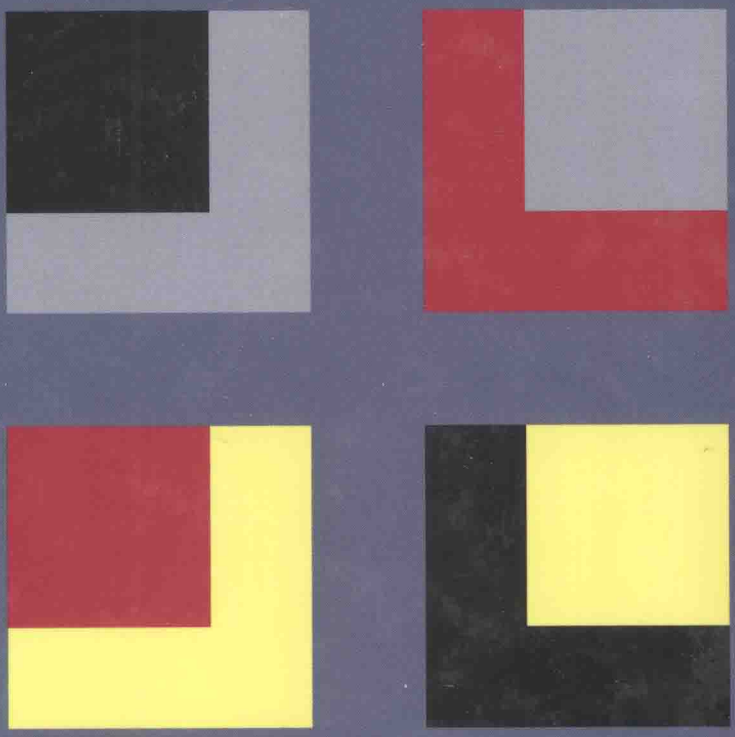
Body Memory, Metaphor and Movement

Edited by
Sabine C. Koch, Thomas Fuchs,
Michela Summa and Cornelia Müller



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Introduction

Body memory – Current state of research

This edited volume results from an interdisciplinary collaboration of phenomenologists, cognitive linguists, and psychologists working at the interface of embodiment research.[1] The editors share the interest in the *lived-body* (Merleau-Ponty 1962) and particularly in its *dynamic aspects* (Fuchs 2000, this volume; Koch 2011a, b; Müller 2007, 2008a, b; Sheets-Johnstone 1999; Summa 2011a, b). This brings them to the common ground of body memory and its repercussions in *kinesthesia* which is approached in this book through different disciplinary methods. Part I lays the phenomenological grounds by providing a definition and a taxonomy of body memory, introducing the concept of kinesthetic memory, critically discussing conceptual metaphor theory, and focusing on the particularities of traumatic memory and dance. Part II introduces an embodied perspective on memory within the cognitive sciences, discusses the value and place of the concept of body memory within embodied cognition, and offers an initial testing of Fuchs' taxonomy. Part III contributes clinical theory and applications from a body and movement therapy perspective. In this last part, many authors are motivated by the necessity to address traumatic as well as resourceful body memory in the course of trauma work and healing.

The aim of the book is thus threefold: Firstly, to describe the phenomenon and develop a taxonomy of body memory, to relate it to psychopathology, and to clarify the contributions from the cognitive sciences to an empirically based conceptualization of body memory. Secondly, employing an embodiment perspective to develop dynamic empirical approaches and an according methodology. And thirdly, to integrate approaches to body memory and metaphors from the fields of embodied therapies in clinical practice.

Regarding the overall topic of the book, phenomenologists, cognitive scientists and clinical practitioners are faced with a number of questions:

> What does the *concept* of body memory mean? Is it a useful category? In particular, what is the difference between body memory and implicit memory as conceptualized in the cognitive sciences?

1. Thanks to project grant 01UB0390A of the BMBF (German Federal Ministry of Education and Research) to S. Koch, T. Fuchs and C. Müller.

How are we to *empirically measure* and test body memory? Can we capture it in interviews, in movement analysis of video tapes, or by measuring reaction times?
Where are the *constraints* of body memory? What would a differential definition include?
When and how does body memory *become explicit*? Do symbols and metaphors play a role in this process?
And finally, how can practitioners of body and movement therapies *access body memories* in order to efficiently treat individuals in therapy? When is it indicated and promising to access, for example, preverbal memories?

