

Literatur

Aktuell

DE CREMER 2011

David De Cremer, Madan M. Pillutla & Chris Reinders Folmer, *How Important Is an Apology to You? Forecasting Errors in Evaluating the Value of Apologies*. *Psychological Science* (2011) preprint, 1–4. <<http://dx.doi.org/10.1177/0956797610391101>>.

Apologies are commonly used to deal with transgressions in relationships. Results to date, however, indicate that the positive effects of apologies vary widely, and the match between people's judgments of apologies and the true value of apologies has not been studied. Building on the affective and behavioral forecasting literature, we predicted that people would overestimate how much they value apologies in reality. Across three experimental studies, our results showed that after having been betrayed by another party (or after imagining this to be the case), people (a) rated the value of an apology much more highly when they imagined receiving an apology than when they actually received an apology and (b) displayed greater trusting behavior when they imagined receiving an apology than when they actually received an apology. These results suggest that people are prone to forecasting errors regarding the effectiveness of an apology and that they tend to overvalue the impact of receiving one.

Keywords: apologies, trust game, forecasting errors

URBAN 2010

Michael A. Urban, David M. Nelson, Gonzalo Jiménez-Moreno, Jean-Jacques Châteauneuf, Ann Pearson & Feng Sheng Hu, *Isotopic evidence of C4 grasses in southwestern Europe during the Early Oligocene – “Middle Miocene*. *Geology* **38** (2010), 1091–1094.

C4 plants are widely successful in the grass-dominated ecosystems of tropical, subtropical, and warm-temperate regions, largely as a result of their ability to limit photorespiration and improve water-use efficiency. A widely held paradigm is that low (<≈400 ppm) atmospheric CO₂ concentrations were an important factor selecting for the origin of C4 plants, although support in geological records is limited. We determined the carbon isotopic composition of 686 individual grass-pollen grains preserved in eight samples of lacustrine and shallow-marine sediments from three basins spanning the Early Oligocene to Middle Miocene in southwestern Europe. Grasses composed <15% of the total abundance of terrestrial pollen grains, and 26%–62% of the grass pollen was from C4 grasses. Thus C4 grasses occurred on the landscape as early as the earliest Oligocene, ≈14 m.y. earlier than previous isotopic evidence of first C4 plants and before pCO₂ fell during the Oligocene.

Anthropologie

GILLIGAN 2007

Ian Gilligan, *Resisting the cold in ice age Tasmania: thermal environment and settlement strategies*. *Antiquity* **81** (2007), 555–568.

Humans had reached Tasmania by 35 000 years bp and were in residence at the peak of the last ice age. Curiously, the settlements in the coldest period are concentrated in the

highest and most southerly places, and the colder the weather became, the more sites were occupied. The author deduces that early people specially sought out the rock shelters of the highlands to combat wind chill.

Keywords: cave sites, cold adaptation, shelter, Tasmanian Aborigines

GILLIGAN 2007

Ian Gilligan, *Neanderthal extinction and modern human behaviour: the role of climate change and clothing*. *World Archaeology* **39** (2007), 499–514.

Thermal considerations can help resolve two of the most challenging problems in later Palaeolithic archaeology - the demise of Neanderthals and the emergence of modern human behaviour. Both can be viewed as reflecting interactions between biological and behavioural cold adaptations, in the context of extreme climatic fluctuations during the Upper Pleistocene. Recent studies draw attention to the special difficulties these conditions posed for humans but few give sufficient regard to the need for adequate pre-adaptations, namely technologies for manufacturing complex clothing assemblages. It is argued here that pre-existing biological cold adaptations delayed the development of such technological capacities among Neanderthals, resulting ultimately in their extinction. In contrast, the greater biological vulnerability of fully modern humans promoted a precocious appearance of behavioural adaptations among some (though not all) groups, visible in the various archaeological markers of modern human behaviour.

Keywords: Clothing; cold adaptations; Neanderthals; modern human behaviour.

GILLIGAN 2007

Ian Gilligan, *Clothing and modern human behaviour: prehistoric Tasmania as a case study*. *Archaeology in Oceania* **42** (2007), 102–111.

