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PUBLICATION ALERTS
NOTICES

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NEW E-BOOK ALERTS — Evolution vs. Creationism

Creationists, or those who hold the belief that the universe and all life was made by divine creator, have tried to use a myriad of tactics either to ban the teaching of evolution entirely or to have creationism and/or intelligent design taught alongside it in public schools. In this eBook, Evolution vs. Creationism, we take a close look at the rise of Darwinism, the arguments and opposition by the creationist movement, whether faith and science can coexist and what could happen if the U.S. continues on an anti-science trajectory.
SCIENCE NEWS – Why human society isn’t more—or less—violent than in the past
Are people in big, modern societies more or less violent than our forebears? The answer is neither, according to a controversial new study: People who lived in small bands in the past had no more proclivity toward violence than we do today. The finding—based on estimates of war casualties throughout history—undercuts the popular argument that humans have become a more peaceful species over time, thanks to advances in technology and governance. But some critics aren’t convinced.

SCIENCE NEWS – Europe's 5000-year-old frozen man gets his own movie—in an invented language
Since his discovery by two hikers at the Austrian-Italian border in 1991, Ötzi has been a worldwide sensation: Europe’s oldest known natural human mummy has attracted thousands of admirers and scientists who have examined every inch of the “Iceman’s” body—from his fingernails to his intestines. Now, the 40-something-year-old Stone Age hunter-gatherer, who’s believed to have been killed some 5300 years ago on the Ötztal Alps, has his own movie.
Der Mann aus dem Eis (Iceman) debuted in German cinemas last month and will be released in the rest of Europe and North America next spring. Directed by Berlin-based filmmaker Felix Randau, the $4 million film is a fictional account of Ötzi’s life, all in an invented language with no subtitles. Randau was advised by scientists at the South Tyrol Museum of Archaeology in Bolzano, Italy, where Ötzi's body is on display.

SCIENCE NEWS – Was trading by nomads crucial to the rise of cities?
Nearly 4000 years ago, in the royal palace of the Mesopotamian city of Mari, King Zimri-Lim awoke from a nightmare in which nomads from the surrounding desert had captured his beloved wife. Archaeologists have long thought that that Zimri-Lim’s fear, described in a cuneiform text, reflects the key roles that nomads played in early urban life. These mobile marauders, powerful enough to trouble the sleep of rulers, were tolerated for the exotic goods they carried from faraway places.
Traveling hundreds of kilometers in search of grazing land, pastoralists have long been seen as likely architects of the long-distance trade networks that helped spur the rise of the world’s first civilization around 3000 B.C.E., in what is now Iraq.

SCIENCE NEWS – The lower your social class, the ‘wiser’ you are, suggests new study
There’s an apparent paradox in modern life: Society as a whole is getting smarter, yet we aren’t any closer to figuring out how to all get along. “How is it possible that we have just as many, if not more, conflicts as before?” asks social psychologist Igor Grossmann at the University of Waterloo in Canada. The answer is that raw intelligence doesn’t reduce conflict, he asserts. Wisdom does. Such wisdom—in effect, the ability to take the perspectives of others into account and aim for compromise—comes much more naturally to those who grow up poor or working class, according to a new study by Grossman and colleagues.
{After the Brexit vote and the election of Trump, I can’t work out whether this experiment is genius, the bleedin’ obvious, or poorly designed.}

SCIENCENEWS.ORG – Even brain images can be biased
Study samples that are too rich and too well-educated may give a biased picture of brain development.

SCIENCENEWS.ORG – The science behind kids’ belief in Santa
The more live Santas young kids see, the stronger their conviction is that the Santas are real.

