Liste erstellt am 2021-06-01

References

Afrika

Pargeter 2021

Justin Pargeter & Gerrit Dusseldorp, *The technology and ecology of Lesotho's highland hunter-gatherers, A case study at Sehonghong rock shelter*. Quaternary International (2021), preprint, 1–12. DOI:10.1016/j.quaint.2020.10.019.

Here we evaluate the hypothesis that during cold climatic phases, people and resources became increasingly packed along highland Lesotho's riverine corridors as the viability of palatable grasslands for large mammal hunting on the upland plateaus declined. These intensification efforts resulted in increased reliance on lowerranked aquatic (fish) resources with knock-on effects for lithic technological organization. We compare data on the relative contribution of fishing to the diets of highland hunter-gatherers at Sehonghong rockshelter with a faunal proxy widely argued to correlate with subsistence intensification (faunal assemblage evenness). In addition, we compare these data with two measures of lithic technological intensification (cutting edge production and core reduction intensity) to test whether diet intensification tracks technological intensification. We show that at Sehonghong, aquatic resource exploitation is not always correlated with faunal assemblage evenness. We find that some layers (i.e. RF) show spikes in aquatic resource use irrespective of changes in faunal assemblage evenness. Other layers (i.e. RBL/CLBRF) were intensively occupied, but they do not have many fish. Our data also demonstrate that aquatic resource use is not correlated with lithic technological intensification. These results suggest that while aquatic resource exploitation was a 'fallback' option for some of Lesotho's highland hunter-gatherers, there is considerable variability. Our data show that multiple intensification dimensions were variably combined through the Late Pleistocene at Sehonghong as they were elsewhere in southern Africa.

Keywords: Lesotho | LGM | Pleistocene Later Stone Age | Sehonghong | Economic intensification | Lithic technology

Aktuell

Chumakov 2021

Konstantin Chumakov et al., *Old vaccines for new infections, Exploiting innate immunity to control COVID-19 and prevent future pandemics*. PNAS **118** (2021), e2101718118. DOI:10.1073/pnas.2101718118.

The COVID-19 pandemic triggered an unparalleled pursuit of vaccines to induce specific adaptive immunity, based on virus-neutralizing antibodies and T cell responses. Although several vaccines have been developed just a year after SARS-CoV-2 emerged in late 2019, global deployment will take months or even years. Meanwhile, the virus continues to take a severe toll on human life and exact substantial economic costs. Innate immunity is fundamental to mammalian host defense capacity to combat infections. Innate immune responses, triggered by a family of pattern recognition receptors, induce interferons and other cytokines and activate both myeloid and lymphoid immune cells to provide protection against a

wide range of pathogens. Epidemiological and biological evidence suggests that the live-attenuated vaccines (LAV) targeting tuberculosis, measles, and polio induce protective innate immunity by a newly described form of immunological memory termed "trained immunity." An LAV designed to induce adaptive immunity targeting a particular pathogen may also induce innate immunity that mitigates other infectious diseases, including COVID-19, as well as future pandemic threats. Deployment of existing LAVs early in pandemics could complement the development of specific vaccines, bridging the protection gap until specific vaccines arrive. The broad protection induced by LAVs would not be compromised by potential antigenic drift (immune escape) that can render viruses resistant to specific vaccines. LAVs might offer an essential tool to "bend the pandemic curve," averting the exhaustion of public health resources and preventing needless deaths and may also have therapeutic benefits if used for postexposure prophylaxis of disease.

Keywords: trained immunity | nonspecific effects of live vaccines | interferon | SARS-CoV-2

Konstantin Chumakov, Michael S. Avidan, Christine S. Benn, Stefano M. Bertozzi, Lawrence Blatt, Angela Y. Chang, Dean T. Jamison, Shabaana A. Khader, Shyam Kottilil, Mihai G. Netea, Annie Sparrow & Robert C. Gallo

King 2021

Anthony King, *Two more coronaviruses may infect people.* science **372** (2021), 893. DOI:10.1126/science.372.6545.893.

Concern grows about the pandemic potential of other members of the virus family.

McDermott 2021

Amy McDermott, *Herd immunity is an important—and often misunderstood—public health phenomenon.* PNAS **118** (2021), e2107692118. DOI:10.1073/pnas.2107692118.