A general model is outlined showing how the prehistoric development of clothing for thermal reasons may be relevant to the emergence of modern human behaviour. A distinction is drawn between simple and complex clothing, with the latter leading to repercussions that can ultimately become decoupled from thermal contingencies. Archaeological correlates of complex clothing can be linked to attributes of modern human behaviour, some but not all of which made a transient appearance in late Pleistocene Tasmania. Cave sites in the southwest of the island have yielded bone tools and distinctive stone scraper tools, along with evidence for the targeting of prey species and parietal artworks in some caves. Thermal conditions in late Pleistocene Tasmania approached the known limits of human cold tolerance, necessitating the use of clothing. The archaeological record is reviewed in relation to likely technological and other correlates of the manufacture of clothing. It is argued that thermal parameters were a significant aspect of the human response to climate change in Tasmania. These developments invite comparison with those witnessed outside the region during the Upper and late Middle Pleistocene, particularly in northern middle latitudes and also in Africa, where they are interpreted as indicating the emergence of modern human behaviour.

Keywords: Clothing, Tasmania, human cold tolerance

GILLIGAN 2008

Ian Gilligan, *Clothing and Climate in Aboriginal Australia*. *Current Anthropology* **49** (2008), 487–495.

Ethnohistorical study of the use of clothing among Australian Aborigines in relation to their thermal environment indicates that clothing was a behavioral adaptation to cold exposure. Seasonal data and trends in Tasmania and parts of northern Australia are not entirely consistent with the overall thermal pattern. Likely reasons for these anomalies include interaction between latitude and season of observation, greater biological adaptation to cold south of Bass Strait, and influence from a regional cultural sphere centered north of the mainland.

GILLIGAN 2010

Ian Gilligan, *The Prehistoric Development of Clothing: Archaeological Implications of a Thermal Model*. [Journal of Archaeological Method and Theory](#) **17** (2010), 15–80.

This paper presents a thermal model for the prehistoric origin and development of clothing. A distinction is drawn between simple and complex forms of clothing, with broad implications for the interpretation of paleolithic technological transitions and the emergence of modern human behavior. Physiological principles and paleoenvironmental data are harnessed to identify conditions requiring simple, loosely draped garments and the more challenging conditions that demanded additional protection in the form of complex garment assemblages. No actual clothing survives from the Pleistocene, yet the archaeological record yields evidence for technological and other correlates of clothing—more evidence than is generally supposed. Major innovations and trends in the distributions and relative frequencies of lithic and other tool forms may reflect the changing need for portable insulation in the context of fluctuating ice age climates. Moreover, the nonthermal repercussions of complex clothing can be connected with archaeological signatures of modern human behavior, notably adornment. Alternative models are less parsimonious in accounting for the geographical and temporal variability of prominent technological and other behavioral patterns in association with environmental change.

Keywords: Clothing . Climate . Paleolithic technology . Modern human behavior

MORROW 2008

Eric M. Morrow et al., *Identifying Autism Loci and Genes by Tracing Recent Shared Ancestry*. [science](#) **321** (2008), 218–223.

[s321-0218-Supplement.pdf](#)

Eric M. Morrow, Seung-Yun Yoo, Steven W. Flavell, Tae-Kyung Kim, Yingxi Lin, Robert Sean Hill, Nahit M. Mukaddes, Soher Balkhy, Generoso Gascon, Asif Hashmi, Samira Al-Saad, Janice Ware, Robert M. Joseph, Rachel Greenblatt, Danielle Gleason, Julia A. Ertelt, Kira A. Apse, Adria Bodell, Jennifer N. Partlow, Brenda Barry, Hui Yao, Kyriacos Markianos, Russell J. Ferland, Michael E. Greenberg & Christopher A. Walsh

To find inherited causes of autism-spectrum disorders, we studied families in which parents share ancestors, enhancing the role of inherited factors. We mapped several loci, some containing large, inherited, homozygous deletions that are likely mutations. The largest deletions implicated genes, including PCDH10 (protocadherin 10) and DIA1 (deleted in autism1, or c3orf58), whose level of expression changes in response to neuronal activity, a marker of genes involved in synaptic changes that underlie learning. A subset of genes, including NHE9 (Na⁺/H⁺ exchanger 9), showed additional potential mutations in patients with unrelated parents. Our findings highlight the utility of “homozygosity mapping” in heterogeneous disorders like autism but also suggest that defective regulation of gene expression after neural activity may be a mechanism common to seemingly diverse autism mutations.

