

References

Aktuell

DEL VICARIO 2016

Michela Del Vicario et al., *The spreading of misinformation online*. [PNAS 113 \(2016\), 554–559](#).

Michela Del Vicario, Alessandro Bessi, Fabiana Zollo, Fabio Petroni, Antonio Scala, Guido Caldarelli, H. Eugene Stanley & Walter Quattrociocchi

The wide availability of user-provided content in online social media facilitates the aggregation of people around common interests, worldviews, and narratives. However, the World Wide Web (WWW) also allows for the rapid dissemination of unsubstantiated rumors and conspiracy theories that often elicit rapid, large, but naive social responses such as the recent case of Jade Helm 15—where a simple military exercise turned out to be perceived as the beginning of a new civil war in the United States. In this work, we address the determinants governing misinformation spreading through a thorough quantitative analysis. In particular, we focus on how Facebook users consume information related to two distinct narratives: scientific and conspiracy news. We find that, although consumers of scientific and conspiracy stories present similar consumption patterns with respect to content, cascade dynamics differ. Selective exposure to content is the primary driver of content diffusion and generates the formation of homogeneous clusters, i.e., “echo chambers.” Indeed, homogeneity appears to be the primary driver for the diffusion of contents and each echo chamber has its own cascade dynamics. Finally, we introduce a data-driven percolation model mimicking rumor spreading and we show that homogeneity and polarization are the main determinants for predicting cascades’ size.

Keywords: misinformation | virality | Facebook | rumor spreading | cascades

Significance: The wide availability of user-provided content in online social media facilitates the aggregation of people around common interests, worldviews, and narratives. However, the World Wide Web is a fruitful environment for the massive diffusion of unverified rumors. In this work, using a massive quantitative analysis of Facebook, we show that information related to distinct narratives—conspiracy theories and scientific news—generates homogeneous and polarized communities (i.e., echo chambers) having similar information consumption patterns. Then, we derive a data-driven percolation model of rumor spreading that demonstrates that homogeneity and polarization are the main determinants for predicting cascades’ size.

FISCHER 2016

Barbara Fischer & Philipp Mitteroecker, *Roles of selection, plasticity, and genetics in the integration of human pelvis shape and head size, Reply to Underdown and Oppenheimer*. [PNAS 113 \(2016\), E259](#).

Independent selection of pelvis shape, stature, and head size would produce covariation of average population phenotypes across evolutionary time, but not of individual phenotypes within a population, as we have observed. The emergence of covariance patterns within a population does require a scenario of correlational selection or a change in the developmental structuring of variation.

MCNUTT 2016

Marcia McNutt, *Whither (wither?) tenure?* [science 350 \(2016\), 1295](#).

[Women scientists . . . are still underrepresented among tenured faculty] A major reason is that young academics must concentrate on their careers to earn tenure at the same time as they would be starting their families, and this issue affects women disproportionately more.

For example, promotion to associate professor could be rewarded with a longer-term contract (10 years), followed by a series of renewable 10-year contracts (or in rare cases, longer contracts) as a full professor. The contracts would be non-binding, giving the faculty member flexibility to consider opportunities at other institutions.

PENNISI 2016

Elizabeth Pennisi, *Beetle horns and book writing*. [science 350 \(2016\), 1578](#).

Working on *Animal Weapons: The Evolution of Battle*, which earned Emlen the 2015 Phi Beta Kappa Award in Science, has also changed how he writes and edits. In his papers, he now aims for “crisp and clean, quick and active” writing. He keeps waiting for a journal editor to push back on this new style, but it hasn’t happened yet.

SMACK 2016

The Study of Maternal & Child Kissing (SMACK) Working Group, *Maternal kisses are not effective in alleviating minor childhood injuries (boo-boos), A randomized, controlled and blinded study*.

[Journal of Evaluation in Clinical Practice \(2016\), preprint, 1–3](#).

[DOI:10.1111/jep.12508](#).

