

Evolutionary Special Interest Group of the Royal College of Psychiatrists



Evolutionary Psychiatry Special Interest Group (EPSIG)

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1. Notes from the editor

We now in a new “Roaring Twenties”, but in this millennium, is it “roaring” due to climate change? How will Homo Sapiens adapt? Culturally, by using science and technology along with international cooperation? Or will we be at the mercy of global warming and remain small primates vulnerable to food, clean water and other resource shortages and all the sequaelae?

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EPSIG has a lot planned albeit not directly regarding climate change. 1 May 2020 is a date to put in your diary where we have a half day scientific meeting on 'Evolutionary Perspectives on Childhood Trauma' (see details below).

There are 2 EPSIG conferences in the pipeline (see details below). We now have 6 confirmed keynote speakers for our 4th International EP symposium on 16 October 2020. They are: Prof Edward Bullmore, Prof Jonathan Hill, Prof Paul Gilbert, Prof Randolph Nesse, Dr Gul Deniz Salali and Dr Daniela Sieff.

We are also planning to hold an additional conference in 2021 with the theme of 'The Evolutionary Roots of Attachment Theory'. Given the centrality of the attachment to modern psychiatric thinking especially in child development and its clear evolutionary origins it seems to be a logical subject for us to try to promote evolutionary thinking among our colleagues.

This will be over and above our regular EP symposium in 2021 and is planned for March of 2021. We have 5 confirmed keynote speakers for this : Prof Martin Brune, Prof Jeremy Holmes, Dr Annie Swanepoel, Dr Paul St John-Smith and Prof Marinus Van Ijzendoorne.

Finally there was an election for college officers; this is required every 4 years. EPSIG officers are changing. Hence, from June 2020 Riadh Abed will become the finance officer, taking over from Agnes Ayton, Paul St John-Smith will become the Chair and Annie Swanepoel will become the newsletter editor. Of course we greatly appreciate the help and support of all EPSIG members and supporters who have assisted in organising and running previous and forthcoming EPSIG events and activities.

We are pleased to report the EPSIG membership at the end of October 2019 stood at 1266 (Paul St John-Smith Editor)

2. Meetings 2 confirmed dates for 2020

May 1st see below and 16/10/2020 4th International EPSIG symposium
at the Royal College of Psychiatrists

EPSIG is pleased to announce a Half-Day Scientific Meeting at the College on 1 May 2020 titled: 'Early Adversity and Mental Health: Comparative and Evolutionary Perspectives' featuring two eminent guest speakers. Please see [programme](#) for further information.

Places are limited so early booking is advisable. Please click on this link to reserve your place:-

https://www.rcpsych.ac.uk/events/conferences/detail/2020/05/01/default-calendar/early-adversity-and-mental-health-comparative-and-evolution--epsig-half-day-workshop?dm_i=3S89,12NX4,2H3IS1,3QFLE,1

The scientific meeting will be preceded by the EPSIG AGM where all members are welcome. Riadh Abed, FRCPsych Chair, EPSIG

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Here is the timetable for the May 2020 meeting. Registration is now open as above

Friday 1 May 2020

13:00-14:00 Annual General Meeting (all are welcome)

followed by Workshop entitled:

Early Adversity and Mental Health:

Comparative and Evolutionary Perspectives

14:00-14:50 The Impact of Early Adversity on the Development of Empathy in Great Apes (Prof Zanna Clay, Durham University).

15:00-15:50 Prenatal Stress and Child Psychopathology: an Evolutionary Perspective (Prof Vivette Glover, Imperial College).

16:00-17:00 Open discussion

At the Royal College of Psychiatrists, 21 Prescot Street, London E1 8BB

Certificates for 3 CPD points will be issued to attendants

Registration fee £35 for the workshop.

Online registration (in case you missed it!):

https://www.rcpsych.ac.uk/events/conferences/detail/2020/05/01/default-calendar/early-adversity-and-mental-health-comparative-and-evolution--epsig-half-day-workshop?dm_i=3S89,12NX4,2H3IS1,3QFLE,1

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Interview with J Polimeni:



1. What triggered off your interest in evolutionary theory in relation to psychiatry and psychology?

I am usually hazy on origin stories, but here I know exactly when I became curious about evolutionary psychiatry. I had just finished completing my psychiatry residency exams, and was excited to finally read something outside the field. I was reading Jane Goodall's book "Through a Window: my thirty years with the chimpanzees of Gombe", and at one point she

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describes the effects of a mother's death on her adolescent chimpanzee (Flint). Goodall's description sounded remarkably similar to the physiological effects of depression on the body, which suggested that the biological roots of depression could have been around for at least 6 million years. That possible fact got me thinking much more broadly about psychiatric disorders. In hindsight, it's remarkable how all my psychiatric mentors just assumed that it was near-impossible to know anything substantial about psychiatric conditions before the mid-1800s and in traditional societies.

