

## Preface

### **"Nothing human is altogether incorporeal".**

(Merleau-Ponty 1968, p. 178)

During the last decade, philosophical, psychological and neurobiological approaches to the self have increasingly overcome their disciplinary constraints and entered into a productive dialogue. Different levels of self-awareness such as the "core" or "minimal self" and the "extended" or "narrative self" have been distinguished and investigated from a phenomenological, developmental and neuro-cognitive perspective.

In this context, the embodied aspect of the self has attracted growing attention. It may serve as a crucial junction for integrating different approaches into a common framework. Since the original work of Varela, Thompson and Rosch (1991), theories of the embodied and enactive mind have gained considerable influence on philosophy and cognitive neuroscience. Embodiment refers not only to the embedding of cognitive processes in brain circuitry, but also to the origin of these processes in an organism's sensory-motor experience in relation to its environment. Thus, action and perception are no longer interpreted in terms of the classic physical-mental dichotomy, but rather as closely interlinked. Moreover, neuroscientists like Damasio, Edelman, Panksepp and others have emphasized the close connection between brain physiology, whole-bodily functions and aspects of the mind such as consciousness, emotion and self-awareness. Social neuroscience and social psychology increasingly endorse embodied models of social cognition and behaviour.

Approaches to embodiment, from a phenomenological as well as from a dynamic systems point of view, are usually opposed to simple mind-brain identity models. On the contrary, they regard both subjective experience and brain processes as being dynamically linked with the organism and the environment. From birth on, it is mainly through our embodied interactions with the world and with others that the brain matures and develops into an organ of interrelations. And it is only as part of embodied interactions that neuronal activities can serve as carrier processes of conscious experience. In this way, it is the living body itself that unites mind and brain.

This "recorporealization of cognition", as it has been termed recently in a special journal edition (Heiner 2002), has potential influence on psychiatry and psychosomatic medicine as well. Embodiment is on the way to become a major paradigm of psychopathology, as is manifested in a number of recent papers and monographs (Stanghellini 2004; Matthews 2007; Ratcliffe 2008; Fuchs & Schlimme 2009). Moreover, embodied and ecological concepts of mental illness emphasize the circular interaction of altered subjective experience, disturbed social interactions and neurobiological dysfunctions

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1 "Rien d'humain n'est tout à fait incorporel." (Merleau-Ponty 1968, p. 178)

in the development of the illness. This opens up not only a rich variety of explanatory models but also promising perspectives for novel treatment approaches.

In view of these developments, the time seems ripe to integrate research strands regarding the self, its coherence and its disorders with the growing body of research into enaction and embodiment. This idea has inspired the European Marie-Curie Research Training Network “*Disorders and Coherence of the Embodied Self (DISCOS)*”, a consortium of 10 European research facilities. This network started in 2007 with the intent to create an interdisciplinary forum for research on embodiment, self-awareness and its disorders. Special emphasis is placed on

- conceptual aspects of self-awareness and embodiment, focussing on non-reductionist approaches to self and brain;
- the interplay of biological and social factors for establishing self-coherence;
- the relevance of intersubjectivity and intercorporeality for the development of the self;
- neuropsychiatric disorders of the embodied self, their nature and origins;
- therapeutic and ethical consequences.

Based on the common ground of embodiment, four main disciplinary approaches are combined in DISCOS to investigate these major issues:

- *Phenomenology and neurophilosophy* investigate the levels of phenomenal self-awareness, in particular the relation between the core self and the narrative self, the role of embodiment for self-coherence, and the relation of self and intersubjectivity.
- *Neuroscience* explores neural correlates of the self in terms of consciousness, basic self-awareness, agency and self-other distinction. This is carried out by using novel research methodologies which combine evidence from brain imaging with behavioural measurements and introspective reports in order to study the “embodied brain”.
- *Developmental psychology* investigates the origins of self-awareness and narrative self-concepts in the early social interactions and attachment relationships. These results are also pertinent to the question which interactive deficiencies undermine this development, and how psychotherapy can serve as a new attachment relationship changing dysfunctional patterns of interaction.
- *Neuropsychiatry and psychosomatics* investigate self-disorders such as occurring in sequelae of stroke or brain injury, schizophrenia, severe personality disorders, post-traumatic and somatoform disorders. Such conditions, where the subject’s relation to the world loses its familiarity and the body becomes alien, have been particularly fruitful in elucidating hidden dimensions of subjectivity.

By uniting the contributions of the first DISCOS conference held in Heidelberg in October 2008, this volume provides a textbook for these four approaches. It may thus serve as an orientation in a rapidly growing and developing field. The format is not chosen at random: DISCOS places a strong emphasis on training young researchers and providing opportunities for interdisciplinary dialogue. The structure of the book reflects this approach by offering keynote papers of the main topics which are commented by younger researchers who are all fellows within DISCOS. This makes it possible to reflect the plurality of approaches and positions within and outside the

network. Finally, a glossary with a selection of central terms will give the reader an additional overview, complemented by a few recommendations for further studies.

The features of interdisciplinarity and open dialogue constitute the spirit of this enterprise. We hope that with this book we can pass on some part of the vividness and enthusiasm of the dialogues to the esteemed reader.

The co-ordinators, node leaders and fellows of DISCOS gratefully acknowledge the funding of this Marie Curie Research and Training network by the European Commission in its 6th Framework Program (MC-RTN-2006-035975). The editors also would like to thank Hanne De Jaegher and Lorna Lees-Grossmann for proof reading and the whole group of DISCOS fellows for their support. For taking care of the manuscript in every respect we are grateful to Eva Wallstein of Schattauer Publishers.

Heidelberg and Munich, June 2010

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