

## References

### Aktuell

#### DEXTER 2017

Joseph P. Dexter et al., *Quantitative criticism of literary relationships*. [PNAS 114 \(2017\), E3195–E3204](#).

Joseph P. Dexter, Theodore Katz, Nilesh Tripuraneni, Tathagata Dasgupta, Ajay Kannan, James A. Brofos, Jorge A. Bonilla Lopez, Lea A. Schroeder, Adriana Casarez, Maxim Rabinovich, Ayelet Haimson Lushkov & Pramit Chaudhuri

Authors often convey meaning by referring to or imitating prior works of literature, a process that creates complex networks of literary relationships (“intertextuality”) and contributes to cultural evolution. In this paper, we use techniques from stylometry and machine learning to address subjective literary critical questions about Latin literature, a corpus marked by an extraordinary concentration of intertextuality. Our work, which we term “quantitative criticism,” focuses on case studies involving two influential Roman authors, the playwright Seneca and the historian Livy. We find that four plays related to but distinct from Seneca’s main writings are differentiated from the rest of the corpus by subtle but important stylistic features. We offer literary interpretations of the significance of these anomalies, providing quantitative data in support of hypotheses about the use of unusual formal features and the interplay between sound and meaning. The second part of the paper describes a machine-learning approach to the identification and analysis of citational material that Livy loosely appropriated from earlier sources. We extend our approach to map the stylistic topography of Latin prose, identifying the writings of Caesar and his near-contemporary Livy as an inflection point in the development of Latin prose style. In total, our results reflect the integration of computational and humanistic methods to investigate a diverse range of literary questions.

**Keywords:** authorship attribution | cultural evolution | intertextuality | machine learning | stylometry

**Significance:** Famous works of literature can serve as cultural touchstones, inviting creative adaptations in subsequent writing. To understand a poem, play, or novel, critics often catalog and analyze these intertextual relationships. The study of such relationships is challenging because intertextuality can take many forms, from direct quotation to literary imitation. Here, we show that techniques from authorship attribution studies, including stylometry and machine learning, can shed light on inexact literary relationships involving little explicit text reuse. We trace the evolution of features not tied to individual words across diverse corpora and provide statistical evidence to support interpretive hypotheses of literary critical interest. The significance of this approach is the integration of quantitative and humanistic methods to address aspects of cultural evolution.

#### GATES 2017

Bill Gates & Melinda Gates, *Hans Rosling (1948–2017), A remarkable physician and teacher who illuminated world poverty and public health crises*. [science 355 \(2017\), 1268](#).

KE 2017

Qing Ke, Yong-Yeol Ahn & Cassidy R. Sugimoto, *A systematic identification and analysis of scientists on Twitter*. *PLoS ONE* **12** (2017), e175368. DOI:10.1371/journal.pone.0175368.

Metrics derived from Twitter and other social media—often referred to as altmetrics—are increasingly used to estimate the broader social impacts of scholarship. Such efforts, however, may produce highly misleading results, as the entities that participate in conversations about science on these platforms are largely unknown. For instance, if altmetric activities are generated mainly by scientists, does it really capture broader social impacts of science? Here we present a systematic approach to identifying and analyzing scientists on Twitter. Our method can identify scientists across many disciplines, without relying on external bibliographic data, and be easily adapted to identify other stakeholder groups in science. We investigate the demographics, sharing behaviors, and interconnectivity of the identified scientists. We find that Twitter has been employed by scholars across the disciplinary spectrum, with an over-representation of social and computer and information scientists; underrepresentation of mathematical, physical, and life scientists; and a better representation of women compared to scholarly publishing. Analysis of the sharing of URLs reveals a distinct imprint of scholarly sites, yet only a small fraction of shared URLs are science-related. We find an assortative mixing with respect to disciplines in the networks between scientists, suggesting the maintenance of disciplinary walls in social media. Our work contributes to the literature both methodologically and conceptually—we provide new methods for disambiguating and identifying particular actors on social media and describing the behaviors of scientists, thus providing foundational information for the construction and use of indicators on the basis of social media metrics.

