

Literatur

Aktuell

BASTARDI 2011

Anthony Bastardi, Eric Luis Uhlmann & Lee Ross, *Wishful Thinking : Belief, Desire, and the Motivated Evaluation of Scientific Evidence*. *Psychological Science* (2011) preprint, 1–2. <<http://dx.doi.org/10.1177/0956797611406447>>.

In the present study, we examined whether desires would trump beliefs based on facts when participants evaluated scientific evidence and whether, after being exposed to ambiguous evidence, participants would change their initial beliefs to conform to their plans and desires. We focused on would-be parents who planned to use day care for their children even though they believed day care to be inferior to home care. Such conflicted individuals, despite their initial belief that home care is superior, should desire to conclude that day care is just as good for children as home care.

HAYDEN 2005

Patrick Hayden, *Putting certainty in the bank*. *nature* **436** (2005), 633–635. A new way to manipulate quantum states resolves a long-standing conundrum about who knows what, and when and how, in the quantum world. The result is, as one has come to expect, startling and counterintuitive.

HAYDEN 2011

Patrick Hayden, *Entanglement as elbow grease*. *nature* **474** (2011), 41–42. Quantum correlations have long been recognized as an informational resource for quantum communication and computation. It now seems that they can also do physical work.

KELLY 2011

Robert L. Kelly, *Lewis R. Binford (1931–2011)*. *science* **332** (2011), 928.

Lew thrived on controversy. Challenging orthodoxy, he argued that agriculture was not an inevitable cultural advance, but an adaptation to population pressure. He debated the eminent French archaeologist François Bordes, arguing that variation in Mousterian stone tool assemblages reflected functional differences rather than different “tribes” of Neandertals. Reanalyzing faunal assemblages from sites of considerable importance to human evolution, including Olduvai Gorge in Africa and Zhoukoudian in China, he replaced the cherished idea of big game hunting in the Lower Paleolithic with a vision of our human ancestors as lowly scavengers of carcasses. He was a harsh critic and argued with many, but I recall him saying that he only argued with people from whom he thought he could learn something.

Lew was a brilliant speaker and teacher. His conference presentations were standing room only, and his courses were routinely attended by non-enrolled students. Some 30 years later, his hunter-gatherer seminar remains vivid in my memory. Lew would often slip into a southern Baptist preacher mode and talk . . . and talk. One evening, a particular class that began at 7 PM found him still lecturing at midnight—and his audience still listening. Every time we walked out of that seminar, we felt as if the world had changed.

NORMILE 2011

Dennis Normile, *Fukushima Revives The Low-Dose Debate*. [science 332 \(2011\), 908–910](#).

The general public avoided exposure to high levels of radioactivity, but questions linger about the long-term effects of contamination

Some researchers doubt that any study in Fukushima, no matter how well devised, will reveal much. The radiation exposure of the general population “is too small to give a statistically significant increase in stochastic effects such as cancer,” argues Ohtsura Niwa, professor emeritus of radiation biology at Kyoto University. But even negative data would complement UNSCEAR’s conclusions on Chernobyl, Niwa says, “and, in this sense, have global implications.” As for the linear no-threshold model, Preston says, “I don’t think anything [done in Fukushima] is going to resolve that debate.”

REARDON 2011

Sara Reardon, *The Alchemical Revolution*. [science 332 \(2011\), 914–915](#).

As cryptic manuscripts and centuries-old labware yield their secrets, scholars are coming to realize that medieval “chymists” were real scientists after all

“A lot of scientific laws that were formulated as late as the 19th century were actually in play much earlier than we had imagined,” says archaeologist Marcos Martín-Torres of University College London. “We easily dismiss things chymists did as superstitious, but when you look further into it, they have a lot more ingenuity than we credit them for.”

SCHOENINGER 2011

Margaret J. Schoeninger, Jeffrey L. Bada, Patricia M. Masters, Robert L. Bettinger, Tim D. White, *Unexamined Bodies of Evidence*. [science 332 \(2011\), 916](#).

Unfortunately, the University of California administration has failed to honor research requests for the study of these unique skeletons. Instead, the University of California favors the ideology of a local American Indian group over the legitimacy of science. In contrast, the 2004 Kennewick case verdict stated that there was insufficient evidence to establish that the skeleton was Native American or related to any living American Indian group. The potential loss of the La Jolla skeletons would have a profoundly negative impact on our knowledge of the peopling of the Americas and the antiquity of coastal adaptations.

VOGEL 2011

Steven Vogel, *Surface tension helps a tongue grab liquid*. [PNAS 108 \(2011\), 9321–9322](#).

