

Editorial

Getting stimulated?

The brain, indeed the human mind is attuned to detecting stimuli. Specifically, it detects changes in both our immediate environment and monitors mental activity and internal bodily variations. It is possibly our primary role 'to attend' and certainly from a survival perspective a necessary skill. But attention is not a single construct, function or entity; it is a collective term for a number of interacting brain processes that subsume perception, cognition and behavioural tasks. Dissecting, both in theory and in practice, complex 'natural' processes is difficult and often unsatisfactory, but perhaps three component processes of attention can be readily identified, namely selection, vigilance and control. Acting in concert, the aim of these three processes is to achieve and sustain goal-directed behaviour in the context of a multitude of distractions (1). In the last decade, research examining attention and investigating the various aspects of this process has expanded exponentially.

In this context, it is interesting that in recent years, there has been a resurgence of interest in 'stimulating brain activity'. Direct stimulation of the brain is nothing new, with electroconvulsive therapy (not quite direct stimulation but almost) being widely available for the greater part of the 20th century, and in more recent years, transcranial magnetic stimulation has come to the fore along with a re-emergence of interest in direct current stimulation. In this context psychosurgery has played a more interesting role with a primary focus on disconnecting pathways and altering activity within neural networks, as opposed to delivering additional stimulation (2). However, it has been argued that indirectly this may in fact bring about greater 'stimulation' by preventing the inhibition of activating circuits (3). However, it is the delivery of direct brain stimulation with precision, coupled with a deeper understanding of brain function that has perhaps reignited the field.

In this issue of *Acta Neuropsychiatrica*, a number of articles focus on aspects of 'brain stimulation' with one in particular that examines deep

brain stimulation in the context of Parkinson's disease (4). This interesting review highlights the importance of maintaining active research in this field because with technological and computational advances, it is highly likely that as increasingly sophisticated means of directly stimulating brain function are developed, coupled with advances in neuroimaging (5,6), these will have potential for use in neuropsychiatric disorders.

In everyday life, our thoughts are impacted on by internal and external stimuli and our routines are emotionally and behaviourally driven by a variety of cues along with our mental interpretation of them. I am therefore hopeful that you, as the reader, are being suitably stimulated by articles in *Acta Neuropsychiatrica* and have begun to anticipate the bimonthly issue of the journal. In return for this attention and expectancy, we will continue to strive to provide regular intellectual stimulation of the highest calibre and greatest variety. In this regard, much of the informal feedback we have received thus far resonates with these aspirations and views, but we are grateful to those who have taken the time to provide critical cues that are necessary to refocus our attention. With this in mind, I conclude by drawing your attention to a critique published in this issue in our comments section made by an editor of another journal emphasising the importance of language (7).

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