Background The practice of maternal kissing of minor injuries of childhood (boo-boos), though widely endorsed and practised, has never been demonstrated to be of benefit to children.

Objective To determine the efficacy, if any, of maternal kissing of boo-boos in toddlers. Design Randomized, controlled and double-blinded study of children with experimentally induced minor injuries. Control arms included both no intervention group and ‘sham’ (non-maternal) kissing. Children were blinded to the identity of the kisser in both the maternal and sham control groups.

Setting Outpatient research clinics in Ottawa, Canada. Participants 943 maternal–toddler pairs recruited from the community. Measurements Toddler Discomfort Index (TDI) pre-injury, 1 and 5 minutes post-injury.

Results One-minute and 5-minute TDI scores did not differ significantly between the maternal and sham kiss groups. Both of these groups had significantly higher TDI scores at 5 minutes compared to the no intervention group.

Conclusions Maternal kissing of boo-boos confers no benefit on children with minor traumatic injuries compared to both no intervention and sham kissing. In fact, children in the maternal kissing group were significantly more distressed at 5 minutes than were children in the no intervention group. The practice of maternal kissing of boo-boos is not supported by the evidence and we recommend a moratorium on the practice.

Keywords: evidenced-based medicine

TSAI 2016

Jessica W. Tsai, *The M.D.-Ph.D. double agent*. [science 350 \(2016\), 1434](#).

I was lucky to find outstanding mentors who understood the tensions between science and medicine. During my Ph.D., my adviser allowed me to spend half a day each week seeing patients so that I could maintain my clinical skills while still challenging me to become a thoughtful, thorough, analytical scientist. My clinical mentor always made it a point to ask me about my basic science research, and he even attended my thesis defense.

UNDERDOWN 2016

Simon Underdown & Stephen J. Oppenheimer, *Do patterns of covariation between human pelvis shape, stature, and head size alleviate the obstetric dilemma?* [PNAS 113 \(2016\), E258](#).

We feel that, although their results are intriguing, the authors do not fully consider the interconnecting web of factors that play important roles in complexity and the evolutionary trade-off between bipedalism and the pattern of increasing brain size in the genus Homo.

Anthropologie

DANNEMANN 2016

Michael Dannemann, Aida M. Andrés & Janet Kelso, *Introgression of Neandertal- and Denisovan-like Haplotypes Contributes to Adaptive Variation in Human Toll-like Receptors*. [American Journal of Human Genetics 98 \(2016\), 22–33](#).

Pathogens and the diseases they cause have been among the most important selective forces experienced by humans during their evolutionary history. Although adaptive alleles generally arise by mutation, introgression can also be a valuable source of beneficial alleles. Archaic humans, who lived in Europe and Western Asia for more than 200,000 years, were probably well adapted to this environment and its local pathogens. It is therefore conceivable that modern humans entering Europe and Western Asia who admixed with them obtained a substantial immune advantage from the introgression of archaic alleles. Here we document a cluster of three Toll-like receptors (TLR6-TLR1-TLR10) in modern humans that carries three distinct archaic haplotypes, indicating repeated introgression from archaic humans. Two of these haplotypes are most similar to the Neandertal genome, and the third haplotype is most similar to the Denisovan genome. The Toll-like receptors are key components of innate immunity and provide an important first line of immune defense against bacteria, fungi, and parasites. The unusually high allele frequencies and unexpected levels of population differentiation indicate that there has been local positive selection on multiple haplotypes at this locus. We show that the introgressed alleles have clear functional effects in modern humans; archaic-like alleles underlie differences in the expression of the TLR genes and are associated with increased microbial resistance and increased allergic disease in large cohorts. This provides strong evidence for recurrent adaptive introgression at the TLR6-TLR1-TLR10 locus, resulting in differences in disease phenotypes in modern humans.

DESCHAMPS 2016

Matthieu Deschamps et al., *Genomic Signatures of Selective Pressures and Introgression from Archaic Hominins at Human Innate Immunity Genes*. [American Journal of Human Genetics 98 \(2016\), 5–21](#).