SCI-NEWS.COM – Archaeologists Discover Cave Paintings on Small Indonesian Island
A total of 28 rock art cave sites have been discovered on the Indonesian island of Kisar, which measures just 81 sq. km and lies north of Timor-Leste. A paper describing cave paintings at five of the discovered sites is published in the Cambridge Journal of Archaeology.
SCIENCE DAILY – Birds learn from each other’s ‘disgust,’ enabling insects to evolve bright colors
A new study of TV-watching great tits reveals how they learn through observation. Social interactions within a predator species can have evolutionary consequences for potential prey, such as the conspicuous warning colors of insects like ladybirds.
https://www.sciencedaily.com/releases/2017/12/171218120338.htm

SCIENCE DAILY – Songbirds may hold the secret to how babies learn to speak
A new study of songbirds may reveal how people learn complex behaviors, including speech, suggests a new report.
https://www.sciencedaily.com/releases/2017/12/171219144405.htm

SCIENCE DAILY – Images of the brain refute a theory of the 60s on the domain of language
A region of the brain that extends through both hemispheres, the planum temporale, is larger in the left than in the right hemisphere. The finding was linked in the 1960s with the hosting of language processing in the left hemisphere, but now researchers show that this asymmetry is not a marker of language lateralization.
https://www.sciencedaily.com/releases/2017/12/171219111927.htm

SCIENCE DAILY – Vengeance is sweet and expensive
Living together in communities requires mutual cooperation. To achieve this, we punish others when they are uncooperative. Scientists have discovered now that even six-year-old children feel the need to reprimand antisocial behavior, and that they are willing to take risks and make an effort to be present when the guilty one is punished.
https://www.sciencedaily.com/releases/2017/12/171219110032.htm

SCIENCE DAILY – Discovery of ruins of ancient Turkic monument surrounded by 14 pillars with inscriptions
A joint excavation team has discovered the ruins of a unique monument surrounded by 14 large stone pillars with Turkic Runic inscriptions arranged in a square on the steppe called Dongoin shiree in eastern Mongolia during their three-year (2015 ~ 2017) joint excavation.
https://www.sciencedaily.com/releases/2017/12/171219092855.htm

SCIENCE DAILY – Lower class wiser about interpersonal conflict than middle class
Lower class populations are wiser than their middle-class counterparts in their ability to reason about interpersonal matters, new research indicates.
https://www.sciencedaily.com/releases/2017/12/171220091659.htm

SCIENCE DAILY – Physicists negate century-old assumption regarding neurons and brain activity
Neurons are the basic computational building blocks that compose our brain. According to the neuronal computational scheme used for over a century, each neuron functions as a centralized excitable element. Using new types of experiments on neuronal cultures, scientists have demonstrated that this assumption regarding brain activity is mistaken. Their results call for a re-examination of neuronal functionalities beyond the traditional framework and, in particular, for an examination into the origin of degenerative diseases.
https://www.sciencedaily.com/releases/2017/12/171221101356.htm

SCIENCE DAILY – Adolescent brain makes learning easier
The brains of adolescents react more responsively to receiving rewards. This can lead to risky behavior, but, according to new research, it also has a positive function: it makes learning easier.
https://www.sciencedaily.com/releases/2017/12/171221122925.htm

ACADEMIA.EDU – Some Equalities Are More Equal than Others
HELENA TUŽINSKÁ – Anthropology as Necessary Unlearning: Examples from Camps, Courts, Schools and Businesses
This paper explores the problems which arise when people attempt to communicate across cultural boundaries. I draw on my fieldwork experience in various settings in Eastern and Central Europe – camps, courts, schools and businesses – where I found that communication works best when trust is established, and that the necessary step to fulfill this condition was to learn how to unlearn deeply rooted assumptions on both sides. The paper begins with a discussion of racial and ethnic stereotypes, drawing on a range of insights from evolutionary psychology and cognitive science. I then turn to memory myths, suggesting how to apply recent findings from specialized memory research. In the second part of the paper, I challenge the concept of “intercultural”, which can all too easily legitimate the “clash of civilisations” ideology. In order to establish real intercultural communication, I suggest that we must abandon models of verbatim translation and instead take advantage of recent anthropological insights into how language works, how meanings are socially constructed and how
shared understandings are achieved. In all this, I build on the work of linguistic and le-gal anthropologists who are already contributing to this endeavour and conclude with some meditations on the related themes of counter-dominance and laughter.

https://www.academia.edu/35485537/ANTHROPOLOGY_AS_NECESSARY_UNLEARNING_Examples_from_Camps_Courts_Schools_and_Businesses

OTHER PUBLICATIONS – eLife

JENNIFER M ACHIRO, JOHN SHEN & SARAH BOTJER – Neural activity in cortico-basal ganglia circuits of juvenile songbirds encodes performance during goal-directed learning

