

# Evolutionary Special Interest Group of the Royal College of Psychiatrists



## Evolutionary Psychiatry Special Interest Group (EPSIG)

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## Notes from the editor

The 3rd International Symposium of the Evolutionary Psychiatry Special Interest Group (EPSIG) was held on Friday 22 March 2019. We have a brief synopsis from Ben Janaway in this issue.

Here is a link to the full videos with the embedded presentations. Our thanks go to Eddie Stevens who with his partner, did the recording and editing.

[https://www.youtube.com/playlist?list=PL\\_gsGoSXTBodZ3hiLk8I7z-dOmF3c1fjj](https://www.youtube.com/playlist?list=PL_gsGoSXTBodZ3hiLk8I7z-dOmF3c1fjj)

We also have a book review by Riadh Abed on *Evolutionary Psychopathology: A Unified Approach*. By Marco Del Giudice.

Finally also have an online interview with Prof G Medicus regarding his interests in evolutionary issues.

## Other meetings

EPSIG AGM and Half-Day Scientific Meeting will take place at the College on 31 May 2019, 14:00-17:00. This will be a Half-Day workshop on '*Evolutionary Perspectives on Suicide*' with Clifford A. Soper, PhD as our guest speaker. Details have already been circulated to EPSIG members.

Places are limited so early booking is advisable.

Online Booking and Program:

<https://www.rcpsych.ac.uk/events/conferences/detail/2019/05/31/default-calendar/evolutionary-psychiatry-special-interest-group-agm-and-workshop>

## Agenda AGM of the Evolutionary Psychiatry Special Interest Group (EPSIG)

Annual General Meeting 13:00-14:00, 31 May 2019, RCPsych, London

13:00 Registration

EPSIG Business meeting (Chair: Riadh Abed)

1. Presentation by RCPsych Library and Information Service.
2. Financial Report by Agnes Ayton, Treasurer.
3. Review of 2018/19 activities by Riadh Abed, Chair.
4. Report by Paul St John-Smith, Newsletter Editor,
  - a) Newsletter
  - b) EPSIG website
4. Forward planning for EPSIG 4th International Symposium
5. MRCPsych Syllabus.
6. AOB

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**You may also wish to note the following 2 confirmed dates for next year:**

**1/5/2020 AGM and half day scientific meeting. This AGM will involve the elections of new officers (Chair and Treasurer) as the term of the current incumbants will expire in 2020.**

**16/10/2020 4th International EPSIG symposium .**

## **A future from the past, EPSIG symposium shines new light on mental health**

*Dr Benjamin Janaway*

On March 22<sup>nd</sup> 2018 the [Evolutionary Psychiatry Specialist Interest Group](#) (EPSIG,) played host to the frontiers of psychiatric research at the Royal College of Psychiatrists, London. Here, world leaders in research probed the entangled science of neurology, psychology, genetics and behaviourism to weave together answers to not only why we are, but why we become unwell in the mind. From Darwinism to dopamine, the future of psychiatry may be found in the past.

All of the talks can be viewed [here](#)

The day was started by Dr Gerhard Medicus, psychiatrist and author of the influential 'Being Human', who discussed the basis of human and animal ethology, development of individual and group behavioural memetics and their bearing on the development of personality disorder. He relates, using recognised models, how early life experiences can lead to distorted cognitive schemas that present with interpersonal difficulty.

In such a contentious field, his work is useful in finding aetiological pathways based on psychological attachment types and could hold significant promise for understanding the evolutionary antecedents which may drive new research pathways. Ingeniously, he is able to demonstrate rudimentary forms of developmental schema not just in humans, but in animals that, at a base level, may be used to explain pathology we see in clinic.

Next up was a very personal and touching presentation by Dr Hayley Peckham on the 'Mixed blessings of neuroplasticity,' where the adaptive processes of our brains were placed in the context of cognitive experience and prognostic end points. The talk covered everything from the consolidative aspects of epigenetics to theories of how early disruption of hormonal axis can present short term survival gain at the expense of long term poorer health, and how different species are adapted to make use of their gene-environment interactions.

She ends on a honest discussion on the life experience of complex trauma and a positive message gleaned from an amalgamation of neuroscience, epigenetics and cognitive psychology, that experience can dictate the brain, and with it, the possibility of recovery.

