Liste erstellt am 2014-05-16

Literatur

Aktuell

Gaudart 2014

Jean Gaudart, Laetitia Huiart, Paul J. Milligan, Rodolphe Thiebaut & Roch Giorgi, *Reproducibility issues in science, is P value really the only answer?* PNAS **111** (2014), E1934.

Lowering the significance level will further increase the type II error, which is clinically as important as type I error. Focusing only on the type I error may lead to an excessive false nondiscovery rate. In the case of severe diseases, it is not uncommon to fix a significance level at 0.1, at the early stages, to avoid excluding an effective treatment.

Gelman 2014

Andrew Gelman & Christian P. Robert, *Revised evidence for statistical standards.* PNAS **111** (2014), E1933.

Johnson's minimax prior is not intended to correspond to any distribution of effect sizes; rather, it represents a worst case scenario under some mathematical assumptions. Minimax and tradeoffs do not play well together, and it is hard for us to see how any worst case procedure can supply much guidance on how to balance between two different losses.

Johnson 2014

Valen E. Johnson, *More reasons to revise standards for statistical evidence, Reply to Gelman, Gaudart, Pericchi.* PNAS **111** (2014), E1936–E1937.

As these surveys demonstrate, the high failure rate of phase III clinical trials stems largely from lax standards of evidence in phase II trials. By declaring success based on 5:1 odds or less in favor of an investigational treatment (i.e., a 5 % significance threshold) and by ignoring the historical rate of failure of investigational drugs in early stage clinical trials, too many ineffective drugs are subjected to phase III testing.

Pericchi 2014

Luis Pericchi, Carlos A. B. Pereira & María-Eglée Pérez, *Adaptive revised standards for statistical evidence.* PNAS **111** (2014), E1935.

A simple constant recipe is not the solution to the problem. The standard how to judge the evidence should be a function of the amount of information. Johnson's main message is to toughen the standards and design the experiments accordingly. This is welcomed whenever possible. However, it does not balance type I and type II errors: it would be misleading to pass the message— now use significance levels divided by 10, regardless of either type II errors or sample sizes. This would change the problem without solving it.

Schwartz 2014

Jeffrey H. Schwartz, Ian Tattersall & Zhang Chi, *Comment on "A Complete Skull from Dmanisi, Georgia, and the Evolutionary Biology of Early Homo".* science **344** (2014), 360.

Lordkipanidze et al. (Research Article, 18 October 2013, p. 326) conclude, from gross morphological comparisons and geometric-morphometric analysis of general shape, that the five hominid crania from Dmanisi in Georgia represent a single regional variant of Homo erectus. However, dental, mandibular, and cranial morphologies all suggest taxic diversity and, in particular, validate the previously named H. georgicus.

Semba 2014

Richard D. Semba et al., *Resveratrol Levels and All-Cause Mortality in Older Community-Dwelling Adults*. Journal of the American Medical Association (2014), preprint, 1–8. DOI:10.1001/jamainternmed.2014.1582.

Richard D. Semba, Luigi Ferrucci, Benedetta Bartali, Mireia Urpí-Sarda, Raul Zamora-Ros, Kai Sun, Antonio Cherubini, Stefania Bandinelli, & Cristina Andres-Lacueva

IMPORTANCE Resveratrol, a polyphenol found in grapes, red wine, chocolate, and certain berries and roots, is considered to have antioxidant, anti-inflammatory, and anticancer effects in humans and is related to longevity in some lower organisms.

OBJECTIVE To determine whether resveratrol levels achieved with diet are associated with inflammation, cancer, cardiovascular disease, and mortality in humans. DESIGN Prospective cohort study, the Invecchiare in Chianti (InCHIANTI) Study ("Aging in the Chianti Region"), 1998 to 2009 conducted in 2 villages in the Chianti area in a population-based sample of 783 community-dwelling men and women 65 years or older.

EXPOSURES Twenty-four–hour urinary resveratrol metabolites.

MAIN OUTCOMES AND MEASURES Primary outcome measurewas all-cause mortality. Secondary outcomes were markers of inflammation (serum C-reactive protein [CRP], interleukin [IL]-6, IL-1β, and tumor necrosis factor [TNF]) and prevalent and incident cancer and cardiovascular disease. RESULTS Mean (95 %CI) log total urinary resveratrol metabolite concentrations were 7.08 (6.69-7.48) nmol/g of creatinine. During 9 years of follow-up, 268 (34.3 %) of the participants died. From the lowest to the highest quartile of baseline total urinary resveratrol metabolites, the proportion of participants who died from all causes was 34.4 %, 31.6 %, 33.5 %, and 37.4 %, respectively (P = .67). Participants in the lowest quartile had a hazards ratio for mortality of 0.80 (95 %CI, 0.54-1.17) compared with those in the highest quartile of total urinary resveratrol in a multivariable Cox proportional hazards model that adjusted for potential confounders. Resveratrol levels were not significantly associated with serum CRP, IL-6, IL-1β, TNF, prevalent or incident cardiovascular disease, or cancer.