Cortico-basal ganglia circuits are thought to mediate goal-directed learning by a process of outcome evaluation to gradually select appropriate motor actions. We investigated spiking activity in core and shell subregions of the cortical nucleus LMAN during development as juvenile zebra finches are actively engaged in evaluating feedback of self-generated behavior in relation to their memorized tutor song (the goal). Spiking patterns of single neurons in both core and shell subregions during singing correlated with acoustic similarity to tutor syllables, suggesting a process of outcome evaluation. Both core and shell neurons encoded tutor similarity via either increases or decreases in firing rate, although only shell neurons showed a significant association at the population level. Tutor similarity predicted firing rates most strongly during early stages of learning, and shell but not core neurons showed decreases in response variability across development, suggesting that the activity of shell neurons reflects the progression of learning.

https://elifesciences.org/articles/26973

OTHER PUBLICATIONS – Brain Structure and Function

NATHALIE TZOURIO-MAZOYER, FABRICE CRIVELLO, BERNARD MAZOYER – Is the planum temporale surface area a marker of hemispheric or regional language lateralization?

We investigated the association between the left planum temporale (PT) surface area or asymmetry and the hemispheric or regional functional asymmetries during language production and perception tasks in 287 healthy adults (BIL&GIN) who were matched for sex and handedness. The measurements of the PT surface area were performed after manually delineating the region using brain magnetic resonance images (MRI) and considering the Heschl's gyrus (HG) duplication pattern; the measurements either included (PTtot) or did not include (PTpost) the second gyrus. A region encompassing both the PT and HG (HGPT) was also studied. Regardless of the ROI measured, 80% of the sample had a positive left minus right PT asymmetry. We first tested whether the PTtot, PTpost and HGPT surface areas in the left or right hemispheres or PT asymmetries differed in groups of individuals varying in language lateralization by assessing their hemispheric index during a sentence production minus word list production task. We then investigated the association between these different measures of the PT anatomy and the regional asymmetries measured during the task. Regardless of the anatomical definition used, we observed no correlations between the left surface areas or asymmetries and the hemispheric or regional functional asymmetries during the language production task. We then performed a similar analysis using the same sample measuring language functional lateralization during speech listening tasks (i.e., listening to sentences and lists of words). Although the hemispheric lateralization during speech listening was not correlated with the left PTtot, PTpost or HGPT surface areas or the PT asymmetries, significant positive correlations were observed between the asymmetries in these regions and the regional functional asymmetries measured in areas adjacent to the end of the Sylvian fissure while participants listened to the word lists or sentences. The PT asymmetry thus appears to be associated with the local functional asymmetries in auditory areas but is not a marker of inter-individual variability in language dominance.


PUBLICATIONS

Proceedings of the Royal Society B

ARTICLES

KIM STERELNY – Humans as model organisms

Like every other species, our species is the result of descent with modification under the influence of natural selection; a tip in an increasingly large and deep series of nested clades, as we trace its ancestry back to increasingly remote antecedents. As a consequence of shared history, our species has much in common with many others; as a consequence of its production by the general mechanisms of evolution, our species carries information about the mechanisms that shaped other species as well. For reasons unconnected to biological theory, we have far more information about humans than we do about other species. So in principle and in practice, humans should be usable as model organisms, and no one denies the truth of this for mundane physical traits, though harnessing human data for more general questions proves to be quite challenging. However, it is also true that human cognitive and behavioural characteristics, and human social groups, are apparently radically unlike those of other animals. Humans are exceptional products of evolution and perhaps that makes them an unsuitable model system for those interested in the evolution of cooperation, complex cognition, group formation, family structure, communication, cultural learning and the like. In all these respects, we are complex and extreme cases, perhaps shaped by mechanisms (like cultural evolution or group selection) that play little role in other lineages. Most of the papers in this special
issue respond by rejecting or downplaying exceptionalism. I argue that it can be an advantage: understanding the human
text. I argue that it can be an advantage: understanding the human exception reveals constraints that have restricted evolutionary options in many lineages.
http://rspb.royalsocietypublishing.org/content/284/1869/20172115?etoc

