

References

Aktuell

KIM 2022

Kyra H. Kim, *Bucking tradition*. [science](#) **376** (2022), 102.

I was born in 1990—the year of the white horse. In the lunar zodiac system, the white horse reigns once every 60 years and is believed to be much stronger and faster than all other stallions. For boys born that year, it is considered a good sign. Not so for girls. A girl born under this zodiac is believed to have a wild, steedlike spirit that will cause her to buck away her fortune, destining her family to trouble. These beliefs were indoctrinated into me as a girl growing up in South Korea. I was repeatedly told to fight against my steedlike spirit by striving to be still, gentle, and quiet. It's an attitude that nearly prevented me from pursuing a career in the geosciences.

LENTZOS 2022

Filippa Lentzos, Edward P. Rybicki, Margret Engelhard, Pauline Paterson, Wayne Arthur Sandholtz & R. Guy Reeves, *Eroding norms over release of self-spreading viruses, Risky research on lab-modified self-spreading viruses has yet to present credible paths to upsides*. [science](#) **375** (2022), 31–33. DOI:10.1126/science.abj5593.

s375-0031-Comment1.pdf, s375-0031-Reply1.pdf

Arguably, little to no technological development is necessary to produce self-spreading viral vaccines today. Without open and inclusive engagement about potential benefits, risks, and appropriate precautionary measures from the scientific and international communities, self-spreading viruses for environmental release could arguably be developed very quickly, with limited funding or expertise and with potentially irreversible consequences for the planet's biodiversity, ecosystems, and environments. With only modest technological innovation required, typical risk mitigation measures, such as increased education of scientists or the creation of new international forums to address governance, are likely to prove too slow to have a constructive impact. It is notable that the time between the very first peer-reviewed description of the Spanish self-spreading rabbit vaccine and the submission for publication of the results of a successful field trial was just 12 months.

Only a concerted, global governance effort with coherent regional, national, and local implementation can tackle the challenges of self-spreading viruses that have the potential to radically transform both wildlife and human communities.

LENTZOS 2022

Filippa Lentzos, Edward P. Rybicki, Margret Engelhard, Pauline Paterson, Wayne Arthur Sandholtz & R. Guy Reeves, *Response, Self-spreading vaccines*. [science](#) **375** (2022), 1363.

Our Policy Forum is not a risk-benefit analysis; it does not, as Streicker et al. assert, caution that the risks of self-spreading vaccines outweigh the benefits, and we do not call for “tighter regulation.” We are calling for engagement and evidence-based debate in appropriate technical and political forums.

Despite ongoing development, as we explain in our Policy Forum, there are no articulated proposals for regulatory pathways to establish self-spreading vaccines as safe, effective, useful, and publicly trusted.

STREICKER 2022

Daniel G. Streicker, James J. Bull & Scott L. Nuismer, *Self-spreading vaccines, Base policy on evidence*. [science 375 \(2022\), 1362–1363](#).

Lentzos et al. speculate that self-spreading vaccines can now be made easily and have not been adopted because of widespread concerns. We disagree. Despite substantial technical advances, a vaccine capable of transmitting and immunizing has yet to be developed using a naturally occurring and benign viral vector (3). Meeting this challenge requires investment and scientifically informed policy that adopts a balanced view of the risks and benefits.

Modern self-spreading vaccine development rejects platforms that use attenuated forms of pathogenic viruses; instead, the approach involves inserting a small piece of pathogen genome into intrinsically benign and host-restricted viruses (i.e., vectors) that already circulate in target host populations. Here, the likely evolutionary outcome is a return to the benign wild type.

Anthropologie

HENRICH 2022

Joseph Henrich, *Selective cultural processes generate adaptive heuristics, Less intuitive, hard-to-learn cognitive heuristics can thrive*. [science 376 \(2022\), 31–32](#).

These results highlight a deeper point: Humans don't have culture because we're smart, we're smart because we have culture (3). The selective processes of cultural evolution not only generate more sophisticated practices and technologies but also produce new cognitive tools—algorithms—that make humans better adapted to the ecological and institutional challenges that we confront. Thompson et al.'s results underline the need for the psychological sciences to abandon their implicit reliance on a digital computer metaphor of the mind (hardware versus software) and transform into a historical science that considers not just how cultural evolution shapes what we think (our mental contents) but also how we think [our cognitive processes (15)].

THOMPSON 2022

B. Thompson, B. van Opheusden, T. Sumers & T. L. Griffiths, *Complex cognitive algorithms preserved by selective social learning in experimental populations*. [science 376 \(2022\), 95–98](#).

s376-0095-Supplement.pdf

Many human abilities rely on cognitive algorithms discovered by previous generations. Cultural accumulation of innovative algorithms is hard to explain because complex concepts are difficult to pass on. We found that selective social learning preserved rare discoveries of exceptional algorithms in a large experimental simulation of cultural evolution. Participants ($N = 3450$) faced a difficult sequential decision problem (sorting an unknown sequence of numbers) and transmitted solutions across 12 generations in 20 populations. Several known sorting algorithms were discovered. Complex algorithms persisted when participants could choose who to learn from but frequently became extinct in populations lacking this selection process, converging on highly transmissible lower-performance algorithms. These

results provide experimental evidence for hypothesized links between sociality and cognitive function in humans.

Kultur

CHILDE 1950

V. Gordon Childe, *The Urban Revolution*. [The Town Planning Review](#) **21** (1950), 3–17.

On the other hand, the lower classes were not only guaranteed peace and security, but were relieved from intellectual tasks which many find more irksome than any physical labour. The ruling classes did confer substantial benefits upon their subjects in the way of planning and organization.

