Wolf does, however, solve one minor mystery in this area, that of the identity of the celebrated multiple personality and clairvoyant subject Léonie (Madame B.) of Le Havre, who was made famous by Pierre Janet in numerous books and articles, and was also studied by Richet. It appears (p. 61), presumably from information in Richet's papers, that her surname was "Boulanger."

What is most noteworthy about Richet's explorations of these controversial areas is not his results and conclusions (though these are not without interest) but the attitude of mind which prompted him to explore. He never lost his lively curiosity and sense of adventure. He was, as mentioned above, always alert to the possible importance of anomalous observations, and his alertness several times paid dividends. But above all he valued intellectual integrity and believed that in the end it would prevail. As Wolf says (p. 141) of an occasion on which Richet had risked ridicule by expressing support for metapsychology, "he was only repeating what, at age twenty, he had replied to his father who had reproached him for risking his future by his preoccupation with hypnotism: 'one risks one's future by speaking the truth?' he asked. His future was not in peril either time. He had dared to speak out because he considered so-called occult or supernatural phenomena to be simply unfamiliar phenomena which should be studied just like any other puzzling observation. He parried his detractors with the comment 'you are also the ones who denied the possibility of airplane flight!'" One could not have a better example than Richet's of the spirit in which and the reasons for which anomalous phenomena should be investigated.

Although I had learned a certain amount about Richet before reading Wolf's book, and had talked with several persons who had known him, I had no idea of the full range of his activities and interests To present them all systematically and clearly and impartially, as Wolf has done, and to sketch in the backgrounds from which they arose, is a feat requiring considerable scholarship and much labor. If rekindling one's interest in a certain person, and inclining one to turn again to his writings, are measures of a good biography, this one more than passes the tests.

Alan Gauld
Department of Psychology
University of Nottingham
Nottingham NG7 2RD
England

Cultivating Consciousness: Enhancing Human Potential, Wellness, and Healing edited by **K.** Ramakrishna Rao. Westport, Connecticut: Praeger, 1991.235 pp. $55 (c). ISBN 0-275-94515-4.

Sixteen points of view on consciousness are presented here, defining it conceptually and experientially; questioning its nature; relating it to scientific theory, philosophy of science, and current research on controversial phenomena;

and considering the role consciousness might play in physical healing and well being.

The chapters are based on papers from a conference held at the Foundation for Research on the Nature of Man in honor of the birth centenary of Louisa E. Rhine, wife of J. B. Rhine and a distinguished co-worker with him in parapsychology, first at Duke University and then at the FRNM.

The book is important reading for those interested in consciousness studies. It is not pop speculation, but attempts to rigorously explore the nature and effects of consciousness. The lead chapter by Willis Harman is a reassessment of the metaphysical basis of scientific assumptions. Harrnan challenges the limitations of reductionism and the assumption of separateness of phenomena in the current scientific worldview. He points to the puzzle of action at a distance, the status of consciousness, self-organizing properties of living systems, and problems of reductionism as suggesting an alternative worldview of a "wholeness science," one in which whole systems are taken as primary. Consciousness is included as a part of the system, and observation is participatory rather than being separated artificially. In this view, causes spring from context: "there are no cause and effect, only a whole system evolving (p. 19)." An implication is that the scientist must be open to personal transformation of beliefs, attitudes, assumptions, and self by the experience within the system. Harman notes the necessity of this in such areas as cultural anthropology, psychotherapy, social-organization research, meditation processes, and consciousness studies.

I expect many will disagree with what seems to be an abandoning of objectivity. Scientific inquiry has emphasized objectivity — that is, basing conclusions on unbiased evidence, not untested feelings, emotional desires, attitudes, or beliefs (though scientists are not always successful in this goal). However, as I understand him, Harman is not rejecting objectivity, but rather the illusory separation that some think creates objectivity. Detachment does lead to knowledge, but so also does identification with what is being observed. Full knowledge requires both. Harman does not discuss the skills or methods of inquiry needed for this participatory approach, but one can see some exploration of them in feminist studies, in meditation research, anthropology, biology, and transpersonal psychology. What their implication might be for physical sciences is not yet evident.

Stephen Braude, responding directly to Harman, takes the position that even Harman's wholeness metaphysics retains a mechanistic point of view. What is necessary, he says, is a healthy scientific pluralism. This includes, but goes beyond, diverse methodologies to the worldview itself. No conceptual grid is inherently more basic than any other, he asserts. He holds that consciousness is a given, a primitive element that cannot be reduced. His discussion is a thoughtful and challenging presentation that questions the most prominent scientific worldview just as much as does Harman's.