TOUPS 2011

Melissa A. Toups, Andrew Kitchen, Jessica E. Light & David L. Reed, *Origin of Clothing Lice Indicates Early Clothing Use by Anatomically Modern Humans in Africa*. [Molecular Biology and Evolution](#) **28** (2011), 29–32.

Clothing use is an important modern behavior that contributed to the successful expansion of humans into higher latitudes and cold climates. Previous research suggests that clothing use originated anywhere between 40,000 and 3 Ma, though there is little direct archaeological, fossil, or genetic evidence to support more specific estimates. Since clothing lice evolved from head louse ancestors once humans adopted clothing, dating the emergence of clothing lice may provide more specific estimates of the origin of clothing use. Here, we use

a Bayesian coalescent modeling approach to estimate that clothing lice diverged from head louse ancestors at least by 83,000 and possibly as early as 170,000 years ago. Our analysis suggests that the use of clothing likely originated with anatomically modern humans in Africa and reinforces a broad trend of modern human developments in Africa during the Middle to Late Pleistocene.

Key words: lice, human evolution, isolation with migration.

Isotope

BENTLEY 2008

R. Alexander Bentley, Joachim Wahl, T. Douglas Price & Tim C. Atkinson, *Isotopic signatures and hereditary traits: snapshot of a Neolithic community in Germany*. *Antiquity* **82** (2008), 290–304.

A group of Linearbandkeramik people at Talheim, Germany were previously found to have died at the same time, probably in a massacre, and the authors were able to ask some searching questions of their skeletons. The isotope signatures of strontium, oxygen and carbon, which gave information on diet and childhood region, showed up three groups which correlated with hereditary traits (derived previously from the analysis of the teeth). In the local group, there were many local children but no adult women, suggesting they had been selectively taken alive at the time of the massacre. Another group, with isotope signatures derived from upland areas, includes two men who may have been closely related. A third group has a composition suggestive of a nuclear family. The variations of one type of isotope signature with another suggested subtle interpretations, such as transhumance, and a probable labour division in the community between stockholders and cultivators. Here we see the ever-growing potential of these new methods for writing the ‘biographies’ of prehistoric skeletons.

Keywords: Neolithic, Germany, LBK, Talheim, isotope analysis, hereditary traits, transhumance

Klima

DRAKE 2011

Nick A. Drake, Roger M. Blench, Simon J. Armitage, Charlie S. Bristow & Kevin H. White, *Ancient watercourses and biogeography of the Sahara explain the peopling of the desert*. *PNAS* **108** (2011), 458–462.

[pnas108-00458-Supplement.pdf](#)

Evidence increasingly suggests that sub-Saharan Africa is at the center of human evolution and understanding routes of dispersal “out of Africa” is thus becoming increasingly important. The Sahara Desert is considered by many to be an obstacle to these dispersals and a Nile corridor route has been proposed to cross it. Here we provide evidence that the Sahara was not an effective barrier and indicate how both animals and humans populated it during past humid phases. Analysis of the zoogeography of the Sahara shows that more animals crossed via this route than used the Nile corridor. Furthermore, many of these species are aquatic. This dispersal was possible because during the Holocene humid period the region contained a series of linked lakes, rivers, and inland deltas comprising a large inter-linked waterway, channeling water and animals into and across the Sahara, thus facilitating these dispersals. This system was last active in the early Holocene when many species appear to have occupied the entire Sahara. However, species that require deep water did not reach northern regions because of weak hydrological connections. Human dispersals were influenced by this distribution; Nilo-Saharan speakers hunting aquatic fauna with barbed bone points occupied the southern Sahara, while people hunting Savannah fauna

with the bow and arrowspread southward. The dating of lacustrine sediments show that the “green Sahara” also existed during the last interglacial (≈ 125 ka) and provided green corridors that could have formed dispersal routes at a likely time for the migration of modern humans out of Africa.

biogeography | human migration | animal migration | palaeoclimate | Saharan palaeohydrology