Besides surface tension and tongues, the present investigation can be viewed in a third context. Biologists have most often looked to chemistry for reductionist explanations. Physical mechanisms, at least beyond those involved in locomotion, have been invoked less often. This traditional disinterest might be blamed on the poor exposure of biologists to the relevant basic variables and phenomena or the lack of exposure of physical scientists and engineers to the wondrous diversity of organisms and organism-level functional devices.

Anthropologie

BOWLES 2002

Samuel Bowles & Herbert Gintis, *Homo reciprocans*. [nature 415 \(2002\), 125–127](#).

Humans are often generous, but cooperation unravels when others take advantage of them. Many people punish such ‘free riders’, even if they do not benefit personally, and this ‘altruistic punishment’ sustains cooperation.

CERLING 2011

Thure E. Cerling et al., *Diet of Paranthropus boisei in the early Pleistocene of East Africa*. [PNAS 108 \(2011\), 9337–9341](#).

[pnas108-09337-Supplement.pdf](#)

Thure E. Cerling, Emma Mbua, Francis M. Kirera, Fredrick Kyalo Manthi, Frederick E. Grine, Meave G. Leakey, Matt Sponheimer and Kevin T. Uno

The East African hominin *Paranthropus boisei* was characterized by a suite of craniodental features that have been widely interpreted as adaptations to a diet that consisted of hard objects that required powerful peak masticatory loads. These morphological adaptations represent the culmination of an evolutionary trend that began in earlier taxa such as *Australopithecus afarensis*, and presumably facilitated utilization of open habitats in the Plio-Pleistocene. Here, we use stable isotopes to show that *P. boisei* had a diet that was dominated by C4 biomass such as grasses or sedges. Its diet included more C4 biomass than any other hominin studied to date, including its congener *Paranthropus robustus* from South Africa. These results, coupled with recent evidence from dental microwear, may indicate that the remarkable craniodental morphology of this taxon represents an adaptation for processing large quantities of low-quality vegetation rather than hard objects.

C4 photosynthesis | C3 photosynthesis

COPELAND 2011

Sandi R. Copeland et al., *Strontium isotope evidence for landscape use by early hominins*. [nature 474 \(2011\), 76–78](#).

[n474-0076-Supplement.pdf](#)

Sandi R. Copeland, Matt Sponheimer, Darryl J. de Ruiter, Julia A. Lee-Thorp, Daryl Codron, Petrus J. le Roux, Vaughan Grimes & Michael P. Richards

Ranging and residence patterns among early hominins have been indirectly inferred from morphology^{1,2}, stone-tool sourcing³, referential models^{4,5} and phylogenetic models⁶⁻⁸. However, the highly uncertain nature of such reconstructions limits our understanding of early hominin ecology, biology, social structure and evolution. We investigated landscape use in *Australopithecus africanus* and *Paranthropus robustus* from the Sterkfontein and Swartkrans cave sites in South Africa using strontium isotope analysis, a method that can help to identify the geological substrate on which an animal lived during tooth mineralization. Here we show that a higher proportion of small hominins than large hominins had non-local strontium isotope compositions. Given the relatively high levels of sexual dimorphism in early hominins, the smaller teeth are likely to represent female individuals, thus indicating that females were more likely than males to disperse from their natal groups. This is similar to the dispersal pattern found in chimpanzees⁹, bonobos¹⁰ and many human groups¹¹, but dissimilar from that of most gorillas and other primates¹². The small proportion of demonstrably non-local large hominin individuals could indicate that male australopiths had relatively small home ranges, or that they preferred dolomitic landscapes.

FEHR 2002

Ernst Fehr & Simon Gächter, *Altruistic punishment in humans*. [nature 415 \(2002\), 137–140](#).

Human cooperation is an evolutionary puzzle. Unlike other creatures, people frequently cooperate with genetically unrelated strangers, often in large groups, with people they will never meet again, and when reputation gains are small or absent. These patterns of

cooperation cannot be explained by the nepotistic motives associated with the evolutionary theory of kin selection and the selfish motives associated with signalling theory or the theory of reciprocal altruism. Here we show experimentally that the altruistic punishment of defectors is a key motive for the explanation of cooperation. Altruistic punishment means that individuals punish, although the punishment is costly for them and yields no material gain. We show that cooperation flourishes if altruistic punishment is possible, and breaks down if it is ruled out. The evidence indicates that negative emotions towards defectors are the proximate mechanism behind altruistic punishment. These results suggest that future study of the evolution of human cooperation should include a strong focus on explaining altruistic punishment.

