

References

Aktuell

XU 2015

Alison Jing Xu, Norbert Schwarz & Robert S. Wyer Jr., *Hunger promotes acquisition of nonfood objects*. [PNAS 112 \(2015\), 2688–2692](#).

Hunger motivates people to consume food, for which finding and acquiring food is a prerequisite. We test whether the acquisition component spills over to nonfood objects: Are hungry people more likely to acquire objects that cannot satisfy their hunger? Five laboratory and field studies show that hunger increases the accessibility of acquisition-related concepts and the intention to acquire not only food but also nonfood objects. Moreover, people act on this intention and acquire more nonfood objects (e.g., binder clips) when they are hungry, both when these items are freely available and when they must be paid for. However, hunger does not influence how much they like nonfood objects. We conclude that a basic biologically based motivation can affect substantively unrelated behaviors that cannot satisfy the motivation. This presumably occurs because hunger renders acquisition-related concepts and behaviors more accessible, which influences decisions in situations to which they can be applied.

Keywords: hunger | food vs. nonfood | wanting vs. liking | spillover effect | mind-set

ZAHARAN 2015

Sammy Zahran, Jeffrey G. Snodgrass, David G. Maranon, Chakrapani Upadhyay, Douglas A. Granger & Susan M. Bailey, *Stress and telomere shortening among central Indian conservation refugees*. [PNAS 112 \(2015\), E928–E936](#).

Research links psychosocial stress to premature telomere shortening and accelerated human aging; however, this association has only been demonstrated in so-called “WEIRD” societies (Western, educated, industrialized, rich, and democratic), where stress is typically lower and life expectancies longer. By contrast, we examine stress and telomere shortening in a non-Western setting among a highly stressed population with overall lower life expectancies: poor indigenous people—the Sahariya—who were displaced (between 1998 and 2002) from their ancestral homes in a central Indian wildlife sanctuary. In this setting, we examined adult populations in two representative villages, one relocated to accommodate the introduction of Asiatic lions into the sanctuary (n = 24 individuals), and the other newly isolated in the sanctuary buffer zone after their previous neighbors were moved (n = 22). Our research strategy combined physical stress measures via the salivary analytes cortisol and α -amylase with self-assessments of psychosomatic stress, ethnographic observations, and telomere length assessment [telomere-fluorescence in situ hybridization (TEL-FISH) coupled with 3D imaging of buccal cell nuclei], providing high-resolution data amenable to multilevel statistical analysis. Consistent with expectations, we found significant associations between each of our stress measures—the two salivary analytes and the psychosomatic symptom survey—and telomere length, after adjusting for relevant behavioral, health, and demographic traits. As the first study (to our knowledge) to link stress to telomere

length in a non-WEIRD population, our research strengthens the case for stress-induced telomere shortening as a pancultural biomarker of compromised health and aging.

Keywords: telomeres | stress | India | indigenous peoples | human displacement

Anthropologie

CZARNETZKI 2014

Alfred Czarnetzki, *The unravelled LB1 (Homo floresiensis) riddle? Some critical comments on the morphology of LB1*. *Archäologische Informationen* **37** (2014), 181–189.

The comparison of the available morphological features of LB1 with 23 skulls of microcephalic modern humans, nearly 5,000 modern humans from all over the world, and from Palaeolithic to modern times, the orangutan skulls of the State Collection of Anthropology and Palaeoanatomy, Munich, Sivapithecus, Pithecanthropus erectus specimens from the Far East, and further data of other hominoids added from literature, led to a surprising result. The analysis of the morphological meaning of LB1 was as precise as possible and (i) took into account the fact that the skeletal elements were more distorted or less distorted depending on the time they had been embedded in very moist soil and therefore (ii) had had to be reconstructed by the authorised person imagining what the real morphology should be. Taking into account all these postulates together with the knowledge of phylogenetic principles like paedomorphism, neoteny, island rules, high variability within the genus Pongo, the high number of affinities (30 out of 31) with the genus Pongo and all comparable 13 features of Sivapithecus indicus (PREUSS, 1982), the phylogenetic positioning of LB1 could only result in a position close to or within the variability of the genus Pongo. In particular, the features of the extremities like the big foot with its short big toe (see SCHWARTZ, 2005, p. 94), the small femur and tibia of LB1, its low degree of humeral torsion, and the elongation of the coronoid process of the ulna, are in best agreement with the laws of functional anatomy for the locomotion of a pongolike Hominoid.

