the wheel; the individual carries the beliefs and values of not only their family, but the norms of their society and the etiquette of their culture (Hui & Triandis, 1986). In such a world, confidentiality takes on a whole new meaning.

My first ward round in India was a powerful illustration of this difference. Ten family members surrounded the first patient, an elderly gentleman who lay in silence, gazing at the ceiling. Each one of these ten relatives was involved in this patient's care. Every neighbour in the local area knew that this farmer had been forced into a psychiatric hospital, physically restrained and sedated. They knew that he had tried to hit his wife several times, that he had smashed the furniture and screamed into the night. The entire village knew what was happening to this gentleman every day that he was in hospital.

When patients were first admitted into hospital, it was always the family member who was drawn into the conversation about the diagnosis and management. Discussions would be held with families about how their loved one should be cared for at home, the importance of exercise and regular meals, as if they were talking about someone who was not there. The ward would be filled during visiting times, neighbours and shopkeepers all coming to give their condolences and to hear about what was happening to the young boy from down the road. Patients' stories were not just documented on the ward round or discussed in meetings: they were gossiped about in the local cafe, sniggered at by young children and disapproved of by the elders. Being psychologically unwell was not a personal journey but a theatre.

#### Conclusion

This brief elective in India illustrates the diversity of medical practice. One can become so ingrained in the teachings of British medicine, with its emphasis on patient autonomy and healthcare as a public service, that the elective can raise feelings of tension and unease.

But the elective is also a powerful tool that can help us appreciate the symbiotic relationship between medicine, culture and the patient. There is no 'right' or 'wrong' way to practice medicine, but reflecting on our own practice can make us aware of our own expectations of how patients should present and how society should treat the unwell. In an age of globalisation and multiculturalism, the ability to acknowledge such bias in ourselves will make us more sensitive to our own Western values and ensure that they do not overwhelm our patient—doctor relationship.

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PANDORA'S BOX

Pandora searches world literature and other sources for evidence, news and matters of interest to bring the reader (and doesn't shy away from controversy). She welcomes comments and suggestions (via ip@rcpsych.ac.uk).

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### Can we become less selfish and kinder to others?

The 21st century is riddled with threats to humanity, with the climate changing relentlessly, increasing numbers of refugees fleeing conflict or poverty, the gap between the rich and the poor widening, and selfish individualism and populism taking over. There is a desperate need for 'prosocial behaviour', defined as 'behaviour that is costly to the individual but benefits others at the individual or group level,' and a willingness for cooperation and altruism from individuals as well as national and international agreements.

Can we change our attitudes? Can we be trained to become more altruistic, with our behaviour

becoming prosocial? Researchers from a variety of disciplines including philosophy, psychology, mathematics and economy have studied cooperation and altruism, but economic models tend to consider prosociality a stable social preference that cannot be modified.

Psychologists from the University of Wurzburg and the Max Planck Institute for Human Cognitive and Brain Sciences in Leipzig claim that changes can be achieved using appropriate mental training. In a longitudinal study lasting nine months, they used three training modules: mindfulness (present moment attention and body awareness); socio-affective skills such as compassion, gratitude and prosocial motivation; and

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cognitive flexibility and the ability to understand other people's perspectives.

They found that only the socio-affective training (module 2) had the effect of boosting altruistic behaviour. The authors suggest that cultivating these affective and motivational capacities in key settings such as schools, healthcare settings and workplaces could lead to better global cooperation and more caring societies. No doubt this would also have a beneficial effect on our mental health!

Böckler A., Tusche A., Schmidt P. & Singer T. (2018) Distinct mental trainings differentially affect altruistically motivated, norm motivated, and self-reported prosocial behaviour. *Scientific Reports*, 8 (1), 13560



## Is there a biological basis to the quest for dominance?

Our social behaviour is to a great extent influenced by our family and societal environment. However, our brain function has also a major role. Our ability to reason, feel and behave is dependent on neuronal activity mediating communications within various brain neurocircuits. Excitatory neuronal activity is moderated by inhibitory GABAergic interneurons, and the right balance is essential to our normal functioning. Our social and emotional behaviour is regulated by the corticolimbic system.

Neuroscientists at Duke-NUS Medical School aimed to unravel the molecular signalling basis in this specific part of the brain (corticolimbic) that regulates our navigation of social hierarchies. It has been established that a protein called brainderived neurotrophin (BDNF) is crucial to neuronal resilience and plasticity. In a study in mice, the researchers created transgenic animals by removing the BDNF receptor, tropomyosin receptor kinase B (TrkB), from GABAergic inhibitory interneurons in the corticolimbic area of the brain, thereby allowing unduly high excitatory neuronal activity to occur. This resulted in the mice becoming aggressive towards other (normal) mice in the group. The aggressive behaviour was not related to protecting territory or being physically stronger (they were injured more than the normal mice), but was aimed at achieving status and dominance over other mice in the group. By re-establishing the balance between excitatory and inhibitory neuronal activity within the system, the scientists reversed the abnormal behaviour of the mice with respect to social dominance.

