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Book review

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Doctoring The Mind: Why Psychiatric Treatments Fail. By R. Bentall. (Pp. 304; ISBN 9780713998894.) Penguin, UK. 2009.

Richard Bentall's *Doctoring the Mind* is an interesting book, and has caused a stir in British psychiatry, in part because his perspective, based on experience as a clinical psychologist and researcher, is so different from that of many psychiatrists. Unlike antipsychiatry writings of former times, it is well written, well referenced, trying as far as possible to argue in scientific manner from evidence, through theory, to conclusions.

In reviewing it, I should declare my own formative experiences, and possible biases. At one time I was a medical student, interested in neurophysiology (including some single unit recording experiments), but was overwhelmed by a psychotic disorder, which finished any attempt to complete the degree, and which was eventually given the diagnosis of schizophrenia. Subsequently, I obtained a doctorate in neurochemistry, and later, as an academic in New Zealand, devoted much time to developing a psychobiological theory of schizophrenia and related disorders. Ever since my days as a research student in Glasgow in the early 1970s (when I was still fighting my own demons) I have recognized the vast divide between proponents of biogenetic and psychosocial concepts of major mental illness. My bias at that time was biological, and that bias is still strong; but over the years there has been a gradual shift towards the middle ground.

The overall aim of Bentall's book, whose emphasis is mainly on psychotic disorders, is to show that the approach of much of contemporary psychiatry, on diagnosis, causes and treatment is far from scientific, and that clinical psychology, a relative newcomer since the Second World War, has better scientific credentials, and offers better methods of therapy. This aim is developed with regard to long-term trends in outcome, diagnosis, relevance of biogenetic models *versus* psychological models, and treatment (pharmacological *versus* a variety of psychological interventions). The style is easy for the reader, and the scientific parts of the argument are interspersed with a variety of personal anecdotes and single-case vignettes. The latter give a vivid impression of what mental healthcare in the NHS is like today, often rather bleak, sometimes lacking humanity, and no doubt under-funded. Although I have not lived in Britain for many years, this impression rings true to me, from what I hear from friends who have been patients in the NHS mental health services, and from reading British newspapers. *Plus ça change, plus c'est la même chose*. However, when we come to the scientific part of the argument, I adopt different standards of evaluation, and this will be the main focus of my review.

In one of the introductory chapters, the claim is made that there has been no improvement in outcome for major mental illness in the last century. Ask the few remaining psychiatrists old enough to have known mental illness before the days of psychotropic medicine. They would not agree. Speaking from my own experience, in 32 years in New Zealand there has been vast improvement. In the early days of the Schizophrenia Fellowship there, all the heart-breaking stories I heard were from despairing and angry parents never from patients themselves. Twenty years later, and even more so now, it is those patients and ex-patients themselves who tell their stories (often in public), and very many of them go on to live independent and fulfilled lives. More important, epidemiological evidence cited by Bentall does not support his claim. Cross-generational comparisons of outcome are very difficult to make. Those using 'social recovery', 'proportion of patients in hospital', or statistics on social security disability payments, mortality or suicide as yardsticks, are affected by many factors (e.g. overall economic conditions, and a variety of government policies) additional to actual health status. One source (Hegarty *et al*. 1994) is cited as showing improvement in outcome between 1950 and 1970, but falling again in recent decades. This ignores the fact that 42% of all studies were from the USA where diagnostic criteria for schizophrenia became more rigorous (and therefore restricted to more severe cases) after 1980 with the introduction of DSM-III. A table later in this paper shows that neuroleptic treatment *does* produce improvement in outcome to a high degree of statistical significance.

Part II ('Three myths about mental illness') starts with a chapter on diagnosis. The author suggests that the validity of diagnostic categories lies at the heart of modern psychiatry, and argues that most such categories lack secure validation. I wholeheartedly agree. Scientific validity has been sacrificed on the altar of replicability. However, I offer some qualifiers

here. Any classification system at its outset is likely to be provisional, supported by the authority of its founders, and the faith of their supporters. Only over generations does the superior validity of one scheme over another become established. In this sense many of the concepts of clinical psychology are also not very secure (i.e. not rooted in the common language of science developed since the 17th century). The specific issue of the differential diagnosis of schizophrenia *versus* bipolar disorder is discussed. Bentall (like many others, including Kraepelin in his later years) finds this an unreliable distinction. I know this to be true. I suggest that, to define underlying causal processes, we might do better by using stable trait characteristics (well documented for schizophrenia, but not for bipolar disorder), rather than the psychotic manifestations or chronic impairments due to repeated episodes (where the two disorders may converge). The distinction between 'state' and 'trait' is not well discussed in this book, and when it is, is done so in dismissive fashion. The transient state of psychosis (and possible transient states emerging from other mental disorders) may well correspond to discrete psychopathologies, while on-going traits merge continuously into the normal range of personality variation. In other words states *might* be best classified categorically, traits always dimensionally.