FLINKER 2015

Adeen Flinker et al., *Redefining the role of Broca's area in speech*. *PNAS* **112** (2015), 2871–2875.

Adeen Flinker, Anna Korzeniewska, Avgusta Y. Shestyuk, Piotr J. Franaszczuk, Nina F. Dronkers, Robert T. Knight & Nathan E. Crone

For over a century neuroscientists have debated the dynamics by which human cortical language networks allow words to be spoken. Although it is widely accepted that Broca's area in the left inferior frontal gyrus plays an important role in this process, it was not possible, until recently, to detail the timing of its recruitment relative to other language areas, nor how it interacts with these areas during word production. Using direct cortical surface recordings in neurosurgical patients, we studied the evolution of activity in cortical neuronal populations, as well as the Granger causal interactions between them. We found that, during the cued production of words, a temporal cascade of neural activity proceeds from sensory representations of words in temporal cortex to their corresponding articulatory gestures in motor cortex. Broca's area mediates this cascade through reciprocal interactions with temporal and frontal motor regions. Contrary to classic notions of the role of Broca's area in speech, while motor cortex is activated during spoken responses, Broca's area is surprisingly silent. Moreover, when novel strings of articulatory gestures must be produced in response to nonword stimuli, neural activity

is enhanced in Broca's area, but not in motor cortex. These unique data provide evidence that Broca's area coordinates the transformation of information across large-scale cortical networks involved in spoken word production. In this role, Broca's area formulates an appropriate articulatory code to be implemented by motor cortex.

Keywords: Broca | speech | ECoG

MUTTONI 2015

Giovanni Muttoni, Dennis V. Kent, Giancarlo Scardia & Robert A. Martin, *Bottleneck at Jaramillo for human migration to Iberia and the rest of Europe?* *Journal of Human Evolution* **80** (2015), 187–190.

What helps motivate our persistence in arguing for a postJaramillo hominin dispersal to Europe is the hypothesis that this dispersal was prompted by profound environmental change around 0.9 Ma at the onset of enhanced glacial/interglacial activity marking the late Early Pleistocene revolution (EPR; formerly known as Mid-Pleistocene Revolution; Berger et al., 1993). Muttoni et al. (2010, 2011) hypothesized that hominins entered Europe together with herds of large African and Asian herbivores because they were 'pushed out' of their homelands by enhanced aridity in the Sahara and across Asia during the EPR, finding ultimate refuge in the more temperate Mediterranean realm. In a modified version of the 'follow-the-herd' hypothesis, Muttoni et al. (2014) now speculate that hominins initially entered Europe during the EPR because at that time vast and exploitable lowlands with open vegetation developed along the Danube-Po Gateway in the Balkan peninsula and northern Italy. This new environment provided, possibly for the first time in the Pleistocene, a migratory corridor for grasslandsavannaadapted large mammals and hominins, as part of a common and interlinked food web. In this revised view, the lack of exploitable grassland-savanna ecosystems before the EPR forestalled African and Asian large herbivores from expanding into Europe.

ROACH 2015

Neil T. Roach & Brian G. Richmond, *Clavicle length, throwing performance and the reconstruction of the Homo erectus shoulder.* *Journal of Human Evolution* **80** (2015), 107–113.