This study adds to our understanding of the neurobiology of social aggression. Can we develop specific biological therapies for such behaviour?

Tan S., Xiao Y., Yin H. H., *et al* (2018) Postnatal TrkB ablation in corticolimbic interneurons induces social dominance in male mice. *PNAS*, 115(42), E9909–E9915.

# Is psychopathy a male leadership prerogative?

The latest global economic crisis and the behaviour of financial institutions and politicians have led to concerns about the personalities of those in power and whether psychopathy is prevalent in such individuals. Are psychopathic individuals more likely to become leaders and, if so, are they ineffective leaders? Research has been inconclusive.

In this study, researchers tried to find an answer by carrying out a meta-analysis of publications on the association between psychopathic personality characteristics and leadership emergence, leadership effectiveness and transformational leadership, based on data from 92 independent samples. They found a weak positive correlation between psychopathic tendencies and leadership emergence; a weak negative association between psychopathic tendencies and leadership effectiveness; and a moderate negative correlation between psychopathic tendencies and transformational leadership.

However, when the data were analysed per gender, psychopathic tendencies in women were negatively associated with effectiveness and transformational leadership and were not associated with leadership emergence.

The authors conclude: 'the concerns over psychopathic tendencies in organisational leaders may be overblown, but gender can function to obscure real effects'. We are still in the dark, but hopefully more data collection separating the genders will shed light in due course.

The message is that gender inequality transcends personality; even psychopathic women cannot do as well as psychopathic men in getting into positions of power!

Landay K., Harms P. D. & Credé M. (2018) Shall we serve the dark lords? A meta-analytic review of psychopathy and leadership. *Journal of Applied Psychology*, DOI: 10.1037/apl0000357.

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### Gender and professional networking

Gender equality is still to be achieved in the workplace, including health services. One factor giving men an advantage over women is that they are more successful at building professional networks. Why are women not as good at this?

A study carried out in Germany interviewed 37 high-profile women leaders in top corporations in an attempt to understand the underlying reasons. The researchers found that there are self-imposed barriers for women, which include modesty and moral concerns about 'exploiting' social connections. They also noted a tendency for women to underestimate and undersell their professional worth.

Pandora wonders, however, given the recent and increasing revelations of women being sexually exploited by men in power, why this was not considered as an additional important factor discouraging women from pursuing professional networks!

Greguletz E., Diehl M. & Kreutzer K. (2018) Why women build less effective networks than men: the role of structural exclusion and personal hesitation. *Human Relations*, DOI: 10.1177/0018726718804303.

# Could neurodegenerative brain disorders have their roots in embryonic brain development?

N eurodegenerative disorders such as Alzheimer's dementia and Parkinson's disease usually manifest in mature and old age and are increasing in prevalence as we live longer. One in 20 people affected by neurodegenerative diseases have a family history; the causes for the rest are yet to be unravelled.

Based on observations that somatic mutations occurring during stem cell division are responsible for many types of cancer, researchers from Cambridge University, UK, hypothesised that similar DNA 'errors' are likely to occur during the intense cell proliferation required for human brain development. Using tissue from the Newcastle Brain Tissue Resource, part of the Medical Research Council's UK Brain Banks Network, they sequenced 102 genes (many known to be related to neurodegenerative diseases) in 173 human brain samples. They detected somatic mutations in 27 of 54 brains (healthy ones as well as those of patients with Alzheimer's and

Lewy body dementia). Using a mathematical model of neurodevelopment, they predicted that islands of pathologically mutated neurons are likely to be common in the general population and could lead to degenerative diseases in later life.

Keogh M. J., Wei W., Aryaman J., et al (2018) High prevalence of focal and multi-focal somatic genetic variants in the human brain. *Nature Communications*, **9**(1), 4257.

### The double burden of malnutrition

The double burden of malnutrition (DBM) includes undernutrition (stunting, wasting, and vitamin and mineral deficiency) as well as overweight, obesity and diet-related non-communicable diseases, and has a devastating effect on health in low-, middle- and high-income countries. There are also serious and lasting developmental and economic effects of DBM, with low- and middle-income countries bearing the greatest burden.

A symposium co-organised by the International Atomic Energy Agency, World Health Organization and UNICEF will be held in Vienna, Austria, in mid-December 2018, and aims to help improve our understanding of how to deal with DBM by sharing the latest research findings and countries' experiences with programme interventions and policies implemented.

Countries are committed to dealing with nutrition problems as part of the UN Decade of Action on Nutrition and Sustainable Development Goals. The symposium will identify considerations for policies and action plans to support member states in achieving their defined 'tackling nutrition' goals.