## Amerika

LINDO 2017

John Lindo et al., *Ancient individuals from the North American Northwest Coast reveal 10,000 years of regional genetic continuity*. *PNAS* **114** (2017), 4093–4098.

pnas114-04093-Supplement1.xlsx, pnas114-04093-Supplement2.pdf, pnas114-04093-Supplement3.pdf, pnas114-04093-Supplement4.pdf

John Lindo, Alessandro Achilli, Ugo A. Perego, David Archer, Cristina Valdiosera, Barbara Petzelt, Joycelynn Mitchell, Rosita Worl, E. James Dixon, Terence E. Fifield, Morten Rasmussen, Eske Willerslev, Jerome S. Cybulski, Brian M. Kemp, Michael DeGiorgio & Ripan S. Malhi

Recent genomic studies of both ancient and modern indigenous people of the Americas have shed light on the demographic processes involved during the first peopling. The Pacific Northwest Coast proves an intriguing focus for these studies because of its association with coastal migration models and genetic ancestral patterns that are difficult to reconcile with modern DNA alone. Here, we report the low-coverage genome sequence of an ancient individual known as “Shuka Kaa” (“Man Ahead of Us”) recovered from the On Your Knees Cave (OYKC) in southeastern Alaska (archaeological site 49-PET-408). The human remains date to  $\approx 10,300$  calendar (cal) y B.P. We also analyze low-coverage genomes of three more recent individuals from the nearby coast of British Columbia dating from  $\approx 6,075$  to 1,750 cal y B.P. From the resulting time series of genetic data, we show that the Pacific Northwest Coast exhibits genetic continuity for at least the past 10,300 cal y B.P. We also infer that population structure existed in the late Pleistocene

of North America with Shuka Kaa on a different ancestral line compared with other North American individuals from the late Pleistocene or early Holocene (i.e., Anzick-1 and Kennewick Man). Despite regional shifts in mtDNA haplogroups, we conclude from individuals sampled through time that people of the northern Northwest Coast belong to an early genetic lineage that may stem from a late Pleistocene coastal migration into the Americas.

**Keywords:** ancient DNA | paleogenomics | Native American | indigenous | peopling

**Significance:** The peopling of the Americas has been examined on the continental level with the aid of SNP arrays, next generation sequencing, and advancements in ancient DNA, all of which have helped elucidate evolutionary histories. Regional paleogenomic studies, however, have received less attention and may reveal a more nuanced demographic history. We present genome-wide sequences of individuals from the northern Northwest Coast covering a timespan of  $\approx 10,000$  years and show that continental patterns of demography do not necessarily apply on the regional level. Compared with existing paleogenomic data, we show that geographically linked population samples from the Northwest Coast exhibit an early ancestral lineage and find that population structure existed among Native North American groups as early as the late Pleistocene.

## Anthropologie Ostasien

YANG 2017

Jian Yang et al., *Genetic signatures of high-altitude adaptation in Tibetans*. [PNAS 114 \(2017\), 4189–4194](#).

Jian Yang, Zi-Bing Jin, Jie Chen, Xiu-Feng Huang, Xiao-Man Li, Yuan-Bo Liang, Jian-Yang Mao, Xin Chen, Zhili Zheng, Andrew Bakshi, Dong-Dong Zheng, Mei-Qin Zheng, Naomi R. Wray, Peter M. Visscher, Fan Lu & Jia Qu

Indigenous Tibetan people have lived on the Tibetan Plateau for millennia. There is a long-standing question about the genetic basis of high-altitude adaptation in Tibetans. We conduct a genome-wide study of 7.3 million genotyped and imputed SNPs of 3,008 Tibetans and 7,287 non-Tibetan individuals of Eastern Asian ancestry. Using this large dataset, we detect signals of high-altitude adaptation at nine genomic loci, of which seven are unique. The alleles under natural selection at two of these loci [methylenetetrahydrofolate reductase (MTHFR) and EPAS1] are strongly associated with blood-related phenotypes, such as hemoglobin, homocysteine, and folate in Tibetans. The folate-increasing allele of rs1801133 at the MTHFR locus has an increased frequency in Tibetans more than expected under a drift model, which is probably a consequence of adaptation to high UV radiation. These findings provide important insights into understanding the genomic consequences of high-altitude adaptation in Tibetans.

**Keywords:** high-altitude adaptation | Tibetans | genome-wide association study | mixed linear model | polygenic selection

**Significance:** The origin of Tibetans and the mechanism of how they adapted to the high-altitude environment remain mostly unknown. We conduct the largest genome-wide study in Tibetans to date. We detect signatures of natural selection at nine gene loci, two of which are strongly associated with blood phenotypes in present day Tibetans. We further show the genetic relatedness of Tibetans with other ethnic groups in China and estimate the divergence time between Tibetans and Han. These findings provide important knowledge to understand the genetic ancestry of Tibetans and the genetic basis of high-altitude adaptation.

