Social inclusion has to be a key aim for any mental health service, but there are specific difficulties in measuring this in several marginalised groups. Writing in the Lancet, Aldridge et al. systematically reviewed morbidity data for four particularly vulnerable groups, from high-income countries, where the degree of social exclusion meant that they are not adequately accounted for in standard health inequity work: the homeless, individuals with substance use disorders, sex workers and imprisoned individuals. It will not surprise you that their all-cause mortality rates were significantly increased, but the figures for standardised mortality ratios were a shocking 11.86 for women and 7.88 for men, considerably exceeding those from prior studies. This excess mortality is described as ‘extreme’, and contrasted with the mortality rates for those living in the most deprived areas of England and Wales, which were 2.1–2.8 times those in the least deprived. Infectious diseases – notably hepatitis C and B – were rampant, with elevated rates of cardiorespiratory and mental illness. There was considerable heterogeneity across studies, but the enormous health inequality was clear, particularly for women.

What can be done? Michael Marmot suggests that ‘not only is the social gradient in health appropriate to study but we have made progress both in understanding its causes and what can be done to address them’. Social causation underpins the inequity; social action, supported by evidence, is required. He quotes the words of Martin Luther King Jr.: ‘I believe that unarmed truth and unconditional love will have the final word in reality. That is why right, temporarily defeated, is stronger than evil triumphant’.

The US opioid epidemic is truly frightening – over 33 000 deaths in 2015 - with anxieties that this may now cross the Atlantic. Writing in the New England Journal of Medicine, Rutkow & Vernick discuss potential strategies. In October, President Trump declared it a national public health emergency; the novel opioid is contradictory. Treating negative symptoms of psychosis is difficult and the evidence base for pharmacotherapy and psychological interventions is contradictory. Cognitive remediation therapy (CRT) targets the cognitive deficits (for example memory and executive functioning) that significantly impact recovery, performance in employment and social functioning. CRT is an umbrella term for a group of therapies, and one specific instance is integrative neurocognitive therapy (INT), described by Mueller et al. as a group-therapy approach delivered in four modules addressing neuro- and social-cognitive domains. A sequence of education, coping-skills training, skills practice and then in-vivo exercises are used in each module. In this study, 61 out-patients with schizophrenia, all on antipsychotic medication and with prominent negative symptoms, were randomised to either INT for 15 weeks (biweekly 90 min sessions) or treatment as usual (TAU). All participants were followed up at the end of therapy as well as 1 year after baseline assessment, including measures of cognitive performance, psychopathology and Global Assessment of Function (GAF).

For total negative symptom burden, 54.2% of patients in the INT group and 26.8% of patients in the TAU group were in remission at 3 months (i.e. the end of therapy) but this statistically significant difference diminished at 1-year follow-up. In line with the hypothesis that negative symptoms predict poorer functional outcomes, the GAF was also significantly different between the INT and TAU groups (Cohen’s d = 0.50, P = 0.02). However, none of the cognitive performance measures showed statistically significant differences. The authors note that the group setting may be reinforcing the effects of INT on spontaneity and GAF, and that the Positive and Negative Symptom Scale may be too blunt a tool to properly dissect severe negative symptoms in schizophrenia. They conclude by suggesting integrating INT with other psychosocial and psychological interventions that have shown promise in remitting negative symptoms.

William Arthur Ward wrote ‘The pessimist complains about the wind. The optimist expects it to change. The realist adjusts the sails’. By analogy, in the search for a parsimonious scientific account of schizophrenia, one could say the pessimist doubts the validity of the diagnosis, the optimist really does believe biomarkers exist (they are just hiding from view), and the realist... well, they keep adjusting where in the organism the pathologies resides. Birnbaum & Weinberger provide a new synthesis of the current literature on neurodevelopment, genetics and the pathogenesis of schizophrenia. They begin by highlighting early enthusiasm for the social gradient in health appropriate to study but we have made progress both in understanding its causes and what can be done to address them’.

Social causation underpins the inequity; social action, supported by evidence, is required. He quotes the words of Martin Luther King Jr.: ‘I believe that unarmed truth and unconditional love will have the final word in reality. That is why right, temporarily defeated, is stronger than evil triumphant’.

The US opioid epidemic is truly frightening – over 33 000 deaths in 2015 - with anxieties that this may now cross the Atlantic. Writing in the New England Journal of Medicine, Rutkow & Vernick discuss potential strategies. In October, President Trump declared it a national public health emergency; the novel opioid is contradictory. Treating negative symptoms of psychosis is difficult and the evidence base for pharmacotherapy and psychological interventions is contradictory. Cognitive remediation therapy (CRT) targets the cognitive deficits (for example memory and executive functioning) that significantly impact recovery, performance in employment and social functioning. CRT is an umbrella term for a group of therapies, and one specific instance is integrative neurocognitive therapy (INT), described by Mueller et al. as a group-therapy approach delivered in four modules addressing neuro- and social-cognitive domains. A sequence of education, coping-skills training, skills practice and then in-vivo exercises are used in each module. In this study, 61 out-patients with schizophrenia, all on antipsychotic medication and with prominent negative symptoms, were randomised to either INT for 15 weeks (biweekly 90 min sessions) or treatment as usual (TAU). All participants were followed up at the end of therapy as well as 1 year after baseline assessment, including measures of cognitive performance, psychopathology and Global Assessment of Function (GAF).