OLMSTEAD 2011

Alan L. Olmstead & Paul W. Rhode, *Adapting North American wheat production to climatic challenges, 1839–2009*. *PNAS* **108** (2011), 480–485. [pnas108-00480-Supplement.pdf](#)

The Intergovernmental Panel on Climate Change projects that temperatures in the major grain-growing areas of North America will rise by 3–4 °C by 2100. Such abrupt changes will create major challenges, significantly altering the area suitable for wheat. The historical record offers insight into the capability of agriculture to adapt to climatic challenges. Using a new county-level dataset on wheat production and climate norms, we show that during the 19th and 20th centuries North American grain farmers pushed wheat production into environments once considered too arid, too variable, and too harsh to cultivate. As summary measures, the median annual precipitation norm of the 2007 distribution of North American wheat production was one-half that of the 1839 distribution, and the median annual temperature norm was 3.7 °C lower. This shift, which occurred mostly before 1929, required new biological technologies. The Green Revolution associated with the pioneering work of Norman Borlaug represented an important advance in this longer process of biological innovation. However, well before the Green Revolution, generations of North American farmers overcame significant climatic challenges.

adaptation | agricultural technology | food security

Mittelpaläolithikum

HENRY 2011

Amanda G. Henry, Alison S. Brooks & Dolores R. Piperno, *Microfossils in calculus demonstrate consumption of plants and cooked foods in Neanderthal diets (Shanidar III, Iraq; Spy I and II, Belgium)*. *PNAS* **108** (2011), 486–491.

[pnas108-00486-Supplement.pdf](#)

The nature and causes of the disappearance of Neanderthals and their apparent replacement by modern humans are subjects of considerable debate. Many researchers have proposed biologically or technologically mediated dietary differences between the two groups as one of the fundamental causes of Neanderthal disappearance. Some scenarios have focused on the apparent lack of plant foods in Neanderthal diets. Here we report direct evidence for Neanderthal consumption of a variety of plant foods, in the form of phytoliths and starch grains recovered from dental calculus of Neanderthal skeletons from Shanidar Cave, Iraq, and Spy Cave, Belgium. Some of the plants are typical of recent modern human diets, including date palms (*Phoenix* spp.), legumes, and grass seeds (*Triticeae*), whereas others are known to be edible but are not heavily used today. Many of the grass seed starches showed damage that is a distinctive marker of cooking. Our results indicate that in both warm eastern Mediterranean and cold northwestern European climates, and across their latitudinal range, Neanderthals made use of the diverse plant foods available in their local environment and transformed them into more easily digestible foodstuffs in part through cooking them, suggesting an overall sophistication in Neanderthal dietary regimes.

Neolithikum

PRICE 2006

T. Douglas Price, Joachim Wahl & R. Alexander Bentley, *Isotopic Evidence for Mobility and Group Organization Among Neolithic Farmers At Talheim, Germany, 5000 BC*. [European Journal of Archaeology **EuJArch** \(2006\), 259–284](#).

The mass grave found near Talheim in southern Germany dates to approximately 7000 years ago and contains the skeletal remains of 34 individuals from the Early Neolithic period, associated with what is known as the Linearbandkeramik culture. These individuals appear to have been the victims of a massacre, based on the presence of numerous lethal head wounds, several arrow wounds, and the placement of all of these individuals in the same burial pit. The burials are considered to likely represent members of the same community attacked and executed by another group. In this study we examine the remains from the mass grave at Talheim for information on migration and community structure using strontium isotope ratios in tooth enamel. In essence, strontium isotope ratios are signatures of different rock types. The food chain moves these atoms into the human skeleton from bedrock through water, soils, plants, and herbivores. Because human tooth enamel does not change after formation, it provides a stored signal of the strontium isotopes of the place of birth. If the strontium isotope ratio of the place of death is different, the individual under study must have moved from one geology to another during his or her lifetime. Isotopic provenancing shows that several of the individuals in the group at Talheim were born in a different geological location. We discuss the results of the analysis and its significance in terms of questions of migration and community structure in the Early Neolithic of prehistoric Europe.

Keywords: Baden-Württemberg, central Europe, isotopes, Linearbandkeramik, mass grave, skeletons, strontium