EAORC BULLETIN 973 – 6 February 2022

CONTENTS

NOTICES

PUBLICATION ALERTS

If you have had a paper or book published, or you see something which would be of interest to the group, please send me a publication alert so that I can include it in the newsletter. Many thanks to those who have already sent in alerts.
If there is a journal you feel I should be tracking on a regular basis, let me know.
And if you have any other ideas for extending the "EAORC experience", please contact me.

NEWS

BREAKING SCIENCE – Hippos Use Vocal Recognition to Manage Inter-Group Relationships

A new study shows that the hippopotamus (Hippopotamus amphibius), an iconic African megaherbivore for which little is known about social communication, uses vocal recognition to manage relationships between territorial groups.
http://www.sci-news.com/biology/vocal-recognition-hippopotamus-10505.html?utm_source=feedburner&utm_medium=email

NATURE BRIEFING – Richard Leakey: 'He embraced life'

Kenyan palaeoanthropologist, conservationist and political leader Richard Leakey died on 2 January, aged 77. Leakey left school at 16 and followed in the fossil-hunting footsteps of his trail-blazing parents, Louis and Mary Leakey. Alongside researchers dubbed the Hominid Gang, led by Kamoya Kimeu, Leakey discovered dozens of hominin fossils, including a new genus and four new species (Paranthropus aethiopicus, Australopithecus anamensis and Kenyanthropus platyops, as well as Homo rudolfensis). He used his high profile to boost science in Kenya, where he became a member of parliament, and conservation projects such as a notable battle against the ivory trade. "He embraced life, good and bad, and imbued those around him with the sheer excitement of what could be done, discovered, resolved and enjoyed," writes evolutionary biologist Marta Mirazón Lahr.
https://nature.us17.list-manage.com/track/click?u=2c6057c528fdc6f73fa196d9d&id=240f5bd974&e=1db4b9a19b

SCIENCE DAILY – Early humans placed the hearth at the optimal location in their cave

A new study provides evidence for high cognitive abilities in early humans who lived 170,000 years ago. Researchers discovered that the early humans who occupied a cave had placed their hearth at the optimal location -- enabling maximum utilization of the fire for their activities and needs while exposing them to a minimal amount of smoke.
https://www.sciencedaily.com/releases/2022/02/220201074539.htm

SCIENCE DAILY – Humans and other primates have evolved less sensitive noses

Variations in the genes for the newly discovered scent receptors for musk and underarm odor add to a growing body of research suggesting that humans' sense of smell is gradually becoming less sensitive.
https://www.sciencedaily.com/releases/2022/02/220203161156.htm

SCIENCE DAILY – Study confirms site of brain region responsible for saying words as intended

A region crossing the folded surface of the top of the brain, called the dorsal precentral gyrus, plays an essential role in how people use the sound of their voices to control how they want the words to sound, a new study shows.
https://www.sciencedaily.com/releases/2022/02/220203160558.htm

SCIENCE DAILY – Exploring the strategies of categorization

Our mental ability to divide the complex world into categories makes our daily life much easier. But how do we categorize? What kind of stimulus properties do we assess? Researchers have come a step closer to answering these questions with the help of pigeons. They discovered that birds use different strategies to successfully learn categories. To gather data, the researchers used a novel research method. To this end, they combined so-called virtual phylogenesis, in which artificial stimuli are generated by computers, with a machine learning approach, namely an automated evaluation of the birds' pecking behavior.
https://www.sciencedaily.com/releases/2022/02/220203103006.htm

SOCIETY FOR SCIENCE – A taste for wild cereal sowed farming's spread in ancient Europe

Balkan groups collected and ate wild cereal grains several millennia before domesticated cereals reached Europe.
http://click.societyforscience-email.com/?qs=fc179fb8894d88d803bab955337202895d2af72343642ac89709c45839b7046256cf3751c932c3002008fc6fc303e4f7bca67f95e633f6e3885f9686348a68c1

THE CONVERSATION – Why monkeys attack sick members of their troop - and don't socially distance

Why social interaction isn't always a good thing for primates, especially for individuals with a fever.
https://theconversationuk.cmail20.com/t/r-l-trurltdd-khhlilahh-s/

THE CONVERSATION – Killer whales taking food from fishing lines has implications for human evolution

To a group of hungry killer whales, a longline fishing boat looks like an all-you-can-eat buffet.
https://theconversationuk.cmail20.com/t/r-l-trurhukl-khhlilahh-b/