All this raises the question of *how* scientific concepts of mental disorder are to become validated? My answer is in terms of the coordinated reasoning needed to develop a proper disease theory, and, as in more mature sciences, this is likely to involve 'cross-level explanations', in this case linking the biological to the psychological domain. Currently there are no such theories in psychiatry, and few in clinical psychology. Nevertheless there *is* some point to the process of diagnosis, as practised; but it needs to be refined, not abandoned (as Bentall seems to suggest). There *are* important distinctions to be made, for instance between psychotic disorders, mood disorders, OCD, anorexia, etc.

Chapter 6 is about genetics and psychotic disorders, and Bentall (mainly) sees little basis for genetic causation in published evidence. Some of his critique is sharp and straight to the point. He clarifies important flaws that are commonly made. Notably, when 'heritability' is quantified as the proportion of variance explained by some factor, it is not a robust measure, because it varies according to the magnitude of the contribution of all other influences to variance. However, his sources are mainly older ones, and he misses some key points: For instance, in the debate about twin studies, a key parameter is the MZ/DZ concordance ratio. If this is much greater than 2 (as it is in schizophrenia) it implies multifactor inheritance, a form of inheritance scarcely discussed at all by Bentall. On molecular genetics we are in complete accord. No genes of major effect have been found and there has been vast waste of resources looking for 'the gene' for schizophrenia. In my view (and Bentall might partly agree) there *is* a genetic basis for this disorder, but it is by no means as strong or as deterministic as commonly implied. The evidence on the heritability of mental disorders is usually more important for understanding the theoretical basis of these disorders than it is for practical decisions, such as whether couples should have children. For me, the inheritance data is thus far more important than evidence on molecular genetics.

Within this chapter there is a substantial section on psychosocial determinants of psychosis: Although my background is in basic neuroscience, I have accepted this contribution to causation ever since I read papers on psychotic illness in some immigrant groups. This also led me to the view that the effect is exerted in formative years, rather than as immediate triggers of psychotic illness. The topic of childhood abuse in relation to psychotic illness is emotive and highly controversial. In the past, I have read many papers on the subject, which, due to great methodological flaws, have left the matter unsettled in my mind. In many of the papers cited by Bentall the quantitative importance of the results is 'amplified' in various ways: by accepting statistical significance (rather than effect size) as a gold standard, when there are very small numbers of affected cases in control and exposed groups; by using raw descriptive data when control and exposed groups are not well matched; or by selecting the more dramatic comparisons from raw data sets, rather than the comparisons after covariation with variables other than the risk factor at issue. A few of the papers cited here (especially that of Shevlin *et al*. 2007) were of high standard, documenting the 'odds ratios' (OR) of various types of hallucination, for various types of abuse, and covarying for many other factors (age, gender, depression, street drugs, parental depression, urbanicity, income, alcohol abuse). In Shevlin *et al*.'s own data, OR for visual hallucinations was 1.65* ('childhood neglect'), 1.04 ('physically abused as child'), 2.37* ('raped at <16 y'), 1.62* ('molested <16 y'). The corresponding OR values for auditory hallucinations were 1.35, 1.18, 1.75* and 1.93* (*$\leqslant 0.05$). These are the best-analysed data I have seen on this subject, showing an effect which is substantial, although by no means as large as the 15- or 20-fold increase sometimes claimed.

Chapter 7 is entitled 'Brains, minds and psychosis: the myth that mental illnesses are brain diseases'. After an introductory narrative section, the author comments, about attempts to pin down the brain biology underlying psychosis, that they have 'led

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more often to confusion than to clarity'. I agree entirely. What follows are two very flimsy sections, respectively on brain morphology and neurochemistry – flimsy, mainly because of the inadequacy of material cited – and then he moves to other areas (see below). The real problem is neither the quality nor the quantity of empirical data about the brain now available, but the true enormity of the task of making sense of it. Bentall is aware of this, but runs away from it by suggesting that most of the data are irrelevant. Most biological researchers engaged in collecting empirical data also avoid the task of building a coherent theory from the multitude of fragments, by engaging in yet more frenetic data-gathering. As one whose doctorate was done in a zoology department, with ethnologists as fellow students, the phase 'displacement activity' comes to mind. When can a true tradition of theory in proper mutual interaction with empirical work be established in psychiatry, as it has been in physics since its earliest days?