GINTIS 2001

Herbert Gintis, Eric Alden Smith & Samuel Bowles, *Costly Signaling and Cooperation*. [Journal of Theoretical Biology](#) **213** (2001), 103–119.

We propose an explanation of cooperation among unrelated members of a social group in which cooperation evolves because it constitutes an honest signal of the member's quality as a mate, coalition partner or competitor, and therefore results in advantageous alliances for those signaling in this manner. Our model is framed as a multi-player public goods game that involves no repeated or assortative interactions, so that non-cooperation would be a dominant strategy if there were no signaling benefits. We show that honest signaling of underlying quality by providing a public good to group members can be evolutionarily stable, and can proliferate in a population in which it is initially rare, provided that certain plausible conditions hold, including a link between group-beneficial signaling and underlying qualities of the signaler that would be of benefit to a potential mate or alliance partner. Our model applies to a range of cooperative interactions, including unconditionally sharing individually consumable resources, participating in group raiding or defense, and punishing free-riding or other violations of social norms.

LEE-THORP 2011

Julia Lee-Thorp, *The demise of "Nutcracker Man"*. [PNAS](#) **108** (2011), 9319–9320.

We can also infer with some confidence that these C4 foods were reliable throughout the year because, although no intratooth measurements were made, $\delta^{13}\text{C}$ values near zero allow little room for much seasonal variation. This observation stands in contrast with the high variability seen in the diets of the South African australopith, *P. robustus*. Such a strong emphasis also precludes notions that the C4 resources formed "fall-back" foods—they must be regarded as staples, and moreover they seem to have formed a remarkably consistent part of the diet for at least a half million years.

PANCHANATHAN 2004

Karthik Panchanathan & Robert Boyd, *Indirect reciprocity can stabilize cooperation without the second-order free rider problem*. [nature](#) **432** (2004), 499–502.

[n432-0499-Comment.pdf](#), [n432-0499-Reply.pdf](#), [n432-0499-Supplement.doc](#)

Models of large-scale human cooperation take two forms. 'Indirect reciprocity'¹ occurs when individuals help others in order to uphold a reputation and so be included in future cooperation. In 'collective action'², individuals engage in costly behaviour that benefits the group as a whole. Although the evolution of indirect reciprocity is theoretically plausible³⁻⁶, there is no consensus about how collective action evolves. Evidence suggests that punishing free riders can maintain cooperation⁷⁻⁹, but why individuals should engage in costly punishment is unclear. Solutions to this 'second-order free rider problem' include meta-punishment¹⁰, mutation¹¹, conformism¹², signalling¹³⁻¹⁵ and

group-selection¹⁶⁻¹⁸. The threat of exclusion from indirect reciprocity can sustain collective action in the laboratory¹⁹. Here, we show that such exclusion is evolutionarily stable, providing an incentive to engage in costly cooperation, while avoiding the second-order free rider problem because punishers can withhold help from free riders without damaging their reputations. However, we also show that such a strategy cannot invade a population in which indirect reciprocity is not linked to collective action, thus leaving unexplained how collective action arises.

SCHOENINGER 2011

Margaret J. Schoeninger, *In search of the australopithecines*. [nature](#) **474** (2011), 43–45.

Evidence from strontium isotope ratios preserved in fossil teeth provides a glimpse into the group dynamics and ranging habits of the australopithecines that can be compared with the patterns for modern primates.

VERHAEGEN 1995

M. Verhaegen, *Aquatic Ape Theory, Speech Origins, and Brain Differences with Apes and Monkeys*. [Medical Hypotheses](#) **44** (1995), 409–413.

Humans and apes show clear differences in brain anatomy. In the human cerebral cortex, for instance, the areas that control the fine movements of the hand, the areas that control the breathing and speech musculature, and the association areas have strongly expanded. It will be argued that these differences are best explained by the aquatic ape theory of human evolution (AAT) and originated in our semi-aquatic past, notably in the adaptations necessary for diving and shellfish collection at sea coasts.

Klima

COMMENTS 2011

Christopher T. Reinhard, Noah J. Planavsky, N. Dauphas, J.F. Kasting, Colin Goldblatt & Kevin J. Zahnle, *Mineralogical constraints on Precambrian pCO₂, Faint young Sun paradox remains*. [nature](#) **474** (2011), E1–E5.

