

References

Aktuell

SIDIK 2023

Saima Sidik, *Bold study that gave people Covid reveals ‘supershedding’*. [nature](#) **618** (2023), 892–893.

A small subset of people spew huge amounts of virus into the air — even if they have mild symptoms.

None of the participants emitted a detectable level of virus into the air before testing positive. By the time they tested positive, most participants had already experienced mild symptoms, such as tiredness. That means that if people test as soon as they detect symptoms, rapid tests “can be a powerful tool” for controlling viral spread.

Anthropologie

ALGER 2023

Ingela Alger, Slimane Dridi, Jonathan Stieglitz & Michael L. Wilson, *The evolution of early hominin food production and sharing*. [PNAS](#) **120** (2023), e2218096120.

[pnas120-e2218096120-Supplement.pdf](#)

How did humans evolve from individualistic to collective foraging with sex differences in production and widespread sharing of plant and animal foods? While current evolutionary scenarios focus on meat, cooking, or grandparental subsidies, considerations of the economics of foraging for extracted plant foods (e.g., roots, tubers), inferred to be important for early hominins (.6 to 2.5 mya), suggest that early hominins shared such foods with offspring and others. Here, we present a conceptual and mathematical model of early hominin food production and sharing, prior to the emergence of frequent hunting, cooking, and increased lifespan. We hypothesize that extracted plant foods were vulnerable to theft, and that male mate guarding protected females from food theft. We identify conditions favoring extractive foraging and food sharing across mating systems (i.e., monogamy, polygyny, promiscuity), and we assess which system maximizes female fitness with changes in the profitability of extractive foraging. Females extract foods and share them with males only when: i) extracting rather than collecting plant foods pays off energetically; and ii) males guard females. Males extract foods when they are sufficiently high in value, but share with females only under promiscuous mating and/or no mate guarding. These results suggest that if early hominins had mating systems with pair-bonds (monogamous or polygynous), then food sharing by adult females with unrelated adult males occurred before hunting, cooking, and extensive grandparenting. Such cooperation may have enabled early hominins to expand into more open, seasonal habitats, and provided a foundation for the subsequent evolution of human life histories.

Keywords: food sharing | human evolution | extractive foraging | cooperation | pair-bonds

Significance: Human foragers share food extensively. Influential scenarios for the evolution of hominin food sharing focus on hunting, scavenging, cooking, or

grandparental subsidies. However, evidence that the diets of early hominins such as Australopithecus included nutrient-dense extracted foods, long before reliance on meat, fire, or increased lifespan, suggests the possibility that early hominins shared extracted foods. Here, we present a conceptual and mathematical model of the evolution of food production and sharing in early hominins, across diverse mating systems. Male mate guarding protects females from food theft, promoting extractive foraging by females. This increased foraging efficiency motivates females to share food with males when pair-bonds exist. Female provisioning of males may have catalyzed the evolution of uniquely hominin traits.

FINKEL 2023

Elizabeth Finkel, *Consciousness hunt yields results but not clarity*. *science* **380** (2023), 1309–1310.

Two rival theories of how it emerges went head-to-head in brain-scanning experiments.

KONDOR 2023

Dániel Kondor, James S. Bennett, Detlef Gronenborn, Nicolas Antunes, Daniel Hoyer & Peter Turchin, *Explaining population booms and busts in Mid-Holocene Europe*. *Scientific Reports* **13** (2023), 9310. DOI:10.1038/s41598-023-35920-z.

Archaeological evidence suggests that the population dynamics of Mid-Holocene (Late Mesolithic to Initial Bronze Age, ca. 7000–3000 BCE) Europe are characterized by recurrent booms and busts of regional settlement and occupation density. These boom-bust patterns are documented in the temporal distribution of 14C dates and in archaeological settlement data from regional studies. We test two competing hypotheses attempting to explain these dynamics: climate forcing and social dynamics leading to inter-group conflict. Using the framework of spatially-explicit agent-based models, we translated these hypotheses into a suite of explicit computational models, derived quantitative predictions for population fluctuations, and compared these predictions to data. We demonstrate that climate variation during the European Mid-Holocene is unable to explain the quantitative features (average periodicities and amplitudes) of observed boom-bust dynamics. In contrast, scenarios with social dynamics encompassing density-dependent conflict produce population patterns with time scales and amplitudes similar to those observed in the data. These Results suggest that social processes, including violent conflict, played a crucial role in the shaping of population dynamics of European Mid-Holocene societies.

Biologie

CASANOVA 2023

Jean-Laurent Casanova, *From second thoughts on the germ theory to a full-blown host theory*. *PNAS* **120** (2023), e2301186120.

pnas120-e2301186120-Supplement.pdf

In 1955, Rene Dubos famously expressed his “second thoughts on the germ theory”, attributing infectious diseases to various “changing circumstances” that weaken the host by unknown mechanisms. He rightly stressed that only a small minority of individuals infected by almost any microbe develop clinical disease. Intriguingly, though, he did not mention the abundant and elegant findings reported from 1905 onward that unambiguously pointed to host genetic determinants of infection outcome in plants and animals, including human inborn errors of immunity.