For total negative symptom burden, 54.2% of patients in the INT group and 26.8% of patients in the TAU group were in remission at 3 months (i.e. the end of therapy) but this statistically significant difference diminished at 1-year follow-up. In line with the hypothesis that negative symptoms predict poorer functional outcomes, the GAF was also significantly different between the INT and TAU groups (Cohen’s d = 0.50, P = 0.02). However, none of the cognitive performance measures showed statistically significant differences. The authors note that the group setting may be reinforcing the effects of INT on spontaneity and GAF, and that the Positive and Negative Symptom Scale may be too blunt a tool to properly dissect severe negative symptoms in schizophrenia. They conclude by suggesting integrating INT with other psychosocial and psychological interventions that have shown promise in remitting negative symptoms.

William Arthur Ward wrote ‘The pessimist complains about the wind. The optimist expects it to change. The realist adjusts the sails’. By analogy, in the search for a parsimonious scientific account of schizophrenia, one could say the pessimist doubts the validity of the diagnosis, the optimist really does believe biomarkers exist (they are just hiding from view), and the realist... well, they keep adjusting where in the organism the pathologies resides. Birnbaum & Weinberger provide a new synthesis of the current literature on neurodevelopment, genetics and the pathogenesis of schizophrenia. They begin by highlighting early enthusiasm for the social gradient in health appropriate to study but we have made progress both in understanding its causes and what can be done to address them’.
does not lead to a personal sense of success – and many, even those with well-developed careers, doubted the validity of their accomplishments. Career progression was caustically noted as ‘rising to the level of your incompetence’. Tellingly – and we suspect all readers will relate – participants very rarely shared their doubts with colleagues. November’s British Journal of Psychiatry reported on the high rates of burnout in medicine, and recurring feelings of inadequacy have been linked to this. Professional interventions tend to be focused on doctors whom others are deeming to be struggling or underperforming: these data highlight that such feelings are occurring in most of us, even when we are externally seemingly competent. The authors note how even positive feedback did not hugely challenge individuals’ insecurities. Every day we try so very hard to do our best in such very difficult circumstances, and no one is tougher on us than we are on ourselves.

Troy McClure warbled ‘I hate every ape I see, from chimpan-A to chimpanze’, but we have much to learn from Pan troglodytes. An advanced theory of mind and complex communication are two of Homo sapiens’ most defining features, and anthropology has tried to unpack their evolution in hominins and hominds. Primate studies have shown that monkeys will call out in alarm more vigorously as threats get closer to a group, showing that they are anticipating the overall level of risk to others, but it had been less clear how well they understood the signal receiver’s mental state. Crockford et al tested how wild chimpanzees, upon seeing a model snake, called to others depending on whether or not simulated responders had previously emitted ‘snake-calls’ (indicating knowledge or ignorance or a potential hazard). Those examined displayed significantly greater vocal and non-vocal signalling when they had not heard prior snake-calls, inferring that they could take the perspective of another’s state of mind and knowledge level, recognising that the receiver was not aware of the danger. As the authors note, complex signalling and social cognition show signs of emergence in hominoid lineages before more advanced aspects such as syntax.

Phobias and compulsive behaviours are sometimes explained as problematic remnants of evolutionary sensible avoidance behaviour. An example of such a behaviour is the need to avoid potential biological contaminants such as blood and faecal matter, which commonly – adaptively – evoke disgust. Testing their phylogeny, Sarabian et al exposed chimpanzees to faeces, blood and semen via visual, olfactory and sensory modalities. They found that these potential biological contaminants led to increased latencies – and some outright refusals – to feeding, and behavioural attempts to maintain distance from these materials. The data are consistent with the parasite avoidance theory of disgust, although of course linking this to later psychopathology remains a speculation. As Troy realised, ‘You’ve finally made a monkey out of me’.

Finally, have you ever seen a ghost? We suspect not, but what underpins belief in the supernatural? So-called ‘agency detection’ has been a hot topic in cognitive science of paranormal beliefs: it had been postulated that false detection of the unearthly strengthens one’s beliefs, and indeed some have proposed this very human predisposition explains the universal emergence of religion in human cultures. In a mesmerising work, Anderson et al test this with a novel virtual reality forest, with participants told to see if they could detect beings within it, though none were actually present. Both high- and low-sensory reliability visual models were used, illustrated in the paper as, respectively, the forest in clear weather and, a rather atmospheric darker misty forest. As might be expected, there was a greater false detection rate of beings in the low-sensory reliability setting, but fascinatingly the role of the sensory environment was much less important than individuals’ prior expectations. Those who anticipated seeing more beings, from prompting by the research team, indeed ‘found’ them, whereas those expecting a low probability of such encounters did not. The cognitive science of religion has primarily posited that detection of the preternatural strengthens faith; here the authors propose it is the other way around – teachings produce expectations, and expectations lead to detection. It raises an interesting question about how one might use this in doctor–patient interactions for patient benefit. As Fox Mulder attested, I want to believe.

4 Mueller DR, Khalesi Z, Benzing V, Castiglione CI, Roder V. Does integrated neurocognitive therapy (INT) reduce severe negative symptoms in schizophrenia outpatients? Schizophr Res 2017; 188: 92–7.
6 LaDonna KA, Ginsburg S, Watling C. “Rising to the level of your incompetence”: exploring what physicians’ self-assessment of their performance reveals about the impact of the imposter syndrome in medicine. Acad Med 2017; Nov 7 (Epub ahead of print).