



## **Evolutionary Psychiatry Special Interest Group (EPSIG)**

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#### **Contents**

**Notes from the editor**

**Publication preview**

**Future EPSIG meetings**

**Book review**

**Program of the 3rd International Symposium of the Evolutionary Psychiatry Special Interest Group (EPSIG) Friday 22 March 2019**

**Resources and EPSIG Website**

# Evolutionary Special Interest Group of the Royal College of Psychiatrists

## Notes from the editor

This is our 13th EPSiG newsletter. That keeps our rate of 4 letters a year going!

We just hope it interests some of you, some of the time.

Riadh attended a meeting at the RCPsych on November 28<sup>th</sup> 2018 and gave feedback on our EPSiG achievements which include the following :-

- Inaugural meeting January 2016.
- Published **editorial in BJPsych Bulletin** on launch of EPSiG Oct 2016.
- Held **2 International symposia and registration now open for the 3<sup>rd</sup> International EP Symposium** with top international evolutionary speakers (speakers from UK, USA, Germany, Italy, Austria, Finland & Australia).
- All lectures from our symposia have been videoed in full and posted on the **EPSiG YouTube channel attracting many thousands of hits.**
- Held 2 Half day Scientific meetings and booking to be open for our 3<sup>rd</sup> shortly.
- Held a **joint meeting with the Psychiatry Section at the RSM March 2018.**
- Issued **12 newsletters.**
- **Up to date web pages** with links to a wide range of evolutionary resources and all past and present EPSiG activities.
- And attempted to have input into the future of the MRCPsych curriculum (work in progress) and we will continue to advocate strongly for inclusion of evolutionary science into the postgraduate curriculum.

In this letter we have:

1. A pre-publication preview of Randy Nesse's new book Good reasons for bad feelings from Dr Riadh Abed. Both Riadh and I have been privileged to read advanced copies/drafts and thoroughly recommend everyone to get a copy when it comes out. Speaking for myself, the reason why I became interested in the connections between psychiatry and evolutionary theory are largely down to Nesse's first book "Why we get sick". This new book is an extension of that seminal publication, concentrating on psychiatry.
2. Future Meeting dates for EPSiG and related organisations
3. We also have a review by George Ikkos of "*The Neuroscience of Emotion: A New Synthesis*" by Ralph Adolphs and David J Anderson
4. Finally we also have up to date details of our 3<sup>rd</sup> International symposium and how to book.

(Paul St John-Smith Editor)

# Evolutionary Special Interest Group of the Royal College of Psychiatrists

## 1. A Pre-publication Preview: Good Reasons for Bad Feelings By Randolph Nesse *Date of Publication in UK: February 2019*

The publication of the long awaited book by Randolph Nesse is drawing near and one or more launch events will be taking place in London in February 2019. EPSIG members and supporters were privileged to hear a sneak preview of some of the ideas in the book at the excellent presentation Prof Nesse gave at the EPSIG first symposium in October 2016. The lecture has since been posted on the EPSIG You Tube channel (the link can be found on EPSIG web pages) and has been viewed several thousand times.

The book is aimed at a wide audience including the general public. However, it is testament to Professor Nesse's command of the field of evolution and medicine as well as his extra-ordinary ability to explain enormously complex ideas in plain English with minimal use of jargon that the book is just as relevant to psychiatrist, psychologists of all levels as well as to academics interested in evolutionary science.

Readers of the newsletter will be aware that a previous book co-authored with the late George Williams entitled 'Why We Get Sick' launched the whole field of Darwinian Medicine which is why Randolph Nesse is often referred to as the father of Evolutionary Medicine. That book has sold 100,000 copies since its first publication in 1994 and is still in print. My prediction is that the current book is destined to break some sales records and establish itself as required reading for anyone interested in an evolutionary perspective on psychiatry or psychology. R.A.

### **Below are a list of events for the launch week which are nearly final.**

Updates will be posted at <http://nesse.us>.

February 11<sup>th</sup> and 12<sup>th</sup> [Royal Society Conference on Evolution and Pain at Chicheley Hall](#)

**February 12th: Publication Day...and Darwin Day.**

**Wednesday February 13<sup>th</sup> from 12:00 to 13:00**

***Good Reasons for Bad Feelings: Psychiatry's Missing Evolutionary Foundation.*** Gavin De Beer Lecture Theatre G04 Anatomy building, Bloomsbury Campus, University College London. Free and open to the public.

**Wednesday February 13<sup>th</sup> from 15:30 to 16:30**

***What Evolution Offers for Psychiatric Research and Practice.*** Department of Psychiatry at St Pancras Hospital. Conference Hall, ground floor, West Wing, St Pancras Hospital, 4 St Pancras Way NW1 0PE. Information on who can attend will be posted soon.