Matthieu Deschamps, Guillaume Laval, Maud Fagny, Yuval Itan, Laurent Abel, Jean-Laurent Casanova, Etienne Patin & Lluís Quintana-Murci

Human genes governing innate immunity provide a valuable tool for the study of the selective pressure imposed by microorganisms on host genomes. A comprehensive, genome-wide study of how selective constraints and adaptations have driven the evolution of innate immunity genes is missing. Using full-genome sequence variation from the 1000 Genomes Project, we first show that innate immunity genes have globally evolved under stronger purifying selection than the remainder of protein-coding genes. We identify a gene set under the strongest selective constraints, mutations in which are likely to predispose individuals to life-threatening disease, as illustrated by STAT1 and TRAF3. We then evaluate the occurrence of local adaptation and detect 57 high-scoring signals of positive selection at innate immunity genes, variation in which has been associated with susceptibility to common infectious or autoimmune diseases. Furthermore, we show that most adaptations targeting coding variation have occurred in the last 6,000–13,000 years, the period at which populations shifted from hunting and gathering to farming. Finally, we show that innate immunity genes present higher Neandertal introgression than the remainder of the coding genome. Notably, among the genes presenting the highest Neandertal ancestry, we find the TLR6-TLR1-TLR10 cluster, which also contains functional adaptive variation in Europeans. This study identifies highly constrained genes that fulfill essential, non-redundant functions in host survival and reveals others that are more permissive to change—containing variation acquired from archaic hominins or adaptive variants in specific populations—improving our understanding of the relative biological importance of innate immunity pathways in natural conditions.

Bibel

FAUST 2001

Avraham Faust, *Doorway Orientation, Settlement Planning and Cosmology in Ancient Israel During Iron Age II*. [Oxford Journal of Archaeology](#) **20** (2001), 129–155.

An examination of Iron Age buildings and settlements in ancient Israel indicates that a large number of them were oriented toward the east, while the west was extremely under-represented. An examination of various climatic and functional considerations does not seem to explain the phenomenon. Many ethnographic studies, however, have demonstrated the strong influence that cosmological principles can have on the planning of buildings and settlements, and that in many cases the east is preferred. In the present study, however, we have additional information. The common Biblical Hebrew word for east is *qedma* (forward), while the west is *ahora* (backward). Additional words for these directions indicate that the east had a good connotation while the west had a bad one. Thus, the archaeological pattern, along with language and texts (which are used as a substitute for human informants), seem to give an important insight into some of the cosmological principles of the ancient Israelites.

Biologie

MARTENS 2016

Eric C. Martens, *Fibre for the future*. [nature](#) **529** (2016), 158–159.

A chronic lack of dietary fibre has been found to reduce the diversity of bacteria in the guts of mice. This effect is not fully reversed when fibre is reintroduced, and increases in severity over multiple generations.

SONNENBURG 2016

Erica D. Sonnenburg, Samuel A. Smits, Mikhail Tikhonov, Steven K. Higginbottom, Ned S. Wingreen & Justin L. Sonnenburg, *Diet-induced extinctions in the gut microbiota compound over generations*. [nature 529 \(2016\), 212–215](#).

[n529-0212-Supplement.zip](#)

The gut is home to trillions of microorganisms that have fundamental roles in many aspects of human biology, including immune function and metabolism^{1,2}. The reduced diversity of the gut microbiota in Western populations compared to that in populations living traditional lifestyles presents the question of which factors have driven microbiota change during modernization. Microbiota-accessible carbohydrates (MACs) found in dietary fibre have a crucial involvement in shaping this microbial ecosystem, and are notably reduced in the Western diet (high in fat and simple carbohydrates, low in fibre) compared with a more traditional diet³. Here we show that changes in the microbiota of mice consuming a low-MAC diet and harbouring a human microbiota are largely reversible within a single generation. However, over several generations, a low-MAC diet results in a progressive loss of diversity, which is not recoverable after the reintroduction of dietary MACs. To restore the microbiota to its original state requires the administration of missing taxa in combination with dietary MAC consumption. Our data illustrate that taxa driven to low abundance when dietary MACs are scarce are inefficiently transferred to the next generation, and are at increased risk of becoming extinct within an isolated population. As more diseases are linked to the Western microbiota and the microbiota is targeted therapeutically, microbiota reprogramming may need to involve strategies that incorporate dietary MACs as well as taxa not currently present in the Western gut.