CONCLUSIONS AND RELEVANCE In older community-dwelling adults, total urinary resveratrol metabolite concentration was not associated with inflammatory markers, cardiovascular disease, or cancer or predictive of all-cause mortality. Resveratrol levels achieved with a Western diet did not have a substantial influence on health status and mortality risk of the population in this study.

Zollikofer 2014

Christoph P. E. Zollikofer, Marcia S. Ponce de León, Ann Margvelashvili, G. Philip Rightmire & David Lordkipanidze, *Response to Comment on "A Complete Skull from Dmanisi, Georgia, and the Evolutionary Biology of Early Homo"*. science **344** (2014), 360.

Schwartz et al. hold that variation among the Dmanisi skulls reflects taxic diversity. The morphological observations to support their hypothesis, however, are

partly incorrect, and not calibrated against intraspecific variation in living taxa. After proper adjustment, Schwartz et al.'s data are fully compatible with the hypothesis of a single paleodeme of early Homo at Dmanisi.

Anthropologie

Finlayson 2014

Clive Finlayson, *The improbable primate, How water shaped human evolution.* (Oxford 2014).

Lergetporer 2014

Philipp Lergetporer, Silvia Angerer, Daniela Glätzle-Rützler & Matthias Sutter, *Third-party punishment increases cooperation in children through (misaligned) expectations and conditional cooperation.* PNAS **111** (2014), 6916–6921.

The human ability to establish cooperation, even in large groups of genetically unrelated strangers, depends upon the enforcement of cooperation norms. Third-party punishment is one important factor to explain high levels of cooperation among humans, although it is still somewhat disputed whether other animal species also use this mechanism for promoting cooperation. We study the effectiveness of third-party punishment to increase children's cooperative behavior in a large-scale cooperation game. Based on an experiment with 1,120 children, aged 7 to 11 y, we find that the threat of third-party punishment more than doubles cooperation rates, despite the fact that children are rarely willing to execute costly punishment. We can show that the higher cooperation levels with third-party punishment are driven by two components. First, cooperation is a rational (expected payoff-maximizing) response to incorrect beliefs about the punishment behavior of third parties. Second, cooperation is a conditionally cooperative reaction to correct beliefs that third party punishment will increase a partner's level of cooperation.

Bibel

Ben Zvi 1991

Ehud Ben Zvi, *The Account of the Reign of Manasseh in II Reg 21,1–18 and the Redactional History of the Book of Kings.* Zeitschrift für die Alttestamentliche Wissenschaft **103** (1991), 355–374.

According to I–2 Kings, Manasseh was the worst king of Judah; moreover, his deeds angered the deity to the extent that God's response to them was an irrevocable sentence of punishment against Judah. Consequently, the account of his reign is one of the most important pieces in I–2 Kings and one of the most important test cases for any comprehensive theory about the redactional history of the Book of Kings.

To conclude: The analysis of the account of Manasseh's deeds in II Reg 21,1–18 does support the idea that there was a basic and comprehensive historiographico/theological work (dtr-H) that was reinterpreted and partially reshaped by two redactional traditions, one prophetic oriented (dtr-P), and the other "Torah" (Deuteronomy) oriented (dtr-N).

Chilton 1982

Bruce Chilton, *Jesus ben David, Reflections on the Davidssohnfrage.* Journal for the Study of the New Testament **4** (1982), 88–112.

In the question, "How do the scribes say the messiah is David's son?", Jesus challenged a specifically scribal messianic expectation and refused to associate himself with it. On the other hand, he embraced the characterization "David's son", with its overtones of Solomonic wisdom and especially of exorcistic and therapeutic skill. The question itself represents Jesus' attempt to evade the charge that he had messianic pretensions. His reputation as "David's son", however, and his activity in the Temple, made it impossible for him long to forestall the coalition of opponents who believed that he had such pretensions and that they were dangerous.

Dever 2001

William Dever, *What did the biblical writers know, and when did they know it? What archaeology can tell us about the reality of ancient Israel*. (Grand Rapids 2002).