In December, when Fauci estimated that as much as 90 % of the US population—but certainly more than 67 %—would need to be vaccinated to reach the herd immunity threshold, he was very likely accounting for imperfect vaccine protection, unreliable immunity from natural infections, and an ever-evolving virus that keeps moving the goal posts. With so little certainty about what's required to even reach herd immunity—and what that would accomplish, and how long it would last—the only thing that seems clear is that the idea itself may have become something of a mirage. Researchers and public health officials might need a different way to describe an end to the pandemic—and a return to "normal."

Yang 2021

Qing Yang, Tassa K. Saldi, Robin D. Dowell, Leslie Leinwand, Roy Parker & Sara L. Sawyer et al., *Just 2 % of SARS-CoV-2-positive individuals carry 90 % of the virus circulating in communities.* PNAS **118** (2021), e2104547118. DOI:10.1073/pnas.2104547118.

pnas118-e2104547118-Supplement.pdf

We analyze data from the fall 2020 pandemic response efforts at the University of Colorado Boulder, where more than 72,500 saliva samples were tested for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) using qRT-PCR. All samples were collected from individuals who reported no symptoms associated with COVID-19 on the day of collection. From these, 1,405 positive cases were identified. The distribution of viral loads within these asymptomatic individuals was indistinguishable from what has been previously observed in symptomatic

individuals. Regardless of symptomatic status, ≈50 % of individuals who test positive for SARS-CoV-2 seem to be in noninfectious phases of the disease, based on having low viral loads in a range from which live virus has rarely been isolated. We find that, at any given time, just 2 % of individuals carry 90 % of the virions circulating within communities, serving as viral "supercarriers" and possibly also superspreaders.

Keywords: viral load | SARS-CoV-2 | transmission

Qing Yang, Tassa K. Saldi, Patrick K. Gonzales, Erika Lasda, Carolyn J. Decker, Kimngan L. Tat, Morgan R. Fink, Cole R. Hager, Jack C. Davis, Christopher D. Ozeroff, Denise Muhlrad, Stephen K. Clark, Will T. Fattor, Nicholas R. Meyerson, Camille L. Paige, Alison R. Gilchrist, Arturo Barbachano-Guerrero, Emma R. Worden-Sapper, Sharon S. Wu, Gloria R. Brisson, Matthew B. McQueen, Robin D. Dowell, Leslie Leinwand, Roy Parker & Sara L. Sawyer

Significance: We analyzed data from saliva-based COVID-19 screening deployed on the University of Colorado Boulder campus. Our dataset is unique in that all SARS-CoV-2-positive individuals reported no symptoms at the time of saliva collection, and therefore were infected but asymptomatic or presymptomatic. We found that 1) the distribution of viral loads observed in our asymptomatic college population was indistinguishable from what has been reported in hospitalized populations; 2) regardless of symptomatic status, approximately 50 % of individuals who test positive for SARS-CoV-2 seem to be in noninfectious phases of the infection; and 3) just 2 % of infected individuals carry 90 % of the virions circulating within communities, serving as viral "supercarriers" and likely also superspreaders.

Anthropologie

Riedl 2021

Christoph Riedl, Young Ji Kim, Pranav Gupta, Thomas W. Malone & Anita Williams Woolley, *Quantifying collective intelligence in human groups*. PNAS **118** (2021), e2005737118.

pnas118-e2005737118-Supplement.pdf

Collective intelligence (CI) is critical to solving many scientific, business, and other problems, but groups often fail to achieve it. Here, we analyze data on group performance from 22 studies, including 5,279 individuals in 1,356 groups. Our results support the conclusion that a robust CI factor characterizes a group's ability to work together across a diverse set of tasks. We further show that CI is predicted by the proportion of women in the group, mediated by average social perceptiveness of group members, and that it predicts performance on various out-of-sample criterion tasks. We also find that, overall, group collaboration process is more important in predicting CI than the skill of individual members.