JHumEvo080-0107-Supplement.pdf

Powerful, accurate throwing may have been an important mode of early hunting and defense. Previous work has shown that throwing performance is functionally linked to several anatomical shifts in the upper body that occurred during human evolution. The final shift to occur is the inferior reorientation of the shoulder. Fossil scapulae show the earliest evidence of a more inferior glenoid in *Homo erectus*. However, where the scapula rests on the thorax is uncertain. The relative length of the clavicle, the only skeletal attachment of the scapula to the torso, is quite variable. Depending on which fossils or skeletal measures are used to reconstruct the *H. erectus* shoulder, either a novel, anteriorly facing shoulder configuration or a modern human-like lateral orientation is possible. These competing hypotheses have led to very different conclusions regarding the throwing ability and hunting behavior of early *Homo*. Here, we evaluate competing models of *H. erectus* shoulder morphology and examine how these models relate to throwing performance. To address these questions, we collected skeletal measures from fossil and extant taxa, as well as anthropometric ($N = 36$) and kinematic ($N = 27$) data from Daasanach throwers from northwestern Kenya. Our data show that all *H. erectus* fossil clavicles fall within the normal range of modern human variation. We find that a commonly used metric for normalizing clavicle length, the clavicular humeral ratio, poorly predicts shoulder position on the torso. Furthermore, no

significant relationship between clavicle length and any measure of throwing performance was found. These data support reconstructing the *H. erectus* shoulder as modern human-like, with a laterally facing glenoid, and suggest that the capacity for high speed throwing dates back nearly two million years.

Keywords: Homo erectus | Shoulder | Clavicle | Functional anatomy | Throwing | Torso

Biologie

MOORE 2015

Frances C. Moore & David B. Lobell, *The fingerprint of climate trends on European crop yields*. [PNAS 112 \(2015\), 2670–2675](#).

Europe has experienced a stagnation of some crop yields since the early 1990s as well as statistically significant warming during the growing season. Although it has been argued that these two are causally connected, no previous studies have formally attributed long-term yield trends to a changing climate. Here, we present two statistical tests based on the distinctive spatial pattern of climate change impacts and adaptation, and explore their power under a range of parameter values. We show that statistical power for the identification of climate change impacts is high in many settings, but that power for identifying adaptation is almost always low. Applying these tests to European agriculture, we find evidence that long-term temperature and precipitation trends since 1989 have reduced continent-wide wheat and barley yields by 2.5 % and 3.8 %, respectively, and have slightly increased maize and sugar beet yields. These averages disguise large heterogeneity across the continent, with regions around the Mediterranean experiencing significant adverse impacts on most crops. This result means that climate trends can account for $\approx 10\%$ of the stagnation in European wheat and barley yields, with likely explanations for the remainder including changes in agriculture and environmental policies.

Keywords: climate change | agriculture | attribution | Europe | adaptation

Significance: Agriculture is one of the economic sectors most exposed to climate change impacts, but few studies have statistically connected long-term changes in temperature and rainfall with yields. Doing so in Europe is particularly important because yields of wheat and barley have plateaued since the early 1990s and climate change has been suggested as a cause of this stagnation. Here, we show that the impact of climate trends can be detected in the pattern of long-term yield trends in Europe. Although impacts have been large in some areas, the aggregate effect across the continent has been modest. Climate trends can explain 10 % of the slowdown in wheat and barley yields, with changes in agriculture and environmental policies possibly responsible for the remainder.

Judentum

DI SEGNI 2012

Leah di Segni & Yoram Tsafrir, *The Ethnic Composition of Jerusalem's Population in the Byzantine Period (312–638 CE)*. [Liber Annuus 62 \(2012\), 405–454](#).

