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References

Aktuell

Callaway 2021

Ewen Callaway, *The mutation that helps Delta spread like wildfire.* nature **596** (2021), 472–473.

A key amino-acid change might underlie the coronavirus variant's ferocious infectivity.

Gazit 2021

Sivan Gazit et al., *Comparing SARS-CoV-2 natural immunity to vaccine-induced immunity, Reinfections versus breakthrough infections.* medRxiv **2021**, 21262415, 1–32. DOI:10.1101/2021.08.24.21262415.

Background: Reports of waning vaccine-induced immunity against COVID-19 have begun to surface. With that, the comparable long-term protection conferred by previous infection with SARS-CoV-2 remains unclear.

Methods: We conducted a retrospective observational study comparing three groups: (1)SARSCoV2-naïve individuals who received a two-dose regimen of the BioNTech/Pfizer mRNA BNT162b2 vaccine, (2)previously infected individuals who have not been vaccinated, and (3)previously infected and single dose vaccinated individuals. Three multivariate logistic regression models were applied. In all models we evaluated four outcomes: SARS-CoV-2 infection, symptomatic disease, COVID-19-related hospitalization and death. The follow-up period of June 1 to August 14, 2021, when the Delta variant was dominant in Israel.

Results: SARS-CoV-2-naïve vaccinees had a 13.06-fold (95 % CI, 8.08 to 21.11) increased risk for breakthrough infection with the Delta variant compared to those previously infected, when the first event (infection or vaccination) occurred during January and February of 2021. The increased risk was significant (P<0.001) for symptomatic disease as well. When allowing the infection to occur at any time before vaccination (from March 2020 to February 2021), evidence of waning natural immunity was demonstrated, though SARS-CoV-2 naïve vaccinees had a 5.96-fold (95 % CI, 4.85 to 7.33) increased risk for breakthrough infection and a 7.13-fold (95 % CI, 5.51 to 9.21) increased risk for symptomatic disease. SARS-CoV-2-naïve vaccinees were also at a greater risk for COVID-19-related-hospitalizations compared to those that were previously infected.

Conclusions: This study demonstrated that natural immunity confers longer lasting and stronger protection against infection, symptomatic disease and hospitalization caused by the Delta variant of SARS-CoV-2, compared to the BNT162b2 two-dose vaccine-induced immunity. Individuals who were both previously infected with SARS-CoV-2 and given a single dose of the vaccine gained additional protection against the Delta variant.

Sivan Gazit, Roei Shlezinger, Galit Perez, Roni Lotan, Asaf Peretz, Amir Ben-Tov, Dani Cohen, Khitam Muhsen, Gabriel Chodick & Tal Patalon

Koopmans 2021

Marion Koopmans et al., *Origins of SARS-CoV-2, Window is closing for key scientific studies.* nature **596** (2021), 482–485.

Authors of the March WHO report into how COVID-19 emerged warn that further delay makes crucial inquiry biologically difficult.

Marion Koopmans, Peter Daszak, Vladimir G. Dedkov, Dominic E. Dwyer, Elmoubasher Farag, Thea K. Fischer, David T. S. Hayman, Fabian Leendertz, Ken Maeda, Hung Nguyen-Viet & John Watson

Ledford 2021

Heidi Ledford, *Covid vaccines and blood clots, What researchers know so far.* nature **596** (2021), 479–481.

Scientists are trying to understand why a small number of people develop a mysterious clotting disorder after receiving a COVID jab.

It is now estimated that VITT occurred in about 1 in 50,000 people aged under 50 who received the Oxford–AstraZeneca vaccine.

Before the COVID-19 pandemic, adenovirusbased vaccines were being developed against infections such as HIV and Ebola, but had not yet been used in large populations. There have been no reports that these vaccines produced a VITT-like condition; however, they were not tested in nearly as many people as have received the Oxford–AstraZeneca COVID-19 vaccine.

