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## PSYCHOLOGY: the trouble with pseudoscience

In the psychology section of any bookstore you will find a huge array of books on self-help, psychoanalysis and theories of personality, advice on how to bring up kids, improve your sex life, reduce stress and so on. The business section will have more psychological material on leadership, working in teams and how to be successful. There is obviously a huge market for such books.

Unfortunately, most people do not stop to ask how reliable all this advice is. Imagine if the physics section was taken up with just anybody's theories of the origins of the universe or the nature of matter, or the chemistry section with alchemy. We would not tolerate it because we know science can provide much better, factually based information.

People are not stupid. They probably know most of the stuff in the psychology section is dubious, but assume that is all there is. They think mental and emotional issues are subjective and intrinsically unscientific and there is no way to decide among views except by their appeal to the reader. This is very sad for a number of reasons.

First, because most people – including policymakers – are unaware of the enormous amount of interesting and reliable information provided by scientific psychology and the power of its methods in deciding among rival views of mental and emotional life and human behaviour generally.

It is also sad because low expectations lead to a tolerance of poor outcomes. So 'models' of human behaviour with little or no validity are regularly taught even in universities – outside psychology departments – and serve, rather alarmingly, as the basis for policy in government and industry.

A notorious example is the widespread use of courses consisting of weird, even dangerous, outdoor experiences claimed to build trust and company spirit by those who make money out of them. Other examples are the use of the pseudoscientific technique of 'neuro-linguistic programming' in teacher and communication training, and the huge popularity of the Myer-Briggs Type Indicator for selecting individuals in business, despite the fact that years of psychological research have shown people cannot be adequately described as types. Another case is the strong opposition (based on flawed analogies with speaking) by proponents of the prevailing 'model' of reading to the routine use of phonics in teaching reading, despite overwhelming research by cognitive psychologists showing its effectiveness, and even its necessity, for many readers.

It should not be just a matter of choosing your favourite model in areas where scientific evidence exists. As in any science, if strong evidence has accumulated over time in good studies, one acts on that. Psychology is full of such investigations. Here are some examples.

Whenever there is a disaster, scores of counsellors appear, many with little training. Is this a good idea? It is believed that

counselling prevents people from getting post-traumatic stress disorder (PTSD). We now know that only a relatively small percentage of people are likely to get PTSD and psychologists have good criteria based on extensive research as to who they are likely to be. It is critical that these people get early, good professional help – but it is not clear that counselling, no matter how well-intentioned, is doing much for the rest and may even be harming some.

Psychological research is beginning to have a big impact in criminal law, especially with regard to police behaviour and eyewitness testimony. Legal procedure is sometimes based on intuitions about human behaviour that are over-optimistic. It is known, for example, that people are not only surprisingly poor at remembering unfamiliar faces and noticing details of clothing, but also that their memories for events may be seriously altered by the way they are questioned. 'Framing effects' also strongly influence economic and medical decisions, as demonstrated by psychologists Kahneman and Tversky. Kahneman received the Nobel Prize for Economics in 2002 for upsetting the conventional wisdom in economic theory that decision-making is rational. The strategies and shortcuts that people use in making decisions of all kinds are now a major area of psychological research.

Psychologists know a great deal about stress and its alleviation, and apply a number of very effective techniques that are far less time-consuming and costly for the patient and taxpayer than psychoanalysis and similar therapies. The contribution of the evidence-based approach that psychology represents in the mental health field has recently been recognised by the Government in allowing Medicare rebates for psychological services.

These examples illustrate the enormous value of psychological research in many aspects of life.

It is very frustrating as an inheritor of a proud scientific tradition – psychology has been a science for well over a century – to be asked by new acquaintances and even academic colleagues: "I suppose you want to psychoanalyse me?"

Frankly, I have more interesting things to do.

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