PAPERS
MARC H. BORNSTEIN et al – Human infancy and parenting in global perspective: specificity
We address three long-standing fundamental questions about early human development and parental caregiving within a
specificity framework using data from 796 infant–mother dyads from 11 societies worldwide. Adopting a cross-society view
opens a vista on universal biological origins of, and contextual influences on, infant behaviours and parenting practices. We
asked: how do infant behaviours and parenting practices vary across societies? How do infant behaviours relate to other
infant behaviours, and how do parent practices relate to other parent practices? Are infant behaviours and parent practices
related to one another? Behaviours of firstborn five-month infants and parenting practices of their mothers were
microanalysed from videorecords of extensive naturally occurring interactions in the home. In accord with behavioural
specificity, biological expectations and cultural influences, we find that infants and mothers from diverse societies exhibit
mean-level society differences in their behaviours and practices; domains of infant behaviours generally do not cohere, nor
do domains of maternal practices; and only specific infant behaviours and mother practices correspond. Few relations were
moderated by society.
http://rspb.royalsocietypublishing.org/content/284/1869/20172168?etoc

SARAH F. BROSNAN & ERIK POSTMA – Humans as a model for understanding biological fundamentals
How special are humans? This question drives scholarly output across both the sciences and the humanities. Whereas some
disciplines, and the humanities in particular, aim at gaining a better understanding of humans per se, most biologists
ultimately aim to understand life in general. This raises the question of whether and when humans are acceptable, or even
desirable, models of biological fundamentals. Especially for basic biological processes, non-human species are generally
accepted as a relevant model to study topics for which studying humans is impractical, impossible, or ethically inadvisable,
but the reverse is controversial: are humans ‘too unique’ to be informative with respect to biological fundamentals relevant
to other species? Or are there areas where we share key components, or for which our very uniqueness serves to allow novel
explorations? In this special feature, authors from disciplines including biology, psychology, anthropology, neuroscience and
philosophy tackle this question. Their overall conclusion is a qualified yes: humans do tell us about biological fundamentals,
in some contexts. We hope this special feature will spur a discussion that will lead to a more careful delineation of the
similarities and the differences between humans and other species, and how these impact the study of biological
fundamentals.
http://rspb.royalsocietypublishing.org/content/284/1869/20172146?etoc

JUDITH M. BURKART, CAREL VAN SCHAIK & MICHAEL GRIESSER – Looking for unity in diversity: human cooperative
care in comparative perspective
Humans engage in cooperative childcare, which includes some elements not found in other animals, such as the presence of
post-reproductive helpers, extensive food sharing among adults and a pervasive sexual division of labour. In animals,
cooperative offspring care has typically been studied in two different contexts. The first mainly involves helpers contributing
care in cooperatively breeding family groups; the second context is allomaternal care in species usually not categorized as
cooperative breeders (e.g. plural and communal breeders, often without male care). Comparative analyses suggest that
cooperative breeding and allomaternal care in plural and communal breeders have distinct evolutionary origins, with humans
fitting neither pathway entirely. Nevertheless, some critical proximate mechanisms of helping, including hormonal
regulators, are likely to be shared across species. Other mechanisms may vary among species, such as social tolerance,
proactive prosociality or conditional mother–infant bonding. These are presumably associated with specific details of the
care system, such as whether all group members contribute, or whether mothers can potentially raise offspring alone. Thus,
cooperative offspring care is seen in different contexts across animal lineages, but may nonetheless share several important
psychological characteristics. We end by discussing how work on humans may play a unifying role in studying cooperative
offspring care.
http://rspb.royalsocietypublishing.org/content/284/1869/201721184?etoc

Science
ARTICLES
ANDREW LAWLER – Were nomads the world’s first traders?
Who helped build the first trading networks in the earliest civilization? Scholars long thought that wandering nomads moving
their flocks in the Near East helped spur urban growth by bringing stone, wood, and metals to the plains of Mesopotamia.
That assumption was built, in part, on studies of modern-day nomads in Anatolia, Iraq, and Iran. Thanks to recent isotopic
analyses from ancient sites, that view is under siege. Archaeologists like Emily Hammer from the University of Pennsylvania
suggest that pastoralists did not stray far from home until long after cities like Ur and Mari flourished around 2000 B.C.E.
That assertion, however, has met with skepticism from many researchers, who insist that nomads played a key role in the
birth and evolution of the first cities.
http://rspb.royalsocietypublishing.org/content/284/1869/20172115?etoc
Evolution of language: An empirical study at eBay Big Data Lab

