

Charles Darwin first recorded his ideas on 'transmutation', a word used to signify the changeable nature of species, in 1844. However, he did not publish his ideas then but instead embarked on painstaking studies of molluscs and other subjects for many years in his home-based laboratory, publishing widely and making some novel discoveries in the area of mollusc biology. We will never know whether he would have got around to publishing his theory of evolution if it had not been for the work of a young naturalist called Alfred Russel Wallace, who forwarded his own (remarkably similar) ideas on the subject to Darwin in 1858. As a result, the two men had their findings jointly presented to the Linnaean Society one and a half centuries ago this year, on July 1st 1858,² an event that initially passed by relatively quietly, but that was soon to rock the scientific establishment and society as a whole. Darwin's notebooks prove that he had been developing his theories on 'transmutation' for the previous 20 years, based on his observations on the HMS Beagle and his own 'home-work' on molluscs and numerous other subjects. Potential reasons as to Darwin's delay in publishing his findings include his wish to produce as much supportive scientific evidence as possible, ambivalence about publishing a Godless theory in a religious society and, at a personal level, a reluctance to offend his devoted wife Emma, who was a devout Christian.³

Charles Darwin contributed directly to modern psychology and psychiatry in the form of his book *The Expression of the Emotions in Man and Animals*, which was effectively the first textbook on human evolutionary psychology and psychiatry.⁴ His indirect contribution is far more significant, and involves the application by many others of evolutionary principles to psychology and psychiatry.^{5–7} However, despite the universal acceptance of evolutionary theory in all branches of the biological sciences, evolution is effectively ignored in mainstream medicine and in psychiatry and psychology, partly because of difficulties with providing empirical evidence or 'proof', and partly because of the corruption and perversion of such ideas in the abuses of Social Darwinism and eugenics. Perhaps most importantly, there is only an emerging evidence base on the clinical applications of evolutionary theory to psychology and psychiatry, and this area

remains a challenge to researchers and clinicians with an interest in the subject.

Despite these problems and shortcomings, an undeniable fact remains that evolution is one of the central platforms of biology and, if psychology and psychiatry are to be considered as belonging to the biological (as opposed to the social) sciences, then evolutionary theory must have relevance to the study of the human mind.⁸

In a time when 'biological psychiatry' has taken on hopelessly reductionistic connotations, for example relating the complexity of human emotions and psychopathology to often questionable and over-simplistic neurotransmitter theories, psychiatry and psychology were never more in need of the fresh perspectives that evolutionary theory would bring to the study of the human mind. A 21st-century presentation to the Linnaean Society is needed, this time on evolutionary psychology and psychiatry.

- 1 Darwin C. *On the Origin of Species: by Means of Natural Selection, or The Preservation of Favoured Races in the Struggle for Life*. John Murray, 1859.
- 2 Darwin C, Wallace AR. On the tendency of species to form varieties; and on the perpetuation of varieties and species by means of natural selection. *Journal of the Proceedings of the Linnean Society of London: Zoology* 1858; 3: 46–50.
- 3 Quammen D. *The Reluctant Mr. Darwin. An Intimate Portrait of Charles Darwin and the Making of His Theory of Evolution*. Atlas Books, 2006.
- 4 Darwin C. *The Expression of the Emotions in Man and Animals*. John Murray, 1872.
- 5 Nesse RM. Is depression an adaptation? *Arch Gen Psychiatry* 2000; 57: 14–20.
- 6 Stevens A, Price J. *Evolutionary Psychiatry. A New Beginning* (2nd edn). Routledge, 2000.
- 7 Buss DM. *Evolutionary Psychology. The New Science of the Mind* (2nd edn). Allyn & Bacon, 2004.
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Corrections

White-matter hyperintensities in first-episode psychosis. *BJP*, 193, 25–30. Page 29, col. 1, 2nd sentence should read: Although several papers reported frontal^{27,31} and frontoparietal^{32,33} location of white-matter lesions in association with bipolar disorder, only one recent study³⁴ directly compared frontal deep white-matter hyperintensities between participants with bipolar disorder and controls, in an elderly population, and found increased frontal scores bilaterally in the bipolar disorder group.

Psychiatry in pictures: military psychiatry at the Maudsley, 1918. *BJP*, 192, 439. Those photographed were, from left to right, standing: Captain Bernard Hart, Captain Frederick Golla, not known, not known, Captain G. W. B. James, possibly Captain Millais Culpin; seated: Captain W. H. R. Rivers, not known, Lt Colonel Atwood Thorne, Lt Colonel F. W. Mott. If any reader should know the identity of those not named, please contact Professor Edgar Jones (Edgar.Jones@iop.kcl.ac.uk).

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