Finkelstein 2006

Israel Finkelstein & Neil Asher Silberman, *David and Solomon, In search of the Bible's sacred kings and the roots of the Western tradition*. (New York 2007).

Fried 2002

Lisbeth S. Fried, *The High Places (Bāmôt) and the Reforms of Hezekiah and Josiah, An Archaeological Investigation*. Journal of the American Oriental Society **122** (2002), 437–465.

This paper investigates the historicity of Hezekiah and Josiah's reforms of the bamot. A description of a bamah is derived from the biblical text. Structures matching the description are then sought in Iron Age II cities of Judah and Samaria. Cult sites matching the description are found, but these sites were not destroyed as a result of the edicts of these reforming kings. Rather, they were destroyed during the onslaughts of Pharaoh Sheshonq I and of the Assyrian kings Tiglath-pileser III, Shamaneser V, and Sennacherib. The historicity of the reforms is not supported by archaeological data. The paper concludes with a brief discussion of the principle of continuity of sacred space, the Sitz im Leben of Deuteronomy 12, and the date of the Deuteronomist.

Geoghegan 2003

Jeffrey C. Geoghegan, *"Until This Day" and the Preexilic Redaction of the Deuteronomistic History*. Journal of Biblical Literature **122** (2003), 201–227.

That Cogan and Tadmor would conclude that "until this day" in 2 Kings reflects the specific political and religious circumstances of Josiah's reign, and that Nelson would inadvertently conclude (Nelson does not seem aware that his examples immediately follow "until this day") that Deuteronomistic insertions after "until this day" in Joshua reflect this same period seems beyond coincidence. When we combine their findings with our determination that "until this day" across the DH reflects a preexilic, Deuteronomistic perspective, the conclusion seems inevitable: "until this day" is Dtrl's day, when the temple still stood, the poles of the ark still protruded beyond the curtain of the holy of holies, and the nation itself was undergoing unprecedented cultic reforms and territorial expansions under Josiah. The implications of these findings for Deuteronomistic studies are considerable.

Handy 1988

Lowell K. Handy, *Hezekiah's Unlikely Reform*. Zeitschrift für die Alttestamentliche Wissenschaft **100** (1988), 111–115.

1t is quite unlikely that Hezekiah made a sweeping reform of the religion of Judah. The absence of any reaction to an upheavel in Samerina within the records of Sennacherib cast great doubt about the historicity of the account of Hezekiah's reforms in II Chr. Other evidence which has been taken to describe a religious reform under Hezekiah may well be seen as action of a ruler whose nation is being conquered.

Humphreys 1980

W. Lee Humphreys, *The Rise and Fall of King Saul, A study of an ancient narrative stratum in 1 Samuel*. Journal for the Study of the Old Testament **5** (1980), 74–90.

The cumulative effect of this evidence suggests that the older Saul narrative was the work of a person strongly influenced by practices and literary traditions characteristic of the early Greeks and Hittites, someone, for example, who did not view suicide as abhorrent in all situations or cremation as tabu, whose understanding of the state of the dead and whose vision of the tragic potential in the human situation and in relation to the deity was in striking contrast to Israelite tradition but in sympathy with what is found in cultures to the north and west. This leads to the suggestion that, as this narrative stands early in the developmental history of 1 Samuel, it was the work of someone living in the period of the united monarchy and probably during the reign of Solomon. Not only was this an age of dynamic creativity and experimentation in the history of Israel's literary and theological expression whether or not the term "enlightenment" is quite appropriate it was also a period in which foreign influence on Israelite intellectual circles was strong. Hittites, Philistines, and many others as well were part of the royal establishment. The older Saul narrative, therefore, stands as still another product of that "golden age" of Israelite letters and thought over which Solomon reigned, penned by someone whose own cultural roots were set in part in Aegean and Anatolian soil.

Na'aman 1995

Nadav Na'aman, *The Debated Historicity of Hezekiah's Reform in the Light of Historical and Archaeological Research*. Zeitschrift für die Alttestamentliche Wissenschaft **107** (1995), 179–195.

Sennacherib's campaign of 701 BCE marks a break in the history of Judah. The destructive Assyrian conquests and mass deportations of the last third of the eighty Century BCE, the words of the late eighth Century prophets, the long subjection of Judah to Assyria, and the >foreign< influences infiltrating the kingdom — the combination of these factors explains, at least partly, the emergence of the Dtr. school in the seventh Century BCE. However, there is no evidence for the emergence of the Dtr. movement as early as the late eighth Century. Hezekiah's reform has sometimes been regarded as the first concrete test of the program of this movement and thus as evidence for its emergence at that time. But since the execution of a wide-ranging reform by Hezekiah is doubtful, there remains no evidence for activity of the Dtr. movement prior to the seventh Century.