There is some mention in the written sources and a little archaeological evidence of a Jewish presence in Byzantine Jerusalem. The point of departure is the well-known Hadrianic prohibition against Jews entering the limits of Aelia Capitolina. Nonetheless, the Jewish sources attest that pilgrimage continued after 70 and

during the Byzantine period for the three annual pilgrimage festivals (Passover, Pentecost and the Feast of the Tabernacles), as well as for the mourning fast in memory of the destruction of the Temple on the Ninth of Av, and on other days. Christian sources concentrate on the annual mourning pilgrimage, but the conditions of this pilgrimage seem to vary. Origen, writing in the early 3rd century, implies that Jews entered Jerusalem freely. In 333 the Bordeaux Pilgrim describes Jews coming to mourn upon “a pierced stone” (lapis pertusus) on the Temple Mount every year, ostensibly without hindrance. On the other hand Eusebius, writing at about the same time, maintains that from the Romans’ prohibition to his days the Jewish people were totally excluded from Jerusalem and not even permitted to look from afar at the site where the Temple had stood. Jerome’s description is even more pointed – he is full of malicious delight that the Jews are prohibited from entering Jerusalem and that they must pay for permission to mourn and lament the Holy City, which is lost to them and was rebuilt by a triumphant Christianity. Thus it seems that the situation had deteriorated in Constantine’s time; however, the widely accepted assumption that Constantine renewed the prohibition against Jewish residence and even entrance in Jerusalem does not rest on firm grounds. Though it seems that no one explicitly restored the right of Jews to enter the city, it is clear that they did in fact come to Jerusalem and even established a small community there, having acquired permission *de facto*, if not *de jure*.

The location of the Jewish community can be gleaned from passages in the works of the Bordeaux Pilgrim and Epiphanius. They note a synagogue “within the walls of Zion” – probably the present-day area of Mount Zion – until the middle of the 4th century. Although there is room for doubt, they perhaps refer, as M. Avi-Yonah has proposed, to the present-day building of the Tomb of David, which J. Pinkerfeld has identified as an ancient synagogue.

Jungpaläolithikum

HILBERT 2014

Yamandú Hieronymus Hilbert & Jeffrey Ian Rose, *Südarabien während des Spätpleistozäns und Frühholozäns, Archäologie, Paläogenetik und Populationsdynamik. Archäologische Informationen* **37** (2014), 9–22.

Studies of mitochondrial DNA (mtDNA) conducted on South Arabian populations reveal that a substantial portion of the present South Arabian gene pool derives from an indigenous population(s) that occupied the region prior to the Late Glacial Maximum. This paper superimposes this new genetic information with the known archaeological record. A variety of lithic technologies span the Late Pleistocene and Early Holocene of southern Arabia. The Middle Paleolithic of this region (≈ 130.000 to 50.000 BP) is marked by different forms of Levallois point production. The Late Paleolithic (≈ 15.000 to 8.000 BP) is characterized by blade-based core technologies, tanged projectile points, burins, endscrapers and pseudo-backed knives. The Early Neolithic (≈ 9.000 to 7.000 BP) represents an abrupt technological and typological break from the Late Paleolithic. In Dhofar, the Early Neolithic tool kit consists of a variety of pressure-retouched projectile points, a plethora of finely made endscrapers, sidescrapers, burins, perforators, and several different bifacial implements. This paper uses the current palaeogenetic and archaeological research to address two diverging models of settlement processes within Arabia. In summary, it is argued that the low frequency of ancestral mtDNA L3 markers indicates minimal genetic contribution from the Middle Palaeolithic peoples of southern Arabia. On the other hand, these data point to

significant population continuity across the Pleistocene-Holocene boundary; hence, favoring the existence of population refugia within the Arabian Peninsula.

Keywords: Palaeogenetic, Mitochondrial DNA, Late Palaeolithic, Neolithic, Paleodemographics, South Arabia