Keywords: collective intelligence | human groups | team performance

Significance: Collective intelligence (CI) is critical to solving many scientific, business, and other problems. We find strong support for a general factor of CI using meta-analytic methods in a dataset comprising 22 studies, including 5,279 individuals in 1,356 groups. CI can predict performance in a range of out-of-sample criterion tasks. CI, in turn, is most strongly predicted by group collaboration process, followed by individual skill and group composition. The proportion of women in a group is a significant predictor of group performance, mediated by social perceptiveness.

Anthropologie Biologie

WHO 2021

WHO Immediate KMC Study Group, *Immediate "Kangaroo Mother Care" and Survival of Infants with Low Birth Weight*. New England Journal of Medicine **384** (2021), 2028–2038.

Background "Kangaroo mother care," a type of newborn care involving skin-to-skin contact with the mother or other caregiver, reduces mortality in infants with low birth weight (<2.0 kg) when initiated after stabilization, but the majority of deaths occur before stabilization. The safety and efficacy of kangaroo mother care initiated soon after birth among infants with low birth weight are uncertain.
Methods We conducted a randomized, controlled trial in five hospitals in Ghana, India, Malawi, Nigeria, and Tanzania involving infants with a birth weight between 1.0 and 1.799 kg who were assigned to receive immediate kangaroo mother care (intervention) or conventional care in an incubator or a radiant warmer until their condition stabilized and kangaroo mother care thereafter (control). The primary outcomes were death in the neonatal period (the first 28 days of life) and in the first 72 hours of life.
Results A total of 3211 infants and their mothers were randomly assigned to the intervention group (1609 infants with their mothers) or the control group (1602 infants with their mothers). The median daily duration of skin-to-skin contact in the neonatal intensive care unit was 16.9 hours (interquartile range, 13.0 to 19.7) in the intervention group and 1.5 hours (interquartile range, 0.3 to 3.3) in the control group. Neonatal death occurred in the first 28 days in 191 infants in the intervention group (12.0 %) and in 249 infants in the control group (15.7 %) (relative risk of death, 0.75; 95 % confidence interval [CI], 0.64 to 0.89; P = 0.001); neonatal death in the first 72 hours of life occurred in 74 infants in the intervention group (4.6 %) and in 92 infants in the control group (5.8 %) (relative risk of death, 0.77; 95 % CI, 0.58 to 1.04; P = 0.09). The trial was stopped early on the recommendation of the data and safety monitoring board owing to the finding of reduced mortality among infants receiving immediate kangaroo mother care.
Conclusions Among infants with a birth weight between 1.0 and 1.799 kg, those who received immediate kangaroo mother care had lower mortality at 28 days than those who received conventional care with kangaroo mother care initiated after stabilization; the between-group difference favoring immediate kangaroo mother care at 72 hours was not significant.

Bibel

Bietak 2021

Manfred Bietak & Gary A. Rendsburg, *Egypt and the Exodus*. In: Hershel Shanks & John Merrill (Hrsg.), *Ancient Israel, From Abraham to the Roman Destruction of the Temple*. (Washington [4]2021), 17–58.

As we have argued herein, the background for the Eisodus, Slavery, and Exodus is the Ramesside period, or to be more speciic, the time period of the late 19th Dynasty and the irst half of the 20th Dynasty, that is, c.1250–c.1150 B.C.E. All of the Egyptian material we have cited falls into this time period.

In general, the sojourn in Egypt was not very long. Turning to the evidence of the biblical genealogies—with special attention to the lineage of Moses (Levi–Kohath–Amram–Moses; see Exodus 6:16– 20), we see that this lineage indicates

that the total amount of time in Egypt could not have been very long. According to the biblical tradition, Levi and his son Kohath are among those who immigrated to Egypt (Genesis 46:11), while the latter's grandson Moses already is leaving Egypt.

Energie

Service 2021

Robert F. Service, *Zinc aims to beat lithium batteries at storing energy*. science **372** (2021), 890–891.

Rechargeable batteries based on zinc promise to be cheaper and safer for grid storage.

This month, Wang and his colleagues reported in Nature Nanotechnology that when they added a fluorine-containing salt to their electrolyte, it reacted with zinc to form a solid zinc fluoride barrier around the anode. Ions could still wriggle through during charging and discharging. But the barrier prevented dendrites from growing and repelled water molecules, blocking them from reaching the anode.