After this section, chapter 7 continues with a section on cognitive neuropsychology. Available evidence documents a large number of trait markers for schizophrenia (as diagnosed), which show tendencies to heritability similar to that of the disorder itself. Bentall deals with little detail here, and is somewhat dismissive of the evidence, on the grounds that it is non-specific, and not associated with actual psychotic symptoms (both of which grounds are true). However, the evidence becomes more significant if one considers the whole profile of cognitive abnormalities as indications of underlying differences from normal brain function, but defining the enduring non-psychotic traits, rather than the emerging psychotic 'fever'. What is then required is to construct a proper cross-level theory of those cognitive abnormalities in terms on brain processes. This is likely to involve aspects of brain biology other than transmitter imbalance. Since Bentall assumes that psychosis arises mainly from psychosocial determinants, with little genetic basis, there is no need for him to factor in enduring cognitive trait profiles to understand psychotic (or any other) illness. This, I believe, is a mistake. We need more research using profiles of psychological traits to define vulnerability to various mental disorders (and not just psychotic illness).

The final sections of this chapter deal with Bentall's own view of psychosis. Here he is at his best. Delusions (especially paranoid) are seen as the combined effect of a defensive style of attribution due to low self-esteem, a tendency to 'jump to conclusions', and a poor 'theory of mind'. For myself, I suggest that all these three bodies of evidence can be better explained in terms of hyperactivity during the psychotic state of some form of mental association ('imagination out of control') especially where basic motivational drives are concerned, and this can be linked directly to overactivity of dopamine in the striatum. For instance Bentall's own finding that causal attributions of paranoid delusional patients focus on other persons ('powerful others') can be linked to the idea that the part of one's environment which is the richest field upon which imagination can work is the most complicated part – namely other people. The section on auditory hallucinations, which Bentall attributes to defective source monitoring, is also interesting (and I noted especially the reference to Judith Ford's electrophysiological paper). Again, I have an alternative account, that slower axonal conduction in schizophrenia between anterior and posterior language zones of the left hemisphere means that, during inner verbal thinking, the posterior zone is not coordinated with the anterior one with such exact timing as in normal persons, so that its activation appears subjectively more akin to an external voice than to an internal thought. Of course Bentall believes that the ultimate cause of both delusions and hallucinations lies mainly in the social realm, whereas I tend towards inherent biological abnormalities. I admit that social adversity leads to paranoid, and self-referential modes of thinking; but this is a far cry from the fast-moving delusional elaboration seen in florid psychosis. Important criteria may yet be found for differential diagnosis in this area.

It might also be incorrect to identify auditory hallucinations (and Schneiderian symptoms) as entirely 'symptoms of psychosis': Although they can be regarded as 'a break with reality', they often persist despite stabilization in most other aspects of acute illness, and for 'voices' at least, are common in people who are not actively ill. I regard them as partly a trait, but one which may be exaggerated at times of acute illness. In this whole section there are a number of important unresolved issues. The detailed debate is welcomed, and will reach resolution soon, I believe.

There are two chapters on psychopharmacology, one more general, with comments on the pharmaceutical industry and then on the SSRIs, the second focusing on antipsychotic drugs. I agree with much of what he says about the pharmaceutical industry, but some companies have had sincere concern about side-effects ever since the 1960s, and others now use some of their profits to support educational and social programmes. I focus here on antipsychotic drugs rather than the SSRIs (about which my knowledge is little better than the layman's). Bentall accepts that antipsychotic drugs are effective in stabilizing acutely psychotic patients. He touches on the still-debated issue of the long time course (weeks or months) before

the full benefit from these drugs is achieved. The significance, both clinical and theoretical, of this important fact (which I know full well!) is not appreciated by most research psychiatrists, nor by Bentall. This is surprising because, if the reasoning is followed through, it affords a bridge between biology and psychology. He regards the real issues as (*a*) getting the right dose and, (*b*) once the initial stabilization period is over, the length of treatment thereafter. On the issue of dose, I agree entirely with Bentall. There has been by no means enough effort to define on an individual basis the minimum/optimum dose of any antipsychotic drug, nor in promoting what *is* known, as clinical guidelines. The best length of treatment after initial stabilization is a complex issue, closely related to the question: 'What happens when a patient stops taking the medication?' On this, there is a short section on withdrawal-emergent psychosis. Much more could be said here, and much more research is needed to clarify the different trajectories, and brain mechanisms involved, after withdrawal of medication. There may be important differences between patient groups, and perhaps between medications.

