

Literatur

Aktuell

LAURIE 2012

Ben Laurie & Cory Doctorow, *Secure the Internet*. [nature](#) **491** (2012), 325–326.

Software engineers must close the loophole used to intercept online communications, say Ben Laurie and Cory Doctorow.

History tells us that those who seek new avenues of attack will eventually find them. But this troubling breach must be closed down now.

Anthropologie

AIELLO 2002

Leslie C. Aiello & Cathy Key, *Energetic Consequences of Being a Homo erectus Female*. [American Journal of Human Biology](#) **14** (2002), 551–565.

Body size is one of the most important characteristics of any animal because it affects a range of behavioral, ecological, and physiological traits including energy requirements, choice of food, reproductive strategies, predation risk, range size, and locomotor style. This article focuses on the implications of being large bodied for Homo erectus females, estimated to have been over 50% heavier than average australopithecine females. The energy requirements of these hominins are modeled using data on activity patterns, body mass, and life history from living primates. Particular attention is given to the inferred energetic costs of reproduction for Homo erectus females based on chimpanzee and human reproductive scheduling. Daily energy requirements during gestation and lactation would have been significantly higher for Homo erectus females, as would total energetic cost per offspring if the australopithecines and Homo erectus had similar reproductive schedules (gestation and lactation lengths and interbirth intervals). Shortening the interbirth interval could considerably reduce the costs per offspring to Homo erectus and have the added advantage of increasing reproductive output. The mother would, however, incur additional daily costs of caring for the dependent offspring. If Homo erectus females adopted this reproductive strategy, it would necessarily imply a revolution in the way in which females obtained and utilized energy to support their increased energetic requirements. This transformation is likely to have occurred on several levels involving cooperative economic division of labor, locomotor energetics, menopause, organ size, and other physiological mechanisms for reducing the energetic load on females.

BURRIS 2009

Robert P. Burriss, *Symmetry is sexy: reply to Hodgson's 'Symmetry and humans'*. [Antiquity](#) **83** (2009), 1170–1175.

Hodgson's (2009) argument that physiological symmetry is not connected with health or attractiveness is not only unsupported by the literature but is also irrelevant to the debate. At present I agree with Mithen's (2008: 766) assessment that the 'Sexy Handaxe Theory' remains the most parsimonious and complete explanation for the level of symmetry evident in Acheulean handaxes, as well as their various characteristics of dispersion, persistence and morphology.

HAYDEN 2009

Brian Hayden & Suzanne Villeneuve, *Sex, symmetry and silliness in the bifacial world*. *Antiquity* **83** (2009), 1163–1170.

The basic symmetrical biface form makes far more sense as firmly rooted in the practicalities of lithic inventorying, mobility, processing volumes, and other fundamental design constraints. In order to explain the appearance and demise of specific archaeological aspects, it may be trendy to attempt to clothe old artefacts in the mantles of new theories like sexual selection, signalling theory, or evolutionary psychology of symmetry. However, without a firmly grounded understanding of the basic technology involved and its constituent constraints, it soon becomes apparent that the new clothes of such theoretical emperors are embarrassingly lacking in substance.

HODGSON 2009

Derek Hodgson, *Symmetry and humans: reply to Mithen's 'Sexy Handaxe Theory'*. *Antiquity* **83** (2009), 195–198.

In view of the above criticisms, Mithen's 'Sexy Handaxe Theory' explanation for the 'oddities' of Acheulean handaxes is open to doubt. Not only is there an alternative and more parsimonious theory that can explain the various traits of such tools, but evidence suggests that symmetry is not connected with health and thus cannot have served as a sign of genetic worth.

KOHN 1999

Marek Kohn & Steven Mithen, *Handaxes: products of sexual selection?* *Antiquity* **73** (1999), 518–526.

Why were handaxes made and why was their shape symmetrical and regular? These and many other questions are considered here, in a paper tackling hominid social behaviour and sexual selection.