Next up Dr Bernadette Wren critically examined the politically charged arena of gender diversity, both from the clinic and academic view point. Not only does she delve, with expertise, into clearly delineating terminology oft misunderstood, but is able to elicit the epidemiology, change in trends, aetiological theories and biological components of an area often seen in mental health clinics and newspapers alike.

Crucially, she raises questions about how we can best support patients and puts clearly how the politics can leave the person forgotten. Her talk is essential viewing not just for budding Darwinians, but all psychiatrists.

Moving onto a condition which is extremely common, Professor Markus Rantala provided us a fascinating overview of animal models of depression, experiments defining reward and punishment and translational potential to human models. His talk was able to demonstrate a surprising simplicity to animal emotion determinants, which underlies potential explanation for more biological and cognitive explanations of the issues that face us today.

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Interestingly, he goes on to discuss the paucity of mood affective syndromes in pre-industrial societies and raises the telling question, is depression a disease of modernity?

Further evaluating the aetiological zeitgeist of depression, the eloquent Professor Daniel Nettle provided an insight into symptomatic models of disease, presenting how signs and symptoms inherent in depression may not only present different categorical subtypes, but potential causal and perpetuating networks of disease. In fact, he goes on to question the diagnosis of depression and its aetiology, but the role of disordered adaptive networks in the context of genetic risk and mismatch with the environment.

If it sounds complicated, that's because it is. But it's a way of thinking that may lead to new treatments, symptom led management, and understandably, a new horizon for evolutionarily derived explanations for mental health disorder.

Finally, we were joined via skype by Professor Marco Del Giudice, who took on the not easily fathomable task of both deconstructing and then remodelling the evolutionary explanations of psychopathology. Taking an extremely critical and welcome perspective of diagnostic heuristics, he is able to demonstrate the associations between different disorders, exposing potential friability in current scientific models.

In order to rectify diagnostic fragmentation, he postulates an explanatory theory of life history in the development of disease, adaptive epithets of symptoms, the role of dysregulatory hormone profiles and hint at unifying diagnostic criteria. His talk provides a challenging journey through the limitations of current diagnostic understanding.

Overall, the day was both an introduction to evolutionary psychiatry, the vernacular and processes of investigation and a crash course in Darwinian theory, but also a cautious look in how evolutionary explanations of disease may remodel our understandings, interactions and treatment pathways. Personally, I found myself both vexed and enthused.

I thoroughly look forward to next years event, and we hope to see you there too.

**Dr Ben Janaway** is a trainee psychiatrist with an interest in neuropsychiatry, psychopathology, evolutionary explanations of delusional belief systems and new treatment avenues. He regularly writes for 'The Mental Elf, and has written for newspapers and online science communication groups.

### **Book Review:**

**Evolutionary Psychopathology: A Unified Approach. By Marco Del Giudice.**  
**Oxford University Press, 2018.**

This is a substantial new volume on the subject of evolutionary psychiatry that unlike previous and subsequent texts, all written by psychiatrists, is authored by an evolutionary psychologist. The book consists of 21 chapters. The first few chapters provide an up to date introduction to the state of the art regarding the application of evolutionary theory to psychiatry and psychology followed by a detailed review of evolutionary thinking on 14 common mental disorders. The book does not cover organic disorders, learning disabilities or child psychiatry (although there are chapters on ASD and ADHD).

Where Del Giudice distinguishes his book from others in the field is that he offers a novel unified framework for the classification of mental disorders based on Life History Theory. Hence, in addition to his review of the evolutionary literature on various mental disorders there is a thread that runs throughout the whole book where he systematically applies his proposed framework to all the disorders he discusses. This is a project the author has been engaged in for a number of years and this book represents the latest iteration of his ideas. This makes Del Giudice's book both unique and

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highly innovative. His ambitious project will be of particular interest to evolutionists eager to unlock the potential of evolutionary science in reformulating our concepts of mental health and mental disorder.