The evolutionary theory of language predicts that a language will tend towards fewer synonyms for a given object. We subject this and related predictions to empirical tests, using data from the eBay Big Data Lab which let us access all records of

Communication relies on the integration of sensory information and prior expectations. Here we show that selective neurodegeneration of human frontal speech regions results in delayed reconciliation of predictions in temporal cortex. These temporal regions were not atrophic, displayed normal evoked magnetic and electrical power, and preserved neural sensitivity to manipulations of sensory detail. Frontal neurodegeneration does not prevent the perceptual effects of contextual information; instead, prior expectations are applied inflexibly. The precision of predictions correlates with beta power, in line with theoretical models of the neural instantiation of predictive coding. Fronto-temporal interactions are enhanced while participants reconcile prior predictions with degraded sensory signals. Excessively precise predictions can explain several challenging phenomena in frontal aphasias, including agrammatism and subjective difficulties with speech perception. This work demonstrates that higher-level frontal mechanisms for cognitive and behavioural flexibility make a causal functional contribution to the hierarchical generative models underlying speech perception.

Predictions allow for efficient human communication. To be efficient, listeners’ predictions need to be adapted to the communicative context. Here we show that during speech processing this adaptation is highly flexible and selective process that is able to fine-tune itself to individual language styles of specific interlocutors. In a newly developed paradigm, speakers differed in the probabilities by which they used particular sentence structures. Probe trials were applied to infer participants’ syntactic expectations for a given speaker and to track changes of these expectations over time. The results show that listeners fine-tune their linguistic expectations according to the individual language style of a speaker. Strikingly, nine months after the initial experiment these highly specific expectations could be rapidly reactivated when confronted with the particular language style of a speaker but not merely on the basis of an association with speaker identity per se. These findings highlight that communicative interaction fine-tunes and consolidates interlocutor specific communicative predictions which can overrule strong linguistic priors.

How do people represent their own and others’ emotional experiences? Contemporary emotion theories and growing evidence suggest that the conceptual representation of emotion plays a central role in how people understand the emotions both they and other people feel. Although decades of research indicate that adults typically represent emotion concepts as multidimensional, with valence (positive–negative) and arousal (activating–deactivating) as two primary dimensions, little is known about how this bidimensional (or circumplex) representation arises. Here we show that emotion representations develop from a monodimensional focus on valence to a bidimensional focus on both valence and arousal from age 6 to age 25. We investigated potential mechanisms underlying this effect and found that increasing verbal knowledge mediated the development of emotion representation over and above three other potential mediators: fluid reasoning, the general ability to represent non-emotional stimuli bidimensionally and task-related behaviours (for example, using extreme ends of rating scales). These results indicate that verbal development aids the expansion of emotion concept representations (and potentially emotional experiences) from a ‘positive or negative’ dichotomy in childhood to a multidimensional organization in adulthood.

Communicative predictions can overrule linguistic priors

Increasing verbal knowledge mediates development of multidimensional emotion representations

Evolution of language: An empirical study at eBay Big Data Lab

Evidence for causal top-down frontal contributions to predictive processes in speech perception

Communicative predictions can overrule linguistic priors

Increasing verbal knowledge mediates development of multidimensional emotion representations

Evolution of language: An empirical study at eBay Big Data Lab

Communicative predictions can overrule linguistic priors

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Communicative predictions can overrule linguistic priors

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Communicative predictions can overrule linguistic priors

Increasing verbal knowledge mediates development of multidimensional emotion representations

Evolution of language: An empirical study at eBay Big Data Lab
the words used by eBay vendors in their item titles, and by consumers in their searches. We find support for the predictions of the evolutionary theory of language. In particular, the mapping from object to words sharpens over time on both sides of the market, i.e. among consumers and among vendors. In addition, the word mappings used on the two sides of the market become more similar over time. Our research contributes to the literature on language evolution by reporting results of a truly unique large-scale empirical study.