Key words: handaxes, sexual selection, mate choice, Lower Palaeolithic technology, happing

MACHIN 2008

Anna Jane Machin, *Why handaxes just aren't that sexy: a response to Kohn & Mithen (1999)*. *Antiquity* **82** (2008), 761–766.

The lack of supporting evidence both from the record and for a clear mechanism of selection leads to the conclusion that the SHT is not a valid theory. This is not to say that the handaxe was not involved in display but, as I have argued elsewhere, this role was in all probability the result of natural selection linked to the value of a well-made handaxe and its maker to the survival of the group (Machin in press). Further, whilst the SHT may not stand up to the rigours of analysis it should be saluted as one of the first attempts to suggest a role for the handaxe within the social domain.

MITHEN 2008

Steven Mithen, *'Whatever turns you on': a response to Anna Machin, 'Why handaxes just aren't that sexy'*. *Antiquity* **82** (2008), 766–769.

My final point is simply a question I would like to ask Machin, along with others who doubt the sexy handaxe theory. Why does it feel so enthralling to hold a finely made symmetrical handaxe in one's hand? Why does a symmetrical handaxe look and feel so attractive? To simply argue that this arises from an 'aesthetic sense' is inadequate, for where does that sense itself arise from (see Voland 2003)? My guess is that the thrill of holding a finely made symmetrical handaxe is an echo of the Stone Age past, of a time when these objects played a key role in sexual display and to which our modern minds remain attuned.

SPIKINS 2012

Penny Spikins, *Goodwill hunting? Debates over the ‘meaning’ of Lower Palaeolithic handaxe form revisited*. [World Archaeology 44 \(2012\), 378–392](#).

There has been intense debate over the ‘meaning’ of Lower Palaeolithic handaxe form. Handaxes date from about 1.7 million years onwards, and many show attention to elements of form such as symmetry and a conformity to the ‘golden ratio’ which go beyond immediate function. Our challenge in interpreting such patterning is that we cannot assume a ‘modern’ cognition to the makers of Acheulian handaxes nor capacities to negotiate concepts such as status or symbolism. Existing interpretations of handaxe form have been dominated by the seminal ‘sexy handaxe theory’ (Kohn and Mithen, *Antiquity*, 1999, 73: 518–26), which envisaged the production of handaxes as driven by sexual selection processes common to all mammal species. By contrast, it is argued here that an emerging concern with reputation building seen amongst higher primates developed within highly collaborative Acheulian societies into a concern with ‘trustworthiness’ and the expression of ‘gestures of goodwill’ to others via handaxe form.

Keywords: Handaxe; Acheulian; Lower Palaeolithic; reciprocal altruism; collaboration; trustworthiness.

STEEGMANN 2002

A. Theodore Steegmann, Jr., Frank J. Cerny & Trenton W. Holliday, *Neandertal Cold Adaptation: Physiological and Energetic Factors*. [American Journal of Human Biology 14 \(2002\), 566–583](#).

European Neandertals employed a complex set of physiological cold defenses, homologous to those seen in contemporary humans and nonhuman primates. While Neandertal morphological patterns, such as foreshortened extremities and low relative surface-area, may have explained some of the variance in cold resistance, it is suggested the adaptive package was strongly dependent on a rich array of physiological defenses. A summary of the environmental cold conditions in which the Neandertals lived is presented, and a comparative ethnographic model from Tierra del Fuego is used. Muscle and subcutaneous fat are excellent “passive” insulators. Neandertals were quite muscular, but it is unlikely that they could maintain enough superficial body fat to offer much cold protection. A major, high-energy metabolic adaptation facilitated by modest amounts of highly thermogenic brown adipose tissue (BAT) is proposed. In addition, Neandertals would have been protected by general mammalian cold defenses based on systemic vasoconstriction and intensified by acclimatization, aerobic fitness, and localized cold-induced vasodilation. However, these defenses are energetically expensive. Based on contemporary data from circumpolar peoples, it is estimated that Neandertals required 3,360 to 4,480 kcal per day to support strenuous winter foraging and cold resistance costs. Several specific genetic cold adaptations are also proposed—heat shock protein (actually, stress shock protein), an ACP*1 locus somatic growth factor, and a specialized calcium metabolism not as yet understood.

