

# EAORC BULLETIN 500 – 13 January 2013

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## NOTICES

### **SCIENCE NEWS – Are Crows Mind Readers ... Or Just Stressed Out?**

New study suggests that the birds can indeed read each others' thoughts

<http://news.sciencemag.org/sciencenow/2013/01/are-crows-mind-readers-or-just-st.html?ref=em>

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### **SCIAM NEWS – Climate Change May Have Spurred Human Evolution**

By Umair Irfan and ClimateWire

A record of changing climate in the Olduvai Gorge suggests early humans had to adapt to shifting ecosystems

[http://www.scientificamerican.com/article.cfm?id=climate-change-may-have-spurred-human-evolution&WT.mc\\_id=SA\\_CAT\\_EVO\\_20130107](http://www.scientificamerican.com/article.cfm?id=climate-change-may-have-spurred-human-evolution&WT.mc_id=SA_CAT_EVO_20130107)

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### **SCIAM NEWS – Expensive Organs: Guppies Reveal the Cost of Big Brains**

By Christie Wilcox

[http://blogs.scientificamerican.com/science-sushi/2013/01/03/expensive-organs-guppies-reveal-the-cost-of-big-brains/?WT.mc\\_id=SA\\_CAT\\_EVO\\_20130107](http://blogs.scientificamerican.com/science-sushi/2013/01/03/expensive-organs-guppies-reveal-the-cost-of-big-brains/?WT.mc_id=SA_CAT_EVO_20130107)

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### **OTHER NEWS - Eliminating useless information important to learning, making new memories**

As we age, it just may be the ability to filter and eliminate old information – rather than take in the new stuff - that makes it harder to learn, scientists report.

“When you are young, your brain is able to strengthen certain connections and weaken certain connections to make new memories,” said Dr. Joe Z. Tsien, neuroscientist at the Medical College of Georgia at Georgia Regents University and Co-Director of the GRU Brain & Behavior Discovery Institute. It’s that critical weakening that appears hampered in the older brain, according to a study in the journal Scientific Reports.

...

“Acknowledging the leap, this impaired ability could also help explain why adults can’t learn a new language without their old accent and why older people tend to be more stuck in their ways, the memory researcher said.

“We know we lose the ability to perfectly speak a foreign language if we learn than language after the onset of sexual maturity. I can learn English but my Chinese accent is very difficult to get rid of. The question is why,” Tsien said.’

<http://news.georgiahealth.edu/archives/7365>

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### **CONFERENCE – 3rd Call for Abstracts: International Conference on Evolutionary Patterns**

Horizontal and Vertical Transmission and Micro- and Macroevolutionary Patterns of Biological and Sociocultural Evolution

May 27-29th, 2013 | Calouste Gulbenkian Foundation, Lisbon, Portugal

Website: <http://evolutionarypatterns.fc.ul.pt>

#### **ABOUT THE CONFERENCE**

The 3-day International Conference aims to provide an interdisciplinary platform where evolutionary scholars from the exact, technological, life, human and sociocultural sciences can exchange ideas and techniques on how to conceptualize, model, and quantify biological and sociocultural evolution.

The Conference is organized by the Applied Evolutionary Epistemology Lab of the Centre for Philosophy of Science of the University of Lisbon, in collaboration with the Calouste Gulbenkian Foundation, and with the support of the John Templeton Foundation.

### **PLENARY SPEAKERS**

Michael Benton, Tal Dagan, John Jungck, Carl Knappett, Daniel McShea, Alex Mesoudi, Mark Pagel, Tyler Volk, and Richard Watson

### **INVITED SPEAKERS**

Quentin Atkinson, Alberto Bisin & Thierry Verdier, Andreas Bohn, Michael Bradie, Jorge Carneiro, Claudine Chaouiya, Mark Collard, Alex de Voogt, Frank Kressing & Matthis Krischel, André Levy, Margarida Matos, Telmo Pievani, Luis Mateus Rocha, Élio Sucena

### **CALL FOR ABSTRACTS**

We call for bio-informaticians, evolutionary biologists, microbiologists, paleontologists, geologists, physicists, mathematicians, anthropologists, archeologists, linguists, sociologists, economists, and philosophers and historians of science to provide talks on the following topics:

1. Conceptualization, quantification and modeling of horizontal and vertical transmission in biological and sociocultural sciences
  2. Conceptualization, quantification and modeling of micro- and macroevolution in biological and sociocultural sciences
  3. Hierarchy theory and the units, levels and mechanisms of evolution
  4. How the universal application of evolutionary theories enables new possibilities for inter- and transdisciplinary research and the unification of the sciences
- We encourage submissions of (1) concrete models and simulations, (2) theoretical, reflexive talks, and (3) historical accounts on any of the above mentioned topics.