Diverse findings over the next 50 y corroborated and extended these earlier genetic and immunological observations that Rene Dubos had neglected. Meanwhile, the sequential advent of immunosuppression- and HIV-driven immunodeficiencies unexpectedly provided a mechanistic basis for his own views. Collectively, these two lines of evidence support a host theory of infectious diseases, with inherited and acquired immunodeficiencies as the key determinants of severe infection outcome, relegating the germ to an environmental trigger that reveals an underlying and preexisting cause of disease and death.

Keywords: René Dubos | germ theory | host genetics | inborn errors of immunity | infectious diseases

Energie

NOGRADY 2023

Bianca Nogrady, *Is Fukushima wastewater release safe? What the science says.* [nature](#) **618** (2023), 894–895.

TEPCO says that the resulting concentration of tritium is around 1,500 becquerels (a measure of the radioactivity of a substance) per litre — around one-seventh of the World Health Organization’s guidelines for tritium in drinking water.

But Richmond is concerned the tritium could concentrate in the food web as larger organisms eat smaller contaminated ones.

Shigeyoshi Ootosaka, an oceanographer and marine chemist at the Atmospheric and Ocean Research Institute of the University of Tokyo says that the organically bound form of tritium could accumulate in fish and marine organisms.

Jungpaläolithikum

BAUMANN 2023

Chris Baumann, Shumon T. Hussain, Martina Roblíčková, Felix Riede, Marcello A. Mannino & Hervé Bocherens, *Evidence for hunter-gatherer impacts on raven diet and ecology in the Gravettian of Southern Moravia.* [Nature Ecology & Evolution](#) (2023), preprint, 1–23.

[DOI:10.1038/s41559-023-02107-8.](#)

[NatEcoEvo2023.07-Baumann-Supplement.pdf](#)

The earlier Gravettian of Southern Moravia—the Pavlovian—is notable for the many raven bones (*Corvus corax*) documented in its faunal assemblages. On the basis of the rich zooarchaeological and settlement data from the Pavlovian, previous work suggested that common ravens were attracted by human domestic activities and subsequently captured by Pavlovian people, presumably for feathers and perhaps food. Here, we report independent $\delta^{15}\text{N}$, $\delta^{13}\text{C}$ and $\delta^{34}\text{S}$ stable isotope data obtained from 12 adult ravens from the Pavlovian key sites of Pøedmostí I, Pavlov I and Dolní Věstonice I to test this idea. We show that Pavlovian ravens regularly fed on larger herbivores and especially mammoths, aligning in feeding preferences with contemporaneous Gravettian foragers. We argue that opportunistic generalist ravens were encouraged by human settlement and carcass provisioning. Our data may thus provide surprisingly early evidence for incipient synanthropism among Palaeolithic ravens. We suggest that anthropogenic manipulation of carrion supply dynamics furnished unique contexts for the emergence of human-oriented animal behaviours, in turn promoting novel human foraging opportunities—dynamics which are therefore important for understanding early hunter-gatherer ecosystem impacts.

Kultur

ZEUSKE 2013

Michael Zeuske, *Handbuch Geschichte der Sklaverei, Eine Globalgeschichte von den Anfängen bis zur Gegenwart.* (Berlin ²2019).

Zeuske_Handbuch-Sklaverei-Abb.zip

Sklaverei und Sklavenhandel sowie Menschenjagd, Kidnapping, Sklavenfang, zusammengefasst unter dem Begriff *slaving*, existierten seit Tausenden von Jahren und es gibt sie, trotz der Jahrestags-Feiern der Abolitionen, noch heute.

Sklaverei oder besser, Sklavereien, stellen wichtige Dimensionen eines welthistorischen Prozesses dar mit Entwicklungsepochen, Plateaus, Räumen, Formen und Typen, weniger eine einzige festgefügte Rechts-Institution oder eine eigene Epoche. Gegenwärtig gibt es in absoluten Zahlen sogar mehr Sklavinnen und Sklaven als zu Zeiten der “großen” Sklavereien und Sklavenhandelsysteme.

Politik

MASTROIANNI 2023

Adam M. Mastroianni & Daniel T. Gilbert, *The illusion of moral decline.* *nature* **618** (2023), 782–789.

n618-0782-Supplement.docx

Anecdotal evidence indicates that people believe that morality is declining^{1,2}. In a series of studies using both archival and original data (n = 12,492,983), we show that people in at least 60 nations around the world believe that morality is declining, that they have believed this for at least 70 years and that they attribute this decline both to the decreasing morality of individuals as they age and to the decreasing morality of successive generations. Next, we show that people’s reports of the morality of their contemporaries have not declined over time, suggesting that the perception of moral decline is an illusion. Finally, we show how a simple mechanism based on two well-established psychological phenomena (biased exposure to information and biased memory for information) can produce an illusion of moral decline, and we report studies that confirm two of its predictions about the circumstances under which the perception of moral decline is attenuated, eliminated or reversed (that is, when respondents are asked about the morality of people they know well or people who lived before the respondent was born). Together, our studies show that the perception of moral decline is pervasive, perdurable, unfounded and easily produced. This illusion has implications for research on the misallocation of scarce resources³, the underuse of social support⁴ and social influence⁵.