## Bibel

ORNAN 2016

Tallay Ornan, *Sketches and Final Works of Art, The Drawings and Wall Paintings of Kuntillet 'Ajrud Revisited*. Tel Aviv: *Archaeology* **43** (2016), 3–26.

This study examines the role of the pithoi drawings and wall paintings of Kuntillet >Ajrud. The author suggests that the pithoi drawings were sketches made in preparation for the wall paintings. Therefore, the repeated attempts to find meaning in the layout of the drawings on the pithoi, or to trace links between them and the inscriptions seem futile. She argues that only an investigation of the pottery drawings and the wall paintings as one assemblage reveals the thematic program of the buildings' decor, which is comprised of two groups: one depicts subject matters related to the king and his activities, the second presents beneficial motifs. The combination of these themes typifies state-run official buildings in the first millennium throughout the ancient Near East and does not support the suggestion that Kuntillet >Ajrud served as a 'religious' building or centre, although the state sponsored site at Kuntillet >Ajrud included a small cultic architectural space.

**Keywords:** Kuntillet 'Ajrud | Drawings of Kuntillet 'Ajrud | Iron II wall paintings | Iron II ancient Israelite art | Ibex Tree

As with the association of the Bes figures and the drawing of the lyre player noted above, an excessive amount of scholarly attention has been focused on an assumed relationship between the Bes images and the letter formula of Inscription 3.1 dedicated to YHWH of Samaria and his ashera (Ahituv, Eshel and Meshel 2012: 87–91), the vast literature of which cannot be referenced here. Suffice it to mention that the preliminary nature of both the sketches of Bes and Inscription 3.1 precludes any correspondence between these two modes of expression, and the scholarly efforts to equate the Bes images with YHWH and/or YHWH and Ashera are to be rejected. Bes retained his lesser divine rank and apotropaic nature when appropriated into Levantine imagery and thus, his characteristics are not fitting of a major deity such as YHWH.

Therefore, we can view the fragmented and reconstructed wall paintings from Kuntillet 'Ajrud as a cracked and dusty mirror reflecting the splendor of the lost palace of the Israelite kings at Samaria during the 9th and 8th centuries BCE.

YOUNG 2016

Ian Young, *Ancient Hebrew Without Authors*. *Journal for Semitics* **25** (2016), 972–1003.

Current scholarship on the history of the Hebrew Bible text sees the composition of biblical literature as a long, drawn-out scribal process of rewriting, to which many individuals contributed. This approach is in harmony with the evidence for variability in the scribal transmission of distinctive (less common) linguistic features in non-MT biblical manuscripts and parallel passages in the MT. The Text-Critical paradigm contrasts with the MT-Only paradigm which presupposes the composition of biblical books or identifiable parts of them by single authors at specific dates. This article focuses on the unusually well-attested text MT 2 Kings 25:1–12// LXX 2 Kings 25:1–12// MT Jeremiah 39:1–10// LXX Jeremiah 39:1–10// MT Jeremiah 52:4–16// LXX Jeremiah 52:4–16 where it is discovered that not a single distinctive linguistic feature is shared by all texts. It concludes with suggestions as to how the application of this approach can help reformulate some of the questions scholars ask in their study of ancient Hebrew.

## Biologie

CLAVEL 2017

Julien Clavel & H  l  ne Morlon, *Accelerated body size evolution during cold climatic periods in the Cenozoic*. [PNAS 114 \(2017\), 4183–4188](#).

How ecological and morphological diversity accumulates over geological time is much debated. Adaptive radiation theory has been successful in testing the effects of biotic interactions on the rapid divergence of phenotypes within a clade, but this theory ignores abiotic effects. The role of abiotic drivers on the tempo of phenotypic evolution has been tested only in a few lineages or small clades from the fossil record. Here, we develop a phylogenetic comparative framework for testing if and how clade-wide rates of phenotypic evolution vary with abiotic drivers. We apply this approach to comprehensive bird and mammal phylogenies, body size data for 9,465 extant species, and global average temperature trends over the Cenozoic. Across birds and mammals, we find that the rate of body size evolution is primarily driven by past climate. Unexpectedly, evolutionary rates are inferred to be higher during periods of cold rather than warm climates in most groups, suggesting that temperature influences evolutionary rates by modifying selective pressures rather than through its effect on energy availability and metabolism. The effect of climate on the rate of body size evolution seems to be a general feature of endotherm evolution, regardless of wide differences in species' ecology and evolutionary history. These results suggest that climatic changes played a major role in shaping species' evolution in the past and could also play a major role in shaping their evolution in the future.