The editors conceptualize memory as embodied; that means, memory is not a set of information stored somewhere in the brain, but the totality of the embodied subject's dispositions, which allow the person to react to present situations and requirements on the basis of past experience. However, we do acknowledge that memory is not monolithic, and any attempt to characterize body memory in terms of a single conceptualization or perspective will certainly not do justice to its heterogeneous aspects. The blind men and the elephant[2] are a suitable metaphor of how it feels when we approach the phenomenon of body memory. Phenomenology is in need of a clear descriptive conceptualization; psychology and the other cognitive sciences have no such concept as body memory and need to carefully approach a first definitional approximation. Movement and body-oriented therapies work with a hitherto rather blurry concept of body memory, and yet they have developed clinical methods to address and access traumatic content and work with it successfully.

All the disciplines involved here have their own reasons and motivations to address the phenomenon. Given their different goals and methods, can we expect to find common ground at this point in time? One common denominator is possibly the view that knowledge is stored in memory not in an *amodal* way, but in a *modality-specific sensorimotor format*, and that any type of recall includes a sensorimotor simulation of the processes involved in the original encoding of the experience (Barsalou, Niedenthal, Barbey & Ruppert 2003; Niedenthal 2007) as a basic assumption of embodied cognition approaches. Following the chapters of the book, the reader might judge whether the different disciplinary perspectives have jointly contributed to an enriched and synoptic understanding of the concept. At the end of the book, we will reassess this question in light of the contributions in this volume.

2. Six blind men are asked to determine what an elephant lookes like. One blind man feels a leg and says the elephant is like a pillar; the next feels the tail and says the elephant is like a rope; the third feels the trunk and says the elephant is like a tree branch; the fourth feels the ear says the elephant is like a hand fan; the fifth who feels the belly says the elephant is like a wall; and the sixth feels the tusk says the elephant is like a solid pipe. This story illustrates the relativity of truth and the dependency on what we think is true on the range of our accessible senory information.

Chapter overview

In the first chapter, Thomas Fuchs provides an overview on body memory from a phenomenological perspective; he introduces his own body memory taxonomy, and relates it to psychopathology. In the second chapter, Michela Summa discusses the relevance of the inquiry into body memory within a phenomenological theory of knowledge. She particularly touches upon the role of body memory in meaning formation by comparing Husserl's theory of *Typus* with the experientialist theory of embodied concepts developed by Lakoff and Johnson (1999). In Chapter 3, Maxine Sheets-Johnstone embeds her description of kinesthetic memory within the current debate on memory in philosophy and the cognitive sciences. Somewhat skeptical regarding the current differentiations of memory types, the author insists on the centrality of kinesthetic memory in everyday life and anchors her account of kinesthetic memory in both phenomenological descriptions and Luria's seminal notion of kinetic melody. Chapter 4 by Elizabeth Behnke introduces the concept of "enduring" to describe a peculiar attitude characterizing traumatic body memory. The phenomenology of 'enduring' describes the bodily and pre-reflective stance to bear and withstand hardships. Yet, it also refers to the temporal spreading out of traumatic experiences, which pervade one's life. In Chapter 5, Monica Alarcon explores the relation between body memory and dance. In doing so, she particularly highlights the interweaving of the spatio-temporal unfolding of body memory in dance, and argues that the lived body shall be quasi-transcendentally considered as the unconstituted condition of both space and time. Commenting on Fuchs' body memory publication from 2003, Eugene Gendlin introduces a new concept of the implicit in Chapter 6. Gendlin particularly contends that the inquiry into implicit memory shall not be exclusively focused on the past, but rather embrace an analysis of our capacity to presently reshape the past and to create something new.