It's possible, says Nicolai, that on rare occasions, a vaccine is inadvertently injected into a vein — as was done in the earlier mouse studies that found that adenovirus could bind to platelets. If so, many cases of VITT might be avoided by asking vaccinators to first draw a small amount of fluid from the injection site with the syringe to check for blood before they actually push the plunger to administer the vaccine. This is already standard practice in some countries, and Denmark has added it to its official guidelines for COVID-19 vaccine administration.

Lundgren 2021

Erick J. Lundgren, Daniel Ramp, Jianguo Wu, Martin Sluk, Karla T. Moeller, Juliet C. Stromberg & Arian D. Wallach, *Response.* science **373** (2021), 973–974.

Likewise, while feral equids can have all the effects that Rubin et al. describe, our Report shows that they can also dig wells up to 2 m in depth—at times providing the only water available. Feral donkey disturbance also appears important to maintaining open-water habitat at desert springs; several endemic and endangered freshwater fish populations in both North America and Australia went extinct following feral donkey eradications (11). Describing feral equids as either ecological heroes or as invasive pests oversimplifies complexity and moralizes ecology.

Lytras 2021

Spyros Lytras, Wei Xia, Joseph Hughes, Xiaowei Jiang & David L. Robertson, *The animal origin of SARS-CoV-2.* science **373** (2021), 968–970. DOI:10.1126/science.abh0117.

s373-0968-Supplement.pdf

Trading of animals susceptible to bat coronaviruses is the likely cause of the COVID-19 pandemic.

Rubin 2021

Esther S. Rubin, Dave Conrad, Andrew S. Jones & John J. Hervert, *Feral equids' varied effects on ecosystems.* science **373** (2021), 973.

Lundgren et al. present no data to demonstrate an overall benefit to wildlife. We urge caution in speculating that the addition of a few localized wells benefits native species.

Sah 2021

Pratha Sah et al., *Asymptomatic SARS-CoV-2 infection, A systematic review and meta-analysis.* PNAS **118** (2021), e2109229118. DOI:10.1073/pnas.2109229118.

pnas118-e2109229118-Supplement.pdf

Quantification of asymptomatic infections is fundamental for effective public health responses to the COVID-19 pandemic. Discrepancies regarding the extent of asymptomaticity have arisen from inconsistent terminology as well as conflation of index and secondary cases which biases toward lower asymptomaticity. We searched PubMed, Embase, Web of Science, and World Health Organization Global Research Database on COVID-19 between January 1, 2020 and April 2, 2021 to identify studies that reported silent infections at the time of testing, whether presymptomatic or asymptomatic. Index cases were removed to minimize representational bias that would result in overestimation of symptomaticity. By analyzing over 350 studies, we estimate that the percentage of infections that never developed clinical symptoms, and thus were truly asymptomatic, was 35.1 % (95 % CI: 30.7 to 39.9 %). At the time of testing, 42.8 % (95 % prediction interval: 5.2 to 91.1 %) of cases exhibited no symptoms, a group comprising both asymptomatic and presymptomatic infections. Asymptomaticity was significantly lower among the elderly, at 19.7 % (95 % CI: 12.7 to 29.4 %) compared with children at 46.7 % (95 % CI: 32.0 to 62.0 %). We also found that cases with comorbidities had significantly lower asymptomaticity compared to cases with no underlying medical conditions. Without proactive policies to detect asymptomatic infections, such as rapid contact tracing, prolonged efforts for pandemic control may be needed even in the presence of vaccination.

Keywords: asymptomatic fraction | presymptomatic | silent transmission | novel coronavirus | comorbidity

Pratha Sah, Meagan C. Fitzpatrick, Charlotte F. Zimmer, Elaheh Abdollahi, Lyndon Juden-Kelly, Seyed M. Moghadas, Burton H. Singer & Alison P. Galvani

Significance: Asymptomatic infections have been widely reported for COVID19. However, many studies do not distinguish between the presymptomatic stage and truly asymptomatic infections. We conducted a systematic review and meta-analysis of COVID-19 literature reporting laboratory-confirmed infections to determine the burden of asymptomatic infections and removed index cases from our calculations to avoid conflation. By analyzing over 350 papers, we estimated that more than one-third of infections are truly asymptomatic. We found evidence of greater asymptomaticity in children compared with the elderly, and lower asymptomaticity among cases with comorbidities compared to cases with no underlying medical conditions. Greater asymptomaticity at younger ages suggests that heightened vigilance is needed among these individuals, to prevent spillover into the broader community.