LINK 2014

THOMAS LINK & HEIDI PETER-RÖCHER (Hrsg.), *Gewalt und Gesellschaft — Dimensionen der Gewalt in ur- und frühgeschichtlicher Zeit, Internationale Tagung an der Julius-Maximilians-Universität Würzburg 14. – 16. März 2013*. *Universitätsforschungen zur prähistorischen Archäologie* 259 ([Bonn 2014](#)).

[Link_Gewalt-Abbildungen.zip](#)

A major result of the symposium is that linear models are oversimplifying the development of violence in the history of mankind and must give way to a more subtle analysis of the archaeological record. Violence does not follow any simple evolutionary scheme but is a cultural phenomenon and as such an integral part of social processes. Violence must be viewed in its specific cultural and historical context. The papers presented at the symposium showed promising attempts in this direction. However, a future challenge for archaeology will be interdisciplinary communication of a more subtly differentiated picture of the past. This also needs to be taken into account by the general social and cultural scientific discourse yet dominated by oversimplified archaeological models. The symposium “Violence and Society” made a contribution to create a reliable archaeological and anthropological basis for a future informed dialogue.

Ein wichtiges Fazit der Tagung ist, dass lineare Modelle zur Entwicklung der Gewalt in der Menschheitsgeschichte viel zu vereinfachend sind und einer differenzierten Betrachtung der Quellen weichen müssen. Gewalt fügt sich in kein einfaches evolutives Schema, sondern ist als kulturelles Phänomen Bestandteil gesellschaftlicher Prozesse. Sie muss in ihrem jeweiligen kulturhistorischen Kontext betrachtet und verstanden werden. Die im Rahmen des Symposiums präsentierten Fallbeispiele zeigten vielversprechende Ansätze hierzu auf. Eine Herausforderung für die Archäologie wird es jedoch sein, ein differenzierteres Bild der Vergangenheit auch interdisziplinär zu kommunizieren und gegen die nach wie vor dominanten, zur Übersimplifizierung neigenden Modelle im sozial- und kulturwissenschaftlichen Diskurs zu positionieren. Die Tagung “Gewalt und Gesellschaft” versteht sich als Beitrag zur Weiterentwicklung tragfähiger archäologischer und anthropologischer Grundlagen für einen zukünftigen fundierten Dialog.

Ostasien

KUMAR 2022

Vikas Kumar, Yichen Liu, E. Andrew Bennett & Qiaomei Fu et al., *Bronze and Iron Age population movements underlie Xinjiang population history*. *science* **376** (2022), 62–69.

s376-0062-Supplement.pdf

The Xinjiang region in northwest China is a historically important geographical passage between East and West Eurasia. By sequencing 201 ancient genomes from 39 archaeological sites, we clarify the complex demographic history of this region. Bronze Age Xinjiang populations are characterized by four major ancestries related to Early Bronze Age cultures from the central and eastern Steppe, Central Asian, and Tarim Basin regions. Admixtures between Middle and Late Bronze Age Steppe cultures continued during the Late Bronze and Iron Ages, along with an inflow of East and Central Asian ancestry. Historical era populations show similar admixed and diverse ancestries as those of present-day Xinjiang populations. These results document the influence that East and West Eurasian populations have had over time in the different regions of Xinjiang.

Vikas Kumar, Wenjun Wang, Jie Zhang, Yongqiang Wang, Qiurong Ruan, Jianjun Yu, Xiaohong Wu, Xingjun Hu, Xinhua Wu, Wu Guo, Bo Wang, Alipujiang Niyazi, Enguo Lv, Zihua Tang, Peng Cao, Feng Liu, Qingyan Dai, Ruowei Yang, Xiaotian Feng, Wanjing Ping, Lizhao Zhang, Ming Zhang, Weihong Hou, Yichen Liu, E. Andrew Bennett & Qiaomei Fu

Politik

BUNDESTAG 2011

Deutscher Bundestag, *Gefährdung und Verletzbarkeit mod. Ges. am Bsp. e. großräumigen und langandauernden Ausfalls der Stromversorgung*, *Drucksache 17/5672*. Online **2011**, Apr. 27, 1–136.

<<http://dserver.bundestag.de/btd/17/056/1705672.pdf>> (2022-04-02).

<http://dip.bundestag.de/vorgang/bericht-des-ausschusses-f%C3%BCr-bildung-forschung-und-technikfolgenabsch%C3%A4tzung-18-ausschuss/35375>

Die Folgenanalysen haben gezeigt, dass bereits nach wenigen Tagen im betroffenen Gebiet die flächendeckende und bedarfsgerechte Versorgung der Bevölkerung mit (lebens) notwendigen Gütern und Dienstleistungen nicht mehr sicherzustellen ist. Die öffentliche Sicherheit ist gefährdet, der grundgesetzlich verankerten Schutzpflicht für Leib und Leben seiner Bürger kann der Staat nicht mehr gerecht werden. Damit verlöre er auch eine seiner wichtigsten Ressourcen – das Vertrauen seiner Bürger.

Die Wahrscheinlichkeit eines langandauernden und das Gebiet mehrerer Bundesländer betreffenden Stromausfalls mag gering sein. Träte dieser Fall aber ein, kämen die dadurch ausgelösten Folgen einer nationalen Katastrophe gleich. Diese wäre selbst durch eine Mobilisierung aller internen und externen Kräfte und Ressourcen nicht “beherrschbar”, allenfalls zu mildern. In historischer Perspektive mag zutreffen, dass sich das deutsche Hilfeleistungssystem auf Katastrophen gut vorbereitet hat, und es “nichts” gab, was “nicht bewältigt wurde” (Unger 2008, S. 100). Ob dies auch für die “Verbundkatastrophe” eines Stromausfalls zutreffen wird, muss bezweifelt werden.