**Wednesday February 13<sup>th</sup> from 6:45 to 8:00 pm**

***The New Science of Anxiety, Depression, and Addictive Behaviour,*** lecture from sponsored by the How To Academy at Emmanuel Centre, 9-23 Marsham Street, London, SW1P 3DW. [Book now. Early Bird Tickets sold out.](#)

**Thursday February 14<sup>th</sup> from 18.30 to 20.00**

***Why Minds Go Awry: Evolutionary Explanations for Mental Illness...and Love's Exigencies,*** London School of Economics Thai Theatre (in the New Academic Building - 'NAB') Details TBA. Probably free and open to the public.

**Friday February 15<sup>th</sup> in the evening**

**Evolutionary Psychiatry: Useful, or Merely Fascinating?** (tentative topic)

Talk and panel discussion organized by the London Evolution and Research Network at UCL or the London Business School. Details TBA.

## 2. Future meeting dates:

- (1) The EPSIG 3<sup>rd</sup> Symposium will take place on 22 March, 2019 at the College (See full program below)



The Evolutionary Psychiatry Special Interest Group is pleased to invite you to their 3rd International Symposium. A fantastic range of speakers will be discussing the latest ideas and research within evolutionary psychiatry, they include:

**Human ethology and the understanding of personality disorder**

Dr Gerhard Medicus (Austria)

**Surviving at the cost of suffering: The mixed blessings of our evolved neuroplastic brains**

Dr Haley Peckham (Australia)

**Form follows function: An evolutionary model of the structure of psychopathology**

Prof Marco Del Giudice (USA)

**Can evolutionary thinking shed light on gender diversity: A view from the clinic**

Bernadette Wren (UK)

**An evolutionary model of depression**

Prof Markus Rantala (Finland)

**Depression: What (if anything) is it, and what are its evolutionary origins?**

Prof Daniel Nettle (UK)

[Download a copy of the full programme.](#)

Registration is now open and further information can be found on the link below. We have recently experienced some technical issues with our website but these have now been resolved. If you do have any issues booking, then please call us on 020 3701 2615.

**Online Booking:** <https://rcpsych-mail.com/3S85-H318-2GOCN2-BM77K-1/c.aspx>

# Evolutionary Special Interest Group of the Royal College of Psychiatrists

## Other meetings

(2) **EPSIG AGM and Half-Day Scientific Meeting will take place at the College on 31 May 2019. This will be a workshop on ‘Evolutionary Perspectives on Suicide’ with Clifford A. Soper, PhD as our guest speaker. Details will be circulated nearer the time but places are limited so early booking is advisable once registration opens.**

## (3) Conference announcement:

### ETHOLOGY, PSYCHOLOGY, PSYCHIATRY: AN EVOLUTIONARY APPROACH

October 22-27, 2019 Erice, Sicily, ITALY WORKSHOP ORGANIZERS

Martin **Brüne** (Research Department of Neuroscience, Ruhr Universität - Bochum)

Alfonso Troisi (Dipartimento di Medicina dei Sistemi, Università di Roma - Tor Vergata)

Paola Palanza and Stefano Parmigiani (Dipartimento di Medicina e Chirurgia, Università di Parma)

## **Conference goals**

The overall purpose of the Workshop is to discuss the implications of ethology and evolutionary psychology for psychological and psychiatric research and practice. It will focus on a diverse array of topics, including the analysis of nonverbal behaviour, behavioural ecology, particularly in the form of life history theory, and evolutionary genetics of psychiatric disorders. The format will involve talks by international authorities who have been engaged in such research. The workshop will be highly interdisciplinary including aspects involving behavioural and social neuroscience as well as psychopharmacology and psychotherapy.

Please see the link below for more information:

<http://schools.centromajorana.it/ethopsy2019/>

## **3. Book Review: Neuroscience, the Evolution of Emotion and Clinical Practice**

Reflection on: Ralph Adolphs and David J Anderson - *“The Neuroscience of Emotion: A New Synthesis”*, Princeton University Press, Princeton and Oxford 2018, 355 pages, ISBN 978-0-691-17408-2 – by George Ikkos

*“You can catch a nightingale with a stick, but you won’t catch its song that way”*  
Odysseus Elytis, Greek Poet and Literature Nobel Laureate  
In *“Open Papers”* (original in Greek)

Medicine Nobel Prize winning Psychiatrist, Psychoanalyst and Neuroscientist Eric Kandel is quoted in the back cover of *The Neuroscience of Emotion* as stating:

“We know a great deal about the science of perception, actions, learning and memory but know relatively little about the science of emotion. This is why *The Neuroscience of Emotion*

## Evolutionary Special Interest Group of the Royal College of Psychiatrists

is so welcome. Adolphs and Anderson present a completely new understanding of how emotions work and why they are so important for everyday life. Their book is the best treatment of the biology of emotion and a must-read for anyone interested in the brain and behaviour.”