Grundlagen

DERGACHEV 2002

Valentin Dergachev, *Two Studies in Defence of the Migration Concept*. In: KATIE BOYLE, COLIN RENFREW & MARSHA LEVINE (Hrsg.), *Ancient interactions: east and west in Eurasia*. (Cambridge 2002), 93–112.

I hope I have succeeded in proving that the Cucuteni A-Tripolye B1 culture experienced a genuine shock (based on the analysis of the general dynamics of the development of this culture) and that this shock was caused by an external invasion (based on analysis of fortified settlements, their toponymy and the arrowheads), and that the threat presumably

come from the steppe zone. One should therefore attempt to determine who the bearers of this external threat and war were.

There is more than enough data to state that military invasion is connected with the steppe livestock breeders. Examine the material and you can immediately see that Gimbutas was right.

Klima

GHILARDI 2012

Matthieu Ghilardi et al., *The impact of rapid early- to mid-Holocene palaeoenvironmental changes on Neolithic settlement at Nea Nikomideia, Thessaloniki Plain, Greece*. [Quaternary International 266 \(2012\), 47–61](#).
Matthieu Ghilardi, David Psomiadis, Stéphane Cordier, Doriane Delanghe-Sabatier, François Demory, Fatiha Hamidi, Theodoros Paraschou, Elissavet Dotsika & Eric Fouache

The site of Nea Nikomideia is one of the oldest and most important Neolithic settlements in Northern Greece and the wider Balkan Peninsula, having been first occupied by early farmers at around 6500 cal. BC. Important archaeological excavations conducted in the 1960s suggested that the settlement was located close to an ancient coastline during the Neolithic. However, palaeoenvironmental change and landscape evolution in the vicinity of the site have seldom been considered in detail. Six cores from the western and central parts of the Thessaloniki Plain were therefore drilled in 2008 and subjected to palaeoenvironmental analyses, including sedimentology (LASER grain size and magnetic susceptibility measurements), chemical analysis (loss on ignition and carbonate content), stable isotopes analysis coupled with X-Ray diffraction measurements, molluscan faunal analysis and radiocarbon dating. The recognition of several important facies representing freshwater (lacustrine and fluvial) and brackish (lagoonal and marine-influenced) conditions have shed light on the environmental and landscape evolution of the western part of the Thessaloniki Plain and associated impacts on human occupation during the last 10,000 years. The general sequence proved in the cores indicates the predominance of lacustrine conditions during the early Holocene, with the occurrence of a marine transgression at c. 6000/5800 cal. B.C. This major palaeoenvironmental change corresponds with the 8.2 Ka event and is a likely cause for the desertion of Nea Nikomideia at that time. Subsequent regression of the shoreline to the east saw that the area around Nea Nikomideia returns to predominantly terrestrial conditions and the deposition of lacustrine and fluvial deposits.

ROHLING 2009

E. J. Rohling, K. Grant, M. Bolshaw, A. P. Roberts, M. Siddall, Ch. Hemleben & M. Kucera, *Antarctic temperature and global sea level closely coupled over the past five glacial cycles*. [Nature Geoscience 2 \(2009\), 500–504](#).
NatGeo02-500-Supplement.pdf

