money does" (Reynolds 1963:474).

The trouble with the literature is that even the early anthropologists (Boas first wrote in 1887) were describing Western market incursion well underway, without fully appreciating the radical difference it made to the potlatch when everyone had rank positions and access to purchased goods. Any generalization made about the nature of the potlatch should bear a date.

Domingue 2018

Benjamin W. Domingue, Daniel W. Belsky, Jason M. Fletcher, Dalton Conley, Jason D. Boardman & Kathleen Mullan Harris, *The social genome of friends and schoolmates in the National Longitudinal Study of Adolescent to Adult Health*. PNAS **115** (2018), 702–707.

Humans tend to form social relationships with others who resemble them. Whether this sorting of like with like arises from historical patterns of migration, meso-level social structures in modern society, or individual-level selection of similar peers remains unsettled. Recent research has evaluated the possibility that unobserved genotypes may play an important role in the creation of homophilous relationships. We extend this work by using data from 5,500 adolescents from the National Longitudinal Study of Adolescent to Adult Health (Add Health) to examine genetic similarities among pairs of friends. Although there is some evidence that friends have correlated genotypes, both at the whole-genome level as well as at trait-associated loci (via polygenic scores), further analysis suggests that meso-level forces, such as school assignment, are a principal source of genetic similarity between friends. We also observe apparent social– genetic effects in which polygenic scores of an individual's friends and schoolmates predict the individual's own educational attainment. In contrast, an individual's height is unassociated with the height genetics of peers.

Keywords: GWAS | polygenic score | social–genetic effect | educational attainment | BMI

Significance: Our study reported significant findings of a "social genome" that can be quantified and studied to understand human health and behavior. In a national sample of more than 5,000 American adolescents, we found evidence of social forces that act to make friends and schoolmates more genetically similar to one another compared with random pairs of unrelated individuals. This subtle genetic similarity was observed across the entire genome and at sets of genomic locations linked with specific traits—educational attainment and body mass index—a phenomenon we term "social–genetic correlation." We also find evidence of a "social– genetic effect" such that the genetics of a person's friends and schoolmates influenced their own education, even after accounting for the person's own genetics.

Kienlin 2017

Tobias L. Kienlin, Klára P. Fischl & Liviu Marta, *Exploring Divergent Trajectories in Bronze Age Landscapes, Tell Settlement in the Hungarian Borsod Plain and the Romanian Ier Valley.* Ziridava, Studia Archaeologica **31** (2017), 93–128.

Drawing on data from ongoing projects in the Hungarian Borsod plain, occupied by Hatvan and subsequent (Otomani-)Füzesabony communities, and the Romanian Carei plain, occupied by Sanislău and following Otomani communities, it is argued in this paper that the traditional modelling of Bronze Age tell sites as proto-urban, chiely settlements falls short of a more complex ancient reality. Rather than being a weak relection of Mediterranean palatial society, it can be shown that tell settlement in the Carpathian Basin is a complex and variable phenomenon – in chronological and regional terms as well as in socio-political and cultural ones. Our modern perception that such sites were dominating the landscape is partly misleading and impoverishes our understanding of the communities under study. Instead, it can be shown that there were diferent trajectories taken by 'tell-building' communities throughout the Carpathian Basin. here is a wide range of organisational options and divergent regional trajectories that should not be subsumed under covering models of the "Rise of Bronze Age Society".

Keywords: Early and Middle Bronze Age | tell settlement | settlement patterns | centre and periphery

Maurer 2006

Bill Maurer, *The Anthropology of Money.* Annual Review of Anthropology **35** (2006), 15–36.

This review surveys anthropological and other social research on money and finance. It emphasizes money's social roles and meanings as well as its pragmatics in different modalities of exchange and circulation. It reviews scholarly emphasis on modern money's distinctive qualities of commensuration, abstraction, quantification, and reification. It also addresses recent work that seeks to understand the social, semiotic, and performative dimensions of finance. Although anthropology has contributed finely grained, historicized accounts of the impact of modern money, it too often repeats the same story of the "great transformation" from socially embedded to disembedded and abstracted economic forms. This review speculates about why money's fictions continue to surprise.

Keywords: abstraction | commensuration | currency | finance | number | quantification

Steinkeller 2015

Piotr Steinkeller, *Labor in the Early States, An Early Mesopotamian Perspective*. In: Piotr Steinkeller & Michael Hudson (Hrsg.), *Labor in the ancient world, A Colloquium held at Hirschbach (Saxony), April 2005*. The International Scholars Conference on Ancient Near Eastern Economies 5 (Dresden 2015), 1–35.