Vogel 2021

Gretchen Vogel, *Unethical? Unnecessary? The booster debate intensifies.* science **373** (2021), 949–950. DOI:10.1126/science.373.6558.949.

As United States reveals its plan to offer an extra dose of COVID-19 vaccine, equity and scientific questions abound.

Anthropologie

Carlhoff 2021

Selina Carlhoff, Kathrin Nägele, Cosimo Posth & Adam Brumm et al.,

Genome of a middle Holocene hunter-gatherer from Wallacea. nature **596** (2021), 543–547.

n596-0543-Supplement.pdf

Much remains unknown about the population history of early modern humans in southeast Asia, where the archaeological record is sparse and the tropical climate is inimical to the preservation of ancient human DNA1. So far, only two low-coverage pre-Neolithic human genomes have been sequenced from this region. Both are from mainland Hòabìnhian hunter-gatherer sites: Pha Faen in Laos, dated to 7939–7751 calibrated years before present (yr cal bp; present taken as ad 1950), and Gua Cha in Malaysia (4.4–4.2 kyr cal bp)1. Here we report, to our knowledge, the first ancient human genome from Wallacea, the oceanic island zone between the Sunda Shelf (comprising mainland southeast Asia and the continental islands of western Indonesia) and Pleistocene Sahul (Australia–New Guinea). We extracted DNA from the petrous bone of a young female hunter-gatherer buried 7.3–7.2 kyr cal bp at the limestone cave of Leang Panninge2 in South Sulawesi, Indonesia. Genetic analyses show that this pre-Neolithic forager, who is associated with the 'Toalean' technocomplex3,4, shares most genetic drift and morphological similarities with present-day Papuan and Indigenous Australian groups, yet represents a previously unknown divergent human lineage that branched off around the time of the split between these populations approximately 37,000 years ago5. We also describe Denisovan and deep Asian-related ancestries in the Leang Panninge genome, and infer their large-scale displacement from the region today.

Selina Carlhoff, Akin Duli, Kathrin Nägele, Muhammad Nur, Laurits Skov, Iwan Sumantri, Adhi Agus Oktaviana, Budianto Hakim, Basran Burhan, Fardi Ali Syahdar, David P. McGahan, David Bulbeck, Yinika L. Perston, Kim Newman, Andi Muhammad Saiful, Marlon Ririmasse, Stephen Chia, Hasanuddin, Dwia Aries Tina Pulubuhu, Suryatman, Supriadi, Choongwon Jeong, Benjamin M. Peter, Kay Prüfer, Adam Powell, Johannes Krause, Cosimo Posth & Adam Brumm

Archäologie

Olsen 2021

Bjørnar J. Olsen & Christopher Witmore, *When Defense Is Not Enough, On Things, Archaeological Theory, and the Politics of Misrepresentation.* Forum Kritische Archäologie **10** (2021), 67–88.

This article responds to a growing tide of critique targeting select new materialist and object-oriented approaches in archaeology. Here we take a stand against this critical discourse not so much to counter actual and legitimate differences in how we conceive of archaeology and its role, but to target the exaggerations, excesses, and errors by which it increasingly is articulated and which restrict communication to the impoverishment of the field as whole. While also embracing an opportunity to clarify matters of politics and archaeological theory in light of object-oriented approaches and the material turn at large, we address a number of concerns raised by this critical discourse, which are, we contend, of relevance to all archaeologists: 1) the importance of ontology; 2) working with theory; 3) politics as first philosophy; 4) the concept of the subaltern; 5) binaries and the rhetorical desire for an enemy; and 6) the matter of misrepresentation.

