Evolutionary Psychiatry (EPSiG)

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Notes from the editor

This is our 8th EPSiG newsletter and we are delighted that our second EPSIG symposium will be on January 12 2018 . In this letter we Have included a commentary on a very interesting paper on siblings and also notes on a conference held this year on the evolution of religion.

Resources and EPSIG Website

The link to the EPSIG web pages that contain a range of resources is below:

http://www.rcpsych.ac.uk/workinpsychiatry/specialinterestgroups/evolutionarypsychiatry.aspx

Future SIG meetings

Further dates for meetings are to be discussed at the AGM
Future meeting dates include:-

The Second Symposium of the Evolutionary Psychiatry Special Interest Group (EPSIG) will be held on 12 January 2018 at the Royal college of Psychiatrists in London.

Book now

We have 4 confirmed keynote speakers as follows:

- **Life History Theory: A Framework for the Understanding of Personality Disorder - Martin Brüne**, Professor of Psychiatry at the Ruhr University, Germany is an eminent evolutionary scholar and author of the Textbook of Evolutionary Psychiatry and Psychosomatic Medicine, the second edition of which was published in 2015.

- **From caring to compassion: an evolutionary journey and social implication exploration - Paul Gilbert** is Professor of Psychology at the University of Derby. He has researched evolutionary approaches to psychopathology for over 40 years and has authored/edited 21 books and over 200 papers. Paul is the originator of Compassion-Focused Therapy which is based on evolutionary insights. He established the Compassionate Mind Foundation in 2006 which has since developed into a global movement. He was awarded the OBE in 2011.

- **An Evolutionary Account of Brain Laterality - Iain McGilchrist**, is author of the widely acclaimed 'The Master and his Emissary'. Dr McGilchrist is a former consultant psychiatrist and clinical director at the Bethlem and former fellow at All Souls College, Oxford. He came to medicine from the humanities and seeks to understand the mind and brain by seeing them in the broadest possible context—that of the whole of our physical and spiritual existence, and of the wider human culture in which they arise.

- **What Clinicians Can Learn from Evolutionary Psychiatry - Alfonso Troisi**, Professor of Psychiatry, University of Rome is one of the pioneers of the application of evolutionary theory to psychiatry and co-author of 'Darwinian Psychiatry' which is a landmark and foundational text in the field. His book 'The Painted Mind: Evolutionary Behavioural Science Reflected in Great Paintings' was published in

2017.

View the full programme

All disciplines and professions are welcome. Please share with colleagues of all disciplines.

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May 18th 2018 AGM Scientific meeting Speakers to be announced

Commentary on an intesting evolutionary paper. R. Abed

Smith, D. (2017) O brother, where art thou? Investment in siblings for inclusive fitness benefits, not father absence, predicts earlier age at menarche. Biology Letters, Royal Society Publishing. Open access.

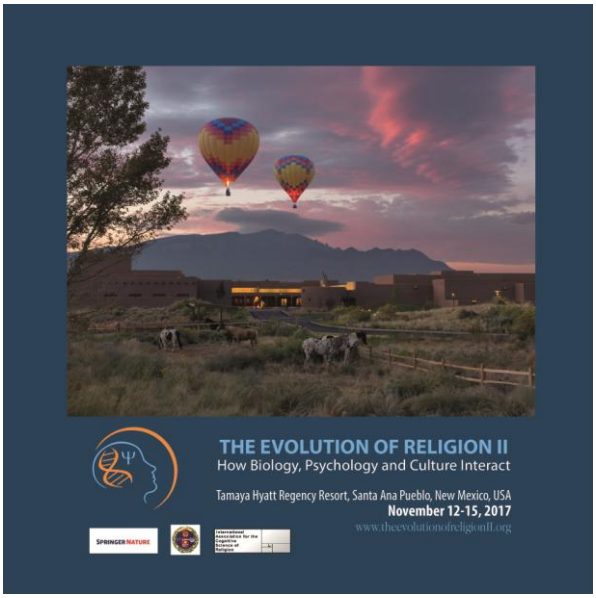
http://rsbl.royalsocietypublishing.org/content/roybiolett/13/10/20170464.full.pdf

