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Reclaiming Cognition

The Primacy of Action, Intention and Emotion
edited by Rafael Núñez & Walter J. Freeman
Imprint Academic, 1999

This volume is intended to redress an imbalance that the editors find in the study of the mind stemming from the work of Rationalists such as Descartes and Leibniz and from Kant's transcendental idealism. Such writers, the editors claim in the introduction, attempted the 'mathematization of the mind' and sought to replace Aquinas' account of intentionality with the doctrine of 'representationalism' (p. x). On such an account, the immediate objects of perception are representations internal to the mind rather than objects in the external world, these representations being the result of a process in which both mind and world play a role. The representations are then manipulated by the mind 'in accordance with the laws of logic, induction, statistical inference and mathematical deduction' (p. xi).

It is this picture of the mind as a system that manipulates internal representations on rule-governed lines that the various contributors wish to challenge. The picture suggests that the functions and operations of the mind can be adequately characterized without making any essential reference to either the subject's body or his/her environment. The mind is essentially self-contained in this respect. One consequence of such a picture, labelled 'cognitivism' here, is that the operations of the mind and brain can be studied, either singly or jointly, in isolation from considerations concerning the subject's place in the world. It would not be much of an exaggeration to suggest that this is the received view in much recent cognitive science.

In place of such a picture, an account of the mind as essentially embodied and environmentally embedded is proposed, although the particular details of such an account is a matter of some dispute amongst the various philosophers, psychologists, physiologists, cognitive scientists, neurologists, biologists, and mathematicians who contribute to the volume. As suggested by the volume's subtitle, though, there is some consensus amongst those hostile to the standard account that a full description of the mind cannot succeed without taking on board the fact that the subject is an *agent*, actively and intentionally interacting with his/her environment and objects therein. Studies of the mind should proceed with this crucial fact securely in place.

The volume comprises four sections:

- The Editors' Introduction
- Embodied, Evolving and Ecological Minds
- Mathematics and Neurobiology
- Philosophy of Action, Intention and Emotion

Let us touch briefly upon each of these in turn.

Given the diversity of the papers contained in the volume, one might hope that the introductory essay would go some way to providing a cohesive account of the various

relations between the papers. However, this is not the case. Instead, the introduction offers an account of the historical development of the standard cognitivist view, tracing its route from Plato to Descartes to contemporary functionalism. While this is undoubtedly an interesting read, there are at least two ways in which it might have been profitably developed.

Firstly, any account of the development of cognitive science that draws solely upon the Rationalist enlightenment tradition is missing a large part of the story. The influence of the Empiricists, primarily John Locke and David Hume, in this context should not be overlooked. Indeed, it is hard to look at the rough characterization of the standard account of the mind on offer without recalling Hume's Newtonian story of the mind's operations and Locke's account of the mind as essentially passive. Furthermore, the Baconian methodology favoured by Locke and Hume finds echoes in today's standard scientific practice, cognitive science being no exception. The Empiricist approach certainly looks like a precursor of the current view of the mind as disengaged from both body and environment and apt for scientific study.

Secondly, it is unfortunate that there is no attempt to draw out the interconnections between the various papers. Given that these share a somewhat broad agenda, the reader would have significantly benefited from an overview that identified the various common threads and dissimilarities between the papers, or at least outlined the different meanings that the evocative terms 'embodied' and 'embedded' might have. After all, the wider debate is not between two fully developed theories; it is between two rough approaches to the study of the mind, and as such we should expect to find numerous disputes internal to each general school. Significant advances will only be made when researchers in different areas are able to identify commonalities with the work of others, a task that can be made all the more difficult through the confusing and often contradictory use of semi-technical terms such as those above.

The first paper in the following section, by Andy Clark, attempts just such a task, albeit of a limited nature. He argues that 'cognition can be embodied and action-oriented in two distinct ways' (p. 1). These ways are (or, at least, can be) complementary to each other. It is just such comparative discussions that are vital to the future progress of the new approach, I would argue.

The remaining papers in this section are an interesting mixture of theses and approaches, covering topics such as the connection between and development of language and bodily gestures, a 'cognitive linguistic' study of the concept of time flow, and an argument to the effect that cognitivism cannot give an adequate account of concepts. Alternative accounts of perception and cognition, drawing on the likes of J. J. Gibson, close the section.

The section on Mathematics and Neurology is broadly centred around traditional or cognitivist attempts to use mathematical models to capture the neurological facts relating to perception and action. This section is something of a mixed bag, with an unusually disparate range of topics discussed. These include the standard input – output metaphor found in traditional accounts of behaviour, the account that we should give of agent causation given the facts about the operation of the brain, and whether relativity theory requires a revision of the ways in which we conceive of space and time in everyday practical thought.

Finally, the papers in the Philosophy section also form a rather unusual collection. The centrepiece is surely the two interesting discussions of emotion contained here. One, by Valerie Gray Hardcastle, concerns its misrepresentation by much neurophysiology and neuropsychology through oversimplification to the point of caricature; the second, by Maxine Sheets-Johnstone concerns the ways in which it is related to bodily movement. The other papers, coming from different approaches outside the mainstream Anglo-American philosophical tradition, consist of a call for the revision of the notion of the self and reality in order to allow science to capture the facts concerning subjective phenomenal experience, and a feminist discussion of the role of social theory in stressing the importance of feeling in consciousness.

On the whole, this is certainly a worthwhile if rather disparate collection of essays. Given that this collection first appeared as a double issue of the *Journal of Consciousness Studies* this is probably to be expected. One cannot, however, help feeling that a bit more work might have been done to clarify the main aims of the collection. This might well have transformed this collection from an interesting special issue of a journal to an important, self-contained call-to-arms against the dominant cognitivist tradition of modern times.