For an agrarian human group to develop any appreciable level of social complexity, most basically, labor specialization, surpluses in kind are necessary. Without a surplus, that hypothetical group will have no crafts, nor will it be able to engage in economic exchanges with other communities. And, in order to produce agricultural surpluses, considerable labor investments, usually beyond the capacities of a single family, must be made. As Marshall Sahlins reminds us, the only way to obtain a surplus is through the intensification of labor: "getting people to work more, or more people to work."

[E]ven if one assumes that the population of Göbekli had a social organization up to that task, how was a group of hunters and gatherers able to produce the surplus—a surplus of what!?—that apparently would have been needed to finance this undertaking?

Steinkeller 2015

Piotr Steinkeller, *The Employment of Labor on National Building Projects in the Ur III Period*. In: Piotr Steinkeller & Michael Hudson (Hrsg.), *Labor in the ancient world, A Colloquium held at Hirschbach (Saxony), April 2005*. The International Scholars Conference on Ancient Near Eastern Economies 5 (Dresden 2015), 137–236.

One may even wonder as to the true objective of these projects. Was it the pyramids themselves? Or was it rather the goal of creating a sense of unity and common culture and ideology among the different parts of Egypt that contributed labor and other resources toward these undertakings? Perhaps it would not be too much of an exaggeration to suggest that it was the pyramids that built the Egyptian nation and its sense of shared culture. At the very least, one needs to recognize that these projects constituted an enormous integrating force, which must have contributed mightily toward the formation of the Egyptian national and cultural identity.

Because of this, what motivated the builders of Göbekli Tepe to contribute their labor likely was not just the expectation of free food and drink. An equally (if not more) important motivation in that respect must have been the possibility of participating in Göbekli's cultic rituals and, through that, of coming into the direct contact with the divine world—or, in other words, of partaking in a profound religious experience.

I stressed earlier that the Ur III national building projects involving participation of the entire country were an important political tool, in that they strengthened social cohesion, thereby significantly contributing toward the creation of a sense of national identity and a unified ideological system. Elementary forms of such social strategies may have been at work already in Göbekli Tepe.

Mesolithikum

Kyparissi-Apostolika 2000

Nina Kyparissi-Apostolika, *The Mesolithic/Neolithic Transition in*

Greece as Evidenced by the Data at Theopetra Cave in Thessaly. Documenta Praehistorica **27** (2000), 133–140.

The Mesolithic period was sparsely documented in some littoral sites in Greece until 1992, when it was first testified in Theopetra Cave, western Thessaly, in central Greece. Excavation data in Theopetra indicate a very normal and natural transition from the Mesolithic to the Neolithic, which is documented by (a) the presence of unbaked masses of clay in the Mesolithic layers and a few atypical and monochrome sherds found at the same layers could show the very initial samples ofpottery technology, (b) The presence of domesticated sheep and goat in the Mesolithic zoo-archaeological material, and a good percentage of wild fauna in the Neolithic deposit, indicating a rather similar way of life in both periods; (c) the presence of cultivated hulled six-row barley and of wild eincorn, both testifying farming as a local development and not as knowledge that came from the Near East to Greece, (d) The biological homogeneity which derives from the DNA analysis of human bones of successive periods.

Keywords: Theopetra | Thessaly | Mesolithic | transition to farming.

Metallzeiten

Pare 2017

Christopher Pare, *Frühes Eisen in Südeuropa, Die Ausbreitung einer technologischen Innovation am Übergang vom 2. zum 1. Jahrtausend v. Chr.* In: Elena Miroššayová, Christopher Pare & Susanne Stegmann-Rajtár (Hrsg.), *Das nördliche Karpatenbecken in der Hallstattzeit, Wirtschaft, Handel und Kommunikation in früheisenzeitlichen Gesellschaften zwischen Ostalpen und Westpannonien.* Archaeolingua 38 (Budapest 2017), 11–116.