Finally, there is evidence for the persistence of a cult place at Lachish, Judah's major royal city in the Shephelah in the eighth Century, until the Assyrian conquest of 701. This fits well with all the other evidence presented above and leads me to conclude that a comprehensive cultic reform did not take place in the time of Hezekiah.

Datierung

Aeschbach-Hertig 2014

Werner Aeschbach-Hertig, *Radiokrypton dating finally takes off*. PNAS **111** (2014), 6856–6857.

"To obtain 50 cm3 of krypton, however, the present minimum volume required, 103 tons of ice would be required." Conventional MS is unable to distinguish such rare isotopes from the overwhelming neighboring masses, and even resonance ionization MS (RIMS) requires isotope enrichment to lift the 81Kr/Kr ratio to a measurable level. The first attempt to date Antarctic ice with 81Kr was based on RIMS, but the method never delivered fully convincing results for noble gas radioisotopes. The difficulty of ATTA is not to sort out single 81Kr atoms from the background of 10^13 times more abundant stable Kr isotopes, but to obtain sufficiently high count rates.

Buizert 2014

Christo Buizert et al., *Radiometric ^{81}Kr dating identifies 120,000-year-old ice at Taylor Glacier, Antarctica*. PNAS **111** (2014), 6876–6881.

pnas111-06876-Supplement.xls

Christo Buizert, Daniel Baggenstos, Wei Jiang, Roland Purtschert, Vasilii V. Petrenko, Zheng-Tian Lu, Peter Müller, Tanner Kuhl, James Lee, Jeffrey P. Severinghaus & Edward J. Brook

We present successful 81Kr-Kr radiometric dating of ancient polar ice. Krypton was extracted from the air bubbles in four ≈350-kg polar ice samples from Taylor Glacier in the McMurdo Dry Valleys, Antarctica, and dated using Atom Trap Trace Analysis (ATTA). The 81Kr radiometric ages agree with independent age estimates obtained from stratigraphic dating techniques with a mean absolute age offset of 6 ± 2.5 ka. Our experimental methods and sampling strategy are validated by (i) 85Kr and 39Ar analyses that show the samples to be free of modern air contamination and (ii) air content measurements that show the ice did not experience gas loss. We estimate the error in the 81Kr ages due to past geomagnetic variability to be below 3 ka. We show that ice from the previous interglacial period (Marine Isotope Stage 5e, 130–115 ka before present) can be found in abundance near the surface of Taylor Glacier. Our study paves the way for reliable radiometric dating of ancient ice in blue ice areas and margin sites where large samples are available, greatly enhancing their scientific value as archives of old ice and meteorites. At present, ATTA 81Kr analysis requires a 40–80-kg ice sample; as sample requirements continue to decrease, 81Kr dating of ice cores is a future possibility.

geochronology | paleoclimatology | glaciology

Finkelstein 1996

Israel Finkelstein, *The Archaeology of the United Monarchy, An Alternative View*. Levant **28** (1996), 177–187.

The article deals with the chronology of the early-Iron II strata in Palestine. A careful examination of the archaeological and textual data indicates that there is no safe chronological anchor between the early-twelfth century BCE (the battles of Ramses III with the Sea Peoples) and the late-eighth century BCE (the Assyrian campaigns to Palestine). The most important clues for this time-span are the Philistine Bichrome pottery and the results of the excavations at Arad and Jezreel. Following a study of the Philistine chronology, the author suggests an alternative dating for the main strata of the early Iron II. According to this 'Low Chronology', Stratum VA-IVB at Megiddo, Stratum XI at Arad and Stratum V at Beer-sheba should all be dated to the ninth century BCE. Consequently, the tenth century is

represented by Stratum VIA at Megiddo, Stratum XII at Arad and Stratum VII at Beer-sheba. The new dating calls for a re-evaluation of the historical, cultural and political processes that took place in Palestine in the eleventh-ninth centuries BCE.

Finkelstein 2003

Israel Finkelstein & Eli Piasetzky, *Recent radiocarbon results and King Solomon*. Antiquity **77** (2003), 771–779.

Radiocarbon dating and stratigraphy here offer a new chronological structure for the Iron Age in the Levant. The credit for the construction of massive public monuments in the northern part of Israel is here wrested from David and Solomon and attributed to the later Omride dynasty. The early Israelite monarchs actually ruled over a small kingdom in the highlands around Jerusalem rather than a great empire.