**Keywords:** evolutionary rates | macroevolution | climate | endotherms | phylogenetics

**Significance:** We do not have a clear understanding of the impact of past climatic changes on evolution. This question has been investigated for a few lineages in the fossil record, but a global vision is still lacking. Here, we present a phylogenetic comparative framework for examining the effects of past climate changes on morphological evolution with data from almost all existing birds and mammals. We show that global temperatures fluctuations through the Cenozoic impacted body size evolution. The evolution of body size was faster during periods of global cooling in most of the groups, challenging the hypothesis that evolution is faster under warm climates. These results have important implications for our understanding of how ongoing climate changes may affect future evolution.

## Biologie Neolithikum

WEISSBROD 2017

Lior Weissbrod, Fiona B. Marshall, Fran  ois R. Valla, Hamoudi Khalaily, Guy Bar-Oz, Jean-Christophe Auffray, Jean-Denis Vign, *Origins of house mice in ecological niches created by settled hunter-gatherers in the Levant 15,000 y ago*. [PNAS 114 \(2017\), 4099–4104](#).

Reductions in hunter-gatherer mobility during the Late Pleistocene influenced settlement ecologies, altered human relations with animal communities, and played a pivotal role in domestication. The influence of variability in human mobility on selection dynamics and ecological interactions in human settlements has not been extensively explored, however. This study of mice in modern African villages and changing micemolar shapes in a 200,000-y-long sequence from the Levant demonstrates competitive advantages for commensal mice in long-term settlements. Mice from African pastoral households provide a referential model for habitat

partitioning among mice taxa in settlements of varying durations. The data reveal the earliest known commensal niche for house mice in long-term forager settlements 15,000 y ago. Competitive dynamics and the presence and abundance of mice continued to fluctuate with human mobility through the terminal Pleistocene. At the Natufian site of Ain Mallaha, house mice displaced less commensal wild mice during periods of heavy occupational pressure but were outcompeted when mobility increased. Changing food webs and ecological dynamics in long-term settlements allowed house mice to establish durable commensal populations that expanded with human societies. This study demonstrates the changing magnitude of cultural niche construction with varying human mobility and the extent of environmental influence before the advent of farming.

**Keywords:** house mouse | sedentism | Natufian hunter-gatherers | commensalism | niche construction

**Significance:** Decreases in hunter-gatherer mobility during the Late Pleistocene altered relationships with animal communities and led to domestication. Little is known, however, about how selection operated in settlements of varying duration. This study of mice in modern African mobile settlements and ancient Levantine sites demonstrates competitive advantages for commensal mice when human mobility is low and niche partitioning with noncommensal wild mice when mobility increases. Changing mice molar shapes in a 200,000-y-long sequence from the Levant reveal that mice first colonized settlements of relatively settled hunter-gatherers 15,000 y ago. The first long-term hunter-gatherer settlements transformed ecological interactions and food webs, allowing commensal house mice to outcompete wild mice and establish durable populations that expanded with human societies.

## Grabung

TERBERGER 2015

Thomas Terberger, Andreas Kotula, Sebastian Lorenz, Manuela Schult, Joachim Burger & Bettina Jungklaus, *Standing upright to all eternity – The Mesolithic burial site at Groß Fredenwalde, Brandenburg (NE Germany)*, *Aufrecht in die Ewigkeit – Der mesolithische Bestattungsplatz von Groß Fredenwalde, Brandenburg (Nordostdeutschland)*. *Quartär* **62** (2015), 133–153.