Ice cores from Antarctica record temperature and atmospheric carbon dioxide variations over the past six glacial cycles^{1,2}. Yet concomitant records of sea-level fluctuations—needed to reveal rates and magnitudes of ice-volume change that provide context to projections for the future^{3–9}—remain elusive. Reconstructions indicate fast rates of sea-level rise up to 5 cm yr⁻¹ during glacial terminations¹⁰, and 1–2 cm yr⁻¹ during interglacials^{11,12} and within the past glacial cycle¹³. However, little is known about the total long-term sea-level rise in equilibration to warming. Here we present a sea-level record for the past 520,000 years based on stable oxygen isotope analyses of planktonic foraminifera and bulk sediments from the Red Sea. Our record reveals a strong correlation on multimillennial timescales between global sea level and Antarctic temperature¹, which is related

to global temperature^{6,7}. On the basis of this correlation, we estimate sea level for the Middle Pliocene epoch (3.0–3.5 Myr ago)—a period with near-modern CO₂ levels—at 25 ± 5 m above present, which is validated by independent sea-level data^{6,14–16}. Our results imply that even stabilization at today’s CO₂ levels may cause sealevel rise over several millennia that by far exceeds existing long-term projections³.

SENEVIRATNE 2012

Sonia I. Seneviratne, *Historical drought trends revisited*. *nature* **491** (2012), 338–339.

A new assessment of drought trends over the past 60 years finds little evidence of an expansion of the area affected by droughts, contradicting several previous estimates.

SHEFFIELD 2012

Justin Sheffield, Eric F. Wood & Michael L. Roderick, *Little change in global drought over the past 60 years*. *nature* **491** (2012), 435–438.

n491-0435-Supplement.pdf

Drought is expected to increase in frequency and severity in the future as a result of climate change, mainly as a consequence of decreases in regional precipitation but also because of increasing evaporation driven by global warming^{1–3}. Previous assessments of historic changes in drought over the late twentieth and early twenty-first centuries indicate that this may already be happening globally. In particular, calculations of the Palmer Drought Severity Index (PDSI) show a decrease in moisture globally since the 1970s with a commensurate increase in the area in drought that is attributed, in part, to global warming^{4,5}. The simplicity of the PDSI, which is calculated from a simple water-balance model forced by monthly precipitation and temperature data, makes it an attractive tool in large-scale drought assessments, but may give biased results in the context of climate change⁶. Here we show that the previously reported increase in global drought is overestimated because the PDSI uses a simplified model of potential evaporation⁷ that responds only to changes in temperature and thus responds incorrectly to global warming in recent decades. More realistic calculations, based on the underlying physical principles⁸ that take into account changes in available energy, humidity and wind speed, suggest that there has been little change in drought over the past 60 years. The results have implications for how we interpret the impact of global warming on the hydrological cycle and its extremes, and may help to explain why palaeoclimate drought reconstructions based on tree-ring data diverge from the PDSI-based drought record in recent years^{9,10}.

Kultur

PETER-RÖCHER 1997

Heidi Peter-Röcher, *Bestattungssitten oder Opferbrauchtum? Anmerkungen zu menschlichen Skelettresten des älteren Neolithikums*. In: CORNELIA BECKER, MARIE-LUISE DUNKELMANN, CAROLA METZNER-NEBELSICK, HEIDI PETER-RÖCHER, MANFRED ROEDER & BIBA TERŽAN (Hrsg.), *Chronos, Beiträge zur Prähistorischen Archäologie zwischen Nord- und Südosteuropa, Festschrift für Bernhard Hansel*. *Studia honoraria* 1 (Espelkamp 1997), 59–66.

Festzuhalten bleibt, daß im Frühneolithikum unterschiedliche Verfahrensweisen hinsichtlich des Umgangs mit Verstorbenen praktiziert wurden, deren Hintergründe allem aus dem materiellen Bestand kaum erschließbar sein dürften. Zugang zur Gräberfeldbestattung hatte jedoch offensichtlich nur ein kleinerer Teil der linearbandkeramischen Bevölkerung — ob dies ein besonderes Privileg bedeutete, sei dahingestellt.

Kupfer

CIERNY 2005

Jan Cierny, Thomas Stöllner & Gerd Weisgerber, *Zinn in und aus Mitteleuropa*. In: ÜNSAL YALÇIN, CEMAL PULAK & RAINER SLOTTA (Hrsg.), *Das Schiff von Uluburun, Welthandel vor 3000 Jahren, Katalog der Ausstellung des Deutschen Bergbau-Museums Bochum vom 15. Juli 2005 bis 16. Juli 2006*. (Bochum 2005), 431–448.