This recently published article aims to test rival evolutionary hypotheses regarding factors during early life that affect female development with specific reference to the timing of the menarche. There has been a claim in the evolutionary literature that father absence during early life has a causal relationship with earlier menarche. The explanation offered for this effect is what is termed the 'predictive adaptive response' whereby father absence is a cue for low parental investment and thus an indicator for future adversity and therefore early reproduction (as part of a fast life history strategy) is an adaptive response to this prediction. However, there is a rival hypothesis based on kin selection that proposes that the presence of half or step siblings as opposed to full siblings is the crucial cue and not father absence. The presence of full siblings (r=0.5) according to this model would encourage daughters to delay reproduction and invest in their highly related full siblings while the presence of relatively low related half siblings or even lower related step siblings alters the evolutionary calculus in favour of early reproduction rather than investment in these siblings.

The study published here carried out at the University of Bristol found in favour of the kin selection hypothesis i.e. that the significant factor that influenced early menarche was not father absence but the existence of half or step siblings.

This is an example of an evolutionary framework and evolutionary theorising enabling the formulation of a research question that can lead to the uncovering of an important influence on human development which would have otherwise remained unknown to us.

The question here is: would formulating such a research question have been possible or even conceivable without thinking in evolutionary terms? I would contend not. Riadh Abed FRCPsych
Chair, EPSIG, RCPsych



Report on
The 2nd International Conference on the Evolution of Religion

From November 12th to 15th, 2017, The 2nd International Conference on the Evolution of Religion was held at the beautiful Tamaya Hyatt Regency Resort on the Santa Ana Pueblo in New Mexico, USA. There were 90 attendees from 19 countries. They included many disciplines, including anthropology, psychology, religious studies, theology, philosophy, psychiatry, sociology, zoology and others. Seven of the submitted abstracts were selected as Plenary talks. All together, there were 60 lectures presented. Except for the plenary lectures the other lectures were given concurrently in one of four adjacent conference rooms. Presenters were given their choice as to a short (30 minute) or long (1 hour) presentation. To see the abstracts of the lectures and more about the conference, click here theevolutionofreligionii.org.

After a rigorous peer review process, selected manuscripts derived from the lectures delivered at the conference will become chapters in the edited volume, *The Evolution of Religion: How Biology, Psychology and Culture Interact*, which will be published by Springer Nature in 2019, as part of the series, New Approaches to the Scientific Study of Religion, Series Editors Lluis Oviedo and Aku Visala.

The 1st International Conference on the Evolution of Religion was held in Hawaii in January of 2007. The proceedings of that conference are published in an edited book, *The Evolution of Religion: Studies, Theories, & Critiques*. It is fair to say that the field has progressed significantly in the past 10 years. The 3rd International Conference on the Evolution of Religion is currently in the early planning stage with a tentative time and place of 2021 in Assisi, Italy.

In addition to the academic lectures, there were two interesting field trips associated with the conference. The first was to the nearby Jemez Pueblo to see a spectacular Native American

religious ritual in which around 1,000 tribal members emerged from an underground religious kiva and then were engaged in a 6 hour "dance" to the sound of tom-tom drums and a chorus of male chanters. The second field trip was a 1.5 mile hike along the Rio Grande to the Coronado Historic Site, which contains the ruins of the Kuaua Pueblo, abandoned in around 1600 when the Spanish settlers moved into the area. The Kuaua Pueblo has a deconsecrated, underground religious kiva, which has rarely seen Native American religious murals on the wall.