This article presents results of new research on the Mesolithic burial site at Groß Fredenwalde in northeastern Germany, where a multiple burial was first discovered by accident in 1962. Anthropological analyses identified one female with a child and two males with two children within this material. According to systematic AMS dating and  $^{15}\text{N}/^{13}\text{C}$ -isotope analyses the individuals are typical Mesolithic hunter-fisher-gatherers of the Atlantic period (c. 6000 calBC). During re-excavation of the site in 2012-2014 three new burials including a disturbed child burial and a baby burial were recognised. There is also an outstanding burial: a young man was interred standing upright and then furnished in stages. The burial is without any parallel in Central Europe, although there are possible parallels at Olenij Ostrov in Karelia. Altogether nine individuals from at least four graves are now known; they probably belong to an early cemetery located at a prominent position in the landscape. AMS-dates assign the burials to the period from c. 6400 to 4900 calBC, and thus the site was in use when the first Linear Band Pottery farmers established the agricultural way of life in the region c. 5200 calBC. Two successfully analysed individuals belong to the haplogroup U of mitochondrial lineages fitting well into the model of highly differentiated forager and farmer populations.



Mit dem Beitrag werden neue Forschungen zum Bestattungsplatz von Groß Fredenwalde in Nordostdeutschland präsentiert, wo schon 1962 ein Mehrfachgrab bei Bauarbeiten entdeckt wurde. Anthropologische Analysen konnten eine Frau mit einem Kind und zwei Männer mit zwei Kindern in dem Skelettmaterial identifizieren. AMS-Daten sprechen für eine Datierung der Individuen in das Atlanikum (ca. 6 000 calBC), und  $^{15}\text{N}/^{13}\text{C}$ -Isotopenanalysen der Individuen zeigen typische Werte von mesolithischen Sammler-Jäger-Fischern. Während einer Nachgrabung am Fundplatz in den Jahren 2012-2014 konnten drei neue Bestattungen einschließlich eines gestörten Kinder- und eines Kleinkindgrabes entdeckt werden. Höchst bemerkenswert ist das Grab eines jungen Mannes, der allem Anschein nach in aufrechter Haltung und in einem gestuften Ritus beigesetzt wurde. Die ungewöhnliche Bestattungsweise ist ohne Parallelen in Mitteleuropa, wobei mögliche Einflüsse aus dem Osten zu diskutieren sind (Gräberfeld Olenij Ostrov, Karelien). Insgesamt liegen nun von Groß Fredenwalde neun Individuen aus mindestens vier Gräbern vor, die wohl zu einem frühen Bestattungsplatz auf der markanten Anhöhe gehören. AMS-Datierungen weisen die Gräber dem Zeitraum von ca. 6 400 bis 4 900 calBC zu, und der Begräbnisplatz wurde somit während der Neolithisierungsphase des unteren Odergebietes durch die Linienbandkeramiker um ca. 5 200 calBC genutzt. Zwei erfolgreich paläogenetisch analysierte Individuen gehören zur Haplogruppe U der mitochondrialen Verwandtschaftslinien und bestätigen das Modell hoch differenzierter Populationen der Sammler-Jäger einerseits und der frühen Bauern andererseits.

**Keywords:** Mesolithic burial | early cemetery | Neolithisation | Mesolithische Bestattung | frühes Gräberfeld | Neolithisierung

## Jungpaläolithikum

BRUMM 2017

Adam Brumm et al., *Early human symbolic behavior in the Late Pleistocene of Wallacea*. *PNAS* **114** (2017), 4105–4110.

Adam Brumm, Michelle C. Langley, Mark W. Moore, Budianto Hakim, Muhammad Ramli, Iwan Sumantri, Basran Burhan, Andi Muhammad Saiful, Linda Siagian, Suryatman, Ratno Sardi, Andi Jusdi, Abdullah, Andi Pampang Mubarak, Hasliana, Hasrianti, Adhi Agus Oktaviana, Shinatria Adhityatama, Gerrit D. van den Bergh, Maxime Aubert, Jian-xin Zhao, Jillian Huntley, Bo Lil, Richard G. Roberts, E. Wahyu Saptomo, Yinika Perston & Rainer Grün

Wallacea, the zone of oceanic islands separating the continental regions of Southeast Asia and Australia, has yielded sparse evidence for the symbolic culture of early modern humans. Here we report evidence for symbolic activity 30,000–22,000 y ago at Leang Bulu Bettue, a cave and rock-shelter site on the Wallacean island of Sulawesi. We describe hitherto undocumented practices of personal ornamentation and portable art, alongside evidence for pigment processing and use in deposits that are the same age as dated rock art in the surrounding karst region. Previously, assemblages of multiple and diverse types of Pleistocene “symbolic” artifacts were entirely unknown from this region. The Leang Bulu Bettue assemblage provides insight into the complexity and diversification of modern human culture during a key period in the global dispersal of our species. It also shows that early inhabitants of Sulawesi fashioned ornaments from body parts of endemic animals, suggesting modern humans integrated exotic faunas and other novel resources into their symbolic world as they colonized the biogeographically unique regions southeast of continental Eurasia.

