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Shamanism: The Neural Ecology of Consciousness and Healing. Michael Winkelman. Westport, Connecticut: Bergin & Garvey, 2000, 309 pages, \$65.00.

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Readers of *The Journal of Mind and Behavior* (JMB) will most probably be familiar with the following quotation, taken from James (1902/1958):

. . . our normal waking consciousness . . . is but one special type of consciousness, whilst all about it, parted from it by the filmiest of screens, there lie potential forms of consciousness entirely different. We may go through life without suspecting their existence; but apply the requisite stimulus, and at a touch they are there in all their completeness How to regard them is the question, — for they are so discontinuous with ordinary consciousness . . . they forbid a premature closing of our accounts with reality. (p. 298)

James is one author not cited by Michael Winkelman in his extensive study of shamanism (Shamanism: The Neural Ecology of Consciousness and Healing). This is not necessarily a fault (he does list 502 sources in his bibliography!); a plausible reason is that it is only from a Western perspective that these other forms of consciousness, or altered (or, alternate) states of consciousness (ASCs) seem to be so discontinuous from everyday experience. The point is, that when viewed cross-culturally, as Winkelman does, ASCs are by far not an isolated occurrence. In this book, he is able to make a very clear case for the ubiquity of such ASCs, suggesting that an anthropological approach should be coupled with a neurobiological one, in order to better elucidate the phenomena, the shamanic path of knowledge inherently tied to these phenomena, and the psychobiological bases and dynamics associated with shamanistic experience and healing.

In order to substantiate this thesis, Winkelman carefully presents an anthropology of consciousness, ranging from a discussion of rock art, animism, totemism and ritual, through shamanism, hallucinogenics (Winkelman prefers the term "psychointegrators"), mediums, possession and ecstasy. Along the way, the other "usual suspects" are weaved into his discussion: OBE (out-of-the-body experience), NDE

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(near-death experience), hypnosis, dreaming and meditation. The neurobiology of ASC is discussed in depth: EEG activity, temporal-lobe activity, sympathetic (ergotropic) vs. parasympathetic (trophotropic) system functioning, endogenous opiates and neurotransmitters. Winkelman makes a strong claim here: given the widespread occurrence of institutionalized procedures for inducing an ASC, and given the widespread existence of such accepted practitioners of healing/knowledge who incorporate ASCs in their work — be these shamans, mediums or mystics there must be some universal, psychobiological underpinning to both their practice and their experience. As he writes (pp. 115-116): "Cultures differ in how they relate institutionally and personally to the experiences and potentials of ASCs. Most cultures have traditions designed to enhance the availability of ASCs Even when there is cultural repression of ASCs, they continue to be manifested because they reflect a biological basis and its inevitable expression in human experience. The classic mediator of these ASCs was the shaman; whereas today it is the mediums, meditators, and others." This book admirably moves between the experiential and neurobiological levels. That and more: the author weaves into his discussion an analysis at the cognitive level, discussing symbolism, mimesis, metaphoric thinking and analogical thinking. In short, the author does not shy away from integrating the various different levels in his exposition, which is truly interdisciplinary.

So, how can one tie in our own Western perspective on consciousness and its variants, as discussed by Winkelman? James advised us to attempt to remove the blinders of our own "rational" consciousness to these potentialities. Winkelman, following Laughlin, McManus, and d'Aquili (1992), refers to this as our own "monophasic consciousness": we marginalize the experience and its experients, and pay "lip service" to these potentialities. The other option would be to "hype" the experience, making this a transpersonal, transformative and transient form, to be searched after by those pursuing the path of self-fulfillment (Winkelman refers to this as an "integrative mode of consciousness"). The shamanic path is essentially a guide to the realization of such an integrative mode.

What were my problems with the book? Firstly, I found the style of writing to be very demanding of the reader. Thus I fear the book will be truly useful only for specialists. For example, take the topic of symbolic cognition about which I have recently published in JMB (Glicksohn, 1998). Here is a representative passage from Winkelman (p. 171), one which is compatible with my own thinking: "Mystical experiences focus on the microgenetic iconic stages of perception and geometric perceptual patterns that provide the basis for the more complex and abstract mental processes based on rearrangement of simpler schema through cross-modal synesthesia These structures are given cultural explanation, but they reflect an immediate perception of sensory events before interpretation, experiences that are universal because of their neurognostic basis." While some of us might very well understand this passage, and even agree (like me) with Winkelman here, one has to admit that the writing is certainly dense. As can be imagined, this is not an isolated incidence of Winkelman's style.

My second problem was with the multiplicity of neologisms appearing on practically every page of the text. I realize that in trying to bridge among levels, Winkelman has made a deliberate decision to make short-cuts in language. The subtitle of the book refers to a "neural ecology," which I can handle. I am also not too disturbed by the term "neurophenomenological" (cf. Laughlin et al., 1992). But the book does have a surplus of such terms, and here is a short list of the more