We also had a banquet at the El Pinto restaurant in Albuquerque to give the attendees a taste of traditional New Mexican food. The weather during the conference was very warm and pleasant, which gave attendees the opportunity to sit on the outdoor patios of Tamaya, eat and drink beer and view the changing colors in the leaves of the cottonwood trees along the Rio Grande as well as viewing the 10,600 Sandia Mountain in the background.

Rather than go over the contents of some selected lectures, which the interested reader can find on the link provided, I will address a few issues associated with the evolution of religion that might be of interest to evolutionary oriented psychiatrists. Some of these issues have overlaps with the evolution of psychiatric disorders. These issues will include how religion could have evolved, whether religion is an adaptation or just a by-product produced by natural selection, and a comparison of religious beliefs and the delusions of some psychiatric patients.

In terms of how religion could have evolved by natural selection there are two schools of thought on the topic. Some scholars believe that religion, or at least the structural design features associated with religion, is or are adaptations crafted by natural selection to produce religion per se. The other school of thought is that religion, or at least the structural design features associated with religion, are just by-products of selection for items that have nothing to do with religion. There are data sets and evidence on both sides of the issue, which is a hot topic of debate at this time. Religions are social institutions, which requires utilizing gene-culture evolution principles.

In addition, religion as a whole is a very broad concept to understand as a single entity that could have evolved by or as a by-product of natural selection. Another approach is to break down religion into smaller components, such as ritual religious behavior and religious beliefs, and ask the same questions about these elements. It is fair to say that this same issue applies to psychiatric disorders, which certainly don't follow the one gene > one enzyme > one disorder algorithm of the inborn errors of metabolism. For this reasons, psychiatrists are in a unique position to contribute to this field.

The other issue which should be of interest to psychiatrists is that most religious beliefs are partially counter-factual and partially counter-intuitive. They have some similarity to the delusional beliefs one sees in psychosis. This issue is captured well in William Irons Chapter 4 in the 1st *Evolution of Religion* book in the link previously provided. The title of his chapter is "Why People Believe (What Other People See As) Crazy Ideas."

The process of believing is a new field of interest among persons who study the evolution of religion. There is a group of scholars who have been meeting in Gratz, Austria once a year for the past several years to understand the process of believing in general and then how it applies to religion in particular. They recently published a book, *The Process of Believing:*

The Acquisition, Maintenance, and Change in Creditions. Our knowledge of the process of believing is today what our knowledge of the process of learning was 100 years ago. In terms of the beliefs of religious people and the beliefs of psychotic people, the mechanisms of acquisition appear to be different. Religious people acquire their beliefs through normative coercion, which includes confirmation and prestige biases. People will believe just about anything if most people and especially if high status people hold the belief. By contrast psychotic persons appear to acquire their beliefs through a dysfunctional perceptual system by which they misinterpret information they acquire from their environment.

In summary, the evolution of religion is a topic that should interest psychiatrists irrespective of whether the individual psychiatrist is religious or not. On a personal level, I (jrf) became interested in the evolution of religion only after I fully retired in 2007. It is a good way to keep busy in retirement and a good way to keep intellectually active. One can also utilize one's knowledge of human behavior by applying it to an new area. It is important to understand religion. If for no other reason, religious differences are dangerously dividing the world. I invite other psychiatrists to do what I did and take up this challenge, at least upon retirement from clinical psychiatric practice.

Jay R. Feierman, M.D.
New Mexico, USA

A SWOT analysis for Evolutionarily Informed Psychiatry's inclusion in the new MRCPsyc syllabus

In this edition we have included a SWOT analysis summary of the difficulties of getting evolutionary ideas and Darwinian concepts into psychiatric training and thinking in general. We suggest that learning some evolutionary theory (Especially areas such as mismatch or kin selection relevant to humans) can assist both research and clinical psychiatry,but there seems to be an inertia and even direct opposition in some quarters. We have therefore looked at some of the strengths and problems surrounding this endeavour.

SWOT is an acronym for strengths, weaknesses, opportunities, and threats.

SWOT is a structured planning method that evaluates those four elements of a project.