Keywords: critical discourse | weak theory | subaltern | rhetoric | hyperbole

Dieser Artikel reagiert auf eine wachsende Flut von Kritik, die sich gegen ausgewählte Ansätze des Neuen Materialismus und der Object Oriented Ontology in der Archäologie richtet. Wir beziehen hier Stellung gegen diesen kritischen Diskurs. Nicht so sehr, um tatsächlichen und legitimen Differenzen darüber zu

begegnen, wie wir die Archäologie und ihre Rolle begreifen. Vielmehr nehmen wir die Übertreibungen, Exzesse und Irrtümer ins Visier, die den Diskurs zunehmend kennzeichnen, die Kommunikation einschränken und letztlich zur Verarmung des Feldes führen. Wir ergreifen dabei auch die Gelegenheit, Fragen von Politik und archäologischer Theorie im Lichte objektorientierter Ansätze und des material turn im Allgemeinen zu klären. Dazu sprechen wir eine Reihe von Punkten an, die durch diesen kritischen Diskurs aufgeworfen werden und die, wie wir meinen, für alle Archäolog*innen von Bedeutung sind: 1) die Bedeutung der Ontologie; 2) die Arbeit mit Theorie; 3) Politik als erste Philosophie; 4) das Konzept des Subalternen; 5) Binaritäten und das rhetorische Verlangen nach einem Feind; und 6) das Problem verfälschender Darstellungen.

Keywords: kritischer Diskurs | schwache Theorie | das Subalterne | Rhetorik | rhetorische Übertreibung

Bibel

Pfoh 2021

Emanuel Pfoh, *The earliest reference to Israel, A historiographical reflection*. Revue Biblique **128** (2021), 321–331.

This paper addresses W. Zwickel and P. Van der Veen's recent study in Vetus Testamentum 67 about the possible earliest reference to "Israel" found in an Egyptian stele, dating probably to the fourteenth or early thirteenth century BCE. The present comments focus on the wider implications of having such an early, previous to pharaoh Merenptah's stele dating for the name "Israel" for the historiography of "ancient Israel", or better the Southern Levant, in the Iron Age, and on the need for a problematisation of the data and the interpretative concepts deployed in history writing.

Vainstub 2019

Daniel Vainstub, Hezi Yizhaq & Uzi Avner, *The Miracle of the Sun and Moon in Joshua 10 as a Solar Eclipse*. Vetus Testamentum (2019), preprint, 1–30. DOI:10.1163/15685330-12341412.

This paper offers an interpretation of the astronomical phenomenon described in Josh 10:12-13 as an annular solar eclipse. According to NASA data, this type of eclipse was seen in the skies of central Israel, where the ancient city of Gibeon was located, on October 30, 1207 BCE. A philological analysis of both Joshua 10 and Habakkuk 3 shows that the phenomenon is described using polysemic verbs in poetic style, describing the darkening of the sun by the moon "standing" in front of it.

Keywords: Joshua | sun | moon | eclipse | Gibeon

Biologie

Deoni 2021

Sean C. L. Deoni, Jennifer Beauchemin, Alexandra Volpe, Viren D'Sa & the RESONANCE Consortium, *Impact of the COVID-19 Pandemic on Early Child Cognitive Development, Initial Findings in a Longitudinal Observational Study of Child Health*. medRxiv **2021**, 21261846, 1–37. DOI:10.1101/2021.08.10.21261846.

Since the first reports of novel coronavirus in the 2020, public health organizations have advocated preventative policies to limit virus, including stay-at-home orders that closed businesses, daycares, schools, playgrounds, and limited child learning and typical activities. Fear of infection and possible employment loss has placed stress on parents; while parents who could work from home faced challenges in both working and providing full-time attentive childcare. For pregnant individuals, fear of attending prenatal visits also increased maternal stress, anxiety, and depression. Not surprising, there has been concern over how these factors, as well as missed educational opportunities and reduced interaction, stimulation, and creative play with other children might impact child neurodevelopment. Leveraging a large on-going longitudinal study of child neurodevelopment, we examined general childhood cognitive scores in 2020 and 2021 vs. the preceding decade, 2011-2019. We find that children born during the pandemic have significantly reduced verbal, motor, and overall cognitive performance compared to children born pre-pandemic. Moreover, we find that males and children in lower socioeconomic families have been most affected. Results highlight that even in the absence of direct SARS-CoV-2 infection and COVID-19 illness, the environmental changes associated COVID-19 pandemic is significantly and negatively affecting infant and child development.