According to Del Giudice, any coherent framework for mental disorder (evolutionary or otherwise) should meet 4 main challenges. These are: Explain patterns of comorbidity; address heterogeneity within diagnostic categories; bridge psychopathology with individual differences and; account for developmental features of mental disorders including life course trajectories. The evolutionary framework proposed by Del Giudice is more comprehensive and wide-ranging than others such as Crespi's diametric model of ASD and schizophrenia and Martel's externalizing-internalizing model. The author suggests that his proposed framework meet all the challenges outlined above and offers an alternative to the existing trans-diagnostic taxonomies of mental disorders such as the RDoC (Research Domain Criteria of the NIMH). The framework outlined in the book has been expanded to include a primary dimension of Fast-Slow life history strategy supplemented by a secondary dimension of Defence-activation and hence the model has been dubbed the FSD model. It is based on a core proposition namely that the risk of developing a mental disorder depends on a pattern of individual differences that can be understood as manifestations of alternative life history strategies. Hence, moving along the Fast-Slow life history dimension will increase the risk of certain mental disorders and reduce the risk of others e.g. fast life history strategies increase the risk of psychosis while reducing the risk of autism and vice versa. The FSD model generates 3 clusters of disorders the F-type (fast spectrum disorders), S-Type (slow spectrum disorders) and D-type (defence activation disorders). The system is currently aimed for use by researchers rather than clinicians.

Del Giudice's style combines a high level of scientific rigour with great eloquence and vibrancy. The text is meticulously referenced with the latest research in the respective fields and is aimed primarily at a professional readership (psychiatrists, psychologists and other academics interested in mental health and mental disorder) rather than the general public.

In the opinion of the present reviewer Del Giudice's evolutionary framework has the potential for radically re-thinking the nature and classification of mental disorder and for influencing the research agenda in mental health. The book undoubtedly deserves to be widely read both by clinicians and researchers. **Riadh Abed**

### **Virtual Interview:**

Our guest is Professor Gerhard Medicus: interviewed by Riadh Abed

Questions for Gerhard Medicus:

#### **1. What triggered off your interest in evolutionary theory in relation to psychiatry/psychology?**

It was around 45 years ago, when as a student, I heard an enthusiastic learning theorist and psychoanalyst in one of the psychiatry lecture series. What they had to say was very interesting and convincing, *but* their theories just did not fit together which I found frustrating. A few months prior to attending those lectures, I happened to have read Konrad Lorenz' "Behind the Mirror". Lorenz described the evolution of behaviour and cognition from basic vertebrates up to apes and humans. His book planted in my mind the idea that the key concepts of these psychotherapeutic schools could successfully fit together. Lorenz' book presented several different learning mechanisms and,

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with regard to psychoanalytic examples, it outlined potential phylogenetic roots of “Id”, “Ego” and “Superego”.

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

Through my psychiatric practice I came to realize that the theoretical and methodological approaches that had been used by many psychologists, were founded (separately) in either the natural sciences *or* the humanities, thereby illustrating a Cartesian division within the human sciences into body and mind sciences. Similarly, psychiatry is regarded as a sort of transfacultary chimera. It seems to be a hybrid creature encompassing psychotherapy, which has its roots in the humanities, as well as biological or science-based “core psychiatry.” The latter is often reductionist in the sense that it limits itself to biochemical / pharmacological and neurobiological hypotheses. Importantly, the interactions between body and mind remain poorly explored and understood.

As Charles Darwin had already seems to have understood in 1859, evolution has left its traces on both the body and the soul. For this reason, accumulated evolutionary knowledge can be a useful if not indispensable model for an understanding of human body and mind including the phenomena of mental disorders (see below, e.g. EEA).

Furthermore, knowledge about behavioural phylogeny can be illuminating when exploring the list of emotional and cognitive faculties potentially involved during ontogeny. This is particularly relevant regarding the development of personality disorders. Consequently, knowledge about ontogeny and phylogeny can then be used for a two-way or reciprocal enlightenment, even though the biogenetic rule as such, is irrelevant for behavioural/psychological development.

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

Many medics are primarily interested in immediate treatments or effects, using information rather like “cooking recipes” where they are less concerned about “grand” theories than results. As a result, many medics seem to know only as much, about the medicines they prescribe, as perhaps some indigenous people might know about how their particular dart poison works.

