

EAORC BULLETIN 604 – 11 January 2015

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NOTICES

PUBLICATION ALERTS

If you have had a paper or book published, or you see something which would be of interest to the group, do 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 you have any other ideas for extending the “EAORC experience”, do please contact me.

CONTENTS PAGE – Does the new format work?

How do you feel about the new EAORC contents page? Are you happy with the papers and articles listed below the journal headings, or do you prefer the old way? Let me know what you want.

JOURNAL – Origins of Language

I raised this issue a few months ago, and heard nothing. The need has not gone away. Mike Beaken has now expressed an interest, and I am happy to pursue it if enough people are willing to get involved. I could not, personally, take on an editorial role, but I am more than happy to fund and set up the necessary online facility for a journal to exist.

I am also happy to act in an ongoing role as publisher, to ensure the whole enterprise is kept running. I have been publishing annual conference proceedings for BAAL since 2008 (see <http://martinedwardes.webplus.net/scitsiugnif/>) – and, of course,

this newsletter has been coming out every week for over 11 years. I envisage the OOL journal as advert-free (although perhaps ads for appropriate books might be a possibility).

As a minimum, I would say we need an editor, a deputy editor, and possibly a reviews editor (all titles which would look good on a CV). We will also need a team – the larger the better – of people willing to peer review submissions (I'm happy to be a peer reviewer, too). We would be doing the reviewing for love, not money, but that seems to work for many specialist journals (e.g. *Biolinguistics*).

Any volunteers? Can we make this work? If you know of anyone outside the EAORC community who may be interested, do please get them to contact me and I will coordinate things.

SCINEWS.COM – Dogs Migrated to Americas only 10,000 Years Ago

Posted: 09 Jan 2015 11:03 AM PST

Dogs (*Canis lupus familiaris*) arrived in the Americas only about 10,000 years ago, thousands of years after the first human migrants crossed the Bering land bridge, according to a new study published in the *Journal of Human Evolution*.

http://feedproxy.google.com/~r/BreakingScienceNews/~3/DfxwWv7WFHQ/science-dogs-migrated-americas-only-10000-years-ago-02393.html?utm_source=feedburner&utm_medium=email

SCIENCE DAILY – Humans, sparrows make sense of sounds in similar ways

The song of the swamp sparrow -- a grey-breasted bird found in wetlands throughout much of North America -- is a simple melodious trill. But according to a new study swamp sparrows are capable of processing the notes that make up their simple songs in more sophisticated ways than previously realized -- an ability that may help researchers better understand the perceptual building blocks that enable language in humans.

http://feedproxy.google.com/~r/sciencedaily/~3/lw29YJnyWuU/150105170024.htm?utm_source=feedburner&utm_medium=email

SCIENCE DAILY – Music cuts across cultures

Whether you are a Pygmy in the Congolese rainforest or a hipster in downtown Montreal, certain aspects of music will touch you in exactly the same ways. Researchers found that although the groups felt quite differently about whether specific pieces of music made them feel good or bad, their subjective and physiological responses to how exciting or calming they found the music to be appeared to be universal.

http://feedproxy.google.com/~r/sciencedaily/~3/OjOuHhPu80k/150107162224.htm?utm_source=feedburner&utm_medium=email

SCIENCE DAILY – Monkeys can learn to see themselves in the mirror

Unlike humans and great apes, rhesus monkeys don't realize when they look in a mirror that it is their own face looking back at them. But, according to a new report, that doesn't mean they can't learn. What's more, once rhesus monkeys in the study developed mirror self-recognition, they continued to use mirrors spontaneously to explore parts of their bodies they normally don't see.

http://feedproxy.google.com/~r/sciencedaily/~3/HvZwsn3sk_E/150108130047.htm?utm_source=feedburner&utm_medium=email

ONLINE SEMINARS – A History of Distributed Cognition

Four web seminars up by Wheeler, Gallagher, Clark, Ward

We now have 4 online seminars up for the Edinburgh-based AHRC research project, A History of Distributed Cognition

(<http://www.hdc.ed.ac.uk>):

