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Timo Järvilehto

Consciousness 'Within' Or 'Without'?

Review of Scott Jordan (ed), 'Modeling Consciousness Across The Disciplines'[1]

When reading the many books and articles reporting the successes of the consciousness studies during the last decade, one cannot avoid the feeling that the consciousness of most researchers and philosophers, approaching the notoriously most enigmatic feature of the human being, is exeedingly narrow. The majority of the explorers do not see the richness of the world and the life of the human being, but look into the inside of an abstracted individual in an attempt to identify the elusive concept with processes in the brain, neurons, or even quantal characteristics of the neural membranes. This kind of search has a dignified line of predecessors, among others the great Church Father St Augustine, who maintained that the deepest truth will be found when turning the gaze towards inside: 'Don't turn outside! Return into yourself! The truth resides within' (Augustin, 1947).

However, it is unlikely that St Augustine meant this expression as a concrete reference to a location within the skin, but rather figuratively, as a metaphor which can be understood also in the sense of examining the most general characteristics of the human being, his properties as a member of the human species. But such a journey does not go only inside, but also 'deeper' which means that it leads to truths common to all people. Thus, as Carl Rogers, almost two thousand years after St Augustine, pointedly stated: 'What is most personal is most general.' This means that the deeper one goes into oneself the more general are the findings, the more they touch also other people. Thus, in the 'inside' of our individuality we will find our humanity. But how is this possible if consciousness is regarded only as a subjective property of the individual or even of his brain?

Against this background the book *Modeling Consciousness Across The Disciplines* makes a refreshing appearance, because its approach to consciousness spans a much wider field than is usual in the typical consciousness literature. The

Correspondence:
Timo Järvilehto, Department of Behavioral Sciences, University of Oulu, Finland

[1] **J. Scott Jordan (ed.)**, *Modeling Consciousness Across The Disciplines*, Boston, MA: University Press of America., 1999, 346 pp., $57.50, ISBN 0 7618 1523 6 (hbk).

chapters of book, based on papers presented at a meeting 'Modeling consciousness across the disciplines: A symposium' in Saint Xavier University, Chicago, (the date is not given), deal with consciousness-related questions in a variety of fields, including experimental studies, art and education.

The book is divided into two parts: Explicit models of consciousness and Implicit models of consciousness. It is, however, not quite clear why there is such a division, because in neither part one can find 'models' of consciousness. There are several chapters which stand in the fringe of the main themes: Jochen Musseler reports on perceiving and measuring spatiotemporal events; Cees van Leeuven, Ilse Verstijnen and Paul Hekkert describe some experiments in the field of experimental aesthetics; Charlotte Stokes considers the work of artist; and Michael D. Rabe the enigma of the aniconic period in early buddhism. The chapters may be interesting for the researchers in the relevant fields, but they do not offer much specifically to the problems related to consciousness. I also have difficulties in seeing the relevance to consciousness studies of the considerations of brain- education relations, presented by Larry R. Vandervert, although education certainly is one of the most basic human ways to influence consciousness. But probably this inability reflects only my own limitations.

The book starts with a Foreword by Wolfgang Prinz, who in a short note sketches some outlines for questions and answers for consciousness studies. This opening, however, is not reflected in the content of the book, and therefore its role remains somewhat unclear. The foreword is followed by a Preface by J. Scott Jordan, who writes that he is 'not proposing a particular theory of consciousness' (p. xvii). This is certainly true to the extent that one may ask whether the book contains any theory of consciousness. This is not necessarily a negative feature, because one can with good reason ask if there is (or even can be) a theory of consciousness. Most of the so-called consciousness theories simply identify consciousness with a process in the brain, or explain it away as an illusion or epiphenomenon.

An exception in this general atmosphere is the paper by L. Andrew Coward ('A physiologically based system theory of consciousness') which, however, has a somewhat strange position in the book. His paper exeeds tens of pages the length of the other articles, and stands, in my opinion, in flat contradiction to most of the other contributions. Coward starts with a simple parallelistic idea: physiological states must correspond to psychological states. Then he uses a relatively simple architecture of electronic systems as a model for the description of events in the brain. This architecture in biological systems is described by repetitive activity in clusters of neurons. Where, then, does consciousness come into the picture? The answer: it is something that 'corresponds' to the activated clusters. But it is just this 'correspondence' which is at stake in any consciousness theory!

Should this type of theory then count as a theory of consciousness? It may appear so because of the complicated modelling, but in reality 'the theory' merely repeats the old dogma that consciousness is created only and exclusively by the brain. Such a theory leaves open just the crucial factor: if consciousness 'corresponds' to some brain activity, why bother about neurons at all? However, if

'corresponds' means some kind of identity with the neural activity then we have the question how a biological entity (a neuron or a cluster of them) may create a psychological process. Let it be cell assembly, re-entrant firing, or a cluster of neurons — why should such feed-forward, -backward or -sideward of nerve impulses suddenly create consciousness or a certain conscious perception? This kind of explanation has a hint of magic, a hope that processing, and processing, and still a little bit more processing, will solve the problem by some friendly trick. However, several other articles in the book argue quite cogently that for consciousness to exist, we need much more than these disturbances in the nervous system.

