Can We Measure Consciousness?

A Review of *Quantifying Consciousness: An Empirical Approach.* by R.J. Pekala. New York and London, Plenum Press, $49.50, 422 pp. Indexes.

Dr Susan Blackmore
Department of Psychology,
University of the West of England,
St Matthias College,
Bristol BS16 2JP.

Psychical researchers have long been interested in consciousness. They have studied mediums in trances and apparitions in the bereaved, ecstatic visions claimed to have come true and – most common of all – psychic and prophetic dreams. In recent times parapsychologists have deliberately sought out the "psi-conducive state", trying dreaming and meditation, hypnosis and the Ganzfeld as well as many other ways of trying to trick the mind into giving up its secrets. The connection between psychic experiences and altered states of consciousness has always been suspected but has proved hard to pin down.

In psychology too there have been many attempts to "map the mind", to create some kind of cartography of consciousness. At its best this might show how each state is related to others and even how to get from one state to another. But this has not met with notable success. Indeed every attempt to measure subjective states has met with problems. The infamous introspectionists, around the turn of the century, tried to formalise a system for observing their own mental events and were ridiculed for trying to pin down the elusive stream of consciousness and destroying it in the process. It was in the wake of their failure that behaviourism, with its denial of conscious processes, came into the ascendent. But their biggest problem was that their observations were unreliable. The introspectionists could not agree on what they experienced.

In this new book Ronald Pekala, a psychologist from Pennsylvania, reviews the failures and successes of the past and presents a new way of mapping consciousness. This new cartography is based on ten years of research in developing, testing and using a set of self-report questionnaires. The questions consist of statements about a particular remembered state of consciousness and the respondent has to agree or disagree using a seven-point scale. The statements cover many facets of experience such as detachment (I felt absorbed in my thoughts, feelings, and sensations), direction (My attention was completely outer-directed), imagery (I experienced no or very few images) and emotion (I felt ecstatic and joyful). The questionnaires were initially developed using dimensions already identified by researchers such as Tart, Krippner and Ludwig. Then, through many pilot studies and assessments, were refined to produce the final forms. Pekala reports in detail on the reliability and validity of the measures and the ways in which the answers allow him to map out a person's state of consciousness. He produces several graphical ways of depicting states of consciousness and the book is full of "psygrams" showing the intensity on nine dimensions.

Pekala's hope is that this methodology will allow cognitive psychologists and mental health professionals to quantify the patterns of subjective experience dealing with imagery, attention, volitional control, emotion and internal dialogue. He claims it will allow for states associated with hypnosis, biofeedback, drug-intoxication, shamanistic trances and even psi-related experiences to be accurately measured and visually displayed. This is an exciting claim and one that could be important for psychical research. So does it help?

Pekala applies this method to one example of an out-of-body experience. He gives a brief account of an OBE near death and presents the results of giving the man concerned questionnaires under several conditions. The OBE, he concludes, is an altered state of consciousness, And, for this man at least, it is more similar to the effects of hypnosis than to sitting quietly with eyes closed. This man experienced his "self" as being outside his body and his attention was focused clearly outwards towards the environment.

Well - has this taught us anything new? I must say it rather looks as though he has simply discovered the obvious - what any OBEr would tell you about their experience if asked to describe it. But perhaps this is just what is needed, a quantitative method that does give the same answers as an ordinary description. The test will be whether it can predict anything new about OBEs or NDEs. Will it be able to help us test the various theories of the OBE? Will it help to find out whether near-death OBEs and tunnels are the same as or different from other OBEs? None of this is even considered.

Pekala does, early in the book, discuss some Eastern enumerations of altered states, such as the Buddhist system in the *Abhidhamma*. Here we find two paths, of concentration and insight, with several states along each. For those who have explored their own altered states the progression from the cessation of hindering thoughts, through one-pointedness to objectless infinite consciousness seems natural and makes sense. Yet our current Western psychology has little or nothing to say about it. It seems to me that if we had a really useful map of states of consciousness it would not only describe these states but explain just why they tend to appear in a certain order and are achievable through some practices rather than others. But Pekala's research does not take him into these realms.

Of more direct concern to psychical research is that if there really are any psi-conducive states we would expect a successful map to tell us where they are and how to get to them; how they relate to each other and why they are different from non-psi states. Or if there are no psi-conducive states it might tell us why certain states have traditionallly been claimed to be psychic ones. Whether Pekala's approach will be able to do any of this, I think we shall have to wait and see.