Keywords: Biblical history, Solomon, historical archaeology, radiocarbon

Mazar 1997

Amihai Mazar, *Iron Age Chronology, A Reply to I. Finkelstein*. Levant **29** (1997), 157–167.

This paper contests 1. Finkelstein's proposed low chronology for the mid-twelfth to mid-eighth centuries BCE. Though indeed there are few, if any, chronological 'anchors' during this period, it is claimed that the suggested low chronology is based on flimsy evidence, and creates new unsolvable problems, instead of resolving the older ones. Pushing the date of the Philistine Monochrome pottery phase (local Myc. IIIC) beyond the end of the Egyptian presence in Canaan is based on a debatable assumption. It led Finkelstein to suggest a wholesale lowering of the date of later assemblages. The extension of the Iron Age I material culture into the late tenth century BCE is unjustified and leads to a distorted archaeological picture of the period of the United Monarchy, and ultimately to misleading historical conclusions. The conclusions pertaining to the ninth-eighth centuries do not allow sufficient time for the complex stratigraphic development documented at several sites, such as Hazor. The stratigraphic and ceramic evidence shows that in each region of the country there was a slow development in pottery forms during the tenth-eighth centuries BCE. Ceramic chronology is a complex and intricate subject beset with difficulties and must be supported by the integration of other evidence. New data from 14C shortlived samples offer potential solutions.

Energie

Fares 2014

Robert L. Fares & Michael E. Webber, *Combining a dynamic battery model with high-resolution smart grid data to assess microgrid islanding lifetime*. Applied Energy (2014), preprint, 1–8. DOI:10.1016/j.apenergy.2014.04.049.

In this paper, we use experimental data collected from an Austin, Texas smart grid test bed with a system-level battery energy storage model to assess the lifetime of batteries in a microgrid operating in islanded mode during a distribution-level outage. We consider a hypothetical microgrid consisting of 21 single-family detached homes and three transformer-level community energy storage (CES) battery units ranging in size from 25 kW h to 75 kWh. To describe the performance of CES batteries, we implement a dynamic behavioral circuit model capable of

describing voltage transients and rate-capacity effects. We use one-minute electricity production and consumption data collected from the smart grid test bed in 2012 to assess how the timing of an electric outage affects the islanding lifetime of a residential microgrid. We contrast our results with the average outage duration reported by U.S. electric utilities to quantify how often a residential microgrid could withstand a typical outage. Our results show that increasing the amount of rooftop PV in a residential microgrid does not significantly increase how often it can withstand an average-duration outage. However, combining PV with CES extends the median islanding lifetime by up to 11.6 h during morning outages. Based on our results, 50 kW h CES provides the best tradeoff between the cost of a CES system and its reliability benefit, allowing downstream loads to withstand an average-duration outage approximately 93 % of the time.

Keywords: Energy storage | Microgrid | Smart grid | Solar | Photovoltaics

Grabung

Aharoni 1974

Yohanan Aharoni, *The Horned Altar of Beer-sheba*. Biblical Archaeologist **37** (1974), 2–6.

One other factor, the demolition of the altar, is of much interest. The storehouse in which the altar stones had been re-used was destroyed at the end of the 8th century B.C.E. (Stratum II), probably during Sennacherib's campaign in 701. It appears that the repair of the building and the concomitant dismantling of the altar took place in the reign of Hezekiah. This is a most dramatic corroboration of the religious reform carried out by him, as expressed in the harsh accusations of Rabshakeh in 2 Kings 18:22: "But if you say to me, 'We rely on the Lord our God,' is it not he whose high places and altars Hezekiah has removed, saying to Judah and to Jerusalem, 'You shall worship before this altar in Jerusalem'?"

Ben-Tor 2000

Amnon Ben-Tor, *Hazor and the Chronology of Northern Israel, A Reply to Israel Finkelstein*. Bulletin of the American Schools of Oriental Research **317** (2000), 9–15.

This article deals with Israel Finkelstein's proposal to adopt a low chronology for the Iron Age in Israel and is, in particular, a response to his most recent article on that issue. His factual points, especially with regard to the close resemblance between the layout of the Jezreel enclosure and tenth-century B.C.E. Hazor, are shown to be inaccurate. The stratigraphic sequence of Iron Age Hazor is compared with that of other contemporary sites in Israel. The questions rising from Finkelstein's suggested Aramaean conquests in Israel are discussed. Finally, two methodological issues are addressed: the validity of treating Jezreel as a key site for Iron Age chronology in Israel, and the relationship between archaeological data and the biblical record.