Datierung

BIETAK 2007

MANFRED BIETAK & ERNST CZERNY (Hrsg.), *The Synchronisation of Civilisations in the Eastern Mediterranean in the Second Millennium B.C. III, Proceedings of the SCIEEM 2000 – 2nd EuroConference Vienna, 28th of May – 1st of June 2003*. Contributions to the Chronology of the Eastern Mediterranean 9 ([Wien 2007](#)).

Judentum

FISCHEL 1939

Heinz Israel Fischel, *Zur Literargeschichte des Bibelkommentars*. [Monatsschrift für Geschichte und Wissenschaft des Judentums 83 \(1939\), 431–441](#).

Die seltenere Behandlung der Propheten ist kennzeichnend für die jüdische Religiosität von über 1500 Jahren, die die Tora zur Grundlage ihres Lebens hatte, die Megillot liturgisch brauchte, und der die Bücher Hiob, Psalmen und Sprüche

näher standen als der Geist der Prophetie und die Geschichtsschreibung der „ersten Propheten“, die dem Interesse des 19. und 20. Jahrhunderts näher stehen. Die Schwierigkeit des Textes ist nicht in erster Linie aus schlaggebend für die Häufigkeit der Behandlung der Bücher.

Die Exegese der Kommentare unterliegt natürlich geschichtlichen und geistesgeschichtlichen Wirkungen, neben der Form und Methode vor allem in den Deutungen umstrittener Stellen und grundlegender Tendenzen.

Es gibt hier keine einheitliche Tradition, die man als die jüdische Auslegung bezeichnen könnte, es gibt bestenfalls Traditionen, einzelne Traditionsfäden. Die Deutungsarbeit bietet uns nicht das Bild einer kontinuierlichen und homogenen Auslegung, sondern zeigt uns eine große Buntheit und Vielgestaltigkeit der Lösungen.

Diese Erscheinung ist wesentlich für die Erkenntnis jüdischer Religion und jüdischen Denkens, indem sie auf die hier herrschende Mannigfaltigkeit, Uneinheitlichkeit, oft Gegensätzlichkeit hinweist, auf die Abneigung gegen Uniformität und Dogmatismus.

GLINERT 2005

Lewis Glinert, *Modern Hebrew, An essential grammar*. (New York [2005](#)).

Klima

CRUCIFIX 2016

Michel Crucifix, *Earth's narrow escape from a big freeze*. [nature](#) **529** (2016), 162–163.

An equation has been derived that allows the timing of the onset of glaciations to be predicted. This confirms that Earth has just missed entering a new glacial period, and is unlikely to enter one for another 50,000 years.

GANOPOLSKI 2016

A. Ganopolski, R. Winkelmann & H. J. Schellnhuber, *Critical insolation–CO₂ relation for diagnosing past and future glacial inception*. [nature](#) **529** (2016), 200–203.