2. Why, would you say, is evolution important to the understanding of mental disorder?

In my view, the complexity and relative incurability of many psychiatric disorders compels researchers not to leave any stones unturned. Therefore, every scientific field that could possibly contribute to elucidating pathophysiology should be explored. In contrast, a medical problem like a hernia can be simply understood and easily repaired, and doesn't desperately require a lot more thought.

3. Why have psychiatrists (and doctors generally) been slow to embrace evolutionary theory?

I believe there are a lot of contributing factors but two reasons readily come to mind. First, the study of evolution can be framed as the study of genes through time or "genes + time = evolution". This is an obvious oversimplification but it serves to make a point. If genetic mechanisms and phylogenetic histories (of deviant behaviours) are obscure, then evolutionary thinking does not obviously seem applicable.

The second obstacle is that properly studying evolutionary biology is difficult, especially for busy clinicians. I just looked at my bookshelf and counted 30 books on ethology alone, including 6 on eusocial insects, 4 about dolphins and whales, and over a dozen on primates. There are dozens more books inside each major field associated with evolutionary psychiatry – evolutionary principles, ethnographic accounts, and the history of psychiatry (and this doesn't include journal reading). In other words, it's hard to plan to be an "evolutionary psychiatrist". I think in most cases, it slowly evolves if you maintain a sustained interest in the relevant subjects.

3. Is it important in your opinion to include evolutionary science into the undergraduate and postgraduate curricula and if so what, in your view, would be the best strategy to achieve this end? Can you tell us about the experience of teaching evolution at under or post graduate levels to doctors in Canada (if any)?

I do believe that students should be exposed to the relevancy of evolutionary principles in medicine. I'm tempted to suggest that professor Randolph Nesse's transformational book "Why We Get Sick" should be required reading in every medical school. I've actually been derelict in my own department. I haven't introduced any formal curriculum, partially for fear that it could be viewed as selfishly advancing my personal research agendas. I do however regularly discuss evolutionary ideas with medical students while supervising clinical cases. For example, the relevance of evolution in anxiety disorders is usually easy to show, and students routinely ask a lot of follow-up questions about this broader perspective.

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4. In your view why are there still no evolutionary psychiatry university departments and no academic journals dedicated to the subject whereas there are numerous examples dedicated to evolutionary psychology?

That's a great question, but I don't feel I have any specific insights to even make a stab at an answer. In my own psychiatry department (University of Manitoba), most new university-hospital subsections pop up to treat emergent patient populations (e.g. Early Psychosis, PTSD Clinics, etc) and not theoretical veins.

6. How can evolutionary psychiatry (or the application of evolutionary principles to psychiatry) fend off the accusations of promulgating 'just so' stories?

I have sometimes cynically remarked that my ideas are "theories" while your ideas are "just so" stories. Stephen Jay Gould, the originator of that term, was a brilliant evolutionary biologist, however I believe he got muddled with a few ideas like "spandrels" and "just-so stories". David Barash apparently retorted that "just-so story" is simply a derogatory term for "hypothesis". As a sympathizer to Thomas Kuhn's philosophy of science, I believe that scientific theories are ultimately judged on their aesthetics and elegance. In other words, there is no algorithmic way to judge a scientific model. The ostensible cornerstones of science like hypothesis testing, for example, are simply add-on tools in the service of making the scientific model more compelling. The term "scientific method" makes the pursuit of knowledge appear to be more algorithmic and definitive than it actually is. For me, a more acceptable critical term could be "armchair" evolutionary theorist, which would simply suggest that having less formal expertise makes your ideas less probable to be correct.

7. Why have there been so few interventions in psychiatry based on evolutionary science?

That statement may be true but it is certainly not unique. For example, how has fMRI directly changed psychiatric treatments? I would argue, not much, yet. If the old adage about scientific discoveries is true, "Chance favours the prepared mind"; then, knowing the general operating rules (i.e. evolution) running the machinery (i.e. organisms) should be useful.