High praise indeed! The clear, systematic and committed way in which Adolphs and Anderson present their case is praiseworthy. Particularly strong aspects of the book include helpful introductory summaries to a diverse range of neuroscience research tools such as optogenetics, pharmacogenetics, FMRI, computational models, similarity analysis etc. These are contributing to new knowledge.

In his studies of the sea slug *Aplysia*, Kandel pursued a radically reductionist approach to studying the mechanisms of memory and learning. Its relatively simple 20,000-neuron system and easily observable gill and siphon withdrawal reflex allowed the development of testable experimental models. Reasoning from evolutionary theory, Kandel expected such studies to yield knowledge relevant to higher organisms. The authors of *The Neuroscience of Emotion*, a Professor of Psychology, Neuroscience and Biology (Adolphs) and a Professor of Biology (Anderson), both at the California Institute of Technology (Caltech), propose a similar approach to emotion. It is important to emphasise how tightly they define the scope of their subject. They exclude: *motivation, arousal and drive*; also, *consciousness and subjectivity*! They justify the latter by explaining that, for example, enormous progress has been made in the neuroscience of vision, without needing to involve the subjective experience of seeing. Within such a restricted perspective, their respective expertise in research on emotion in humans (Adolphs) and emotion in mice and flies (Anderson) offers depth. There are separate chapters on “*The Neurobiology of Emotion in Animals: General Considerations*”, “*The Neuroscience of Emotion in Rodents*”, “*Emotions in Insects and other Invertebrates*” and “*The Neuroscience of Emotion in Humans*”.

The authors do not shy away from other radical claims. For example, they boldly suggest that future research in neuroscience may lead us to discard some or all the names that we use for emotions today. Irrespective of what the specific emotions and names may turn out to be, they offer a provisional list of essential properties of anything that neuroscientists might be prepared to label as “emotion” in the future (figure 3.2, p. 67). This list consists of:

1. “scalability”,
2. “valance”,
3. “persistence”,
4. “generalisation”,
5. “global co-ordination”,
6. “automaticity” and
7. “social communication”

Each “essential property” is briefly explained in figure 3.2. For example, in relation to “automaticity” it is stated: “*emotions have a greater priority over behavioural control than does volitional deliberation, and it requires effort to regulate them (a property that appears disproportionate, or even unique, in humans)*”; or in relation to “social communication” it is stated that: “*in good part as a consequence of their priority over behavioural control, emotion states are pre-adapted to serve a social communicative signals. They can function as honest signals and predict another animal’s behaviour, a property taken advantage of not only by conspecifics, but also predators and prey*”. This is helpful but hardly a “completely new understanding”. Furthermore, their radical intent notwithstanding, when it comes to discussing specific examples the authors

## Evolutionary Special Interest Group of the Royal College of Psychiatrists

repeatedly turn to “threat” (to the exclusion of “fear”!), to the neglect of many other emotions. This is a limitation they freely acknowledge.

Chapter 10 discusses other scientists’ “Theories of Emotions and Feelings”. For example, one of these is Joseph LeDoux who perhaps has done more than most to advance the neuroscience of emotion (e.g. LeDoux 1998). LeDoux’s approach however, is directly contrary to theirs, as he specifically advocates reserving the word “emotion” for experiences of “feeling”, i.e. subjectivity. In LeDoux’s terms what Adolphs and Anderson study are evolutionary adaptive mechanisms, not “emotions”. It is somewhat ironic that though Adolphs and Anderson adopt a position directly contrary to LeDoux’, they focus their examples on threat/ fear, where he has made such an enormous contribution, including elucidating the function of the amygdala in the flight/fight response!

Also discussed is Lisa Feldman Barrett’s (b. 1963) theory of “constructed emotion” (also called the “conceptual act theory”) which downgrades, but does not dismiss, the importance of the evolution of inherited biological mechanisms in favour of active personal and social constructions of emotions (Feldman Barrett, 2018). Having had the privilege for more than 20 years at the London Spinal Cord Injuries Centre (LSCIC) directly talking with and observing patients with spinal injuries during their prolonged stays at the Centre, I have a lot of sympathy for her approach (Ikkos et. al. 2018). I have been impressed by the determining impact of attitude, communication and relationships on the changing experience and expression of emotion. Feldman Barrett is keenly aware of the predictive nature of the brain (2015) and, therefore, the importance of history, meaning and context for emotional life, especially in humans.