The past rapid growth of Northern Hemisphere continental ice sheets, which terminated warm and stable climate periods, is generally attributed to reduced summer insolation in boreal latitudes^{1–3}. Yet such summer insolation is near to its minimum at present⁴, and there are no signs of a new ice age⁵. This challenges our understanding of the mechanisms driving glacial cycles and our ability to predict the next glacial inception⁶. Here we propose a critical functional relationship between boreal summer insolation and global carbon dioxide (CO₂) concentration, which explains the beginning of the past eight glacial cycles and might anticipate future periods of glacial inception. Using an ensemble of simulations generated by an Earth system model of intermediate complexity constrained by palaeoclimatic data, we suggest that glacial inception was narrowly missed before the beginning of the Industrial Revolution. The missed inception can be accounted for by the combined effect of relatively high late-Holocene CO₂ concentrations and the low orbital eccentricity of the Earth⁷. Additionally, our analysis suggests that even in the absence of human perturbations no substantial build-up of ice sheets would occur within the next several thousand years and that the current interglacial would probably last for another 50,000 years. However, moderate anthropogenic cumulative CO₂ emissions of 1,000 to 1,500 gigatonnes of carbon will postpone the

next glacial inception by at least 100,000 years^{8,9}. Our simulations demonstrate that under natural conditions alone the Earth system would be expected to remain in the present delicately balanced interglacial climate state, steering clear of both large-scale glaciation of the Northern Hemisphere and its complete deglaciation, for an unusually long time.

ROBERTS 2016

Jenny Roberts et al., *Evolution of South Atlantic density and chemical stratification across the last deglaciation*. *PNAS* **113** (2016), 514–519.

Jenny Roberts, Julia Gottschalk, Luke C. Skinner, Victoria L. Peck, Sev Kender, Henry Elderfield, Claire Waelbroeck, Natalia Vázquez Riveiros & David A. Hodell

Explanations of the glacial–interglacial variations in atmospheric pCO₂ invoke a significant role for the deep ocean in the storage of CO₂. Deep-ocean density stratification has been proposed as a mechanism to promote the storage of CO₂ in the deep ocean during glacial times. A wealth of proxy data supports the presence of a “chemical divide” between intermediate and deep water in the glacial Atlantic Ocean, which indirectly points to an increase in deep-ocean density stratification. However, direct observational evidence of changes in the primary controls of ocean density stratification, i.e., temperature and salinity, remain scarce. Here, we use Mg/Ca-derived seawater temperature and salinity estimates determined from temperature-corrected δ¹⁸O measurements on the benthic foraminifer *Uvigerina* spp. from deep and intermediate water-depth marine sediment cores to reconstruct the changes in density of sub-Antarctic South Atlantic water masses over the last deglaciation (i.e., 22–2 ka before present). We find that a major breakdown in the physical density stratification significantly lags the breakdown of the deep–intermediate chemical divide, as indicated by the chemical tracers of benthic foraminifer δ¹³C and foraminifer/ coral ¹⁴C. Our results indicate that chemical destratification likely resulted in the first rise in atmospheric pCO₂, whereas the density destratification of the deep South Atlantic lags the second rise in atmospheric pCO₂ during the late deglacial period. Our findings emphasize that the physical and chemical destratification of the ocean are not as tightly coupled as generally assumed.

Keywords: South Atlantic | density gradient | ocean stratification | last deglaciation | atmospheric CO₂

Significance: The cause of the rise in atmospheric pCO₂ over the last deglaciation has been a puzzle since its discovery in the early 1980s. It is widely believed to be related to changes in carbon storage in the deep ocean, but the exact mechanisms responsible for releasing CO₂ from the deep-ocean reservoir, including the role of ocean density stratification, remains an open question. Here we reconstruct changes in the intermediate–deep density gradient in the South Atlantic across the last deglaciation and find evidence of an early deglacial chemical destratification and a late deglacial density destratification. These results suggest that other mechanisms, besides deep-ocean density destratification, were responsible for the ocean–atmosphere transfer of carbon over the deglacial period.

WENINGER 2007

Bernhard Weninger et al., *Abrupt Climate Forcing observed at Early Neolithic sites in South-East Europe and the Near East*. In: HENRIETA TODOROVA, MARK STEFANOVICH & GEORGI IVANOV (Hrsg.), *The Struma/Strymon River Valley in Prehistory, International Symposium “Strymon Praehistoricus”, Kjustendil–Blagoevgrad & Serres–Amphipolis 27.09–01.10.2004*. In *The Steps of James Harvey Gaul 2* (Sofia 2007), 7–20.