Dyer 2021

Owen Dyer, *Covid-19, Children born during the pandemic score lower on cognitive tests, study finds.* British Medical Journal **374** (2021), n2031.

In terms of effect size, he said, "the closest thing we've seen in other research—and this is horrible, not a good comparison to be making—is the studies that were done of orphans in Romania. The effects of institutionalisation and lack of interaction on them were profound, but what we're seeing here is on par with that."

Judentum

Vainstub 2021

Daniel Vainstub, *The Covenant Renewal Ceremony as the Main Function of Qumran.* Religions **12** (2021), 578, 1–26.

Unlike any other group or philosophy in ancient Judaism, the yahad sect obliged all members of the sect to leave their places of residence all over the country and gather in the sect's central site to participate in a special annual ceremony of renewal of the covenant between God and each of the members. The increase of the communities that composed the sect and their spread over the entire country during the first century BCE required the development of the appropriate infrastructure for hosting this annual gathering at Qumran. Consequently, the hosting of the gathering became the main function of the site, and the southern esplanade with the buildings surrounding it became the epicenter of the site.

Keywords: Qumran | Damascus Document | scrolls | mikveh

Klima

Yin 2021

Q. Z. Yin, Z. P. Wu, A. Berger, H. Goosse & D. Hodell, *Insolation triggered abrupt weakening of Atlantic circulation at the end of interglacials.* science **373** (2021), 1035–1040.

s373-1035-Supplement1.pdf, s373-1035-Supplement2.zip

Abrupt cooling is observed at the end of interglacials in many paleoclimate records, but the mechanism responsible remains unclear. Using model simulations, we demonstrate that there exists a threshold in the level of astronomically induced insolation below which abrupt changes at the end of interglacials of the past 800,000 years occur. When decreasing insolation reaches the critical value, it triggers a strong, abrupt weakening of the Atlantic meridional overturning circulation and a cooler mean climate state accompanied by high-amplitude variations lasting for several thousand years. The mechanism involves sea ice feedbacks in the Nordic and Labrador Seas. The ubiquity of this threshold suggests its fundamental role in terminating the warm climate conditions at the end of interglacials.

Metallzeiten

Wunderlich 1972

Hans Georg Wunderlich, *Wohin der Stier Europa trug, Kretas Geheimnis und das Erwachen des Abendlandes.* (Köln 2007).

Methoden

O'Grady 2021

Cathleen O'Grady, *Made-up data set raises questions about behavioral scientist Dan Ariely.* science **373** (2021), 950–951.

Politik

Kreutzmann 2007

Hermann Kreutzmann, *Afghanistan and the Opium World Market, Poppy Production and Trade.* Iranian Studies **40** (2007), 605–621.

The Afghan poppy cultivation is presented here as a case in point to exemplify the linkages between external influences and local effects. World market and power relations have influenced cultivation patterns, processing, and trafficking. At the same time, poppy cultivation pinpoints an internal development which is strongly linked to deteriorating state control, warlordism, and regional power politics. Opium production has served as a major source of revenue for the upholding of disparate political structures which reflect the present political map of Afghanistan. Poppy cultivation in Afghanistan gained a substantial push during the last quarter century, from an annual production of 200 tons in 1979 to 4,200 tons in 2004, making use of former development efforts in creating irrigated oases in Helm and and Nangarhar. Prices rose after the Taliban's 2001 ban on production, raising farmers' incomes substantially and turning opium into an unrivalled cash crop. Fairly new production zones have been added in recent times; for example, Badakhshan—the stronghold of the Northern Alliance–has gained the third position with major increases in the last few years. Afghanistan's poppy cultivation and opium production has to be interpreted in terms of globalisation and fragmentation. Drug trafficking affects the neighboring states, namely, Iran, Tajikistan, and Pakistan, as they function as consumer markets as well as trade routes for contraband drugs heading towards the West. Consequently, the Afghan poppy cultivation is interpreted in a holistic manner.