THE CONVERSATION – How your culture informs the emotions you feel when listening to music

Researchers visited the remote Kalash valleys to investigate how the concept of 'happy' and 'sad' music differs across cultures.
https://theconversationuk.cmail19.com/t/r-l-truytikt-khhlilahh-v/

PUBLICATIONS

PUBLICATIONS

American Journal of Biological Anthropology

PAPERS

JIANXIN GAO et al – Genomic insights into Neolithic farming migrations in the junction of East and Southeast Asia

"Your access does not allow copying the text". So no abstract. Full download only $59. What fresh boldilocks is this? Wiley versus the World?
https://onlinelibrary.wiley.com/doi/epdf/10.1002/ajpa.24434

JONATHAN MORLEY et al – Characterizing the body morphology of the first metacarpal in the Homininae using 3D geometric morphometrics

The morphological characteristics of the thumb are of particular interest due to its fundamental role in enhanced manipulation. Despite its possible importance regarding this issue, the body of the first metacarcapal (MC1) has not been fully characterized using morphometrics. This could provide further insights into its anatomy, as well as its relationship with manipulative capabilities. Hence, this study quantifies the shape of the MC1's body in the extant Homininae and some fossil hominins to provide a better characterization of its morphology.
The sample includes MC1s of modern humans (n = 42), gorillas (n = 27), and chimpanzees (n = 30), as well as Homo neanderthalensis, Homo naledi, and Australopithecus sediba. 3D geometric morphometrics were used to quantify the shape of MC1's body.
The modern human MC1 is characterized by a distinct suite of traits, not present to the same extent in the great apes, that are consistent with an ability to use forceful precision grip. This morphology was also found to align very closely with that of H. neanderthalensis. H. naledi shows a number of human-like adaptations, while A. sediba presents a mix of both derived and more primitive traits.
https://onlinelibrary.wiley.com/doi/abs/10.1002/ajpa.24473

REVIEWS

JEFFREY V. PETERSON – Legacy Review: Biological Anthropology and the Ecology of Mind
Review of 'Steps to an Ecology of Mind', by Gregory Bateson. UCP, 2000.
https://onlinelibrary.wiley.com/doi/epdf/10.1002/ajpa.24451

BDJ Student

PAPERS

NICOLE HASOON – Five tips on how to speak 'Childrenese'
Going into paediatric clinics can be daunting. Younger children not only find it difficult to tell us how they feel, but also to understand what we are trying to tell them. Learning how to interact with children is like learning a whole new language: you use different words and need to talk in a whole new style. Here are five basic tips on how to speak 'Childrenese'.
https://www.nature.com/articles/s41406-021-0273-8

Current Biology

PAPERS

PATRICK E. SAVAGE et al with QUENTIN D. ATKINSON – Sequence alignment of folk song melodies reveals cross-cultural regularities of musical evolution
Culture evolves, but the existence of cross-culturally general regularities of cultural evolution is debated. As a diverse but universal cultural phenomenon, music provides a novel domain to test for the existence of such regularities. Folk song melodies can be thought of as culturally transmitted sequences of notes that change over time under the influence of cognitive and acoustic/physical constraints. Modeling melodies as evolving sequences constructed from an "alphabet" of 12 scale degrees allows us to quantitatively test for the presence of cross-cultural regularities using a sample of 10,062 melodies from musically divergent Japanese and English (British/American) folk song traditions. Our analysis identifies 328 pairs of highly related melodies, finding that note changes are more likely when they have smaller impacts on a song's melody. Specifically, (1) notes with stronger rhythmic functions are less likely to change, and (2) note substitutions are most likely between neighboring notes. We also find that note insertions/deletions ("indels") are more common than note substitutions, unlike genetic evolution where the reverse is true. Our results are consistent across English and Japanese samples despite major differences in their scales and tonal systems. These findings demonstrate that even a creative art form such as music is subject to evolutionary constraints analogous to those governing the evolution of genes, languages, and other domains of culture.
https://www.cell.com/current-biology/fulltext/S0960-9822(22)00092-6