Das Besondere der Lagerstätte von Muschiston ist aber, dass das Zinnerz mit Kupfererzen vermischt ist. Da dieses sich durch Verwitterung und Oxidation grün und gelb verfärbt hat, sind und waren beide Erze im Quarz nicht zu übersehen.

Es ist nur schwer vorstellbar, wie in der Bronzezeit Zinn- und Kupfererze getrennt worden sein sollen; daher wird es wohl so gewesen sein, dass beide Erze zusammen verhüttet wurden. Dann wäre das Kupfer lagerstättenbedingt mit dem gleichfalls im Erz enthaltenen Zinn im Schmelzofen bei der Verhüttung legiert worden. Die Kupfer-Zinn-Legierung Bronze wäre dann unter Umständen zufällig entdeckt worden. Diesen alternativen Ansatz zur Entdeckung der Bronze im 3. Jt. v. Chr. hatte bis dahin noch niemand ins Gespräch gebracht, da das Misch Erz von Muschiston sowohl sehr selten als auch nirgends sonst Lagerstätten bildend vorkommt. Bei Schmelzversuchen mit dem "Bronzeerz" von Muschiston an der Bergakademie Freiberg wurde in der Tat eine Bronze erschmolzen. Kam die Kenntnis der Bronze tatsächlich aus den tadschikischen Bergen? Zur Beantwortung dieser Frage muss noch viel archäologische Grundlagenforschung geleistet werden.

MCGEEHAN-LIRITZIS 1987

V. McGeehan-Liritzis & J. W. Taylor, *Yugoslavian tin deposits and the early Bronze Age industries of the Aegean region*. *Oxford Journal of Archaeology* 6 (1987), 287–300.

This paper provides a synopsis of those tin sources available to prehistoric communities in Europe and the Near East. Moreover, it is designed to introduce to archaeologists the recent discovery of substantial cassiterite deposits in Yugoslavia, and to discuss their potential and possible exploitation by Early Bronze Age metallurgists in the area around the Aegean.

WAINWRIGHT 1943

G. A. Wainwright, *Egyptian bronze-making*. *Antiquity* 17 (1943), 96–98.

This picture of the early 14th century B.C. shows the manufacture of bronze by the advanced method of mixing the metals themselves. It also shows that this step had been taken during the 200 years between 1580 and 1370 B.C. After this it only remained to learn the right proportions of the two metals in order to obtain the best results.

Metallzeiten

BARTELHEIM 1997

Martin Bartelheim, *Aunjetitz und El Argar, Neue Überlegungen zu einer alten Frage*. In: CORNELIA BECKER, MARIE-LUISE DUNKELMANN, CAROLA METZNER-NEBELSICK, HEIDI PETER-RÖCHER, MANFRED ROEDER & BIBA TERŽAN (Hrsg.), *Chronos, Beiträge zur Prähistorischen Archäologie zwischen Nord- und Südosteuropa, Festschrift für Bernhard Hansel*. *Studia honoraria* 1 (Espelkamp 1997), 275–285.

Zusammenfassend betrachtet, scheint es sich, wie vor allem im Falle der Keramik zu beobachten, bei den skizzierten Analogien eher um einen über weite Räume hinweg wirkenden Zeitgeschmack zu handeln, als um das Produkt einer direkten Beeinflussung einer Region durch die andere. Die Aunjetitzer Kultur und die El Argar-Kultur präsentieren sich als zwei hochentwickelte Regionen mit starker Ausstrahlung innerhalb eines weiterreichenden kulturellen Spannungsfelds mit ähnlichen Tendenzen in puncto Gestaltungswille ihres mobilen Inventars und der technischen Entwicklung. Ob den beiden Kulturzentren ihre Nähe zu Lagerstätten von vermutlich in jenen Zeiten begehrten Metallen wie Kupfer und, im Falle der Aunjetitzer Kultur, auch Zinn dabei zu diesem Aufschwung verhalf, ist denkbar, aber momentan kaum eindeutig zu verifizieren. Im Gegensatz zur El Argar-Kultur bleibt die extensive Nutzung der metallischen Rohstoffe um die Aunjetitzer Kultur herum (Harz, Thüringer Wald, Erzgebirge, Riesengebirge und Westböhmen) noch zu beweisen.