The second part of the book contains chapters of cognitive scientists who took the challenge to anchor the phenomenological conceptualization of body memory in their own empirical work via the recent framework of embodied cognition. The first four chapters are based on a cognitive sciences background from psychology. In Chapter 6 on implicit body memory, Jansen criticizes the cognitive science's methods of conceptualizing and measuring implicit memory as being too narrow for the use of clinical practitioners. In her chapter, she proposes new measurements of body memory analogous to the ones of "classical" memory research. In Chapter 7, Christina Bermeitinger and Markus Kiefer provide an overview of recent empirical embodiment literature, and provide an integration of embodied and classical views on conceptual representation. They particularly discuss embodied processes and the sensorimotor representation perspective of concepts. In Chapter 8, Christina Jung and Peggy Sparenberg summarize recent empirical results in the field of embodied cognition, focusing on the effects of embodiment on emotions and the connections to the human mirror-neuron system. Chapter 9 by Caterina Suitner, Sabine Koch, Katherina Bachmeier and Anne Maass stresses the dynamic aspect of body memory resulting from the inclusion

of movement. The authors introduce the spatial agency bias and the dynamic body feedback approach as experimental methods that account for the dynamics of bodily behavior and body memory, with both cultural and universal appearances. A content analysis of interviews by Sabine Koch in Chapter 10 aims to test whether interviewees – when asked about a differentiation of body memory – generate the same categories than assumed in the taxonomy of Fuchs. Results show that Fuchs' categories were all included and were further sub-differentiated by the interviewees.

The next four chapters of part two include the perspective of cognitive linguistics, cognitive anthropology and other fields. Chapter 11 by Claudia Böger provides a perspective from philosophical anthropology and the fields of educational and sport science. Drawing on the background of conceptual metaphor theory (Lakoff & Johnson 1999), the author introduces her empirical work on metaphoric instruction. In two experiments, she showed performance advantages of participants instructed through metaphors versus non-metaphorically instructed participants. In Chapter 12, Astrid Kolter, Silva Ladewig, Michela Summa, Cornelia Müller, Sabine Koch and Thomas Fuchs present a case study on the dynamic emergence of metaphors from body memory in movement. Integrating the perspectives of phenomenology, psychology, cognitive linguistics and movement therapy, the case study shows how verbal and bodily metaphors dynamically emerge from movement, displaying different degrees of activated metaphoricity and different forms of experiencing body memory. This work results from an interdisciplinary methodology to analyze dynamic embodiment, developed by the editors within the BMBF-project "Body Language of Movement and Dance". Chapter 13 by William Sax and Karin Polit provides a dense and rich anthropological perspective on body memory. Conveyed by the examples of ritual possession and a ritual journey in the Himalayas the authors show how memory is to a large part not cognitive but embodied. Chapter 14 by Ralf P. Meyer provides an epigenetic perspective on body memory. The author puts forth that body memory in neurobiological context may be hypothesized as a concept influenced by genetics and epigenetics, environmental input, cultural influence, cognition, and emotion.

The third part of the book provides clinical perspectives of practitioner-researchers from body and movement therapies, who often work with body memories on a daily basis, particularly with regard to trauma treatment. Descriptions from the work with patients of different diagnoses provide a more concrete perspective to understand how body memory emerges from movement, and offers the opportunity to enter into the experiential worlds of the patients. This last part of the book contributes to ground the scientific approaches, and give them purpose by applying them to the clinical work with patients in different fields of embodied therapies that await scientific validation. In Chapter 15, Christine Caldwell integrates a clinical movement therapy perspective with a neuroscientific one, focusing on the fact that neuroscience confirms the crucial role of sensorimotor and affective processing in the neurogenetic shaping and reshaping of human memory, particularly implicit memory. Caldwell emphasizes that the understanding of the phenomenological body's centrality in learning and remembering has profound implications for the psychotherapeutic relationship and methods. Chapter 16 by Marianne Eberhard-Kaechele proposes an integrative model