**Keywords:** Pleistocene art | Pleistocene symbolism | cognition | personal ornamentation | Wallacea

**Significance:** We present evidence from the Late Pleistocene of Sulawesi, Indonesia, where an unusually rich and unique symbolic complex was excavated from archaeological deposits spanning 30,000 to 22,000 y ago. Including previously unknown practices of self-ornamentation, used ochre, pigmented artifacts, and portable art, these findings advance our knowledge of the cultural repertoires of modern humans in Pleistocene Wallacea, including the nonparietal artworks and symbolic material culture of some of the world's earliest known "cave artists."

## Klima

WENINGER 2017

Bernhard Weninger & Donald Easton, *A Gap in the Early Bronze Age Pottery Sequence at Troy Dating to the Time of the 4.2 ka cal. B.P. Event*. In: FELIX HÖFLMAYER (Hrsg.), *The Late Third Millennium in the Ancient Near East – Chronology, C14, and Climate Change, Papers from: "The Early/Middle Bronze Age Transition in the Ancient Near East", Chicago 7–8 March 2014*. Oriental Institute Seminars 11 (Chicago 2017), 429–450.

In conclusion, by providing a review of previous and contemporary climatic studies, we hope to have demonstrated that further research into the impact of the 4.2 ka cal. b.p. event on the late Early Bronze Age cultures of the Mediterranean is likely to be rewarding. Already now there exists a large corpus of similar or at least related studies, from which we select Maran 1998 and Wiener 2014 as particularly interesting. In addition, taking Troy as a case study, we put forward the hypothesis that a gap exists between (Blegen) periods III and IV which has every chance of having been caused by a major "drought" event. It should be emphasized that, in the pottery seriation, this gap has so far been observed only in the Blegen material. It remains to be seen whether it can be observed also in the material from the new excavations. At this stage, therefore, it is unclear whether the gap represents a total abandonment of the site or merely a diminution in the scale of its occupation. We are still working on the details of this gap, at Troy, from both a stratigraphic and a historical perspective, which is quite challenging. But the real challenge will be, given such confirmation, how to explain the abandonment, or partial abandonment, of the site in social, economic, and religious terms. With the present paper we hope to have provided the interested reader with a compact introduction as to where the idea of a gap at Troy derives from (namely, from Correspondence Analysis pottery analysis), what makes the gap (namely, stratigraphic analysis), and, if it exists, where it may be leading us (toward a possible 4.2 ka cal. b.p. climate impact). With reference to this last question, we draw attention to the hypothesis, first formulated some thirty years ago by Jeremy Rutter (1984, p. 85), that an equivalent gap may exist, and that would be on a much wider scale, in the contemporary cultural development of the Aegean. The title to Rutter's paper is quite intriguing: "The Early Cycladic III Gap: What It Is and How To Go About Filling It Without Making It Go Away."

## Methoden

ECO 1977

Umberto Eco, *How to Write a Thesis*. (Cambridge 2015).

Eco was aware of this predicament. As a university professor, he knew that the majority of students in Italian universities seldom attended classes, that very



few of them would continue to write and do research, and that the degree they eventually earned would not necessarily improve their social conditions. It would have been easy to call for the system to be reformed so as not to require a thesis from students illequipped to write one, and for whom the benefit of spending several months working on a thesis might be difficult to justify in cold economic terms.

But Eco did not believe that education belonged to an elite, or that it should lower its standards in including the non-elite. He understood that the writing of a thesis forced many students outside of their cultural comfort zone, and that if the shock was too sudden or strong, they would give up. For him, it was about tailoring the challenge to students' needs and capabilities, but without giving up thoroughness, complexity, and rigor. If students' interests and ambitions could be met, while the limits of their sense of security were stretched, education would be achieved.

#### FINE 1993

Gary Alan Fine, *Ten Lies of Ethnography, Moral Dilemmas of Field Research*. *Journal of Contemporary Ethnography* **22** (1993), 267–294.