Dieser Artikel präsentiert eine Übersicht zu der gegenwärtigen archäologischen und paläogenetischen Forschung in Südarabien. Neue Ergebnisse mitochondrialer DNS Forschung, die an modernen Populationen aus Dhofar, Südoman, und der Mahera Provinz, Jemen, gewonnen wurden, werden hier in Kombination mit neuesten archäologischen Forschungsergebnissen präsentiert, um Einblicke in prähistorische Populationsdynamiken zu gewinnen. Zwei gegensätzliche Modelle werden hier vorgestellt, mit denen die Besiedelung der arabischen Halbinsel veranschaulicht werden soll; das "tabula rasa"- und das "Arabian refugia"-Modell. Die gewonnenen Daten, archäologischer und genetischer Natur, unterstützen die Existenz demographischer Refugien innerhalb des südarabischen Raumes. Hierdurch wird eine relativ lange Besiedelungszeit Südarabiens trotz klimatisch unvorteilhafteren Phasen (z.B. Letztes Kälte Maximum – LGM) angenommen. Im Folgenden wird postuliert, dass ein erheblicher Teil des modernen südarabischen Genpools einer Population zu Grunde liegt, die um 12.000 vor Heute (BP) einen grundlegenden Wachstumsschub und eine subsequeute Ausbreitung erlebt hat. Der Ursprung dieser Population wird im Nahen Osten vermutet und ihre Ausbreitung nach Südarabien wird noch vor den LGM angenommen. Gleichzeitig konnte kein genetischer Nachweis von Populationen älter als 20.000 Jahre erbracht werden, wobei dies als ein Hinweis für das Aussterben eines wesentlichen Teils des pleistozänen Genpools interpretiert werden kann.

Schlüsselwörter – Paläogenetik, Mitochondriale DNS, Spätpaläolithikum, Neolithikum, Populationsdynamik, Südarabien

Mittelpaläolithikum

ESTALRRICH 2015

Almudena Estalrrich & Antonio Rosas, *Division of labor by sex and age in Neandertals, An approach through the study of activity-related dental wear*. [Journal of Human Evolution](#) **80** (2015), 51–63.

The analysis of activity-related dental wear patterns in prehistoric anatomically modern humans and modern hunter-gatherers has shown sex differences attributable to a gendered division of labor. Neandertals are known to have extensive anterior dental wear related to the use of their front teeth as a tool. In this study we analyze the i) cultural striations (scratches on the labial surface of the anterior teeth with a cut-mark morphology), and ii) dental chipping (ante-mortem microfracture involving enamel or both enamel and dentine) in 19 Neandertal individuals from the l'Hortus (France), Spy (Belgium), and El Sidrón (Spain) sites, and compare the characteristics of those traits with the age and sex estimation for the individuals and among samples. The study reveals that all individuals have cultural striations, but those detected on the adult females are longer than the striations found in adult males. Regarding the distribution of dental chipping, the prevalence of this trait is higher in the maxillary dentition of males whereas females have the majority of dental chipping on their mandibular teeth. The differences detected on the overall activity-related dental wear pattern denote a difference or a division of labor by age and sex in Neandertals while using the mouth as a third hand, i.e., in activities other than the provisioning of food, and provide new evidence for the lifestyle of this Pleistocene fossil human species.

Keywords: l'Hortus | Spy | El Sidrón | Cultural striations | Dental chipping | Sexual division

Neolithikum

LÜNING 2014

Jens Lüning, *Einiges passt, anderes nicht, Archäologischer Wissensstand und Ergebnisse der DNA-Anthropologie zum Frühneolithikum*. [Archäologische Informationen 37 \(2014\), 43–51](#).

In DNA research about the early Neolithic of Central Europe, the Linear Pottery culture (LBK), in the last decade three subjects were in the foreground, which are commented from an archaeological point of view. (1) According to ancient DNA (aDNA) work, the LBK cattle all came from a breeding center in the Near East, which is consistent with the archaeozoological record. (2) According to ancient DNA work, the people of the Linear Pottery Culture did not tolerate milk (lactose intolerance, no lactase persistence). In fact, they had pottery sieve vessels in which milk fat was chemically detected, probably from production of lactose-free cheese. (3) According to ancient DNA work, the Linear Pottery people were not descendents from the local hunters and gatherers, but must have immigrated all. Archeology usually also starts from an immigration, it debates, however, about the intensity of immigration and about the scale of biological integration of Mesolithic people.