- 'Distributed Cognition in the Analytic and Continental Traditions' by Mike Wheeler: <http://www.hdc.ed.ac.uk/seminars/distributed-cognition-analytic-and-continental-traditions>
- 'Embodied Cognition' by Shaun Gallagher: <http://www.hdc.ed.ac.uk/seminars/embodied-cognition>
- 'The Extended Mind' by Andy Clark: <http://www.hdc.ed.ac.uk/seminars/extended-mind>
- 'Enactivism' by Dave Ward: <http://www.hdc.ed.ac.uk/seminars/enactivism>

There is an online discussion forum open for each seminar. To comment one only has to sign up at: <https://disqus.com/> (only takes a minute). Please do feel free to comment and join in the discussion.

Further seminars are coming at weekly intervals, and I'll send updates as more arrive.

Mark Sprevak, mark.sprevak@ed.ac.uk

PUBLICATIONS

Proceedings of the Royal Society B – 22 February 2015

PAPERS

SABRINA AMADOR-VARGAS et al – Specialization and group size: brain and behavioural correlates of colony size in ants lacking morphological castes

“Group size in both multicellular organisms and animal societies can correlate with the degree of division of labour. For ants, the task specialization hypothesis (TSH) proposes that increased behavioural specialization enabled by larger group size corresponds to anatomical specialization of worker brains. Alternatively, the social brain hypothesis proposes that increased levels of social stimuli in larger colonies lead to enlarged brain regions in all workers, regardless of their task specialization. We tested these hypotheses in acacia ants (*Pseudomyrmex spinicola*), which exhibit behavioural but not morphological task specialization. In wild colonies, we marked, followed and tested ant workers involved in foraging tasks on the leaves (leaf-ants) and in defensive tasks on the host tree trunk (trunk-ants). Task specialization increased with colony size, especially in defensive tasks. The relationship between colony size and brain region volume was task-dependent, supporting the TSH. Specifically, as colony size increased, the relative size of regions within the mushroom bodies of the brain decreased in trunk-ants but increased in leaf-ants; those regions play important roles in learning and memory. Our findings suggest that workers specialized in defence may have reduced learning abilities relative to leaf-ants; these inferences remain to be tested. In societies with monomorphic workers, brain polymorphism enhanced by group size could be a mechanism by which division of labour is achieved.”

<http://rspb.royalsocietypublishing.org/content/282/1801/20142502>

Philosophical Transactions of the Royal Society B – 19 February 2015

NOTHING OF INTEREST

New Scientist – 10 January 2015

ARTICLES

LAURA SPINNEY – The time illusion: How your brain creates now

Time is not out there – “now” is a strange trick of the mind. The good news is that with training you can live in the moment for longer.

<http://www.newscientist.com/article/mg22530030.500-the-time-illusion-how-your-brain-creates-now.html>

HAL HODSON – Talking gibbonish: Deciphering the banter of the apes

New ways to decode animal chatter reveal a lot about what they are saying. And the answers could unravel human language too.

<http://www.newscientist.com/article/mg22530032.800-talking-gibbonish-deciphering-the-banter-of-the-apes.html>

Science – 9 January 2015

NOTHING OF INTEREST

Nature – 8 January 2015

NOTHING OF INTEREST

PLoS One – 7 January 2015

PAPERS

ADRIANO R. LAMEIRA et al – Speech-Like Rhythm in a Voiced and Voiceless Orangutan Call

“The evolutionary origins of speech remain obscure. Recently, it was proposed that speech derived from monkey facial signals which exhibit a speech-like rhythm of ~5 open-close lip cycles per second. In monkeys, these signals may also be vocalized, offering a plausible evolutionary stepping stone towards speech. Three essential predictions remain, however, to be tested to assess this hypothesis' validity; (i) Great apes, our closest relatives, should likewise produce 5Hz-rhythm signals, (ii) speech-like rhythm should involve calls articulatorily similar to consonants and vowels given that speech rhythm is the direct product of stringing together these two basic elements, and (iii) speech-like rhythm should be experience-based. Via cinematic analyses we demonstrate that an ex-entertainment orangutan produces two calls at a speech-like rhythm, coined “clicks” and “faux-speech.” Like voiceless consonants, clicks required no vocal fold action, but did involve independent manoeuvring over lips and tongue. In parallel to vowels, faux-speech showed harmonic and formant modulations, implying vocal fold and supralaryngeal action. This rhythm was several times faster than orangutan chewing rates, as observed in monkeys and humans. Critically, this rhythm was seven-fold faster, and contextually distinct, than any other known rhythmic calls described to date in the largest database of the orangutan repertoire ever assembled. The first two predictions advanced by this study are validated and, based on parsimony and exclusion of potential alternative explanations, initial support is given to the third prediction.”

