Book reviews

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Genes and Behavior: Nature–Nurture Interplay Explained

In this book Mike Rutter sets out to explain how genes might influence behaviour and how this might be important in understanding the causal pathways leading to various behavioural traits and psychiatric disorders. This is an ambitious and challenging project, not just because the issues themselves are so complex and our current understanding so rudimentary, but also because this area has suffered from a polarisation of views between the proponents of Nature and Nurture that has been most unhelpful. The great majority of researchers have realised for some time that the key to understanding individual differences in susceptibility to behavioural disorders will come from understanding how the effects of genetic variation and environmental exposure interact over the lifespan, but the rumbling guerrilla war between behaviour geneticists and psychosocial researchers has been sustained by the fact that the different schools have approached their subjects from different theoretical and methodological perspectives and spoken different languages in which apparently similar terms actually describe crucially different concepts. As with many intellectual disputes the differences have had a lot to do with reciprocal misunderstandings of methodology and language, but the flames have been fanned by evangelists on both sides.

What is needed, therefore, is someone with an understanding not just of genetics, but also of psychosocial and developmental research — to integrate the results from these areas, to illuminate the misunderstandings and to point out where, in their enthusiasm, the evangelists have strayed from the path of righteousness and, in some cases, common sense. As such, Mike Rutter is probably one of the few people in the world who could have written this book.

Most of the readers of the Journal will be familiar with his work and will not be surprised to learn that he brings to the task his formidable analytical approach whereby the problems and issues are dissected and the bones laid bare. He has worked hard to present a clear and non-technical account of a number of different areas of research including behaviour genetics, psychiatric genetics and research into environmentally mediated risks. Crucially, the treatment of these issues includes clear descriptions of the underlying assumptions, careful consideration of the strengths and weaknesses of the methodology and cautious interpretation of the findings. This is complemented by two chapters that serve as a non-technical primer in genetics and that illustrate how genes might influence behaviour and, equally importantly, show the limits of simple genetic explanations.

Finally, having brought the reader to a level where they can understand the issues and interpret the findings, he brings together genes and environment and reaches the heart of his argument: the effects of genes and environment are inextricably interwoven. With rare exceptions, human traits and disorders, medical as well as psychiatric, are multifactorial, with good evidence of both genetic and environmental influences. On the one hand, this means that genetic influences are pervasive, though not necessarily predominant, across virtually all behaviours. This applies not just to disorders but also to psychological traits that are present to various degrees across the general population. The latter include temperamental and cognitive characteristics and even socially defined behaviours such as criminality and divorce to the extent that they are influenced by underlying temperamental and cognitive characteristics. On the other hand, it seems that in many, and perhaps most, instances the effects of genes are likely to manifest through various types of interplay with the environment. Thus, some genetically influenced behaviours will affect the extent to which individuals are exposed to environmental risk (so-called gene–environment correlation). To give one example, antisocial behaviour in a parent, which is influenced by genetics, can disrupt family function, which in turn will contribute to a child’s risk of developing antisocial traits. In other words, the parent’s genes are contributing to a child’s risk via an environmental mechanism. There are also other forms of gene–environment correlation by which an individual’s own behaviour, again partly influenced by genes, can influence exposure to environmental risks either directly or by evoking risk-imposing behaviour on other people such as family members.

The other main way in which the effects of genes and the environment collide is via so-called gene–environment interaction. This describes the situation whereby genes influence a person’s susceptibility to environmental risk. For example, there is an accumulating body of evidence that variation in the gene encoding the serotonin transporter might modulate the extent to which depression occurs as a consequence of exposure to adverse experiences such as stressful life events and childhood maltreatment. Rutter argues persuasively that gene–environment interactions of this sort are likely to be common and that we must take this into account in our research.

Thus, genes are not deterministic and they do not ‘cause’ behaviours or psychiatric disorders such as autism and schizophrenia in any direct way. Rather their effects on behaviour are indirect and mediated to a considerable extent via the environment. The challenge now is to delineate gene–environment interplay more widely and to begin to determine the causal
pathways – biochemical, cellular and cognitive – that mediate psychiatric and behavioural phenotypes. There seems little doubt that this is the most promising approach to developing a scientific understanding of psychiatric disorders, but it will require increasing multidisciplinary collaboration and, particularly for geneticists and psychosocial researchers, not only to talk the same language, but also to work together. Fortunately, there are signs that this is happening.