Frontiers in Psychology

PAPERS

GERHARD LAUER – Language, Childhood, and Fire: How We Learned to Love Sharing Stories
Gutenberg Institute of World Literature and Written Media, Johannes Gutenberg University of Mainz, Mainz, Germany
Stories do not fossilize. Thus, exploring tales shared during prehistory, the longest part of human history inevitably becomes speculative. Nevertheless, various attempts have been made to find a more scientifically valid way into our deep human past of storytelling. Following the social brain hypothesis, we suggest including into the theory of human storytelling more fine-grained and evidence-based findings (from archaeology, the cognitive sciences, and evolutionary psychology) about the manifold exaptation and adaptation, genetic changes, and phenotypic plasticity in the deep human past, which all shaped the emergence of storytelling in hominins. We identify three preconditions for humans sharing stories: first, the long evolution of language in the different taxa as one of the preconditions of ostensive signaling; second, the pivotal role of childhood in the evolution of collaborative intentionality; and third, the role of fireside chats in the rise of elaborative (i.e., narrative) sharing of stories. We propose that humans, albeit perhaps no other hominins learned to understand others through sharing stories, not only as intentional agents, but also as mental ones.
https://www.frontiersin.org/articles/10.3389/fpsyg.2021.787203/full

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Journal of Linguistics

PAPERS

ERIC K. ACTON – Sociophonetics, semantics, and intention
Kathryn Campbell-Kibler observes that the role of speaker intention seems to differ in the meanings of primary interest in variationist sociolinguistics on one hand and semantics and pragmatics on the other. Taking this observation as its point of departure, the central goal of the present work is to clarify the nature of intention-attribution in general and, at the same time, the nature of these two types of meaning. I submit general principles by which observers determine whether to attribute a particular intention to an agent – principles grounded in observers' estimation of the agent's beliefs, preferences, and assessment of alternative actions. These principles and the attendant discussion clarify the role of alternatives, common ground, and perceptions of naturalness in intention-attribution, illuminate public discourses about agents' intentions, point to challenges for game-theoretic models of interpretation that assume cooperativity, and elucidate the nature of the types of

meaning of interest. Examining the role of intention vis-à-vis findings and insights from variationist research and the formally explicit game-theoretic models just mentioned foregrounds important differences and similarities between the two types of meaning of interest and lays bare the contingent nature of all meaning in practice.
https://www.cambridge.org/core/journals/journal-of-linguistics/article/abs/sociophonetics-semantics-and-intention/CD0C6B825A496F2A7D0ACFFEB19FD9CA

Nature

PAPERS

GREGG A. CASTELLUCCI et al – A speech planning network for interactive language use

During conversation, people take turns speaking by rapidly responding to their partners while simultaneously avoiding interruption. Such interactions display a remarkable degree of coordination, as gaps between turns are typically about 200 milliseconds—approximately the duration of an eyeblink. These latencies are considerably shorter than those observed in simple word-production tasks, which indicates that speakers often plan their responses while listening to their partners. Although a distributed network of brain regions has been implicated in speech planning, the neural dynamics underlying the specific preparatory processes that enable rapid turn-taking are poorly understood. Here we use intracranial electrocorticography to precisely measure neural activity as participants perform interactive tasks, and we observe a functionally and anatomically distinct class of planning-related cortical dynamics. We localize these responses to a frontotemporal circuit centred on the language-critical caudal inferior frontal cortex (Broca's region) and the caudal middle frontal gyrus—a region not normally implicated in speech planning. Using a series of motor tasks, we then show that this planning network is more active when preparing speech as opposed to non-linguistic actions. Finally, we delineate planning-related circuitry during natural conversation that is nearly identical to the network mapped with our interactive tasks, and we find this circuit to be most active before participant speech during unconstrained turn-taking. Therefore, we have identified a speech planning network that is central to natural language generation during social interaction.
https://www.nature.com/articles/s41586-021-04270-z

Nature Scientific Reports

PAPERS

JONATHAN ST-ONGE et al – Socio-semantic networks as mutualistic networks

Several studies have shown that discourse and social relationships are intertwined and co-evolve. However, we lack theoretical models to explain the phenomenon. Inspired by recent work in ecology, we propose to model socio-semantic networks as an interaction between two intermingled data generating processes: a social community process and a document-based process. We consider the link between semantic and social ties as analogous to the interactions found in pollination networks whereby agents visit hidden topics in a similar way that insects visit specific plants for pollination. We use the ENRON socio-semantic email network to investigate if it exhibits properties that characterize mutualistic networks, namely moderate connectance, heterogeneous degree distribution, moderate modularity and high nestedness. To do so, we build a plant-pollinator matrix where "insect species" are communities detected via block modelling, "plant species" are latent topics detected with topic modelling, and the interaction between the two is the total number of visits a community makes to specific topics. Our results show that the ENRON socio-semantic interaction matrix respects the aforementioned criteria of mutualism paving the way for the development of a relevant framework to better understand the dynamic of human socio-semantic interactions.
https://www.nature.com/articles/s41598-022-05743-5