Keywords: Bandceramic, Early Neolithic, DNA-Research, Palaeogenetics, Archaeo-Biochemics, Domestication of Cattle, Lactase persistence, Cheese Making, Immigration, Acculturation

In der DNA-Forschung zum Frühneolithikum Mitteleuropas, zur bandkeramischen Kultur, standen in den letzten zehn Jahren drei Themen im Vordergrund, die aus archäologischer Sicht kommentiert werden. (1) Nach aDNA-Ergebnissen stammten die bandkeramischen Hausrinder alle aus einem ersten Züchtungszentrum im Vorderen Orient, was mit dem archäozoologischen Befund übereinstimmt. (2) Nach aDNA-Ergebnissen vertrugen die Menschen der bandkeramischen Kultur keine Milch (Laktoseunverträglichkeit, keine Laktasepersistenz). Tatsächlich besaßen sie Siebgefäße, in denen chemisch Milchfett nachgewiesen ist, wahrscheinlich von der Herstellung laktosefreien Käses. (3) Nach aDNA-Ergebnissen stammten die bandkeramischen Menschen nicht von den einheimischen Jägern und Sammlern ab, sondern müssen sämtlich eingewandert sein. Die Archäologie geht meist ebenfalls von einer Einwanderung aus, diskutiert allerdings über deren Intensität und über eine unterschiedlich starke, auch biologische Integration der mesolithischen Vorbevölkerung.

Schlüsselwörter – Bandkeramik, Frühneolithikum, DNA-Forschung, Paläogenetik, Archäo-Biochemie, Rinderdomestikation, Laktasepersistenz, Sauermilchkäse, Einwanderung, Akkulturation

ORSCHIEDT 2014

Jörg Orschiedt, Ruth Bollongino, Olaf Nehlich, Flora Gröning & Joachim Burger, *Parallelgesellschaften? Paläogenetik und stabile Isotopen an mesolithischen und neolithischen Menschenresten aus der Blätterhöhle*. [Archäologische Informationen 37 \(2014\), 23–31](#).

Neolithic and Mesolithic human remains from the 9th and 4th millennium are rare for the area of the mid-range mountains (Sauerland) of Westphalia and elsewhere. The discovery of human remains in the cave site Blätterhöhle at Hagen in 2004 changed that picture. Available radiocarbon dates are between 9200 and 8600, and 3900 and 3000 cal BC and revealed a Late Neolithic age for the remains. Neolithic collective burials in caves and rockshelters are known for the 4th millennium BC in other areas (Belgium, British Isles, Ireland) but not for the Westphalian

mid-range mountain. The Blätterhöhle provides the first clue that this burial practice might have also occurred in the region of northwest Germany with the border to the zone where megalithic collective burials occur only approximately 50 km away. Although from bioturbated sediments and without anatomical context the very well preserved human remains provide a rich source of information. A-DNA sampling showed results both for Mesolithic and Neolithic remains. The results suggest that the Mesolithic population of the Blätterhöhle represents a typical hunter-gatherer population (mitochondrial haplogroups U5/U4), whereas the Neolithic population seems to be an admixture of hunter-gatherer (haplogroup U5) and farmer lineages (haplogroup H and others). Additionally the analysis of stable Isotopes ($^{13}\text{C}/^{15}\text{N}/^{34}\text{S}$) was carried out in order to reconstruct long-term diets. The results show three distinct clusters with significant differences. Terrestrial diet was evident both for the Mesolithic and a Neolithic group, but the diet of one Neolithic group was based on the consumption of freshwater fish. This group consists of people exclusively with haplogroup U5. This result demonstrates a “non-Neolithic” way of life in the 4th millennium.

Keywords: Mesolithic, Neolithic, stable isotope analysis, aDNA, human remains, cave site

Neolithische und mesolithischen Menschenreste aus dem 9. und 4. Jahrtausend vor Christus sind nicht nur im Bereich der Mittelgebirge Westfalens (Sauerland) selten belegt. Durch die Entdeckung der Blätterhöhle in Hagen im Jahre 2004 änderte sich die Situation. Die derzeit verfügbaren ^{14}C -Datierungen belegen ein Alter der Menschenreste zwischen 9200 und 8600 sowie 3900 und 3000 calBC.