of the trauma process as a common denominator of all therapy schools. She outlines the body's centrality in the development and healing of PTSD and provides a theory of *mirroring* as one of the central methods of assessment and intervention from a movement therapy perspective. In Chapter 17 Paivi Pilvänäinen, on the background of her "tripartite model of body" relating to Casey's (2000) body memory model, provides a comprehensive overview of the theory and works of Eric Kandel and relates them to the concept of body memory. In the second part of her chapter, she describes a movement therapy process of eight women, focusing on the emergence and meaning of body memories in the course of group psychotherapy. In Chapter 18, Yona Shahar-Levy introduces the Emotorics approach she developed in her clinical work in Israel. This approach contains a theory of body memory, which Shahar-Levy also exemplifies using clinical examples from patients. Chapter 19 takes on the challenge to analyze the verbalization and verbalizability of meaning-related processes in movement. Heidrun Panhofer, Helen Payne, Timothy Parke and Bonnie Meekums integrate narrative research and expressive approaches. Their conclusion is that much of the nonverbal therapeutic processes cannot – and in fact need not – be verbalized for healing to occur. In Chapter 20, Ilka Konopatsch and Helen Payne describe the method of authentic movement, a technique in movement therapy to get to truthful, self-congruent, and innovative discoveries by use of movement. Authentic movement often triggers body memories and the emergence of metaphors. Chapter 21 by Helle Winther provides a phenomenological description and detailed analysis of the processes of three patients participating in movement therapy. In Chapter 22, Sabine Koch and Steve Harvey highlight the role of movement therapy for traumatized dissociative patients illustrating their point with a single case study of a child and a group case study with traumatized dissociative identity disorder patients in a clinical setting. They focus on body memories, treatment principles, and methodological options in movement therapy for adults and children. Chapter 23 by Elmar Kruithoff introduces focusing and the felt sense – two core concepts of Eugene Gendlin (1996) – as an aspect of and in relation to body memory. In Chapter 24, Johannes Michalak, Jan Burg and Thomas Heidenreich provide a comprehensive overview of mindfulness-based psychotherapy, the empirical research related to it with a particular focus on the treatment of depression, and their own empirical work in the field. They view body memory as the constant ground on which learning takes place, and emphasize the role of conscious attention toward the body in this process. The final chapter of the editors ties together important research directions that emerge from the book.

For phenomenology as well as for movement therapy, there has been some previous writing, thinking, and predefining the topic, not so for the cognitive sciences. A treatise on body memory from the perspective of the cognitive sciences is an innovative jump into a non-existing field. We have been lucky to find the right kind of open-minded and innovative researchers to put down a foundation of the field from a converging phenomenological, cognitive sciences, and clinical perspective. Independent of their perspective, we would like to thank all authors for their contributions.

Last but not least, we would like to thank the organizing forces behind this edited volume, Teresa Kunz, who more than once formatted the entire set of chapters; Els

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Sabine C. Koch, Thomas Fuchs, Michela Summa and Cornelia Müller
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PART I

Contributions from phenomenology

CHAPTER 1

The phenomenology of body memory

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Memory comprises not only one's explicit recollections of the past, but also the acquired dispositions, skills, and habits that implicitly influence one's present experience and behavior. This implicit memory is based on the habitual structure of the lived body, which connects us to the world through its *operative intentionality*. The memory of the body appears in different forms, which are classified as procedural, situational, intercorporeal, incorporative, pain, and traumatic memory. The life-long plasticity of body memory enables us to adapt to the natural and social environment, in particular, to become entrenched and to feel at home in social and cultural space. On the other hand, the structures accrued in body memory are an essential basis of our experience of self and identity: The individual history and peculiarity of a person is also expressed by his or her bodily habits and behavior. Finally, sensations or situations experienced by the lived body may function as implicit *memory cores*, which, under suitable circumstances, can release their enclosed content, as in Proust's famous *madeleine* experience. This unfolding or *explication* of body memory is of particular importance for therapeutic approaches working with bodily experience.

Keywords: lived body, body memory, implicit memory typology, habit, intercorporeality, trauma

We usually understand memory to indicate our capacity to remember certain events of our past or to retain and retrieve data and knowledge. But the phenomena of memory are by no means restricted to explicit recollection. As Descartes already noted, the lute player must have a memory in his hands, too, in order to play a tune with such skill.[1] He would certainly be lost should he try to remember the single movements that he

1. "Thus, for example, lute players have part of their memory in their hands, because the facility to move and bend their fingers in various ways which they have acquired by habit, helps them to remember passages that require them to move their fingers in that way in order to play them." See, *Descartes Lettre à Meyssonnier* 29.01.1940; also, *Lettre à Mersenne* 01.04.1640; 06.08.1640; (Descartes 1996), AT III, pp. 18–21; pp. 47–48; pp. 84–85; pp. 142–144.