Energie Klima

Miller 2020

Lee Miller, *The warmth of wind power*. PhysicsToday **73** (2020), viii, 58–59.

As wind turbines harvest energy, they redistribute heat in the lower atmosphere. Farmers have been exploiting the effect for decades.

Wind power's relevance to climate goes beyond surface warming. The turbines also likely affect precipitation, as warm, dry air from above displaces cooler, more moist air at the surface and increases the rate of evaporation. But that issue is beyond the scope of this Quick Study.

Islam

Luther 1523

Martin Luther, *Daß Jesus Christus ein geborener Jude sei und andere Judenschriften, Neu bearbeitet und kommentiert von Matthias Morgenstern*. (Wiesbaden 2019).

Luther 1543

Martin Luther, *Von den Juden und ihren Lügen, Neu bearbeitet und kommentiert von Matthias Morgenstern*. (Wiesbaden ^{4}2017).

Mussner 1974

Franz Mußner, *Der Galaterbrief*. Herders theologischer Kommentar zum Neuen Testament 9 (Freiburg ^{5}1988).

Klima

Bennett 2021

Amy C. Bennett & Simon L. Lewis et al., *Resistance of African tropical forests to an extreme climate anomaly*. PNAS **118** (2021), e2003169118.

pnas118-e2003169118-Supplement.pdf

The responses of tropical forests to environmental change are critical uncertainties in predicting the future impacts of climate change. The positive phase of the 2015–2016 El Niño Southern Oscillation resulted in unprecedented heat and low precipitation in the tropics with substantial impacts on the global carbon cycle. The role of African tropical forests is uncertain as their responses to short-term drought and temperature anomalies have yet to be determined using on-the-ground measurements. African tropical forests may be particularly sensitive because they exist in relatively dry conditions compared with Amazonian or Asian forests, or they may be more resistant because of an abundance of drought-adapted species. Here, we report responses of structurally intact old-growth lowland tropical forests inventoried within the African Tropical Rainforest Observatory Network (AfriTRON). We use 100 long-term inventory plots from six countries each measured at least twice prior to and once following the 2015–2016 El Niño event. These plots experienced the highest temperatures and driest conditions on record. The record temperature did not significantly reduce carbon gains from tree growth or significantly increase carbon losses from tree mortality, but the record drought did significantly decrease net carbon uptake. Overall, the long-term biomass increase of these forests was reduced due to the El Niño event, but these plots remained a live biomass carbon sink (0.51 ± 0.40 Mg C ha-1 y-1) despite extreme environmental conditions. Our analyses, while limited to African tropical forests, suggest they may be more resistant to climatic extremes than Amazonian and Asian forests.

Keywords: temperature | drought | ENSO | carbon cycle | El Niño

Significance: The responses of tropical forests to heat and drought are critical uncertainties in predicting the future impacts of climate change. The 2015–2016 El Niño Southern Oscillation (ENSO) resulted in unprecedented heat and low precipitation across the tropics, including in the very poorly studied African tropical forest region. We assess African forest ENSO responses using on-the-ground measurements. Across 100 long-term plots, record high temperatures did not significantly reduce carbon gains from tree growth or significantly increase carbon losses from tree mortality. Overall, despite the climate anomaly, forests continued to gain live biomass over the ENSO period. Our analyses, while limited to African tropical forests, suggest that they may be more resistant to climate extremes than Amazonian and Asian forests.

Amy C. Bennett, Greta C. Dargie, Aida Cuni-Sanchez, John Tshibamba Mukendi, Wannes Hubau,Jacques M. Mukinzi, Oliver L. Phillips, Yadvinder Malhi, Martin J. P. Sullivan, Declan L. M. Cooper,Stephen Adu-Bredu, Kofi Affum-Baffoe, Christian A. Amani, Lindsay F. Banin, Hans Beeckman,Serge K. Begne, Yannick E. Bocko, Pascal Boeckx, Jan Bogaert, Terry Brncic, Eric Chezeaux, Connie J. Clark,Armandu K. Daniels, Thales de Haulleville, Marie-Nol Djuikouo Kamdem, Jean-Louis Douceta,Fidle Evouna Ondob, Corneille E. N. Ewango,c, Ted R. Feldpauschd, Ernest G. Foli, Christelle Gonmadjee,Jefferson S. Hallf, Olivier J. Hardyg, David J. Harrish, Suspense A. Ifoi, Kathryn J. Jefferyj, Elizabeth Kearsley,k,Miguel Leall, Aurora Levesley, Jean-Remy Makanam, Faustin Mbayu Lukasu, Vincent P. Medjiben,Vianet Mihinduo,p, Sam Moore, Natacha Nssi Begoneq, Georgia C. Pickavance, John R. Poulsenp,Jan Reitsmar, Bonaventure