Neolithikum

HEUN 1997

Manfred Heun, Ralf Schäfer-Pregl, Dieter Klawan, Renato Castagna, Monica Accerbi, Basilio Borghi & Francesco Salamini, *Site of Einkorn Wheat Domestication Identified by DNA Fingerprinting*. [science](#) **278** (1997), 1312–1314.

The emergence of agriculture in the Near East also involved the domestication of einkorn wheat. Phylogenetic analysis that was based on the allelic frequency at 288 amplified fragment length polymorphism molecular marker loci indicates that a wild group of *Triticum monococcum boeoticum* lines from the Karacadağ mountains (southeast Turkey) is the likely progenitor of cultivated einkorn varieties. Evidence from archeological excavations of early agricultural settlements nearby supports the conclusion that domestication of einkorn wheat began near the Karacadağ mountains.

Religion

BLOOM 1999

Paul Bloom & Csaba Veres, *The perceived intentionality of groups*. [Cognition 71 \(1999\), B1–B9](#).

Heider and Simmel [Heider, F., Simmel, M., 1944. An experimental study of apparent behavior. *American Journal of Psychology* 57, 243-259] found that people spontaneously describe depictions of simple moving objects in terms of purposeful and intentional action. Not all intentional beings are objects, however, and people often attribute purposeful activity to non-object individuals such as countries, basketball teams, and families. This raises the question of whether the same effect found by Heider and Simmel would hold for non-object individuals such as groups. We replicate and extend the original study, using both objects and groups as stimuli, and introducing two control conditions with groups that are not engaged in structured movement. We found that under the condition that best promoted the attribution of intentionality, moving groups are viewed as purposeful and goal-directed entities to the same extent that moving objects are. These results suggest that the psychological distinction between the notion of ‘intentional entity’ and the notion of ‘object’ can be found even in the perception of moving geometrical figures. Keywords: Moving objects; Groups; Intentionality

BLOOM 2000

Paul Bloom & Tim P. German, *Two reasons to abandon the false belief task as a test of theory of mind*. [Cognition 77 \(2000\), B25–B31](#).

The false belief task has often been used as a test of theory of mind. We present two reasons to abandon this practice. First, passing the false belief task requires abilities other than theory of mind. Second, theory of mind need not entail the ability to reason about false beliefs. We conclude with an alternative conception of the role of the false belief task.

Keywords: Cognitive development; False belief task; Theory of mind

BLOOM 2005

Paul Bloom, *Is God An Accident?* [Atlantic 296 \(2005\), v, 105–112](#).

Despite the vast number of religions, nearly everyone in the world believes in the same things: the existence of a soul, an afterlife, miracles, and the divine creation of the universe. Recently psychologists doing research on the minds of infants have discovered two related facts that may account for this phenomenon. One: human beings come into the world with a predisposition to believe in supernatural phenomena. And two: this predisposition is an incidental by-product of cognitive functioning gone awry. Which leads to the question: Is God An Accident?

BLOOM 2006

Paul Bloom, *My Brain Made Me Do It*. [Journal of Cognition and Culture 6 \(2006\), 209–214](#).

Just about everyone believes, for instance, that when our bodies die, we will survive – perhaps rising to heaven, entering another body, or coming to occupy some spirit world. And just about everyone believes in free will.

But materialism is not common sense. Like quantum physics and natural selection, it is a bizarre and unnatural view. We are intuitive dualists, and we naturally explain the social-intentional domain in a very different way than the physical domain.

BLOOM 2007

Paul Bloom, *Religion is natural*. [Developmental Science 10 \(2007\), 147–151](#).

Despite its considerable intellectual interest and great social relevance, religion has been neglected by contemporary developmental psychologists. But in the last few years, there has been an emerging body of research exploring children's grasp of certain universal religious ideas. Some recent findings suggest that two foundational aspects of religious belief – belief in mind-body dualism, and belief in divine agents – come naturally to young children. This research is briefly reviewed, and some future directions are discussed.

HARRIS 2005

Paul L. Harris & Marta Giménez, *Children's Acceptance of Conflicting Testimony: The Case of Death*. *Journal of Cognition and Culture* **5** (2005), 143–164.

Children aged 7 and 11 years were interviewed about death in the context of two different narratives. Each narrative described the death of a grandparent but one narrative provided a secular context whereas the other provided a religious context. Following each narrative, children were asked to judge whether various bodily and mental processes continue to function after death, and to justify their judgment. Children displayed two different conceptions of death. They often acknowledged that functioning ceases at death and offered appropriate biological justifications for that judgment. However, they also claimed that functioning continues after death and offered appropriate religious justifications. The tendency to claim that functioning continues after death was more frequent among older children than younger children, more frequent in the context of the religious narrative as opposed to the secular narrative and more frequent with respect to mental processes than bodily processes. Particularly among older children, two distinct conceptions of death appear to co-exist: a biological conception in which death implies the cessation of living processes and a metaphysical conception in which death marks the beginning of the afterlife.