Which evolutionary theory of language?

http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0189107

PNAS

PAPERS

DANIEL L. BOWLING, DALE PURVES & KAMRAAN Z. GILL – Vocal similarity predicts the relative attraction of musical chords

Musical chords are combinations of two or more tones played together. While many different chords are used in music, some are heard as more attractive (consonant) than others. We have previously suggested that, for reasons of biological advantage, human tonal preferences can be understood in terms of the spectral similarity of tone combinations to harmonic human vocalizations. Using the chromatic scale, we tested this theory further by assessing the perceived consonance of all possible dyads, triads, and tetrads within a single octave. Our results show that the consonance of chords is predicted by their relative similarity to voiced speech sounds. These observations support the hypothesis that the relative attraction of musical tone combinations is due, at least in part, to the biological advantages that accrue from recognizing and responding to conspecific vocal stimuli.


JALEAL S. SANJAK et al – Evidence of directional and stabilizing selection in contemporary humans

Modern molecular genetic datasets, primarily collected to study the biology of human health and disease, can be used to directly measure the action of natural selection and reveal important features of contemporary human evolution. Here we leverage the UK Biobank data to test for the presence of linear and nonlinear natural selection in a contemporary population of the United Kingdom. We obtain phenotypic and genetic evidence consistent with the action of linear/directional selection. Phenotypic evidence suggests that stabilizing selection, which acts to reduce variance in the population without necessarily modifying the population mean, is widespread and relatively weak in comparison with estimates from other species.

http://www.pnas.org/content/pnas/early/2017/12/12/1707227114.abstract.html?collection

PETER TURCHIN et al – Quantitative historical analysis uncovers a single dimension of complexity that structures global variation in human social organization

Do human societies from around the world exhibit similarities in the way that they are structured, and show commonalities in the ways that they have evolved? These are long-standing questions that have proven difficult to answer. To test between competing hypotheses, we constructed a massive repository of historical and archaeological information known as “Seshat: Global History Databank.” We systematically coded data on 414 societies from 30 regions around the world spanning the last 10,000 years. We were able to capture information on 51 variables reflecting nine characteristics of human societies, such as social scale, economy, features of governance, and information systems. Our analyses revealed that these different characteristics show strong relationships with each other and that a single principal component captures around three-quarters of the observed variation. Furthermore, we found that different characteristics of social complexity are highly predictable across different world regions. These results suggest that key aspects of social organization are functionally related and do indeed coevolve in predictable ways. Our findings highlight the power of the sciences and humanities working together to rigorously test hypotheses about general rules that may have shaped human history.

http://www.pnas.org/content/pnas/early/2017/12/20/1708800115.abstract.html?collection

American Journal of Physical Anthropology

PAPERS

JOEL BRAY et al with RICHARD WRANGHAM – The development of feeding behavior in wild chimpanzees (Pan troglodytes schweinfurthii)

We analyzed 4 years of behavioral data (2010–2013) from 26 immature chimpanzees and 31 adult chimpanzees of the Kanyawara community in Kibale National Park, Uganda. Specifically, we examined milestones of nutritional independence (first consumption of solid food and cessation of suckling) as well as developmental changes in feeding time, diet composition, diet breadth, and ingestion rates. Chimpanzees first fed on solid food at 5.1 months and, on average, suckled until 4.8 years. Daily feeding time of immature individuals reached adult levels between 4 and 6 years, while diet composition showed minor changes with age. By juvenility (5–10 years), individuals had a complete adult diet breadth. Ingestion rates for five ripe fruit species remained below adult levels until juvenility but continued to show absolute increases into adolescence.

CLAIrike Kirchhoff et al – Infanticide in chimpanzees: Taphonomic case studies from Gombe
We present a study of skeletal damage to four chimpanzee (Pan troglodytes) infanticide victims from Gombe National Park, Tanzania. Skeletal analysis may provide insight into the adaptive significance of infanticide by examining whether nutritional benefits sufficiently explain infanticidal behavior. The nutritional hypothesis would be supported if bone survivorship rates and skeletal damage patterns are comparable to those of monkey prey. If not, other explanations, such as the resource competition hypothesis, should be considered.
The cases described here suggest that chimpanzees may not always completely consume infanticide victims, while reports on chimpanzee predation indicated that complete consumption of monkey prey usually occurred. Infanticidal chimpanzees undoubtedly gain nutritional benefits when they consume dead infants, but this benefit may not sufficiently explain infanticide in this species. Continued study of infanticidal and hunting behavior, including skeletal analysis, is likely to be of interest.