At the beginning of the book there are a few interesting chapters which deal with the historical background of consciousness studies. E. Paul Calella discusses fragmentation of consciousness started by the model of Descartes, and opposed by its early critic, Giambattista Vico. Andrew Bailey continues the historical journey by examining William James' contributions, influential still today. Although many present-day scholars take James as a great figure in developing psychological theory, they seem to have problems with his approach to consciousness. Bailey tries to show how James' approach 'encompasesses gritty realism about the phenomenal data of consciousness, a sort of dualism between the mental and the physical, his radical metaphysics of pure experience and . . . a view of consciousness as a kind of control capacity without agency . . .'. It is thus no wonder that people who see consciousness as an inner agent steering the organism's behaviour, have difficulties with James' views.

J. Scott Jordan takes up a contemporary of James, John Dewey, in his attempt to demonstrate, both experimentally and theoretically, the anticipatory nature of consciousness, and the impossibility of limiting consciousness to the brain only. As indicated above, most contemporary consciousness research starts with the idea that consciousness is somehow related to processing of the environmental stimuli, which then leads to appropriate responses, behaviour of the organism. This model follows the reflex scheme already criticised over hundred years ago by Dewey. The gist of his criticism was not, however, that the reflex scheme was a wrong move as a replacement for introspectionist psychology. Rather:

> In criticising this conception it is not intended to make a plea for the principles of explanation and classification which the reflex arc idea has replaced [i.e. introspectionist psychology], but to urge that they are not sufficiently displaced. . . . The older dualism between sensation and idea is repeated in the current dualism of peripheral and central structures and functions; the older dualism of body and soul finds a distinct echo in the current dualism of stimulus and response (Dewey, 1896).

Dewey wants to show that this dualism may be abolished if we model actions rather as a circle than as a linear stimulus–response connection. Thus, both the stimulus and the response are phases of 'coordinations' involving both the organism and the environment.

Jordan ingeniously connects this starting point with the results on 'Phantom Array' experiments indicating the anticipatory character of consciousness. Thus, consciousness is not a result of sensory processing as such, but is rather related to

the coordination of the whole organism–environment system. The perception of material bodies is not the origin of consciousness, but material bodies are inferences based on the anticipatory character of consciousness, and realized within an organism's field of control. This means that consciousness should not be studied as a property of the neurons only but, as concluded by Lawrence Souder in his article 'Is the dialogue limited by its own terms?':

> Consciousness studies need . . . to let the methodology be as broad-based as the phenomenon of consciousness itself. The most complete account of consciousness will emerge from an interdisciplinary perspective, one that incorporates not just language, but art, dance, music, sport etc. (p. 228).

Bruce K. Kirchoff follows similar ideas in his remarkable chapter on 'Consciousness, communities and the brain: toward an ontology of being'. Kirchoff starts with the claim that we cannot separate the study of consciousness from the fact that we ourselves are conscious. But then we will at once see that we cannot be conscious alone, but only in connection to the community to which we belong. Hence, he goes on to show how the participation in the community may influence our consciousness and perception of reality. Furthermore, he tries to show that the mainstream of the studies on the neural basis of consciousness is flawed in taking *a priori* the brain as the basis of consciousness. In its stead, one should see that it is consciousness which makes possible the concept of the brain. Thus, the mainstream studies take the condition created by consciousness as determinative of consciousness itself. This circularity will prevent all progress in the study of consciousness. But does this mean that reality is only our social construct? No, because neither consciousness nor physical reality is in some sense primary. 'Rather they exist as intrinsic parts of a system with a community of people who credit the type of consciousness that is sustained by the physical reality that this consciousness is creates' (p. 262).

This idea could perhaps be expressed also by saying that consciousness and matter cannot be separate or in a causal relation, because they belong to the same system. On the one hand, matter may not be separated into some kind of basic substance with absolute existence, the properties of which would exist also without any living being. On the other hand, consciousness does not produce matter as a some kind of 'fiction' or social agreement (cf. social constructivists), because the properties of matter are not something mental or an outcome of negotiation, but real properties of the world which are concretized by living beings, giving to these aspects of the 'stuff' of the universe their significance and meaning in a community of organisms. It is consciousness and sharing of the world that makes possible the existence of material objects, and the description of the properties of matter, but only from the point of the human beings (cf. Järvilehto, 2000).

Harald Atmanspacher and Frederick Kronz take up quantum physical aspects of consciousness, but deal mainly with the problem of different conceptions of reality. They maintain that many of these problems may be fruitfully conceptualized by using two different descriptions of reality; namely, the ontic and epistemic. The former describes the system as a whole and is empirically inaccessible in the sense that this whole is destroyed if one tries to describe its parts. The

latter, then, is the description of the empirically observable parts of the system in question. This distinction, originally presented by Hans Primas (1990), might, indeed, be useful in searching for a new perspective in consciousness studies.

The concluding chapter by Jordan and Vandervert, with its plea for integrative philosophy, would probably have been more conveniently place at the beginning of the book. This would have better prepared the reader for the somewhat loosely connected chapters that follow. The book has very little to say about the traditionally central problems of consciousness ('what is subjective experience', etc.), but it is possible that these problems cannot be solved if the scientists really concretely follow the advice of St. Augustine and search consciousness only 'within'. Perhaps the solution for the many vexing problems of consciousness can be found only by 'opening the windows', and looking more broadly at the characteristics of the human species and its products, in which conscious human activity eventually finds its expression.

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