### **POSSIBLE FORMATS**

We call for mini-symposia (3 or 6 talks), poster sessions (3 or 6 posters), as well as individual regular and poster talks.

### **IMPORTANT DATES**

Deadline Submissions: February 1st, 2013

Notification of Acceptance: March 1st, 2013

Registration Deadline for all Presenters: April 1st, 2013

Registration Deadline Audience: May 1st, 2013

Conference Dates: May 27th-29th, 2013

### **REGISTRATION FEES**

Professors: 300 euro | PhD and post-docs: 250 euro | Audience: 100 euro | Students: 50 euro

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## **PUBLICATIONS**

### **Proceedings of the Royal Society B – 7 March 2013**

#### **PAPERS**

**BENJAMIN BOSSAN, PETER HAMMERSTEIN & ARNULF KOEHNCKE – We were all young once: an intragenomic perspective on parent–offspring conflict** [“Our model departs from previous models by describing POC as an intragenomic conflict between genes determining life-history traits during infancy or parenthood. We explain why a direct fitness approach that measures the total fitness effect during exactly one generation is required to correctly assess POC in interbrood rivalry. We find that incorrect assumptions in previous models led to an overestimation of the scope of POC. Moreover, we show why the degree of monogamy is more important for POC than previously thought”]

<http://rspb.royalsocietypublishing.org/content/280/1754/20122637.abstract>

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### **Philosophical Transactions of the Royal Society B – 19 February 2013**

#### **NOTHING OF INTEREST**

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### **New Scientist – 12 January 2013**

#### **ARTICLES**

**JARED DIAMOND – The way we were** [JD discusses his 48 years of contact with traditional societies in New Guinea]

<http://www.newscientist.com/article/mg21728990.400-what-westerners-can-learn-from-tribal-societies.html>

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### **Science – 11 January 2013**

#### **NOTHING OF INTEREST**

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### **Nature – 10 January 2013**

#### **NOTHING OF INTEREST**

PAPERS

**ANDREA BARONCHELLI, NICK CHATER, MORTEN H CHRISTIANSEN & ROMUALDO PASTOR-SATORRAS – Evolution in a Changing Environment** [“We propose a simple model for genetic adaptation to a changing environment, describing a fitness landscape characterized by two maxima. One is associated with “specialist” individuals that are adapted to the environment; this maximum moves over time as the environment changes. The other maximum is static, and represents “generalist” individuals not affected by environmental changes. The rest of the landscape is occupied by “maladapted” individuals. Our analysis considers the evolution of these three subpopulations. Our main result is that, in presence of a sufficiently stable environmental feature, as in the case of an unchanging aspect of a physical habitat, specialists can dominate the population. By contrast, rapidly changing environmental features, such as language or cultural habits, are a moving target for the genes; here, generalists dominate, because the best evolutionary strategy is to adopt neutral alleles not specialized for any specific environment”] <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0052742>

**ARNAUD WITT, IRA PUSPITAWATI & ANNIE VINTER – How Explicit and Implicit Test Instructions in an Implicit Learning Task Affect Performance** [“Typically developing children aged 5 to 8 years were exposed to artificial grammar learning. Following an implicit exposure phase, half of the participants received neutral instructions at test while the other half received instructions making a direct, explicit reference to the training phase ... The results showed that performance did not vary as a function of age in the implicit instructions condition, while age effects emerged when explicit instructions were employed at test.”] <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0053296>

**LARI VAINIO et al – Effect of Syllable Articulation on Precision and Power Grip Performance** [“Relatively fast precision grip responses were associated with articulatory gestures in which the tip of the tongue contacted the alveolar ridge ([te]) or the aperture of the vocal tract remained small ([hi]), as well as gestures that required lip protrusion ([pu]). In contrast, relatively fast power grip responses were associated with gestures that were produced by moving the back of the tongue against the velum ([ke]) or in which the aperture of the vocal tract remained large ([hα])”] <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0053061>

**SOPHIE STEELANDT et al – Decision-Making under Risk of Loss in Children** [“Children aged 3 to 4 years old were unable to discriminate the profitability of exchanging in the different combinations. From 5 years, children were better at maximizing their benefit in each combination, their decisions were negatively induced by the probability of losing, and they exhibited a framing effect, a judgment error found in adults”] <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0052316>

NOTHING OF INTEREST

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