Es wird also offensichtlich, daß es gute Argumente für eine unabhängige Entstehung beider Kulturen aus lokalen Wurzeln heraus gibt. Dennoch sind verbindende Elemente nicht zu übersehen, die auf eine gemeinsame Vorgängerkultur und auch ähnliche zeitgleiche überregionale Tendenzen in der Kulturentwicklung zurückzuführen sind. Die verblüffenden Analogien in der Keramik sind nach heutigem Kenntnisstand allerdings mit hoher Wahrscheinlichkeit Produkt eines Zufalls.

KAVTARADZE 2004

Giorgi L. Kavtaradze, *The Chronology of the Caucasus during the Early Metal Age: Observations from Central Trans-Caucasus*. In: ANTONIO SAGONA (Hrsg.), *A view from the highlands, Archaeological studies in honour of Charles Burney*. Ancient Near Eastern Studies Supplement 12 (Herent 2004), 539–556.

Under the weight of a revised chronological framework, we are led to a reassessment of a number of cultural-historical, ethno-genetic and social-economical events. In so doing the interrelationships between the ancient Near Eastern and east European societies appears in rather different light.

KLASSEN 2010

Lutz Klassen, *Karpaten oder Alpen? Zur Herkunft der Kupferscheibe aus Hornstaad (Lkr. Konstanz)*. *Archäologisches Korrespondenzblatt* 40 (2010), 29–48.

The origin of the early 4th millennium imported copper disc from the pile-dwelling at Hornstaad-Hörnle IA in Southwest Germany is subject to controversy in archaeological discussion. While some scholars believe the find to originate in eastern Central Europe where it was made of Slovakian copper, others claim the metal has an Alpine origin. A re-evaluation of the metal analysis of the piece speaks for the copper coming from the Monte Lessini chain of the Alps in Northern Italy. The disc was probably exchanged from here to Hornstaad across the Alps.

Die Herkunft der importierten Kupferscheibe aus der Seeufersiedlung Hornstaad-Hörnle IA in Südwestdeutschland aus dem frühesten 4. Jahrtausend v.Chr. wird in der Literatur kontrovers beurteilt. Einige Autoren leiten den Fund aus dem östlichen Zentraleuropa und das Kupfer aus einer slowakischen Lagerstätte ab, während andere den Ursprung des verwendeten Metalls in den Alpen suchen. Eine Neubewertung der Metallzusammensetzung des Funds führt zu der Erkenntnis, dass dieser wahrscheinlich aus Kupfer aus den Lessinischen Alpen in Norditalien besteht und von dort nach Hornstaad gelangte.

Mittelpaläolithikum

BOËDA 1999

Eric Boëda, J.M. Geneste & C. Griggo with N. Mercier, S. Muhesen, J.L. Reyss, A. Taha & H. Valladas, *A Levallois point embedded in the vertebra of a wild ass (*Equus africanus*), Hafting, projectiles and Mousterian hunting weapons*. *Antiquity* **73** (1999), 394–402.

The hunting methods of the Neanderthals are rarely evident in detail in the archaeological record. Here, the rare and important discovery of a fragment of broken Levallois point, embedded in the neck-bones of a wild ass, provokes plenty of discussion of the methods of hafting and killing game in the Middle Palaeolithic of Syria.

Key-words: Levallois, Syria, Neanderthal, wild ass, projectile, hunting