Neolithische Kollektivbestattungen des 4. Jahrtausends in Höhlen und unter Felsdächern sind in verschiedenen Regionen wie Belgien, Luxemburg und den britischen Inseln bekannt, jedoch bislang für Westfalen nicht belegt. Die Funde der Blätterhöhle stellen den ersten Beleg für diese Praxis im Bereich der Mittelgebirge dar. Dabei verläuft die Grenze zu der Zone in der die Megalithgräber verbreitet sind, ca. 50 km weiter nördlich. Obwohl die sehr gut erhaltenen Menschenreste aus gestörtem (bioturbierten) Kontext stammen, stellen sie eine reiche Informationsquelle dar. Die Beprobung von mesolithisch und neolithisch datierten Resten ergab in fast allen Fällen Ergebnisse. Diese Resultate zeigen, dass die mesolithisch datierten Menschenreste alle zur mitochondrialen Haplogruppe U gehören, wie es für europäische Jäger-Sammlerpopulationen des Paläolithikums und Mesolithikums bislang nachgewiesen wurde. Bei den neolithischen Menschenresten dagegen ließen sich sowohl die Haplogruppen U, H und andere nachweisen. Zusätzlich wurden auch stabile Isotopen ($^{13}\text{C}/^{15}\text{N}/^{34}\text{S}$) untersucht um Aussagen zur Ernährung treffen zu können. Die Ergebnisse lassen drei unterschiedliche Gruppen erkennen, die sich voneinander unterscheiden. Eine terrestrische Ernährung war sowohl bei der mesolithischen als auch bei einer neolithischen Gruppe nachweisbar. Dagegen ließ eine der beiden neolithischen Gruppen eine abweichende Ernährung, basierend auf Süßwasserfisch erkennen. Die Angehörigen dieser Gruppe wiesen alle Haplogruppe U5 auf. Anhand dieses Ergebnisses kann eine “nicht-neolithischen” Lebensweise im 4. Jahrtausend v. Chr. belegt werden.

Schlüsselwörter – Mesolithikum, Neolithikum, Analyse stabiler Isotopen, aDNA, Menschenreste, Höhlenfundstelle

Religion

JUNKER 2014

Thomas Junker, *Warum sind Menschen religiös? Die evolutionäre Perspektive*. [Archäologische Informationen](#) **37** (2014), 67–76.

The question, to which extent religious behavior can be explained as a biological trait has been discussed intensively during the last decades and was answered differently. After a short account of some recent theories I will define religiosity as a belief in supernatural and overpowering gods and discriminate it from animism, i.e. the belief in spirits. In the second part of the article I will discuss if Palaeolithic art and burials can be considered as evidence for religious behavior. I will come to the conclusion that this is not the case and that religiosity has only emerged in the environment of civilisation from a genetic predisposition for animistic thinking.

Keywords: Evolutionary psychology, religiosity, animism, Palaeolithic age, civilisation, art, burials

Die Frage, inwieweit sich religiöses Verhalten biologisch erklären lässt, wurde in den letzten Jahrzehnten intensiv erörtert und unterschiedlich beantwortet. Nach einem kurzen Abriss einiger aktueller Theorien werde ich Religiosität als den Glauben an übernatürliche und übermächtige Götter definieren und vom Animismus, dem Geisterglauben, unterscheiden. Im zweiten Teil des Artikels diskutiere ich die These, dass Kunst und Bestattungen der Altsteinzeit aussagekräftige Indizien für religiöses Verhalten darstellen. Ich werde zu dem Schluss kommen, dass dies nicht der Fall ist, sondern dass Religiosität erst unter den Bedingungen der Zivilisation aus einer genetischen Anlage für animistisches Denken entstand.

Schlüsselwörter – Evolutionäre Psychologie, Religiosität, Animismus, Altsteinzeit, Zivilisation, Kunst, Bestattungen