Bernhard Weninger, Eva Alram-Stern, Eva Bauer, Lee Clare, Uwe Danzeglocke, Olaf Jöris, Claudia Kubatzki, Gary Rollefson, Henrieta Todorova, Tjeerd van Andel

In this paper we explore the hypothesis that the abrupt drainage of Laurentide lakes and the associated rapid switch of the Thermohaline Circulation c. 8200 years ago (BARBER et al. 1999) may have had a catastrophic influence on Neolithic civilisation in large parts of South-East Europe, Anatolia, Cyprus, and the Near East. The cold event at 8200 calBP is attested in a number of high-resolution climate proxies in the Northern Hemisphere, and in many cases corresponds to markedly cold and arid conditions. We expect that extended arid conditions would have an unfavourable and maybe even devastating influence on the agricultural communities in the Eastern Mediterranean. To evaluate this hypothesis, we have identified the relevant archaeological levels of major Neolithic settlements in Central Anatolia, Cyprus, Greece and Bulgaria, first by constructing a substantial archaeological radiocarbon database and then by stratigraphic, architectural, cultural and geomorphological studies for these sites utilizing published data. The specific archaeological events and processes we observe at a number of these sites during the study interval 8400–8000 cal.BP lead us to extend and refine some previously established Neolithisation models.

WENINGER 2015

Bernhard Weninger & Thomas Harper, *The Geographic Corridor for Rapid Climate Change in Southeast Europe and Ukraine*. In: SVEND HANSEN, ALEXANDRA ANDERS, PÁL RACZKY & AGATHE REINGRUBER (Hrsg.), *Neolithic and Copper Age Between the Carpathians and the Aegean Sea, Chronologies and Technologies from the 6th to the 4th Millennium BCE, International Workshop Budapest 2012*. Archäologie in Eurasien 31 (Bonn 2015), 475–505.

With reference to pertinent palaeoclimatological, meteorological and archaeological literature, our detailed comparison of available ^{14}C data from Greece, Bulgaria, Romania and Ukraine during the Chalcolithic period suggests in many aspects a strong qualitative similarity with perceived trends in RCC proxy data. It is hoped that the discussion here may form a solid foundation for future investigations in climate archaeology, and at least incite greater general interest in palaeoclimatology as a means of understanding diachronic cultural variation. Far from a “catch all” scenario (i.e. an RCC “template” of expected behaviours), we suggest that human adaptive responses to climate change, although systematic, exhibit significant spatiotemporal variation.

Seemingly oppositional phenomena, such as giant-settlement formation in one region being synchronous with settlement abandonment in another, may very well have common causation. The degree to which the RCC mechanism has a role in this causation remains difficult to judge, although an initial effort at quantification has been made. Further research into our comparatively well-developed archaeological data sets for Ukraine has revealed a significant correlation between modelled demographic trends relating to the giant-settlement phenomenon and RCC proxies. While these results are encouraging, we conclude that the success of future studies is contingent on the collation of more accurate and expansive regional archaeological and climatic data. These studies should not only examine super-regional climatic trends and the remote human responses on a local level, but multiple levels of intermediate responses in ancient environmental and social systems. In essence, we should strive to reconstruct the entire postulated causal chain. Particular emphasis should be placed on improving our conceptual modelling, via reference

to historical and ethnographic analogies, of human vulnerability and adaptivity to climatic constraints.

Methoden

BLENCH 2016

Roger Blench, *Stone tool wars; have we got it upside down?* [unknown \(2016\)](#), preprint, 1–11. .

The modern academic stone tool industry is dominated by an almost obsessive debate over typology, chronology and correlation with a supposed 'behavioural modernity'. However, there are many reasons for supposing both that these questions are in principle irresolvable and that they may never be able to provide answers. The paper explores neopositivist and progressivist approaches, concluding that both the SE Asian Hoabhinian and the stone tools of the New World are difficult to explain with these models. It looks at the evidence for cultural universals and the explanations that might be adopted to explain these, suggesting that modern humans left with Africa with a complex culture which, however, will not be reflected in the archaeological record.