Bentall's critique of RCTs raises two other issues: first, he suggests that the claim that atypical medications have fewer extrapyramidal side-effects than typical medications is exaggerated because the latter were prescribed at higher equivalent doses than the former in the relevant trials. My reading of the literature tells me that this is true of many North American studies, but not of European studies, where the superiority of the atypicals *is* found for equivalent doses. The second point he raises is on the superior efficacy of clozapine, especially in refractory patients. The 1988 study of Kane *et al*. is criticized due to its use of doses of the comparison drug (chlorpromazine) much larger than optimal. However, there is evidence suggesting that optimal dose varies 10-fold or more across patients. The refractory patients in this study would be amongst the least sensitive. A third point is that he is critical of the increasing adoption of early intervention strategies. While, in my view, drug treatment is ill-advised until patients are showing signs of active illness, or are actively seeking help, I suggest that this strategy, combined with a good public education policy, and non-pharmacological intervention in at-risk young people who are not yet ill, should become a cornerstone of future services for psychotic illness.

One of the closing chapters is entitled 'The importance of kindness'. Yes! Despite my having greater faith in antipsychotic medications than Bentall, here we sing from the same hymn-sheet; and clearly the best medicines in the world cannot induce patients to make sense of incomprehensible experiences. That is one of several roles of psychotherapy, which he describes well in the later sections of the book; but of course, giving full attention to the individual needs of each patient may become impossible when a clinician's case load is too great. Moreover, kindness may not be enough without extensive clinical experience, enlightened (dare I say?) by advanced scientific understanding of brain processes.

I have a few more general points: (i) there are some inconsistencies. Although his perspective at times indicates a blanket dismissal of the scientific credentials of psychiatrists, Bentall uses a great deal of evidence and concepts from psychiatrists' research to support his argument. Some of the arguments used to criticize biogenetic research are not used to criticize psychological research. (ii) Often he makes damning comments when dealing with detail, but softer and (to me) more acceptable statements as summaries. Quoting short bits of the text out of context could thus be used to support quite diverse conclusions. I was recently in Hong Kong, helping with the launch of their early psychosis programme when a newspaper article by Bentall (copyright *The Guardian*) appeared in the *South China Morning Post*. This caused alarm to both me and my hosts, because it tended towards the more strident and simplistic version of his arguments. (iii) Best practice may not be the usual practice, but I know plenty of psychiatrists who are light-years ahead of the stereotyped biogenetic demon who lurks the pages of this book. Moreover, in some countries there is little professional rivalry between psychiatrists and clinical psychologists, but rather (despite inevitable power imbalance) a complementarity, with recognition of each other's different skills and roles. (iv) The unhelpful attitudes the author portrays in some psychiatrists reflect not necessarily the influence of the pharmaceutical industry. Western societies are still engaged in the slow process of escape from the asylum era. The institutions may have closed, but the mind-set they engendered is not yet fully eradicated. This affects the whole of society and will take generations to disappear. Good trainee psychiatrists may have made the break; some may not yet have escaped from the asylum. In the programme I joined in Hong Kong the people recruited for their service had an average age of 30 or less, deliberately so, so that they are untainted by old traditions.

This book is a serious attempt to reformulate concepts of major mental illnesses (especially psychotic disorders) and their treatment. There is plenty of room for this. I accept some of the arguments, and some of them I sharply reject. It is much easier to adopt an entrenched position, dug in on either side of the battlefield, than to explore the dangerous middle

ground, but that indubitably is what is needed. The book should be taken seriously. It is not a foolproof and fully rigorous argument. Nevertheless, it should serve a very valuable purpose as a basis for on-going dialogue between those whose allegiances, while definitely on one side or the other of the great divide, are brave enough to venture into the no-man's land in between. *For such people, especially those who can rise above the armies on either side, who can take a bird's-eye view of the whole scene, and who can then undertake the extremely complex task of assimilating the disparate perspectives, this book is recommended. Since the book is written definitely from one side, I recommend it especially for those of the other persuasion, that is those with biogenetic inclination*.

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