Die ältesten Eisengegenstände treten in Ägypten, Mesopotamien und Anatolien sowie im Raum zwischen der pontischen Steppe und Südsibirien im späten 4. und 3. Jahrtausend v. Chr. auf. Bei diesen frühen Eisengegenständen handelt es sich oft um Meteoriteisen. Im nachfolgenden 2. Jahrtausend v. Chr. ist Eisen vor allem aus Anatolien überliefert. Die Ausbreitung der Eisenmetallurgie im Vorderen Orient, im Ostmittelmeerraum und in der Ägäis im späten 2. und frühen 1. Jahrtausend v. Chr. wird eingehend behandelt und im Hauptteil die Einführung des neuen Metalls im südeuropäischen Arbeitsgebiet detailliert beschrieben (Portugal, Spanien, Italien, westliche und zentrale Balkanhalbinsel, Rumänien, Moldawien, Ukraine bis zur Dnjepr). Die frühen Eisenfunde im zentralen und westlichen Mittelmeerraum zeigen eine küstennahe Verbreitung, u.a. in Südwestalbanien, im Karst/Soèa-Gebiet Sloweniens, in Süditalien, in Südostsizilien, in Sardinien, auf den Balearischen Inseln und in Zentralportugal. Es erscheint plausibel, dass Eisen im 11./10. Jahrhundert v. Chr. zunächst von ägäischen und/oder ostmediterranen Seefahrern dorthin vermittelt wurde. Im Raum nördlich des Schwarzmeers wird Eisen ungefähr gleichzeitig vor allem für Messer und Dolchmesser eingeführt. Etwas unklar ist immer noch die Frage nach dem möglichen frühen Beginn der Eisenverarbeitung bzw. -gewinnung in Rumänien und der Slowakei, wo einige Fundstücke schon vor das 11. Jahrhundert v. Chr. datiert werden. In der abschließenden Diskussion wird der historische Kontext der Ausbreitung des neuen Metalls im 12./11. Jahrhundert v. Chr. erörtert und die früheste Verwendung des Eisens – z.B. als “special purpose metal” – diskutiert.

Keywords: Eisen | Metallurgie | Bronzezeit | Technologische Innovation

Neolithikum

Abbo 2011

S. Abbo, E. Rachamim, Y. Zehavi, I. Zezak, S. Lev-Yadun & A. Gopher, *Experimental growing of wild pea in Israel and its bearing on Near Eastern plant domestication*. Annals of Botany **107** (2011), 1399–1404.

Background and Aims The wild progenitors of the Near Eastern legumes have low germination rates mediated by hardseededness. Hence it was argued that cultivation of these wild legumes would probably result in no yield gain. Based on the meagre natural yield of wild lentil and its poor germination, it was suggested that wild Near Eastern grain legumes were unlikely to have been adopted for cultivation unless freely germinating types were available for the incipient farmers. Unlike wild cereals, data from experimental cultivation of wild legumes are lacking.
Methods Replicated nurseries of wild pea (Pisum elatius, P. humile and P. fulvum) were sown during 2007– 2010 in the Mediterranean district of Israel. To assess the effect of hardseededness on the yield potential, seeds of the wild species were either subjected to scarification (to ensure germination) or left intact, and compared with domesticated controls.
Key Results Sowing intact wild pea seeds mostly resulted in net yield loss due to poor establishment caused by wild-type low germination rates, while ensuring crop establishment by scarification resulted in net, although modest, yield gain, despite considerable losses due to pod dehiscence. Harvest efficiency of the wild pea plots was significantly higher (2–5 kg seeds h21) compared with foraging efficiency in wild pea populations (ranging from a few grams to 0.6 kg h21).
Conclusions Germination and yield data from 'cultivation' of wild pea suggest that Near Eastern legumes are unlikely to have been domesticated via a protracted process. Put differently, the agronomic implications of the hardseededness of wild legumes are incompatible with a millennia-long scenario of unconscious selection processes leading to 'full' domestication. This is because net yield loss in cultivation attempts is most likely to have resulted in abandonment of the respective species within a short time frame, rather than perpetual unprofitable cultivation for several centuries or millennia.

Keywords: Legume domestication | pre-domestication cultivation | protracted vs. contracted plant domestication | wild pea | Pisum elatius | P. humile | P. fulvum.

Abbo 2014

Shahal Abbo, Ruth Pinhasi van-Oss, Avi Gopher, Yehoshua Saranga, Itai Ofner & Zvi Peleg, *Plant domestication versus crop evolution: a conceptual framework for cereals and grain legumes*. Trends in Plant Science **19** (2014), 351–360.

'Domestication syndrome' (DS) denotes differences between domesticated plants and their wild progenitors. Crop plants are dynamic entities; hence, not all parameters distinguishing wild progenitors from cultigens resulted from domestication. In this opinion article, we refine the DS concept using agronomic, genetic, and archaeobotanical considerations by distinguishing crucial domestication traits from traits that probably evolved post-domestication in Near Eastern grain crops. We propose that only traits showing a clear domesticated–wild dimorphism represent the pristine domestication episode, whereas traits showing a phenotypic continuum between wild and domesticated gene pools mostly reflect post-domestication diversification. We propose that our approach may apply to other crop types and examine its implications for discussing the timeframe of plant domestication and for modern plant science and breeding.

Abbo 2017

Shahal Abbo & Avi Gopher, *Near Eastern Plant Domestication, A History of Thought*. Trends in Plant Science **22** (2017), 491–511.