Sonk, Terry C. H. Sunderland,s, Hermann Taedoumg,t, Joey Talbot,u,Darlington S. Tuagben, Peter M. Umunayv,w, Hans Verbeeckk, Jason Vleminckxx,y, Lee J. T. Whitej,q,z,Hannsjoerg Woellaa, John T. Woodsbb, Lise Zemagho & Simon L. Lewis

Boers 2021

Niklas Boers & Martin Rypdal, *Critical slowing down suggests that the western Greenland Ice Sheet is close to a tipping point*. PNAS **118** (2021), e2024192118.

pnas118-e2024192118-Supplement.pdf

The Greenland Ice Sheet (GrIS) is a potentially unstable component of the Earth system and may exhibit a critical transition under ongoing global warming. Mass reductions of the GrIS have substantial impacts on global sea level and the speed of the Atlantic Meridional Overturning Circulation, due to the additional freshwater caused by increased meltwater runoff into the northern Atlantic. The stability of the GrIS depends crucially on the positive melt-elevation feedback (MEF), by which melt rates increase as the overall ice sheet height decreases under rising temperatures. Melting rates across Greenland have accelerated nonlinearly in recent decades, and models predict a critical temperature threshold beyond which the current ice sheet state is not maintainable. Here, we investigate long-term melt rate and ice sheet height reconstructions from the central-western GrIS in combination with model simulations to quantify the stability of this part of the GrIS. We reveal significant earlywarning signals (EWS) indicating that the central-western GrIS is close to a critical transition. By relating the statistical EWS to underlying physical processes, our results suggest that the MEF plays a dominant role in the observed, ongoing destabilization of the central-western GrIS. Our results suggest substantial further GrIS mass loss in the near future and call for urgent, observation-constrained stability assessments of other parts of the GrIS.

Keywords: critical slowing down | early-warning signals | tipping points | Greenland Ice Sheet

Significance: It has been suggested that, in response to anthropogenic global warming, the Greenland Ice Sheet may reach a tipping point beyond which its current configuration would become unstable. A crucial nonlinear mechanism for the existence of this tipping point is the positive melt-elevation feedback: Melting reduces ice sheet height, exposing the ice sheet surface to warmer temperatures, which further accelerates melting. We reveal early-warning signals for a forthcoming critical transition from ice-core-derived height reconstructions and infer that the western Greenland Ice Sheet has been losing stability in response to rising temperatures. We show that the melt-elevation feedback is likely to be responsible for the observed destabilization. Our results suggest substantially enhanced melting in the near future.

Pavlik 2021

Bruce M. Pavlik, Lisbeth A. Louderback & Brian F. Codding et al., *Plant species richness at archaeological sites suggests ecological legacy of Indigenous subsistence on the Colorado Plateau*. PNAS **118** (2021), e2025047118.

pnas118-e2025047118-Supplement.pdf

Humans have both intentional and unintentional impacts on their environment, yet identifying the enduring ecological legacies of past small-scale societies remains difficult, and as such, evidence is sparse. The present study found evidence of an ecological legacy that persists today within an semiarid ecosystem of western