8. Would you like to give a brief summary for our readers of your theory on Shamanism and schizophrenia as well as your work on the evolutionary psychology of humour? Also, I'm aware that you espouse the view that group selection has been an important force in human evolution which some evolutionists still consider to be controversial. Can you expand a little on the reasons why you believe group selection is important (especially to our vulnerability to mental disorder)?

The Shamanistic Theory of Schizophrenia proposes that schizophrenia "symptoms" are a vestigial behavioural phenotype that emerges in a small subset of the population in order to prompt the social role of shaman in traditional societies. This basic notion has been around since the 19th century; however, my research tries to elevate the idea to a level of a theory. I believe there are many compelling reasons (outlined in my book) to accept that schizophrenia and shamanism are determined by the same underlying biological mechanisms; and that all of the apparent differences can be explained by the disparate social space occupied by shamans versus modern patients with schizophrenia. I argue that this behavioural phenotype is

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especially mismatched in the industrialized economy, which would partially explain the epidemic of schizophrenia coinciding with 18th Century Western industrialization. Even though I am an atheist, I believe that religiosity is evolutionarily advantageous and that religion is a type of social communication (akin to music, dance and humour) where there is asymmetrical communication of religious ideas (i.e. shamans are generators of religious fodder while the rest of the tribe, through their superstitious inclinations, are consumers of this form of communication, akin to musicians and listeners). I should add that John Price and Anthony Stevens laid a lot of the foundational work related to this story in their groundbreaking textbook “Evolutionary Psychiatry”.

As for humour, I began studying humour in residency, 30 years ago, as a possible means to help differentiate bipolar disorder from schizophrenia. So, I’ve always episodically been thinking about humour’s machinations and possible functions. A few years ago, it suddenly clicked as I was preparing a brief lecture on humour in psychiatry. In hindsight, I can use Tinbergen’s four questions (ontogeny, mechanism, phylogeny, function) to clarify the intuitive way I developed the hypothesis. I was gravitating towards what I figured was the best cognitive theory of humour (Veatch’s social violation theory) which filled in the “mechanism” quadrant. Then I connected Veatch’s theory (mechanism quadrant) to General Dominance Hierarchy Theory (phylogeny quadrant), which then seemed to reveal the function quadrant. In summary, humour juxtaposes 2 views of one social situation, and one of those views always contains a social violation. Laughter is prompted by an unconscious appreciation that one social situation can be understood by a notably different second perspective. Playing with the boundaries of social norms would have probably been incredibly useful to primates whose behavioural repertoire is partially dictated by dominance hierarchy rules. I therefore proposed that humour optimizes social norms between conspecifics, while laughter synchronizes the associated social attitudes.

With regards to group selection, I’ve been following this scientific controversy over the last 20 years; and here is my take. Much of the debate was initiated as a response to Wynne-Edwards’ 600-plus-page book *Animal Dispersion in Relation to Social Behaviour* (1962). The initial group selection advocates did so intuitively, and were, in fact, relatively naïve theoreticians. This allowed the anti-group-selection camp to dominate the conversation, especially as it pertained to hominids. Now, Wynne-Edwards’ book was a bit of a straw dummy. It was treated like a theoretical essay when in fact it was simply a naturalist’s work. There is only one notable theoretical comment in the entire book, which basically says that you can’t explain sterility in eusocial insects through the concept of individual selection, so group selection must be a thing. I realize this isn’t impeccable logic, but neither is it an unreasonable starting point. In any case, many anti-group-selectionists were so dismissive and snarky in their opposition to group selection that – in my view- they later couldn’t get themselves to temper their views. I personally absorbed this type of ad hominem criticism in submitted papers and lectures in the early 2000s. It has since toned down, perhaps related to David Sloan Wilson’s persistent methodical rebuttals and Edward O. Wilson’s late-career conversion on the subject.

I have always acknowledged that the anti-group-selectionists have reasonable concerns, and that the matter is complicated. Moreover, group selection is an evolutionary mechanism that can be convenient to invoke without doing the hard work of figuring out the intricate

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evolutionary machinations. But - and this has always been my main point - I have yet to be convinced that group selection is anywhere close to being impossible. It is therefore wholly reasonable to invoke multi-level selection as a *possible* evolutionary mechanism (perhaps among others) to explain certain human behavioural traits – especially in the hypothesis stage of a scientific argument. I believe that the very subtle evolutionary effects of group selection can add up over thousands of generations; and that such forces have been historically underestimated - just like other glacial effects in evolution and geology.