Finkelstein 1986

Israel Finkelstein, *Shiloh Yields Some, But Not All, of Its Secrets, Location of Tabernacle still uncertain*. Biblical Archaeology Review **12** (1986), i, 22–41.

Finkelstein 1999

Israel Finkelstein, *Hazor and the North in the Iron Age, A Low Chronology Perspective*. Bulletin of the American Schools of Oriental Research **314** (1999), 55–70.

The article deals with the dating of the Iron Age II strata at Hazor and with historical developments on the border between the two most powerful Iron Age II states in the Levant-the northern kingdom of Israel and Aram Damascus. It first discusses the relative chronology of three northern sites-Megiddo, Jezreel, and Hazor-establishing the similarity between Megiddo VA-IVB and the Jezreel compound and reviewing the relationship between the assemblages of those sites and Hazor X. The article then describes the dating of the Hazor strata according to Yadin (and recently Ben-Tor), pointing out the shaky arguments regarding the affiliation of Stratum X with Solomon and indicating the difficulties of the Yadin chronological system for reconstruction of the history of the region in the Iron Age II. Next the article reviews Hazor's stratigraphy in the light of the Low Chronology which has recently been suggested for Iron Age II strata in the Levant. Applying the Low Chronology to Hazor seems to solve most of the difficulties created by the Yadin scheme. Strata X and IX are downdated to the days of the Omrides, and Strata VIII and VII to the reign of Hazael, King of Damascus. Hence the destruction of Hazor IX is attributed to the expansion of Damascus, which is related in the Dan inscription, and the destruction of Hazor VII is attributed to the renewed domination of the northern kingdom in the region under Joash or Jeroboam II. Finally, the article proposes an early eighth century B.C.E. date for the construction of Stratum IVA at Megiddo.

Finlayson 2010

Bill Finlayson, Cheryl Makarewicz, Sam Smith & Steven Mithen, *The transition from PPNA to PPNB in southern Jordan*. In: Fares al-Hmoud (Hrsg.), *Studies in the history and archaeology of Jordan XI*. Studies in the history and archaeology of Jordan 11 (Amman 2010), 105–119.

Contra Edwards and Ghattas, who argue for cultural fusion and a stagnant local late PPNA, we propose that there is a dynamic and complete local history for the earliest Neolithic in the southern Levant that has been largely ignored in our quest for normative EPPNB culture. The presence of Motza to the west and a possible classic EPPNB site at Wadi 'Asal in the middle, or at least on the edge of a late PPNA facies in southern Jordan, is also informative. If these sites represent the presence of a small incoming EPPNB population in the area at the same time as the indigenous late PPNA population, then it may well be an indication of a fluidity between groups that would have encouraged the transmission of ideas and knowledge, reflecting on a micro-scale the mosaic-pattern of interaction known to have occurred throughout south-west Asia. The late PPNA phase may provide a perfectly adequate transition to the PPNB in the southern Levant. Concern over a missing, widespread EPPNB may reflect more a slavish conformity to extant chrono-typological cultures rather than the reality of local history and local developments that actually occur on the ground. The sites of WF16, al-Hammih and ZAD 2 that we have identified as late PPNA on the basis of economy, chipped stone, architectural tradition and chronology not only fill the early PPNB chronological gap, but also provide considerable evidence of continuity from them to the sites of Bayda and Shakarat al-Musay'id, whose dates close the gap from the other end.

Kemp 2012
Barry Kemp, *The city of Akhenaten and Nefertiti, Amarna and its people*. New aspects of antiquity (London 2014).

Malamat 1960
A. Malamat, *Hazor "The Head of All Those Kingdoms"*. Journal of Biblical Literature **79** (1960), 12–19.
This discussion may help to illuminate the true meaning of the note by the biblical historiographer: "For Hazor beforetime was the head of all those kingdoms." In our view, these words were not spoken, or at least not intended primarily, as a description of Hazor on the eve of the Israelite conquest. Rather do they testify to the former greatness of this city founded in the Middle Bronze Age. Moreover the title "king of Canaan" (Judg 42, 24), attributed to Jabin uniquely in the Bible, is apparently a reminiscence of earlier times, when the king of Hazor was in fact the king of Canaan.35 The pre-eminence accorded to Hazor during the Israelite conquest is probably the last vestige of the greatness of the once-mighty kingdom.