LU ZHANG et al – A specific brain network for a social map in the human brain

Individuals use social information to guide social interactions and to update relationships along multiple social dimensions. However, it is unclear what neural basis underlies this process of abstract "social navigation". In the current study, we recruited twenty-nine participants who performed a choose-your-own-adventure game in which they interacted with fictional characters during fMRI scanning. Using a whole-brain GLM approach, we found that vectors encoding two-dimensional information about the relationships predicted BOLD responses in the hippocampus and the precuneus, replicating previous work. We also explored whether these geometric representations were related to key brain regions previously identified in physical and abstract spatial navigation studies, but we did not find involvement of the entorhinal cortex, parahippocampal gyrus or the retrosplenial cortex. Finally, we used psychophysiological interaction analysis and identified a network of regions that correlated during participants' decisions, including the left posterior hippocampus, precuneus, dorsolateral prefrontal cortex (dlPFC), and the insula. Our findings suggest a brain network for social navigation in multiple abstract, social dimensions that includes the hippocampus, precuneus, dlPFC, and insula.
https://www.nature.com/articles/s41598-022-05601-4

ALON BARASH et al – The earliest Pleistocene record of a large-bodied hominin from the Levant supports two out-of-Africa dispersal events

The paucity of early Pleistocene hominin fossils in Eurasia hinders an in-depth discussion on their paleobiology and paleoecology. Here we report on the earliest large-bodied hominin remains from the Levantine corridor: a juvenile vertebra

(UB 10749) from the early Pleistocene site of 'Ubeidiya, Israel, discovered during a reanalysis of the faunal remains. UB 10749 is a complete lower lumbar vertebral body, with morphological characteristics consistent with Homo sp. Our analysis indicates that UB-10749 was a 6- to 12-year-old child at death, displaying delayed ossification pattern compared with modern humans. Its predicted adult size is comparable to other early Pleistocene large-bodied hominins from Africa. Paleobiological differences between UB 10749 and other early Eurasian hominins supports at least two distinct out-of-Africa dispersal events. This observation corresponds with variants of lithic traditions (Oldowan; Acheulian) as well as various ecological niches across early Pleistocene sites in Eurasia.
https://www.nature.com/articles/s41598-022-05712-y

K. BRETZKE et al – Multiple phases of human occupation in Southeast Arabia between 210,000 and 120,000 years ago
Changing climatic conditions are thought to be a major control of human presence in Arabia during the Paleolithic. Whilst the Pleistocene archaeological record shows that periods of increased monsoon rainfall attracted human occupation and led to increased population densities, the impact of arid conditions on human populations in Arabia remains largely speculative. Here, we present data from Jebel Faya in Southeast (SE) Arabia, which document four periods of human occupation between c. 210,000 and 120,000 years ago. The Jebel Faya record indicates that human occupation of SE Arabia was more regular and not exclusively linked to major humid periods. Our data show that brief phases of increased rainfall additionally enabled human settlement in the Faya region. These results imply that the mosaic environments in SE Arabia have likely formed a population refugia at the end of the Middle and the beginning of the Late Pleistocene.
https://www.nature.com/articles/s41598-022-05617-w

New Scientist
NEWS

160,000-year-old fossil may be the first Denisovan skull we've found
A partial skull from China represents the earliest human with a "modern" brain size. It could represent an unknown group of ancient humans, or perhaps one of the enigmatic Denisovans.
https://www.newscientist.com/article/2305830-160000-year-old-fossil-may-be-the-first-denisovan-skull-weve-found/#ixzz7JwGI9v1s

Some bee colonies have to kill thousands of 'selfish' wannabe queens
About one-fifth of all Melipona beecheii stingless bee larvae develop as queens, but the colony accepts only one – the rest are executed by worker guards.
https://www.newscientist.com/article/2305843-some-bee-colonies-have-to-kill-thousands-of-selfish-wannabe-queens/#ixzz7JwGUzIdi