Furthermore, there are conflicting theories and scientific schools, with conservatism and fashions, as well as individual prejudices and narcissisms within the behavioural sciences as well as in psychology, psychotherapy and psychiatry. These dynamics make interdisciplinarity difficult. Frequently, young medics, who may have had good biology teachers at grammar school, have scientific evolutionary insights that goes unheeded because their seniors lack the readiness or preparedness to learn from them. This has been a recurrent theme in the history of medicine (cf: Semmelweis Reflex or Effect in Wikipedia; also the observation that incorporation of new knowledge is often only fast in medicine if the respective medication or technical equipment is expensive.)

### **4. Is it important 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?**

Evolutionary behavioural science should already have been taught at the grammar school level and further postgraduate ethological education for teachers might also be helpful. Curiosity with regard to animals and nature should be conveyed in all biology lessons. In addition, new biology textbooks should contain much more complex evolutionary orientational knowledge and fewer molecular/physiological details.

Moreover, emulating the Swiss strategy of establishing departments for Evolutionary Medicine could be helpful and can result in neighbouring evolutionary departments supporting one another.

My evolutionary approach made me have to run around, both the Medical Psychology Department as well as within Austrian psychiatric societies. Perhaps because medics (compared with “real” biologists) have a different understanding of what biology is.

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### **5. In your view why are there still no evolutionary psychiatry university departments and no academic journals dedicated to the subject, whereas there are many dedicated to evolutionary psychology?**

I note that there is an Institute of Evolutionary Medicine in Zürich, Switzerland, and in February 2019 the comprehensive “Oxford University Handbook of Evolutionary Medicine”, edited by Martin Brüne and Wulf Schiefenhövel, was published. I do not understand the continuing differential developmental pathways taken by psychiatry/psychotherapy and psychology.

In Austria and Germany, “biological anthropology” remains unpopular at some university departments. Many members of the humanity faculties fight the concept of biological anthropology because they still think that this kind of science has fascist roots.

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

a) An orientation matrix for all humanities (except theological questions about life after death) and all human natural sciences can be helpful. The interdisciplinary scope of discourse is revealed when the subject of enquiry for the central questions (phylogeny, adaptation, ontogeny, function) is informed by considering the relevant reference level (molecule, cell, organ, individual, family, group, society). Lucidity increases if the central questions are tabulated as column headers against reference levels as line headers (i.e. “Periodic Table of Human Sciences”).

Scientists specialized in the different quadrants of such a table differ in many empirical and theoretical aspects (e.g.: in their demands for consistency and certainty, demands for qualitative and quantitative research, research with and without working hypothesis – e.g. unconditional observations, ideas about freedom, impact points, speed of knowledge gain and incorporation into scientific communities). If particular interdependencies as well as “‘just so’ stories” (partly as working hypotheses) are not part of the discussion, then potential exploration is significantly curtailed.

b) With the help of such an orientation matrix in the background, many theories of psychotherapy have been falsified. For example: The idea of a death drive; the idea of psychoanalysis that children in the so-called “oedipal phase” sexually desire a parent of the opposite sex (cf theory about incest avoidance); the behaviouristic notion that motherly love harms babies because it enhances tyrannical dispositions in the children (with this background, small children as patients would not need a parent to be present at hospitals).

c) Many medics overemphasize reductionistic research and data because of a perceived and excessive demand for the goals of consistency and certainty. High levels of certainty can sometimes be found in anatomical, physiological and neuro-psychological research. At the same time, these requirements for high levels of certainty found in complex fields of research (for example physics and chemistry) can actually hamper scientific progress in others such as in psychiatry and psychotherapy. The nature of the complexity of the human condition and intellect are such that statements attempting to meet the very highest levels certainty, ironically may have a low validity or explanatory value in complex anthropological questions. This is because the psychological and social worlds are very complex (humans are not the same as atoms, molecules, or monoclonal mice and rats). Excessive requirements for such certainty are therefore actually erroneous, unreasonable and even out of touch with reality, i.e. having little generalisibility in the real world.