HEIDER 1944

Fritz Heider & Marianne Simmel, *An Experimental Study of Apparent Behavior*. *American Journal of Psychology* **57** (1944), 243–259.

A motion picture which shows movements of three geometrical figures was the material of the investigation. It was presented to a first group of 34 Ss with the instruction to describe it; to a second group (36 Ss) with the instruction to interpret the movements as actions of persons and to answer a number of questions relating to them. A third group (44 Ss) was treated like the second except that the picture was shown in reverse and with fewer questions. The reports show that all but one S of Group I, all of Group II, and all but two of Group III interpreted the picture in terms of actions of animated beings, chiefly of persons. A characteristic feature of this organization in terms of actions is the attribution of the origin of movements to figural units and to motives. It has been shown that this attribution of the origin influences the interpretation of the movements, and that it depends in some cases on the characteristics of the movements themselves, in others on surrounding objects. The way in which the actors are judged is closely connected with this attribution of origin. It is held that this method is useful in investigating the way the behavior of other persons is perceived.

PARGAMENT 2001

Kenneth I. Pargament, Harold G. Koenig, Nalini Tarakeshwar & June Hahn, *Religious Struggle as a Predictor of Mortality Among Medically Ill Elderly Patients, A 2-Year Longitudinal Study*. *Archives of Internal Medicine* **161** (2001), 1881–1885.

Background: Although church attendance has been associated with a reduced risk of mortality, no study has examined the impact of religious struggle with an illness on mortality.

Objective: To investigate longitudinally the relationship between religious struggle with an illness and mortality.

Methods: A longitudinal cohort study from 1996 to 1997 was conducted to assess positive religious coping and religious struggle, and demographic, physical health, and mental health measures at baseline as control variables. Mortality during the 2-year period was the main outcome measure. Participants were 596 patients aged 55 years or older on the medical inpatient services of Duke University Medical Center or the Durham Veterans Affairs Medical Center, Durham, NC.

Results: After controlling for the demographic, physical health, and mental health variables, higher religious struggle scores at baseline were predictive of greater risk of mortality (risk ratio [RR] for death, 1.06; 95 % confidence interval [CI], 1.01-1.11; $\chi^2=5.89$; $P=.02$). Two spiritual discontent items and 1 demonic reappraisal item from the religious coping measure were predictive of increased risk for mortality: "Wondered whether God had abandoned me" (RR for death, 1.28; 95 % CI, 1.07-1.50; $\chi^2=5.22$; $P=.02$), "Questioned God's love for me" (RR for death, 1.22; 95 % CI, 1.02-1.43; $\chi^2=3.69$; $P=.05$), and "Decided the devil made this happen" (RR for death, 1.19; 95 % CI, 1.05-1.33; $\chi^2=5.84$; $P=.02$).

Conclusions: Certain forms of religiousness may increase the risk of death. Elderly ill men and women who experience a religious struggle with their illness appear to be at increased risk of death, even after controlling for baseline health, mental health status, and demographic factors.

SUBBOTSKY 2002

Eugene Subbotsky & Graciela Quinteros, *Do cultural factors affect causal beliefs? Rational and magical thinking in Britain and Mexico*. [British Journal of Psychology](#) **93** (2002), 519–543.

In two experiments, unusual phenomena (spontaneous destruction of objects in an empty wooden box) were demonstrated to adult participants living in rural communities in Mexico. These were accompanied by actions which had no physical link to the destroyed object but could suggest either scientifically based (the effect of an unknown physical device) or non-scientifically based (the effect of a 'magic spell') causal explanations of the event. The results were compared to the results of the matching two experiments from the earlier study made in Britain. The expectation that scientifically based explanations would prevail in British participants' judgments and behaviours, whereas Mexican participants would be more tolerant toward magical explanations, received only partial support. The prevalence of scientific explanations over magical explanations was evident in British participants' verbal judgments but not in Mexican participants' judgments. In their behavioural responses under the low-risk condition, British participants rejected magical explanations more frequently than did Mexican participants. However, when the risk of disregarding the possible causal effect of magic was increased, participants in both samples showed an equal degree of credulity in the possible effect of magic. The data are interpreted in terms of the relationships between scientific and 'folk' representations of causality and object permanence.