Mittelpaläolithikum Jungpaläolithikum

BORDES 2011

Jean-Guillaume Bordes & Nicolas Teyssandier, *The Upper Paleolithic nature of the Châtelperronian in South-Western France, Archeostratigraphic and lithic evidence.* [Quaternary International 246 \(2011\)](#), 382–388.

This paper aims to review current evidence and to develop new ideas and hypotheses concerning the status of the Châtelperronian in the context of the Middle to Upper Paleolithic transition. Attention is focused on archeostratigraphy and lithic evidence from South-Western France. The stratigraphic evidence can no longer be used to affirm a Châtelperronian/Aurignacian contemporaneity and is not a good indicator of Mousterian of Acheulean Tradition/Châtelperronian continuity. Concerning lithic productions, the transitional aspect of the Châtelperronian industry seems to be a result of postdepositional disturbances. The industry that directly followed the Châtelperronian in several sequences of South-Western France was the Protoaurignacian. Based on lithic equipment, the Châtelperronian is a pure leptolithic industry, which has a more common orientation with the Protoaurignacian than with any final Mousterian technocomplexes.

Neolithikum

CHENAL 2015

Fanny Chenal, Bertrand Perrin, H el ene Barrand-Emam & Bruno Boulestin, *A farewell to arms, A deposit of human limbs and bodies at Bergheim, France, c. 4000 BC.* [Antiquity 89 \(2015\)](#), 1313–1330.

Between c. 4500 and 3500 BC, the deposition of human remains within circular pits was widespread throughout Central and Western Europe. Attempts at forming explanatory models for this practice have proven difficult due to the highly variable nature of these deposits. Recent excavations at Bergheim in Alsace have

revealed a particularly unusual variant of this phenomenon featuring a number of amputated upper limbs. The evidence from this site challenges the simplicity of existing interpretations, and demands a more critical focus on the archaeological evidence for acts of systematic violence during this period.

Keywords: France | Late Neolithic | human remains | circular pits | amputation | violence

Ostasien

VAN DEN BERGH 2016

Gerrit D. van den Bergh et al., *Earliest hominin occupation of Sulawesi, Indonesia*. [nature](#) **529** (2016), 208–211.

[n529-0208-Supplement.pdf](#)

Gerrit D. van den Bergh, Bo Li, Adam Brumm, Rainer Grün, Dida Yurnaldi, Mark W. Moore, Iwan Kurniawan, Ruly Setiawan, Fachroel Aziz, Richard G. Roberts, Suyono, Michael Storey, Erick Setiabudi & Michael J. Morwood

Sulawesi is the largest and oldest island within Wallacea, a vast zone of oceanic islands separating continental Asia from the Pleistocene landmass of Australia and Papua (Sahul). By one million years ago an unknown hominin lineage had colonized Flores immediately to the south¹, and by about 50 thousand years ago, modern humans (*Homo sapiens*) had crossed to Sahul^{2,3}. On the basis of position, oceanic currents and biogeographical context, Sulawesi probably played a pivotal part in these dispersals⁴. Uranium-series dating of speleothem deposits associated with rock art in the limestone karst region of Maros in southwest Sulawesi has revealed that humans were living on the island at least 40 thousand years ago (ref. 5). Here we report new excavations at Talepu in the Walanae Basin northeast of Maros, where in situ stone artefacts associated with fossil remains of megafauna (*Bubalus* sp., *Stegodon* and *Celebochoerus*) have been recovered from stratified deposits that accumulated from before 200 thousand years ago until about 100 thousand years ago. Our findings suggest that Sulawesi, like Flores, was host to a long-established population of archaic hominins, the ancestral origins and taxonomic status of which remain elusive.