SWOT involves specifying the objective of the venture and identifying the internal and external factors that are favourable and unfavourable to achieve that objective

1. Strengths characteristics of the project that give it an advantage over others
2. Weaknesses: characteristics of the that place the project at a disadvantage relative to others
3. Opportunities: elements in the environment that the or project could exploit to its advantage
4. Threats: elements in the environment that could cause trouble for the project

1 STRENGTHS

Evolutionarily informed psychiatry EP is an organising principle for the whole of medicine producing a scientifically based "Biopsychosocial" integration of psychiatric knowledge. EP provides testable explanations for human "vulnerability" to psychiatric disorders based on the universal guiding principle of biology i.e. Evolution by natural selection and other related processes. Evolutionary Psychiatry theories are able to usefully link and inform areas such as genetics, phenomenology, human co-operation, culture, the social brain and neurochemistry, defences, and disorders of such, by giving a scientifically proven (Though individual elements need testing) route to explainations of why genes and processes occur, not just how.

2 WEAKNESSES

Evolutionary models are mostly related to basic science;

i. There are few current psychiatric interventions purely based on evolutionary principles;
ii. The practical benefits of considering evolution are a few steps removed from clinical practice.

3 OPPORTUNITIES

Making the seemingly disconnected facts and models in psychiatry make sense; having a meta-theory of mental functioning and dysfunction not currently available.

4 THREATS

i. Eugenics; the concern that evolution can be misused in pursuit of social/biological engineering aims such as racial purity or human genetic or societal 'improvement'.

ii. Creationism, Intelligent design, religious objections to evolution based on the belief that the mind was made just as it is all in one go by a deity or single act, some thousands of years ago by an intelligent designer. In other words the rejection of evolution based on religious faith.

iii. neo-Cartesian dualism, hermeneutics. There is a belief that the mind and all its products such as culture lie beyond the remit of biology and are not governed by the laws of nature.

iv. Ultra-reductionism: The belief that all psychopathology is within the brain and can be fully explained on basis of molecular events such as malfunctioning of genes, chemicals and neurones i.e. ultra medical model

v Lack of awareness of evolutionary theory and its valuable contribution and application to human behaviour psychology and psychiatry. 'We have managed so far without evolution; therefore, we don't need it'. There is too much to learn alredy in medicine and psychiatry in particular.

vi Complexity arguments; the belief that human brains are so complex, distant from our evolutionary separation from other primates and now so culturally determined that evolutionary biology has nothing relevant to add. (Closely related to iii. & v.).

vii Related to te above s are the notions that in any case if EP was that good everyone would use it already.

Like many models and theories that have been suggested over the last 100 years to improve medicine, evolutionary theory does not instantly solve all outstanding problems. Issues in psychiatry are particularly complex, and if claims were made of any new model asserting that it can explain everything instantly or something similar were made , Doctors would rightly be sceptical of such a grandiose claim. Doctors are rightly suspicious of many exaggerated claims, many of which are articles of faith or lie in the realm of pseudoscience. However, evolutionary theory has been of immense value in other areas related to biology and we have specified examples of success in our field as demonstrated in our bulletin article Evolutionary psychiatry: a new College special interest group . Riadh Abed, Paul St John-Smith BJPsych Bull published online February 25, 2016.

We aspire to increase awareness in these areas and hope one day the college will see fit to include these ideas within psychiatric training.

Articles for the newsletter

We welcome submissions for future newsletters in the form of articles, reviews and interviews. Please send to me at

paulstjohnsmith@hotmail.com

Correspondence: Replies, suggestions and clarifications on articles are welcomed and may be printed/included in our next newsletter . Also, we welcome brief reviews of seminal articles where there is an evolutionary or other relevant conceptual angle (please include the weblink if the article is open access). Please send any submissions to me at:- **paul.stjohnsmith@hpft.nhs.uk or paulstjohnsmith@hotmail.com**