As Everett Hughes noted, there is an “underside” to all work. Each job includes ways of doing things that would be inappropriate for those outside the guild to know. Illusions are essential for maintaining occupational reputation, but in the process they create a set of moral dilemmas. So it is with ethnographic work. This article describes the underside of ethnographic work: compromises that one frequently makes with idealized ethical standards. It argues that images of ethnographers—personal and public—are based on partial truths or self-deceptions. The focus is on three clusters of dilemmas: the classical virtues (the kindly ethnographer, the friendly ethnographer, and the honest ethnographer), technical skills (the precise ethnographer, the observant ethnographer, and the unobtrusive ethnographer), and the ethnographic self (the candid ethnographer, the chaste ethnographer, the fair ethnographer, and the literary ethnographer). Changes in ethnographic styles and traditions alter the balance of these deceptions but do not eliminate the need for methodological illusions.

#### HERTEL 2001

Peter Hertel, *Projekt Diplomarbeit, Schreibwerkstatt*. (Osnabrück 2001). <<http://www.informatik.hs-furtwangen.de/~hanne/LATEX-DA-sws.pdf>> (2017-04-16).

Wir halten fest: Jedes Dokument, mit dem man sich wegen der Diplomarbeit beschäftigt, ist sofort in der Literaturdatenbank zu vermerken. Auch dann, wenn Sie noch gar nicht wissen können, ob das Schriftstück zitiert werden soll, oder an welcher Stelle.

## Mittelpaläolithikum

#### WEYRICH 2017

Laura S. Weyrich et al., *Neanderthal behaviour, diet, and disease inferred from ancient DNA in dental calculus*. *nature* **544** (2017), 357–361.

n544-0357-Supplement.pdf

Laura S. Weyrich, Sebastian Duchene, Julien Soubrier, Luis Arriola, Bastien Llamas, James Breen, Alan G. Morris, Kurt W. Alt, David Caramelli, Veit Dresely,

Milly Farrell, Andrew G. Farrer, Michael Francken, Neville Gully, Wolfgang Haak, Karen Hardy, Katerina Harvati, Petra Held, Edward C. Holmes, John Kaidonis, Carles Lalueza-Fox, Marco de la Rasilla, Antonio Rosas, Patrick Semal, Arkadiusz Soltysiak, Grant Townsend, Donatella Usai, Joachim Wahl, Daniel H. Huson, Keith Dobney & Alan Cooper

Recent genomic data have revealed multiple interactions between Neanderthals and modern humans<sup>1</sup>, but there is currently little genetic evidence regarding Neanderthal behaviour, diet, or disease. Here we describe the shotgun-sequencing of ancient DNA from five specimens of Neanderthal calcified dental plaque (calculus) and the characterization of regional differences in Neanderthal ecology. At Spy cave, Belgium, Neanderthal diet was heavily meat based and included woolly rhinoceros and wild sheep (mouflon), characteristic of a steppe environment. In contrast, no meat was detected in the diet of Neanderthals from El Sidrón cave, Spain, and dietary components of mushrooms, pine nuts, and moss reflected forest gathering<sup>2,3</sup>. Differences in diet were also linked to an overall shift in the oral bacterial community (microbiota) and suggested that meat consumption contributed to substantial variation within Neanderthal microbiota. Evidence for self-medication was detected in an El Sidrón Neanderthal with a dental abscess<sup>4</sup> and a chronic gastrointestinal pathogen (*Enterocytozoon bieneusi*). Metagenomic data from this individual also contained a nearly complete genome of the archaeal commensal *Methanobrevibacter oralis* (10.2× depth of coverage)—the oldest draft microbial genome generated to date, at around 48,000 years old. DNA preserved within dental calculus represents a notable source of information about the behaviour and health of ancient hominin specimens, as well as a unique system that is useful for the study of long-term microbial evolution.

## Story or Book

LIVIO 2017

Mario Livio, *Stranger than fiction, A wide-ranging history offers a sumptuous panorama of modern physics.* [science](#) **355** (2017), 1273.

In “The Greatest Story Ever Told—So Far”, theoretical physicist Lawrence Krauss beautifully explains how our refusal to believe that there are unknowable cosmic truths has rewarded humanity with brilliantly precise answers to puzzles previously obscured by the fog of dogmatic assurance. When we cast off faith in favor of the scientific method, deep questions such as “What is the nature of space and time?” and “What is matter?” suddenly became answerable and, perhaps more important, verifiable.

The Greatest Story Ever Told—So Far. Lawrence M. Krauss. Simon & Schuster, 2017. 336 pp.