O'Shea 2014
John M. O'Shea, Ashley K. Lemke, Elizabeth P. Sonnenburg, Robert G. Reynolds & Brian D. Abbott, *A 9,000-year-old caribou hunting structure beneath Lake Huron*. PNAS **111** (2014), 6911–6915.
Some of the most pivotal questions in human history necessitate the investigation of archaeological sites that are now under water. Nine thousand years ago, the Alpena-Amberley Ridge (AAR) beneath modern Lake Huron was a dry land corridor that connected northeast Michigan to southern Ontario. The newly discovered Drop 45 Drive Lane is the most complex hunting structure found to date beneath the Great Lakes. The site and its associated artifacts provide unprecedented insight into the social and seasonal organization of prehistoric caribou hunting. When combined with environmental and simulation studies, it is suggested that distinctly different seasonal strategies were used by early hunters on the AAR, with autumn hunting being carried out by small groups, and spring hunts being conducted by larger groups of cooperating hunters.
underwater archaeology | hunter–gatherer subsistence | virtual world simulation

Ussishkin 1990
David Ussishkin, *Notes on Megiddo, Gezer, Ashdod, and Tel Batash in the Tenth to Ninth Centuries B.C.* Bulletin of the American Schools of Oriental Research **277** (1990), 71–91.
The article deals with four independent but related problems concerning four sites in the tenth and ninth centuries B.C. First, the archaeological and historical implications of the erection of a monumental stele by Shoshenq I in Megiddo are discussed. Second, the dating of the fortifications of Gezer, in view of Dever's recent excavations (1984; 1985; 1986) is challenged. Third, the stratigraphy of the four-entry city gate in Ashdod is analyzed, following the assumption that it is based on the "built-up foundations" principle. Fourth, the stratigraphy and date of the city gate at Tel Batash are discussed, and the conclusion is reached that it is a ninth-century gate complex with an outer gate and an inner four-entry gate based on built-up foundations.

Yadin 1970
Yigael Yadin, *Megiddo of the Kings of Israel*. Biblical Archaeologist **33** (1970), 65–96.

The endeavors of the spade to unearth the building remains of Solomon, greatest builder among Israel's kings, are part of the enthralling web of the excavations in the Holy Land during the last seventy years. No doubt the crowning glory of Solomo1n's enterprises is the Temple he built in Jerusalem, to which, understandably, whole chapters in the Bible are dedicated. David, who spent his life warring even beyond the borders of Israel, had no time to build fortified cities (which his offensive strategy in fact made unnecessary), let alone the Temple in Jerusalem. "You know that David my father could not build a house for the name of the Lord his God because of the warfare with which his enemies surrounded him, until the Lord put them under the soles of his feet" (I Kings 5:3).

Grundlagen

Sahlins 1960

Marshall D. Sahlins & Elman R. Service (Hrsg.), *Evolution and culture*. (Ann Arbor 1988).

Thomas Harding, David Kaplan, Marshall D. Sahlins & Elman R. Service

Klima

Bierman 2014

Paul R. Bierman, Lee B. Corbett, Joseph A. Graly, Thomas A. Neumann, Andrea Lini, Benjamin T. Crosby & Dylan H. Rood, *Preservation of a Preglacial Landscape Under the Center of the Greenland Ice Sheet*. science **344** (2014), 402–405.

s344-0402-Supplement.pdf

Continental ice sheets typically sculpt landscapes via erosion; under certain conditions, ancient landscapes can be preserved beneath ice and can survive extensive and repeated glaciation. We used concentrations of atmospherically produced cosmogenic beryllium-10, carbon, and nitrogen to show that ancient soil has been preserved in basal ice for millions of years at the center of the ice sheet at Summit, Greenland. This finding suggests ice sheet stability through the Pleistocene (i.e., the past 2.7 million years). The preservation of this soil implies that the ice has been nonerosive and frozen to the bed for much of that time, that there was no substantial exposure of central Greenland once the ice sheet became fully established, and that preglacial landscapes can remain preserved for long periods under continental ice sheets.

Langgut 2013

Dafna Langgut, Israel Finkelstein & Thomas Litt, *Climate and the Late Bronze Collapse, New Evidence from the Southern Levant*. Tel Aviv: Archaeology **40** (2013), 149–175.