<http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0116136>

PNAS – 6 January 2015

ARTICLES

MICHAEL LESK – How many scientific papers are not original?

“Is plagiarism afflicting science? In PNAS, Citron and Ginsparg (1) count the number of authors who are submitting articles containing text already appearing elsewhere. They report disturbing numbers of authors resorting to copying, particularly in some countries where 15% of submissions are detected as containing duplicated material. I am on the editorial board of an Institute of Electrical and Electronic Engineers (IEEE) magazine, which also finds it useful to run all of the submissions through a plagiarism filter. What can be done about this?”

<http://www.pnas.org/content/112/1/6.extract>

PAPERS

DANIEL T. CITRON & PAUL GINSPARG – Patterns of text reuse in a scientific corpus

“In the modern electronic format it is both easier to reuse text and easier to detect reused text. This is the first comprehensive study of patterns of text reuse within the full texts of an important large scientific corpus, covering a 20-y timeframe. It provides an important baseline for what is regarded as standard practice within the affected research communities, a standard somewhat more lenient than that currently applied to journalists, popular authors, and public figures.”

<http://www.pnas.org/content/112/1/25.abstract>

PEDRO VARGAS-PINILLA et al – Evolutionary pattern in the OXT-OXTR system in primates: Coevolution and positive selection footprints

“It was previously believed that placental mammals present no variability in oxytocin (OXT). The present study reports novel data on the diversity of OXT and its receptor (OXTR) in primate species, including New World monkeys. Contrary to prior expectations, we found three novel OXT forms and several OXTR nonsynonymous changes not previously described. In the Cebidae family, signals of positive selection were found for an OXT variant at position 8, which is associated with larger litter sizes. We detected positive selection for OXTR forms and report a coevolutionary process between changes in OXT and OXTR.”

<http://www.pnas.org/content/112/1/88.abstract>

CATHERINE PERRODIN et al with NIKOS K. LOGOTHETIS – Natural asynchronies in audiovisual communication signals regulate neuronal multisensory interactions in voice-sensitive cortex

“Social animals often combine vocal and facial signals into a coherent percept, despite variable misalignment in the onset of informative audiovisual content. However, whether and how natural misalignments in communication signals affect integrative neuronal responses is unclear, especially for neurons in recently identified temporal voice-sensitive cortex in nonhuman primates, which has been suggested as an animal model for human voice areas. We show striking effects on the excitability of voice-sensitive neurons by the variable misalignment in the onset of audiovisual communication signals. Our results allow us to predict the state of neuronal excitability from the cross-sensory asynchrony in natural communication signals and suggest that the general pattern that we observed would generalize to face-sensitive cortex and certain other brain areas.”

<http://www.pnas.org/content/112/1/273.abstract>

National Geographic – January 2015

ARTICLES

CHIP WALTER – The First Artists

The greatest innovation in the history of humankind was neither the stone tool nor the steel sword, but the invention of symbolic expression by the first artists.

<http://ngm.nationalgeographic.com/2015/01/first-artists/walter-text>

YUDHIJIT BHATTACHARJEE – The First Year

A baby’s brain needs love to develop. What happens in the first year is profound.

<http://ngm.nationalgeographic.com/2015/01/baby-brains/bhattacharjee-text>

GLENN HODGES – Tracking the First Americans

New finds, theories, and genetic discoveries are revolutionizing our understanding of the first Americans.

<http://ngm.nationalgeographic.com/2015/01/first-americans/hodges-text>

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