This rich beginning of the book is sustained by the further chapters. I will

summarize them briefly, so that readers will know what is available. Tom Hurley reports some of the challenges to objectivity and reductionism, and the resulting puzzles in physics (quantum contradictions), biology (evolution, self-organizing systems), medicine (remissions, subtle energies), and consciousness (causality, access to exceptional abilities).

David Griffin presents the view of philosopher Alfred Whitehead, namely that consciousness is not a thing but an illumination of experience, which may occur late in the sequence of events, and that the "mind" is composed of these sequential states occurring serially perhaps 20-30 occasions per second (a concept also found in Tibetan Buddhist teachings). Eugene Taylor emphasizes that consciousness can be studied for both external (scientific) and inner (self) knowledge, the former leading to external control and the latter to personal transformation. Seekers after self-knowledge usually turn to the arts, to metaphor, or to religion for the knowledge that is relevant to them, rather than to science.

K. Ramakrishna Rao provides a sweeping coverage of conceptualizations of consciousness and identifies such issues as upward and downward causation, internal observation, and deployment of attention as a voluntary means of control over cortical processes. The important issue of unconscious levels of consciousness is noted by Rao, though this is not picked up by the other contributors.

Beverly Rubik reports on frontier areas of science such as bioelectromagnetic phenomena, body-mind interaction, psi, and field effects. Alone among the contributors, Rubik calls attention to the predominantly masculinized language of science, with words emphasizing control, separation, attack, machines, and games — the dominance of yang over yin. This is not a healthy balance, she says.

Looking at this from complementarity in addition to gender, Robert Jahn calls for interactions of polarities, rather than opposition. He draws examples from his work and the thinking of such physicists as Pauli, Bohr, Heisenberg, and Einstein. This is not dualism, but a necessary perspective that might be applied to consciousness itself. Brenda Dunne follows with research findings from the striking work being done (by her with Jahn and Roger Nelson) at Princeton, in which various male-female pairs produced different outcomes in affecting the output of random-event devices.

Charles T. Tart brings clarity into this issue: we shape our own reality. Noting that virtual reality is now technologically feasible for training, design, and remote technological interactions, he goes further to emphasize that our embodied consciousness is trained to generate its own world, which we then take to be real. His hope is to learn the laws by which this kind of consciousness then emerges from its own construction.

Quantum and neurological hypotheses about the interface between mind and body are discussed by Jean Burns, along with their applications to parapsychological effects.

It is beginning to be acknowledged that the use of imagery and particular consciousness states (e.g. hypnosis) is effective in treating some physical conditions. Michael Grosso surveys some of the documentation in this area and asks if some worldviews may themselves be toxic as others seem to be healing. The image mediates, he says, between purposes, ideals, values, and the sensory experience.

Alfred Alschuler, in research stimulated by his own personal experience, analyzes accounts of individuals who have received personal and professional guidance from "inner voices." This is more common than is usually recognized and has been confirmed by others' research. Alschuler demonstrates the value of these messages and observes that the task is not to get rid of the inner voice but to develop a healthy relationship.

Providing another perspective on the oneness of body and mind, T. M. Srinivasan presents the transcendent position that reality is unchanging and omnipresent, and hence that the self that reflects it is also reality, non-physical and unchanging.

A final comment on the consciousness theme is provided by U.S. Senator Claiborne Pell, connecting it with Louisa Rhine's work in parapsychology and emphasizing its relevance to social needs.

These contributions are not technical research papers but reports, models, conceptualizations. They are valuable in that they show the state of consciousness study in the current era, with some of the issues, paradigm challenges, and anomalies that are embedded in the field. The book is short on mathematical and neurological models of consciousness as well as relevant brain research, and it would have been valuable to learn the authors comments on each others' contributions. Subjective approaches to consciousness are included and advocated, along with the more traditional conceptual analysis. A reference section lists works cited by the authors. The collection works well as a reader in the subject to inform and stimulate thinking.

Arthur Hustings
Institute of Transpersonal Psychology
744 San Antonio Rd.
Palo Alto, CA 94303

Shadow Matter and Psychic Phenomena by Gerhard **D.** Wasserman. Oxford: Mandrake of Oxford, 1993. 199 pp. £7.99 in U. K. paperback.

In 1972 the President of the (London) Society for Psychical Research, Professor C.W.K. Mundle (1973) delivered his presidential address under the title "Strange Facts in Search of a Theory." (The facts referred to are those of paranormal phenomena.) In the twenty years that have since elapsed the search has continued. This is not for lack of suggested theories, but for failure of the theoreticians to agree. One can divide the proposals into mentalistic and