Hitonaru Nishie & Michio Nakamura – A newborn infant chimpanzee snatched and cannibalized immediately after birth: Implications for “maternity leave” in wild chimpanzees
This study reports on the first observed case of a wild chimpanzee infant being snatched immediately after delivery and consequently cannibalized by an adult male in the Mahale Mountains, Tanzania. We demonstrate “maternity leave” from long-term data from the Mahale M group and suggest that it functions as a possible counterstrategy of mother chimpanzees against the risk of infanticide soon after delivery.

Language
PAPERS

Manuel Widmer et al with Johanna Nichols – NP recursion over time: Evidence from Indo-European
Some languages constrain the recursive embedding of NPs to some specific morphosyntactic types, allowing it, for example, only with genitives but not with bare juxtaposition. In Indo-European, every type of NP embedding—genitives, adjectivizers, adpositions, head marking, or juxtaposition—is unavailable for syntactic recursion in at least one attested language. In addition, attested pathways of change show that NP types that allow recursion can emerge and disappear in less than 1,000 years. This wide-ranging synchronic diversity and its high diachronic dynamics raise the possibility that at many hypothetical times in the history of the family recursive NP embedding could have been lost for all types simultaneously, parallel to what has occasionally been observed elsewhere (Everett 2005, Evans & Levinson 2009).
Performing Bayesian phylogenetic analyses on a sample of fifty-five languages from all branches of Indo-European, we show, however, that it is extremely unlikely for such a complete loss to ever have occurred. When one or more morphosyntactic types become unavailable for syntactic recursion in an NP, an unconstrained alternative type is very likely to develop in the same language. This suggests that, while diachronic pathways away from NP recursion clearly exist, there is a tendency—perhaps a universal one—to maintain or develop syntactic recursion in NPs. A likely explanation for this evolutionary bias is that recursively embedded phrases are not just an option that languages have (Fitch et al. 2005), but they are in fact preferred by our processing system.
https://muse.jhu.edu/article/680458

Commentaries

Salikoko S. Mufwene – Language vitality: The weak theoretical underpinnings of what can be an exciting research area
As linguists theorize about language endangerment and loss (LEL), we must understand the big picture: the coexistence of languages in particular polities and how the competition that sometimes arises is resolved. Many concerns have been voiced about LEL since the early 1990s, but theoretical developments regarding language vitality lag far behind linguists’ current investment in language advocacy. While discussing issues such as the failure to connect the subject matter to language evolution in general, the framing of LEL as deleterious almost exclusively to ‘indigenous peoples’, a lack of historical time depth, and the omission of the ecological factors in typical approaches to LEL, I argue that linguistics should theorize about language vitality more adequately than has been the case to date.
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Lylye Campbell – On how and why languages become endangered: Reply to Mufwene
https://muse.jhu.edu/article/680466

Nala H. Lee – The vitality or endangerment of some nonindigenous languages: A response to Mufwene
https://muse.jhu.edu/article/680467

Claire Bowern – Language vitality: Theorizing language loss, shift, and reclamation (Response to Mufwene)
https://muse.jhu.edu/article/680468

Pierpaoalo Di Carlo, Jeff Good – The vitality and diversity of multilingual repertoires: Commentary on Mufwene
https://muse.jhu.edu/article/680469
FIONA WILLANS, ANTHONY JUKES – How far can the language ecology metaphor take us? : A Pacific perspective on language vitality (Response to Mufwene)
https://muse.jhu.edu/article/680470
FRIEDERIKE LÜPKE – African(ist) perspectives on vitality: Fluidity, small speaker numbers, and adaptive multilingualism make vibrant ecologies (Response to Mufwene)
https://muse.jhu.edu/article/680471
COLLEEN M. FITZGERALD – Understanding language vitality and reclamation as resilience: A framework for language endangerment and ‘loss’ (Commentary on Mufwene)
https://muse.jhu.edu/article/680472
MARLYSE BAPTISTA – On the role of agency, marginalization, multilingualism, and language policy in maintaining language vitality: Commentary on Mufwene
https://muse.jhu.edu/article/680473
SALIKOKO S. MUFWENE – It’s still worth theorizing on LEL, despite the heterogeneity and complexity of the processes (Response to commentators)
https://muse.jhu.edu/article/680474