North America. Specifically, the richness of ethnographically important plant species is strongly associated with archaeological complexity and ecological diversity at Puebloan sites in a region known as Bears Ears on the Colorado Plateau. A multivariate model including both environmental and archaeological predictors explains 88 % of the variation in ethnographic species richness (ESR), with growing degree days and archaeological site complexity having the strongest effects. At least 31 plant species important to five tribal groups (Navajo, Hopi, Zuni, Ute Mountain Ute, and Apache), including the Four Corners potato (Solanum jamesii), goosefoot (Chenopodium sp.), wolfberry (Lycium pallidum), and sumac (Rhus trilobata), occurred at archaeological sites, despite being uncommon across thewider landscape. Our results reveal a clear ecological legacy of past human behavior: even when holding environmental variables constant, ESR increases significantly as a function of past investment in habitation and subsistence. Consequently, we suggest that propagules of some species were transported and cultivated, intentionally or not, establishing populations that persist to this day. Ensuring persistence will require tribal input for conserving and restoring archaeo-ecosystems containing "high-priority" plant species, especially those held sacred as lifeway medicines. This transdisciplinary approach has important implications for resource management planning, especially in areas such as Bears Ears that will experience greater visitation and associated impacts in the near future.

Keywords: ethnobotany | archaeo-ecosystems | species richness | Solanum jamesii | Bears Ears

Bruce M. Pavlik, Lisbeth A. Louderback, Kenneth B. Vernon, Peter M. Yaworsky, Cynthia Wilson, Arnold Clifford & Brian F. Codding

Significance: Identifying how past human populations altered ecosystems is critical for understanding current ecological diversity and for the management of both natural and cultural resources. This study presents evidence for an enduring ecological legacy of ancient people on the Colorado Plateau, where the complexity of archaeological sites correlates with the richness of culturally important plant species. This suggests the intentional or unintentional transport and cultivation of native plants on a scale that is often overlooked in the American Southwest, where exogenous domesticates (corn, beans, and squash) are emphasized. These results illustrate how even small-scale societies can affect ecosystems and highlight the importance of coupling archaeology, ecology, and tribal expertise for resource management.

di Rita 2019

Federico di Rita & Donatella Magri, *The 4.2 ka event in the vegetation record of the central Mediterranean.* Climate of the Past **15** (2019), 237–251.

In this paper, the variation in forest cover in the central Mediterranean region, reflected by percentage changes in the arboreal pollen record, has been examined in relation to the 4.2 ka event. A total of 36 well-dated and detailed pollen records from latitudes between 45 and 36° N were selected and their vegetation dynamics between 5 and 3 ka examined in relation to the physiographic and climatic features of the study area and to the influence of human activity on past vegetation, as suggested by anthropogenic pollen indicators. We have found that the sites located between 43 and 45° N do not show any significant vegetation change in correspondence with the 4.2 ka event. Several sites located on the Italian Peninsula between 39 and 43° N show a marked opening of the forest, suggesting a vegetation response to the climate instability of the 4.2 ka event. Between 36 and 39° N, a forest decline is always visible around 4.2 ka, and in some cases it is dramatic. This indicates that this region was severely affected by a climate change towards

arid conditions that lasted a few hundred years and was followed by a recovery of forest vegetation in the Middle Bronze Age. Human activity, especially intense in southern Italy, may have been favored by this natural opening of vegetation. In Sardinia and Corsica, no clear change in vegetation is observed at the same time. We suggest that during the 4.2 ka event southern Italy and Tunisia were under the prevalent influence of a north African climate system characterized by a persistent high-pressure cell.

Mathematik

Kawakatsu 2021

Mari Kawakatsu, Philip S. Chodrow, Nicole Eikmeier & Daniel B. Larremore, *Emergence of hierarchy in networked endorsement dynamics*. PNAS **118** (2021), e2015188118.

pnas118-e2015188118-Supplement.pdf

Many social and biological systems are characterized by enduring hierarchies, including those organized around prestige in academia, dominance in animal groups, and desirability in online dating. Despite their ubiquity, the general mechanisms that explain the creation and endurance of such hierarchies are not well understood. We introduce a generative model for the dynamics of hierarchies using time-varying networks, in which new links are formed based on the preferences of nodes in the current network and old links are forgotten over time. The model produces a range of hierarchical structures, ranging from egalitarianism to bistable hierarchies, and we derive critical points that separate these regimes in the limit of long system memory. Importantly, our model supports statistical inference, allowing for a principled comparison of generative mechanisms using data. We apply the model to study hierarchical structures in empirical data on hiring patterns among mathematicians, dominance relations among parakeets, and friendships among members of a fraternity, observing several persistent patterns as well as interpretable differences in the generative mechanisms favored by each. Our work contributes to the growing literature on statistically grounded models of time-varying networks.