Any one of a serious interest in understanding how genes might influence human behaviour and psychopathology should read this book.

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Intrusive Thoughts in Clinical Disorders: Theory, Research, and Treatment

Good students of psychopathology ask us whether fine distinctions really matter, especially when confronted by yet another unfeasibly long German word. In fact, interpreting thoughts of harming a baby as obsessional rather than goal-directed counts for much at a child protection conference. In this multi-authored book phenomena similar to the traditional obsessional thought are identified across a range of problems and brought together in a concept of ‘unwanted intrusive thoughts’. Obsessive–compulsive disorder is covered, but so are anxiety, psychosis and sex-offending, among other areas.

But first, imagine a big white fluffy bear. And now do your best not to think about that bear again while reading this review. You may find this is very hard to keep up, even for a few seconds. Wegner’s ‘white bear experiment’ conveys the most important message of this book – thought suppression is bad news. Efforts to control intrusive thoughts only fuel them. This is not a new finding in obsessive–compulsive disorder, but for psychosis, the case is persuasively made that some psychotic symptoms have much in common with intrusive thoughts in other disorders, and that helping people to find alternatives to thought suppression should be a feature of cognitive approaches. We are reminded how we all experience the occasional intrusive thought; but it is how we appraise such thoughts that matters. In some areas these concepts work less well. The distinction between intrusive thoughts and negative automatic thoughts in depression was particularly unclear.

There are also a number of omissions. A critical appraisal of the broadened concept of intrusive thoughts from a rigorous philosopher would have been welcome. Aggression and self-harm are not addressed, and the relevance of intrusive thoughts to risk assessment was absent.

This volume is a complex literature review of theory and practice at the cutting edge of cognitive psychology approaches to mental illness. It is not a practical manual for busy generalists. However, specialist cognitive therapists will learn something new and have thoughts provoked that are better not suppressed.

So how are you getting on with that bear?

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EMDR and the Energy Therapies: Psychoanalytic Perspectives

This is a fascinating book, not only because it is about the use of EMDR (eye movement desensitisation and reprocessing), which offers a very interesting and powerful approach to the treatment of post-traumatic stress disorder (PTSD) and other disorders, but also because of the way Phil Mollon compares its use to current psychoanalytic practices. I was surprised when, after a description of EMDR and the energy therapies as powerful therapeutic tools, he launched into a validation of the early Freud, who wrote the Project for a Scientific Psychology in 1895. Referring to Shapiro, the founder of EMDR, he writes: ‘For Freud, as for Shapiro, psychopathology (and dreams) are constructed out of networks of memories; the original troubling memories of childhood experience being subject to strategies of avoidance, yet ever ready to be triggered, with accompanying physiology, when an associative cue is encountered. This is the psychodynamic mind. Therapy consists of accessing and reprocessing, with adult awareness, the desires and the memories or phantasies of pain associated with them. Both EMDR and Freudian based psychoanalysis do this.’

The difference is that resolution in EMDR is through intrapsychic processing, rather than through the interpretation of the transference. This processing is achieved by bilateral stimulation embedded within a clearly outlined protocol. The bilateral stimulation can involve eye movements, sounds or finger-tapping, depending on the client’s preference.

The energy therapies that Mollon discusses address disturbances in a person’s energy fields and use various techniques to facilitate the ‘distribution and flow of quantities of excitation’, thereby relieving the patient’s symptoms.

I know that most psychoanalysts feel obliged to use Freud to validate their belief systems or their work, but I was surprised at how Phil Mollon links EMDR to Freud’s early theoretical formulations of the unconscious. I was even more surprised at the way this well-known senior psychoanalyst uses his findings in EMDR to attack current psychoanalytic techniques, with their emphasis on the ‘here and now’ approach to treatment. He criticises this form of psychoanalysis for not having the means to process trauma and other damaging past experiences.