The Agricultural Revolution and plant domestication in the Near East (among its components) have fascinated generations of scholars. Here, we narrate the history of ideas underlying plant domestication research since the late 19th century. Biological and cultural perspectives are presented through two prevailing models: one views plant domestication as a protracted, unconscious evolutionary mutualistic (noncentric) process. The second advocates a punctuated, knowledge-based human initiative (centric). We scrutinize the research landscape while assessing the underlying evolutionary and cultural mechanisms. A parsimony measure indicates that the punctuated-centric view better accords with archaeological records, and the geobotany and biology of the species, and requires fewer assumptions. The protracted alternative requires many assumptions, does not account for legume biology, fails to distinguish domestication from postdomestication changes, and, therefore, is less parsimonious.

Gopher 2013

Avi Gopher, Simcha Lev-Yadun & Shahal Abbo, *A Response to "Arguments Against the Core Area Hypothesis" for Plant Domestication*. Tel Aviv: Archaeology **40** (2013), 187–196.

The paper relates to several issues concerning geographical and chronological aspects of the 'core area' model for plant domestication in the Levant (LevYadun et al. 2000), as presented in Fuller et al. (2011). The paper stresses that the core area as depicted by Fuller et al. does not correspond to the original core area map and list of Neolithic sites published by the authors (Lev-Yadun et al. 2000). It also discusses the alternative model suggested by Fuller et al., namely the alleged existence of autonomous, independent domestication centres in the Levant, a suggestion that does not conform to the available archaeobotanical, as well as genetic and archaeological data. A primarily technical section on chronology considers the procedures used by Fuller and his associates concerning 14C dating. Archaeobotanical data inconsistencies are also noted.

Keywords: Neolithic | plant domestication | core area

Shennan 2017

Stephen Shennan, Andy Bevan, Kevan Edinborough, Tim Kerig, Mike Parker Pearson & Peter Schauer, *Supply and Demand in Prehistory? Economics of Neolithic Mining in NW Europe (NEOMINE)*. Archaeology International **20** (2017), 74–79.

The results show that there is a significant difference between the mine and quarry site SPD and the hinterland mean confidence envelope. In particular, we can see that mine activity accelerated rapidly after beginning around 4500 cal. BC, in advance of the Neolithic population increase in Britain and Ireland, leading the population curve by around 200 years (though our method will tend to exaggerate the effect of the early end of the individual date probability distributions for both the mines and the population). Since the main products of the mines and quarries were axes it seems likely that this corresponds to a period of forest clearance by the immigrant groups who introduced farming to Britain and Ireland at this time (Olalde et al. 2017). Mining activity then declined, before rising again around 3000 cal. BC. The hinterland population decreased sharply after this, and when it recovered from 2500 cal. BC onwards, flint and stone mining did not return, probably because the first copper metallurgy was introduced at this time. The

pattern was the same whether we used 100 year 'bins' for the mine dates (Fig. 1) or reduced the dates even more, to only one per mine (Fig. 2).

Politik

Feiglin 1999

Moshe Feiglin, *Where There Are No Men, The Struggle of the 'Zo Artzeinu' Movement Against the Post-Zionist Collapse*. (Kein Ort 1999).

Sprachlehre

Müller-Kessler 2000

Christa Müller-Kessler, *SSṬM, ŚSṬM, ŚṢṬM, SṢṬM or ŠSTM: A Technical Term for Shackling Demons, Contributions to the Babylonian Aramaic Dictionary*. Ancient Near Eastern Studies **37** (2000), 224–228.

Story or Book

Woolfson 2018

Adrian Woolfson, *The messy biological basis of culture*. nature **554** (2018), 30.

Adrian Woolfson heralds Antonio Damasio's bold argument that emotions define us.

The Strange Order of Things: Life, Feeling, and the Making of Cultures. Antonio Damasio. Pantheon: 2018.

Although compelling and refreshingly original, Damasio's thesis would have benefited from a more detailed exposition of the scientific evidence supporting his assertions. The lack of substantial discussion of supporting literature is a significant weakness. As a result, the text reads more like a nineteenth-century philosophical treatise than a contemporary study.

Still, The Strange Order of Things addresses several important questions. One of the more compelling consequences of Damasio's organic linkage of mental processes to the properties of biological hardware is that tinkering — such as the use of artificial amino acids and other synthetic-biology technologies — might have unforeseen consequences. Indeed, if Damasio is correct, the precise nature of the substrate that facilitates the performance of biological 'computing machines' will crucially determine their ability to generate mental phenomena. We certainly couldn't expect putative extraterrestrial life forms, which might have evolved by way of unfamiliar biological chemistries and structures, to experience feelings and mental processes in the same way that we do.