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PeerJ
PAPERS

JONAS VERSPEEK et al – Adult bonobos show no prosociality in both prosocial choice task and group service paradigm
Previous studies reported contrasting conclusions concerning bonobo prosociality, which are likely due to differences in the experimental design, the social dynamics among subjects and characteristics of the subjects themselves. Two hypotheses have been proposed to explain the occurrence of prosociality in animals: the cooperative breeding hypothesis and the self-domestication hypothesis. While the former predicts low levels of prosociality in bonobos because they are non-cooperative breeders, the latter predicts high levels of prosociality because self-domestication has been proposed to select for high levels of tolerance in this species. Here, we presented a group of thirteen bonobos with two platform food-provisioning tasks: the prosocial choice task (PCT) and the group service paradigm (GSP). The latter has so far never been applied to bonobos. To allow for free choice of participation and partner, we implemented both tasks in a group setting. Like in previous PCT studies, bonobos did not choose the prosocial option more often when a group member could benefit vs not benefit. In the GSP, where food provisioning is costly, only subadult bonobos showed a limited amount of food provisioning, which was much lower than what was previously reported for chimpanzees. In both experiments, adult subjects were highly motivated to obtain rewards for themselves, suggesting that bonobos behaved indifferently to the gains of group members. We suggest that previous positive food-provisioning prosociality results in bonobos are mainly driven by the behaviour of subadult subjects. The lack of prosociality in this study corresponds to the hypothesis that proactive food provisioning co-occurs with cooperative breeding and suggests that proactive prosociality might not be part of the self-domestication syndrome in bonobos.
https://peerj.com/articles/12849/

PLoS Biology
PAPERS

DANIEL KAISER, ARTHUR M. JACOBS & RADOSLAW M. CICHY – Modelling brain representations of abstract concepts
This is an uncorrected proof.

Abstract conceptual representations are critical for human cognition. Despite their importance, key properties of these representations remain poorly understood. Here, we used computational models of distributional semantics to predict multivariate fMRI activity patterns during the activation and contextualization of abstract concepts. We devised a task in which participants had to embed abstract nouns into a story that they developed around a given background context. We found that representations in inferior parietal cortex were predicted by concept similarities emerging in models of distributional semantics. By constructing different model families, we reveal the models' learning trajectories and delineate how abstract and concrete training materials contribute to the formation of brain-like representations. These results inform theories about the format and emergence of abstract conceptual representations in the human brain.
https://journals.plos.org/ploscompbiol/article?id=10.1371/journal.pcbi.1009837

PNAS

PAPERS

YUAN YANG & STEVEN T. PIANTADOSI – One model for the learning of language

A major goal of linguistics and cognitive science is to understand what class of learning systems can acquire natural language. Until recently, the computational requirements of language have been used to argue that learning is impossible without a highly constrained hypothesis space. Here, we describe a learning system that is maximally unconstrained, operating over the space of all computations, and is able to acquire many of the key structures present in natural language from positive evidence alone. We demonstrate this by providing the same learning model with data from 74 distinct formal languages which have been argued to capture key features of language, have been studied in experimental work, or come from an interesting complexity class. The model is able to successfully induce the latent system generating the observed strings from small amounts of evidence in almost all cases, including for regular (e.g., an, (ab)n, and {a,b}+), context-free (e.g., anbn, anbn+m, and xxR), and context-sensitive (e.g., anbncn, anbmcndm, and xx) languages, as well as for many languages studied in learning experiments. These results show that relatively small amounts of positive evidence can support learning of rich classes of generative computations over structures. The model provides an idealized learning setup upon which additional cognitive constraints and biases can be formalized.
https://www.pnas.org/content/119/5/e2021865119.abstract

W. ANDREW BARR et al – No sustained increase in zooarchaeological evidence for carnivory after the appearance of Homo erectus

The appearance of Homo erectus shortly after 2.0 Ma is widely considered a turning point in human dietary evolution, with increased consumption of animal tissues driving the evolution of larger brain and body size and a reorganization of the gut. An increase in the size and number of zooarchaeological assemblages after the appearance of H. erectus is often offered as a central piece of archaeological evidence for increased carnivory in this species, but this characterization has yet to be subject to detailed scrutiny. Any widespread dietary shift leading to the acquisition of key traits in H. erectus should be persistent in the zooarchaeological record through time and can only be convincingly demonstrated by a broad-scale analysis that transcends individual sites or localities. Here, we present a quantitative synthesis of the zooarchaeological record of eastern Africa from 2.6 to 1.2 Ma. We show that several proxies for the prevalence of hominin carnivory are all strongly related to how well the fossil record has been sampled, which constrains the zooarchaeological visibility of hominin carnivory. When correcting for sampling effort, there is no sustained increase in the amount of evidence for hominin carnivory between 2.6 and 1.2 Ma. Our observations undercut evolutionary narratives linking anatomical and behavioral traits to increased meat consumption in H. erectus, suggesting that other factors are likely responsible for the appearance of its human-like traits.
https://www.pnas.org/content/119/5/e2115540119.abstract