“*The Neuroscience of Emotion*” pays special tribute to Jaak Panksepp (1942 –2017) in whose work Adolphs and Anderson have found inspiration. He was the Baily Endowed Chair of Animal Well-Being Science for the Department of Veterinary and Comparative Anatomy, Pharmacology, and Physiology at Washington State University’s College of Veterinary Medicine and took a keen interest in psychoanalysis too. He coined the term “affective neuroscience” (Panksepp 2004), adopted a strong evolutionary framework (Panksepp and Biven 2012) and his suggestion that there are specific evolutionarily adapted *emotion generating* and *expressing* neurobiological systems underpinning 7 basic emotions (“*seeking*”, “*rage*”, “*fear*”, “*lust*”, “*care*”, “*panic*” and “*play*”) has attracted much interest, though not necessarily consensus. Unlike Adolphs and Anderson, Panksepp was strongly committed to the neurobiological investigation of consciousness in relation to emotions. Solms and Turnbull (2002) have summarised his work for clinicians and it has been crucial to the formulation and construction of the *Stanmore Nursing Assessment of Psychological Status* (SNAPS) which colleagues and I have developed to help nurses at LSCIC to elicit, understand and respond to patients’ emotions during their prolonged stays for rehabilitation (Smyth, et. al. 2016).

In terms of current clinical utility, Adolphs and Anderson’s approach amounts to a marked regression compared to LeDoux, Feldman Barrett and Panksepp. As psychiatrists we need a much broader approach to emotions, including descriptive and dynamic phenomenology, individual and social psychology, history and sociology of emotions and anthropology. It is instructive in this sense that, as well as his landmark investigations into learning and memory in *Aplysia*, Kandel wrote “*In Search of Memory: The Emergence of a New Science of Mind*” (2006), a masterpiece of scientific and personal autobiography. However, the narrowness of Adolphs and Andersons formulation does not detract from the scientific merit of the case they present. Busy clinical psychiatrists need to have a good general sense of the latest advances and prospects for this narrowly conceived neurobiology of evolutionary adaptive mechanisms/ “emotions”. This slim, volume has the merit of summarising current understanding, with frankness about its limitations as well as enthusiasm about its ambitions. Lack of current immediate clinical utility aside, it is strongly recommended as an introduction to a



## Evolutionary Special Interest Group of the Royal College of Psychiatrists

new way of thinking. It is likely to underpin a fruitful research programme and make a positive contribution to understanding the evolution of emotions.

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3rd International Symposium of the Evolutionary Psychiatry Special Interest Group (EPSIG)  
Friday 22 March 2019

Royal College of Psychiatrists, 21 Prescott Street London E1 8BB

Time	Session
9.00-9.30	<b>Registration, welcome and coffee</b>
9.30-9.35	<b>Welcome</b> <b>Dr Riadh Abed EPSIG Chair</b>
<b>9.35-12.20</b>	<b>Morning Session</b> <b>Chair: Prof George Ikkos</b>
9.35-10.20	<b>Keynote: Human ethology and the understanding of personality disorder</b> <b>Dr Gerhard Medicus (Austria)</b>
10.20-10.35	<b>Q&amp;A</b>
10.35-11.20	<b>Keynote: Surviving at the cost of suffering: The mixed blessings of our evolved neuroplastic brains</b> <b>Dr Haley Peckham (Australia)</b>
11.20-11.35	<b>Q&amp;A</b>
11.35-11.50	<b>Coffee Break</b>
11.50-12.35	<b>Keynote: Form follows function: An evolutionary model of the structure of psychopathology</b> <b>Prof Marco Del Giudice (USA)</b>
12.35-12.50	<b>Q&amp;A</b>
12.50-13.45	<b>Lunch</b>
13.45-17.30	<b>Afternoon Session</b> <b>Chair: Dr Paul St John-Smith</b>



## Evolutionary Special Interest Group of the Royal College of Psychiatrists

13.45-14.30	<b>Keynote: Can evolutionary thinking shed light on gender diversity: A view from the clinic Bernadette Wren (UK)</b>
14.30-14.45	<b>Q&amp;A</b>
14.45-15.00	<b>Coffee Break</b>
<b>15.00-15.45</b>	<b>Keynote: An evolutionary model of depression Prof Markus Rantala (Finland)</b>
15.45-16.00	<b>Q&amp;A</b>
16.00-16.45	<b>Keynote: Depression: What (if anything) is it, and what are its evolutionary origins? Prof Daniel Nettle (UK)</b>
16.45-17.00	<b>Q&amp;A</b>
<b>17.00-17.30</b>	<b>General Discussion and Close</b>

**The conference dinner will be at 19.00. This will need to be booked separately. Further details can be found on the online booking link.**

### **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>

### **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](mailto:paulstjohnsmith@hotmail.com)