A core drilled from the Sea of Galilee was subjected to high resolution pollen analysis for the Bronze and Iron Ages. The detailed pollen diagram (sample/≈40 yrs) was used to reconstruct past climate changes and human impact on the vegetation of the Mediterranean zone of the southern Levant. The chronological framework is based on radiocarbon dating of short-lived terrestrial organic material. The results indicate that the driest event throughout the Bronze and Iron Ages occurred ≈1250–1100 BCE—at the end of the Late Bronze Age. This arid phase was identified based on a significant decrease in Mediterranean tree values, denoting a

reduction in precipitation and the shrinkage of the Mediterranean forest/maquis. The Late Bronze dry event was followed by dramatic recovery in the Iron I, evident in the increased percentages of both Mediterranean trees and cultivated olive trees. Archaeology indicates that the crisis in the eastern Mediterranean at the end of the Late Bronze Age took place during the same period—from the mid13th century to ca. 1100 BCE. In the Levant the crisis years are represented by destruction of a large number of urban centres, shrinkage of other major sites, hoarding activities and changes in settlement patterns. Textual evidence from several places in the Ancient Near East attests to drought and famine starting in the mid-13th and continuing until the second half of the 12th century. All this helps to better understand the 'Crisis Years' in the eastern Mediterranean at the end of the Late Bronze Age and the quick settlement recovery in the Iron I, especially in the highlands of the Levant.

Keywords: Climate change, Paleoclimate, Pollen, Late Bronze collapse, Crisis years, Sea of Galilee, Levant, Hatti, Ugarit, 20th Dynasty

Yu 2014

Fangqun Yu & Gan Luo, *Effect of solar variations on particle formation and cloud condensation nuclei.* Environmental Research Letters **9** (2014), 45004. DOI:10.1088/1748-9326/9/4/045004.

The impact of solar variations on particle formation and cloud condensation nuclei (CCN), a critical step for one of the possible solar indirect climate forcing pathways, is studied here with a global aerosol model optimized for simulating detailed particle formation and growth processes. The effect of temperature change in enhancing the solar cycle CCN signal is investigated for the first time. Our global simulations indicate that a decrease in ionization rate associated with galactic cosmic ray flux change from solar minimum to solar maximum reduces annual mean nucleation rates, number concentration of condensation nuclei larger than 10 nm (CN10), and number concentrations of CCN at water supersaturation ratio of 0.8 % (CCN0.8) and 0.2 % (CCN0.2) in the lower troposphere by 6.8 %, 1.36 %, 0.74 %, and 0.43 %, respectively. The inclusion of 0.2 C temperature increase enhances the CCN solar cycle signals by around 50 %. The annual mean solar cycle CCN signals have large spatial and seasonal variations: (1) stronger in the lower troposphere where warm clouds are formed, (2) about 50 % larger in the northern hemisphere than in the southern hemisphere, and (3) about a factor of two larger during the corresponding hemispheric summer seasons. The effect of solar cycle perturbation on CCN0.2 based on present study is generally higher than those reported in several previous studies, up to around one order of magnitude.

Keywords: solar variations, ionmediated nucleation, particle formation, cloud condensation nuclei, effect of temperature change, solar cycle, galactic cosmic ray

Kultur

Mitchell 2004

Stephen Mitchell, *Gilgamesh, A new English version.* (New York 2013).

Methoden

Hill 1965

Sir Austin Bradford Hill, *The Environment and Disease: Association or Causation?* Proc. Royal Society Med **58** (1965), 295–300.

Disregarding then any such problem in semantics we have this situation. Our observations reveal an association between two variables, perfectly clear-cut and beyond what we would care to attribute to the play of chance. What aspects of that association should we especially consider before deciding that the most likely interpretation of it is causation?

Religion

Boyer 2000

Pascal Boyer, *Functional origins of religious concepts*, *Ontological and strategic selection in evolved minds*. Journal of the Royal Anthropological Institute **6** (2000), 195–214.

Culturally successful religious concepts are the outcome of selective processes that make some concepts more likely than others to be easily acquired, stored and transmitted. Among the constructs of human imagination, some connect to intuitive ontological principles in such a way that they constitute a small catalogue of culturally successful supernatural concepts. Experimental and anthropological evidence confirm the salience and transmission potential of this catalogue. Among these supernatural concepts, cognitive capacities for social interaction introduce a further selection. As a result, some concepts of supernatural agents are connected to morality, group identity, ritual and emotion. These typical "religious" supernatural agents are tacitly presumed to have access to information that is crucial to social interaction, an assumption that boosts their spread in human groups.

Hinnells 2007

John R. Hinnells (Hrsg.), *The Penguin handbook of ancient religions*. (London 2009).

Wade 2009

Nicholas Wade, *The faith instinct*, *How religion evolved and why it endures*. (New York 2009).