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

When we consider the concept of the Environment of Evolutionary Adaptedness (EEA) of our ancestors regarding both animal–human comparison and cross-cultural comparisons, e.g. with tribal societies), many new insights and interventions seem to me to become evident, possible and even necessary. This also holds true for somatic medicine. Here are some possible examples:

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- Many doctors and hospital organizations remain unaware that multi-bed rooms are detrimental to rest and recovery of postpartum women for good “evolutionary” reasons.
- The pharmacological suppression of a child’s desire for movement fails to consider that children are not naturally adapted to sedentary environments such as classrooms or computers. Quite apart from the current “ADHD epidemic”, it should be noted that zoos ended up medicalising their animals because they displayed behavioural problems as a result of keeping them in conditions that were species-inappropriate and would now rightly attract the attention of animal rights groups).
- A similar situation has arisen in psychiatry whereby the pathologising of the normal grieving process (which does not do justice to the situation of most bereaved people), was demonstrated by the objections made from people emanating from many different cultures (cf. discussion when DSM-5 was in preparation).

Hopefully relevant evolutionary medicine and psychology will increasingly contribute to the useful understanding of the interactions between our environment and our health.

### **8. You describe yourself as a psychiatrist and an ethologist. Very few psychiatrists in the UK would think of themselves in this way. Can you tell us a bit about the importance and relevance of ethology to psychiatry?**

I kept a number of animals at home as a child, and I had a very good biology teacher at grammar school. Darwin’s books (1859, 1871, 1872), which are particularly relevant for me, were bought by my grandparents as far back as 1910. I also read Konrad Lorenz’ “King Salomon’s Ring”. More recently in the years immediately preceding retirement, I led a department for day psychiatry. We had two therapeutic foci: medication and psychotherapy. From these perspectives and my evolutionary background, I came to think the following aspects were particularly important:

- Theories about connections between body and soul, e.g. psychosomatic medicine
- **Attachment Theory** (after John Bowlby) / **Zurich Model** (after Norbert Bischof)
- Psychology of **natural birth** as well as bonding during the first hours, days and weeks post partum
- **“Neuroses” and personality disorders**
- Research about **grief/mourning**
- Theory and clinical practice of **incest avoidance**
- Research about **hierarchy** and its economic and salutogenetic implications
- **Aggression-** and **peace** (inhibition of aggression) research
- **Sexual medicine**, e.g. gender differences
- **Chronobiology**
- Evolutionary **Epistemology**, e.g. for system theory and family therapy
- Evolutionary **Ethics**

Many of these conceptual issues are not really considered in any depth if at all, by many medics. It seems that nowadays many specialists have forgotten these crucial evolutionary/ethological roots of their field.

Here are two illustrations:

1. The example of a mentally impaired adult who requires the care of his/her parents for personal ano-genital hygiene. The person might well react with annoyance and aggression towards his parents as carers due to what we might see as or label as a predictable “erotic aversion”. This awkward situation may very well be experienced by the distressed parents as something incomprehensible and burdensome. However helping them recognise the biopsychological reasons for this reaction, i.e. incest avoidance, and explaining it as the cause of such a rejection, could be usefully explored with the parents, who then might be better able to understand and cope with the situation. Subsequently, under appropriate



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professional care, these patients usually do not react so aggressively. Accordingly, professional caregivers may experience significantly different behaviour than do the person's parents or siblings.

2. Problems also arise when we make the unwarranted assumption that men and women have exactly the same values. For instance, the idea that men and women are psycho-sexually identical is demonstrably incorrect from the perspective of ethology and sociobiology. Consequently psychotherapists and medics should not formulate any recommendations based on this a priori error nor from the mistake of generalising from their own sexuality, particularly with regard to patients of the opposite sex or orientation.

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

I am particularly proud of my book "Being Human: Bridging the Gap between the Sciences of Body and Mind". I am grateful for the constructive feedback given by groups such as the evolutionary psychiatry special interest group (cf the feedback summarized on my book cover):

[https://www.uibk.ac.at/psychologie/humanethologie/einfuehrung-in-die-humanethologie/dateien/medicus\\_engl\\_cover.pdf](https://www.uibk.ac.at/psychologie/humanethologie/einfuehrung-in-die-humanethologie/dateien/medicus_engl_cover.pdf) ).

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

If and when your scientific interests do not fit into the mainstream and even if your interests do not directly support your career, just pursue science for the fun of it. Such a mind-set can provide ample opportunity for satisfaction and can help boost self-confidence over your lifetime.

**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)