9. What aspect of your evolutionary work are you most proud of?

Writing a book was hard. I recall that around midway through the book I considered giving it up. I began counting how many people were aware that I was writing a book, and would subsequently know I failed. I say this half-jokingly, but still, that thought had crossed my mind.

10. What advice would you like to offer to your fellow evolutionary psychiatrists?

I am not sure I have any gripping advice to colleagues but perhaps I can take a moment to encourage any students or early-career scientists about the merits of evolutionary psychiatry. I believe studying evolutionary psychiatry is extraordinarily fun and interesting. All of the building blocks related to the field (e.g. psychiatry, ethology, anthropology, history of medicine and evolutionary principles) are so interesting in their own right. Then, it gets especially fascinating when you start seeing synergies between fields that are usually treated like individual silos.

5. Further topics and links

Newly published article that may be of interest: Mental health is biological health: Why tackling “diseases of the mind” is an imperative for biological anthropology in the 21st century.

This article will be of interest to all psychiatrists and mental health professionals interested in the application of evolutionary theory to the understanding of mental health and mental disorder. The authors present a critique of current classification systems and propose an outline of a new system based on Darwinian thinking.

https://www.researchgate.net/publication/337491540_Mental_health_is_biological_health_Why_tackling_diseases_of_the_mind_is_an_imperative_for_biological_anthropology_in_the_21st_century

Riadh Abed, Chair

Here are links to a series of 4 short lectures by evolutionary anthropologist and psychotherapist, Daniela Sieff. In these videos Daniela tackles the darker side of motherhood and specifically the phenomenon known as ‘Death Mother’ where she analyses maternal neglect and infanticide from an evolutionary psychology/anthropology perspective. Her analysis is both penetrating and empathic and would be of interest to anyone interested in evolutionary aspects of motherhood and parenting in general.

Daniela Sieff has spent several years working on evolutionary and anthropological perspectives on infanticide, maternal hostility & neglect. Her aim has been to show how an

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understanding of these perspectives can help us identify the circumstances that push mothers into this behaviour, and also to foster compassion both for mothers who are living this and also for their children. It is her experience that these perspectives can help to develop compassion and self-compassion, and open the door to change and healing. Daniela is author of *Understanding and Healing Emotional Trauma* and is due to deliver a keynote lecture at the 4th International Evolutionary Psychiatry Symposium in October 2020.

Riadh Abed, Chair

The lecture is now finished and posted on YouTube. It has been formatted in two ways:

First, as a single film (that runs to about an hour) and this is the link for that version:

https://sieff.video/Death-Mother_entire_talk

Second, as four linked 15 min films These are the links for the four parts:

Part 1: https://sieff.video/Death-Mother_01

Part 2: https://sieff.video/Death-Mother_02

Part 3: https://sieff.video/Death-Mother_03

Part 4: https://sieff.video/Death-Mother_04

Articles for the newsletter We welcome submissions for future newsletters in the form of articles, reviews and interviews. 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: - paulstjohnsmith@hotmail.com

We are now including a student section in future newsletters. This student section of the newsletter would be peer-reviewed with a lighter touch than other articles to encourage contributions. Remember it is a newsletter, so popular science is OK as long as it is science. Articles on evolution and psychology/psychiatry will be the mainstay, though we are open to related topics. Up to 2000 words is fine. Projects and preliminary findings would be suitable too. Any appropriate contribution on human behaviour with an evolutionary slant can be considered. If in doubt, email us:-

abedrt@btinternet.com , paulstjohnsmith@hotmail.com or annie.panzer@gmail.com

We continue to be involved in a new project with a possible student/trainee essay prize. We are planning to set up a 'Charles Darwin Essay Prize' for non-consultant grades in UK. This will involve writing on a topic related to both Darwinian evolution and psychiatry. We look forward to receiving some ideas or titles / topics to put forward to entrants. ***An important piece of advice to all authors*** is to consider using the Tinbergen 4 questions to structure the essay. It is worth emphasising that evolutionary explanations are about populations and vulnerability; individual behaviours in the present are not solely explained by evolutionary theories although there may be evolutionary angles to be explored. The assumption that evolutionary theories attempt to explain individual situations is a fundamental misunderstanding . Individual behaviours may be influenced by development, learning, culture, mechanisms, and context as well as myriad stochastic (random) factors. For instance, the universal human capacity to experience grief following bereavement may have various evolutionary threads, and explanations, but clearly evolution alone will not explain why or how a given individual is experiencing bereavement (with a specific set of symptoms) in the here and now.