Keywords: dominance hierarchies | dynamical systems | statistical inference | critical transitions | network science

Significance: Hierarchies structure the lives of many social animals, including humans. We propose a generative model of time-varying networks in which endorsements between individuals give rise to enduring hierarchies. For several network-based ranking functions, our model possesses a distinct, analytically tractable, critical transition between egalitarian and hierarchical states. We also use our model to explore hierarchical structures in empirical data on hiring patterns among mathematicians, dominance relations among parakeets, and friendships among members of a fraternity, observing several persistent patterns. Overall, our model enables data-informed modeling of hierarchical networks in social and biological systems.

Methoden

Serra-Garcia 2021

Marta Serra-Garcia & Uri Gneezy, *Nonreplicable publications are cited more than replicable ones*. Science Advances **7** (2021), eabd1705. DOI:10.1126/sciadv.abd1705.

We use publicly available data to show that published papers in top psychology, economics, and general interest journals that fail to replicate are cited more than those that replicate. This difference in citation does not change after the publication of the failure to replicate. Only 12 % of postreplication citations of nonreplicable findings acknowledge the replication failure. Existing evidence also shows that experts predict well which papers will be replicated. Given this prediction, why are nonreplicable papers accepted for publication in the first place? A possible answer is that the review team faces a trade-off. When the results are more "interesting," they apply lower standards regarding their reproducibility.

Politik

DeDeo 2021

Simon DeDeo & Elizabeth A. Hobson, *From equality to hierarchy*. PNAS **118** (2021), e2106186118.

Now, however, a paradox emerges. For ranks to get this second job done, they must be visible enough to provide common expectations. But how can this happen if rank is not tied to stable intrinsic properties? If some candidates truly are better than others, endorsement might heighten the contrast, but how can the magnifying process of consensus work if the underlying endorsements are arbitrary? Kawakatsu et al. (1) show how the systematic ways in which individuals respond to rank make it visible through a self-fulfilling prophecy.

The process is governed by two "psychological" parameters: an individual's tendency to endorse those high in the hierarchy (the "preference for prestige"), and to focus on those nearby (the "preference for proximity"). These preferences are cashed out, satisfyingly, in utility theory, where your utility for endorsing another is a function of their rank (the preference of prestige), and the squared difference of rank between you and them (the preference for proximity). Under a broad range of conditions, what matters is the preference for prestige. At a critical point in this preference, the system undergoes a discontinuous (second-order) transition between an egalitarian system, with few real differences in social power, and a hierarchical one, where a few oligarchs receive the lion's share of prestige.

DeMora 2021

Stephanie L. DeMora, Jennifer L. Merolla, Brian Newman & Elizabeth J. Zechmeister, *Reducing mask resistance among White evangelical Christians with value-consistent messages*. PNAS **118** (2021), e2101723118.

pnas118-e2101723118-Supplement.pdf

Public health experts have advocated for wearing protective face masks to combat the COVID-19 pandemic, yet some populations are resistant. Can certain messages shift attitudes toward masks? We investigate the effect of value-consistent messages within a mask-skeptical population: White evangelicals in the United States. An experiment within a national survey of White evangelicals (n = 1,212) assigned respondents to one of three conditions: One group was given a religious message equating mask use with loving your neighbor, another was given a message by Donald Trump saying mask use is patriotic, and a control group received no message. Those exposed to the religious message were more likely to see mask use as important and were more supportive of mask mandates. Republican evangelicals exposed to the patriotism message had similar responses. These findings show that messages that align with individuals' core values—in this case, religious tenets

and patriotism—can shift certain views on mask use and government mask policies to combat COVID-19, even among a comparatively mask-resistant group.

Keywords: mask use | evangelicals | public opinion | Trump | partisanship

Sprachlehre

Schönfeld 1776

Johann Ferdinand Edler von Schönfeld, *Nützliches Handlexicon der jüdischen Sprache*. (Prag 1776).

in welchem alle, den Jüden entweder eigene, oder aus dem Hebräischen und Rabbinischen entlehnte Wörter mit ihrer wahren Bedeutung, enthalten sind; nebst einigen Erklärungen ihrer verschiedenen Gebräuche, Fast- und Festtagen Monate, und dergleichen.