Evolutionary Anthropology

MICHAEL J. O’BRIEN & BRIGGS BUCHANAN – Cultural learning and the Clovis colonization of North America
The timing of the earliest colonization of North America is debatable, but what is not at issue is the point of origin of the early colonists: Humans entered the continent from Beringia and then made their way south along or near the Pacific Coast and/or through a corridor that ran between the Cordilleran and Laurentide ice sheets in western North America. At some point, they abandoned their Arctic-based tool complex for one more adapted to an entirely different environment. That new techno-complex is termed “Clovis”; its dispersal allows us to examine, at a fine scale, how colonization processes played out across a vast continent that at the time had, at best, a very small resident population. Clovis has figured prominently in American archeology since the first Clovis points were identified in eastern New Mexico in the 1930s. However, the successful marriage of learning models grounded in evolutionary theory and modern analytical methods that began roughly a decade ago has begun to pay significant dividends in terms of what we know about the rapid spread of human groups across the last sizable landmass to witness human occupation.

JOHN F. HOFFECKER & IAN T. HOFFECKER – Technological complexity and the global dispersal of modern humans
Anatomically modern humans (Homo sapiens) dispersed out of Africa roughly 120,000 years ago and again after 75,000 years ago. The early dispersal was geographically restricted to the Arabian Peninsula, Levant, and possibly parts of southern Asia. The later dispersal was ultimately global in scope, including areas not previously occupied by Homo. One explanation for the contrast between the two out-of-Africa dispersals is that the modern humans who expanded into Eurasia 120,000 years ago lacked the functionally and structurally complex technology of recent hunter-gatherers. This technology, which includes, for example, mechanical projectiles, snares and traps, and sewn clothing, provides not only expanded dietary breadth and increased rates of foraging efficiency and success in places where plant and animal productivity is low, but protection from cold weather in places where winter temperatures are low. The absence of complex technology before 75,000 years ago also may explain why modern humans in the Levant did not develop sedentary settlements and agriculture 120,000 years ago (i.e., during the Last Interglacial).

MARINA LOZANO et al – Right-handed fossil humans
Fossil hominins often processed material held between their upper and lower teeth. Pulling with one hand and cutting with the other, they occasionally left impact cut marks on the lip (labial) surface of their incisors and canines. From these actions, it is possible to determine the dominant hand used. The frequency of these oblique striations in an array of fossil hominins documents the typically modern pattern of 9 right- to 1 left-hander. This ratio among living Homo sapiens differs from that among chimpanzees and bonobos and more distant primate relatives. Together, all studies of living people affirm that dominant right-handedness is a uniquely modern human trait. The same pattern extends deep into our past. Thus far, the majority of inferred right-handed fossils come from Europe, but a single maxilla from a Homo habilis, OH-65, shows a predominance of right oblique scratches, thus extending right-handedness into the early Pleistocene of Africa. Other studies show right-handedness in more recent African, Chinese, and Levantine fossils, but the sample compiled for non-European fossil specimens remains small. Fossil specimens from Sima del los Huesos and a variety of European Neandertal sites are predominately right-handed. We argue the 9:1 handedness ratio in Neandertals and the earlier inhabitants of Europe constitutes evidence for a modern pattern of handedness well before the appearance of modern Homo sapiens.
The extensive involvement of nonconscious processes in human behaviour has led some to suggest that consciousness is much less important for the control of action than we might think. In this article I push against this trend, developing an understanding of conscious control that is sensitive to our best models of overt (that is, bodily) action control. Further, I assess the cogency of various zombie challenges—challenges that seek to demote the importance of conscious control for human agency. I argue that though nonconscious contributions to action control are evidently robust, these challenges are overblown.