

the phenomenological realm without necessary reference to the organic or psychological realms. In clinical practice we do this all the time and our classifications of mental disorders depend upon it. Parnas and Sass though, I think, reach a block in their exploration of this realm because they do not expand phenomenology to include ethics and philosophical anthropology. They talk about *structures of subjectivity* or the *constitution of subjectivity* rather than the *normativity of the human being* or the *constitution of the human being*. It is ethics which explains the fact that psychiatry has developed *laws* – laws which permit or prohibit probably the most momentous interventions psychiatrists make in the lives of their patients: deprivations or restrictions of freedom with the goal of restoring or increasing freedom. It is philosophical anthropology which gives provisional/somewhat metaphorical explanations of what our *nature* as a human being is, what mental disorder can teach about this nature, and what the appropriate aims of psychiatry should be.

I have discussed symptoms and that brings us nicely to the last section of the book: nosology. Psychiatry cannot just speak of symptoms. The term ‘symptom’ means an indicator of something else, which, by convention in psychiatry we take to be disease (greek: nosos). The problem psychiatry has – identified decades ago by Schneider – is that for all but the organic mental disorders we have no stable referent for disease construed as organic or even psychological dysfunction. This, together with the heterogeneity of symptoms which we regard as potential indicators of psychiatric disorders, leaves our nosological concepts vulnerable. Kenneth Kendler and Peter Zachar in their essay on nosology use the striking phrase ‘incredible insecurity’. Yet both Kendler and Zachar want to avoid abolishing nosology. Zachar, in one essay, advocates a kind of pragmatic approach to diagnostic categories suggesting that they are ‘real’ but not ‘true’ reflections of nature. This approach is rather similar to that taken by Schneider decades ago. Kendler suggests that we try to solidify our nosological concepts by both broadening them where appropriate and running them through evolutionary ‘tape rewinds’. Try this thought experiment: would ‘schizophrenia’ re-appear on the human scene if we rewound to the early history of *Homo sapiens* and pressed ‘play’, allowing human history to take a different course? Alas, Parnas comments, this is a thought experiment only and cannot be tested: mental disorders are too soft to leave a fossil record. But is it just a thought experiment? *Homo sapiens* has developed in all sorts of different directions across the planet – diversifying out of the rift valley into a multitude of forms of life. These are in front

of our eyes: human cultures and ethnicities. Anthropology, under the influence of philosophical doctrines of relativism, has been emphasizing the radical diversity of human cultures and is now, having deconstructed any notion of *human nature*, seeking to reinvent itself. Perhaps we can use cultural diversity to test our nosological and phenomenological concepts. We may get a purer idea of, say schizophrenia and bipolar or unipolar affective disorder, when we look for invariance across culture and ethnicity; when we immerse ourselves in the manifestations of the disorders in different cultures and ethnicities and then, drawing back, try to get into focus common phenomenological structures. Perhaps transcultural, anthropological psychiatry can, ironically, save us from nosological nihilism.

This is a high-quality publication achieving genuine dialogue between psychiatry and philosophy. It is exciting to see first-rate philosophers engaging with psychiatry and with leaders of academic psychiatry taking philosophy seriously. The tone and orientation of this book is one of complexity and pluralism in psychiatric explanation: it conjures up the image of the subtle doctor.

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A Neurodynamic Theory of Schizophrenia (and related disorders). By R. Miller. (Pp. 681, £77.502, ISBN 978-0-473-13653-6 hb.) Lulu.com: New Zealand. 2008.

Modern schizophrenia research covers a vast intellectual territory, from urbanicity to P50 waveforms, from smooth-pursuit eye movement to D₂ receptors, from factor analysis to white-matter tracts, and so-on. Surely no one person can have the energy to acquire mastery in all these sub-fields, let alone attempt a synthesis of the present knowledge in all its bewildering complexity. But Miller seems to be undaunted by the sheer size of this task and has produced a work which is readable, highly educational and original.

The main aim is to provide support for his neurodynamic theory of schizophrenia, which can be summarized as follows: (1) Schizophrenia (trait) and psychosis (state) are separable, *although researchers have often failed to make this distinction*. (2) Schizophrenia is based on a failure of rapid integration within the cortices. (3) The right hemisphere, which deals in wholes (Gestalts), has more dependency upon fast conduction

within and between cortical modules than the left. (4) In schizophrenia there are consistent deficits in fast integration arising from slower conduction speeds, and this is manifest especially on the right-hand side. (5) Impaired rapid cortical integration predisposes to excess impulse traffic in midbrain dopamine neurons and psychotic episodes.

One by-product is that, given the sheer wealth of information, Miller's book functions as a reference manual and a source of information, rather than a mere vehicle to advance his theory. The central chapters – a series of exquisitely referenced reviews – follow a common format. The historical underpinnings of ideas (and methods) are traced to their roots, followed by their initial popularization and, all too often, their demise amid inconsistent results and controversy. Those ideas which do survive are given a more thorough treatment. Miller explores where the sensory, motor, cognitive, electrical and structural deficits of schizophrenia fit (or are at odds with) his central theory, of impaired fast cortical conduction. The by-product for the reader is a well-organized, comprehensive and authoritative description of endophenotypes across the schizophrenia spectrum and in first-degree relatives of patients.

A Neurodynamic Theory will be of interest to 'coal-face' psychiatrists of any persuasion wondering where modern schizophrenia research is at. Miller completely transcends the mind/brain, endogenous/environmental debates; and places his dialogue firmly within the realm of neural plasticity and cortical dynamics. A few gems stand out. The white-matter cables interconnecting the cortex (Miller believes there are too few of the large fast-conducting fibres in schizophrenia) are themselves subject to plasticity – intriguingly they become larger and more thickly myelinated in enriched environments. And, in contrast to popular belief, schizophrenia patients are not uniformly outperformed by healthy controls – the resulting excess of slow cortical conduction favours, for example, better subliminal perception in patients *versus* controls.

The attention to detail, the rigorous analysis of methods (both historical and current) will appeal to present-day schizophrenia researchers. Every working schizophrenia laboratory (wet or dry) should endeavour to secure a copy of this book. The text functions equally well as: an arbiter in laboratory debates; as a quick, emergency solution for knowledge gaps; for teaching purposes; and perhaps most of all – in presenting sensible research questions which can be tested experimentally. For example, the modern methods of white-matter tractography combined with electrophysiological recording might offer a way to directly measure conduction times in cortical fibres and put Miller's central hypothesis to the test. Another route may be the analysis of RNA expression and proteins in the white matter, an area attracting recent attention.

The book is not without its faults. Inevitably, any chapter on schizophrenia genetics will date very quickly. The fanfare over neuregulin, dysbindin, etc. is not covered here. The genetics chapter can be skipped through without impoverishing the central themes. In contrast, the chapter on dopamine should not be missed. Miller goes beyond typical discussions, asking key questions, for example, what drives the excess of dopamine in acute psychosis? And how does dopamine impact on the striatal circuitry to elicit psychosis? He interrogates the anatomical connectivity and the receptor subtypes, searching for a neurological account rather than being satisfied with 'reified' psychological concepts, which although important and necessary, tend towards the dogmatic.

Many will be put off by the size of this book (>600 pages). For those who do engage, the rewards are likely to be high. An excellent synopsis (chapter 2) serves as a concise summary and introduction to Miller's ideas. Interested (or sceptical readers) can dip in and out of the central chapters for more complex material and discussion.

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