INDRIKIS A. KRAMS et al – Extra-pair paternity explains cooperation in a bird species

In many social animals, females mate with multiple males, but the adaptive value of female extra-pair mating is not fully understood. Here, we tested whether male pied flycatchers (Ficedula hypoleuca) engaging in extra-pair copulations with neighboring females were more likely to assist their neighbors in antipredator defense. We found that extra-pair sires joined predator-mobbing more often, approached predators more closely, and attacked predators more aggressively than males without extra-pair offspring in the neighboring nest. Extra-pair mating may incentivize males to assist in nest defense because of the benefits that this cooperative behavior has on their total offspring production. For females, this mating strategy may help recruit more males to join in antipredator defense, offering better protection and ultimately improving reproductive success. Our results suggest a simple mechanism by which extra-pair mating can improve reproductive success in breeding birds. In summary, males siring extra-pair offspring in neighboring nests assist neighbors in antipredator defense more often than males without extra-pair offspring.
https://www.pnas.org/content/119/5/e2112004119.abstract

OBITUARIES

BERT HÖLLDOBLER – Edward Osborne Wilson, Naturalist (1929–2021)

In January 1980, at the commencement of a new decade, the journal Harvard Magazine asked several Harvard professors what they consider to be the major problems for humanity in the future. Edward O. Wilson replied: The worst that can happen—will happen—is not energy depletion, economic collapse, limited nuclear war, or conquest by a totalitarian

government. As terrible as these catastrophes would be for us, they can be repaired within a few generations. The one process ongoing in the 1980s that will take millions of years to correct is the loss of genetic and species diversity by the destruction of natural habitats. This folly our descendants are least likely to forgive us.
https://www.pnas.org/content/119/5/e2200201119

Science Advances

PAPERS

MARCELA OVANDO-TELLEZ et al – Brain connectivity–based prediction of real-life creativity is mediated by semantic memory structure

Associative theories of creativity argue that creative cognition involves the abilities to generate remote associations and make useful connections between unrelated concepts in one's semantic memory. Yet, whether and how real-life creative behavior relies on semantic memory structure and its neural substrates remains unclear. We acquired multi-echo functional magnetic resonance imaging data while participants underwent a semantic relatedness judgment task. These ratings were used to estimate their individual semantic memory networks, whose properties significantly predicted their real-life creativity. Using a connectome predictive modeling approach, we identified patterns of task-based functional connectivity that predicted creativity-related semantic memory network properties. Furthermore, these properties mediated the relationship between functional connectivity and real-life creativity. These results provide new insights into how brain connectivity patterns support real-life creative behavior via the structure of semantic memory. We also show how computational network science can be used to couple behavioral, cognitive, and neural levels of analysis.
https://www.science.org/doi/full/10.1126/sciadv.abl4294

Scientific American

NEWS

Dogs Can Distinguish Speech from Gibberish

A new study's authors say their investigation represents the first time that a nonhuman brain has been shown to detect language.
http://links.email.scientificamerican.com/els/v2/YejaMKEWKYHG/bktBQXU5VlZ3OUNjRkhTZ1Nxc3d6ZncwaDdKWVdOZjdabUZCbUd6SGpPSzhtelJLdXkxZlpZWkpMbWZjdlFnNTlESnAza0ZiZXVHV3pxaU9EZ3ErUEFYZUJJQVd1dE5QTm5XSEhuZGd3Z009S0/

Trends in Cognitive Sciences

PAPERS

RUBY BASYOUNI & CAROLYN PARKINSON – Mapping the social landscape: tracking patterns of interpersonal relationships

It is widely believed that the demands of living in large, complexly bonded social groups played a key role in the evolution of human cognition. This review focuses on a critical but understudied skillset in the social-living toolkit: the ability to acquire, maintain, and use knowledge of the interpersonal relationships among the people around oneself. We provide a multidisciplinary synthesis of a diverse set of relevant findings, including recent work on the neural encoding and cognitive and behavioral consequences of knowledge of real-world social networks, research on how third-party relationship knowledge is tracked and used by children and other highly social primates, and research examining how people's knowledge of their social networks can be leveraged to inform the design of interventions aiming to promote behavior change or to efficiently spread information. We also highlight important unanswered questions and avenues in need of further exploration.
https://www.cell.com/trends/cognitive-sciences/fulltext/S1364-6613(21)00314-4

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