once learned deliberately. Obviously there is a memory of the body apart from conscious recollection: Through repetition and exercise, a habit develops. Well-practiced patterns of movement and perception become embodied as skills or capacities that we apply in our everyday lives as a matter of course – the upright gait, the abilities to speak, read, or write, and the handling of instruments such as a bicycle, a keyboard, or a piano. If, following Merleau-Ponty, we regard the body not as the visible, touchable, and moving physical body, but first and foremost as our capacity to see, touch, move, etc., then body memory denotes the totality of these bodily capacities, habits, and dispositions as they have developed in the course of one's life.

In the 19th and 20th centuries, the French philosophers Maine de Biran (1953/1799), Félix Ravaisson (1999/1838), and Henri Bergson (2007/1896) recognized and studied the habitual capacities of the body as an independent kind of memory. For instance, Bergson's distinction between *souvenir-image* and *mémoire habitude* refers to a voluntarily and representative kind of memory, on the one hand, and to an involuntary and mainly enacted kind of memory, on the other hand.

The latter, "this consciousness of a past of efforts stored in the present is certainly a memory as well, but a memory fundamentally different from the first, always directed towards action, based in the present and looking only at the future. (...) Indeed it does not represent our past, but enacts it."[2] Similarly, Merleau-Ponty, in his *Phenomenology of perception*, described the habitual body (*corps habituel*) as the basis of our being-towards-the-world (*être au monde*): The body establishes itself in every situation and attaches us to the world by the invisible threads of its peculiar 'operative intentionality' – threads that have formed already in our earliest contacts with the world (Merleau-Ponty 1962: 74, 114).

Merleau-Ponty developed his approach to body memory in particular by considering the role of *operative intentionality* in the formation of habitualities (Merleau-Ponty 1962: 122ff.). Considering the cases of a typist and of an organist, he emphasizes the peculiar kind of "knowledge" that allows them to type and play. While they first have to accustom their bodies to the instrument through consciously using the keys, both the typist and the player finally accomplish their tasks spontaneously, without explicitly recollecting the series of movements they have to perform. Their knowledge, as Merleau-Ponty puts it, is in the hands – not in the anatomical hands, of course, but in their lived-body; it comes forth by means of a bodily effort, and cannot be objectively designated:

> Habit expresses our power of dilating our being-in-the-world, or changing our existence by appropriating fresh instruments. If habit is neither a form of

2. "...cette conscience de tout un passé d'efforts emmagasiné dans le présent est bien encore une mémoire, mais une mémoire profondément différente de la première, toujours tendue vers l'action, assise dans le présent et ne regardant que l'avenir. (...) À vrai dire, elle ne nous représente plus notre passé, elle le joue." – Bergson (1896/2007: 87). *Matière et mémoire* (italics by the author, T.F.).

> knowledge nor an involuntary action, what then is it? It is knowledge in the hands, which is forthcoming only when bodily effort is made, and cannot be formulated in detachment from that effort. (Merleau-Ponty 1962: 127)

This kind of memory has been discovered and explored by cognitive psychology as *implicit memory* in the last three decades. Research concerning amnesic patients who may still learn simple motor tasks though being unable to retain any new memories has demonstrated the existence of multiple memory systems.[3] As a consequence, explicit or declarative memory has been distinguished from implicit or procedural memory (Schacter 1987). Explicit memory contains single recollections or information that can be reported and described; it may also be called a *knowing that*. By contrast, repeated situations or actions have merged in implicit memory, as it were, which means they have become superimposed on each other and can no longer be retrieved as single past events. They have become a tacit know-how that is difficult to verbalize – we would have some difficulty describing, for example, how to waltz. Thus, explicit recollection is directed from the present back to the past, whereas implicit memory does not represent the past, but re-enacts it through the body's present performance. What we once had acquired as skills, habits, and experience have become what we can do today; hence, body memory is our lived past.

On the other hand, implicit memory is not a mere reflex program realized by the body machine. Merleau-Ponty rightly conceived of body knowledge as a third dimension between merely imagined movement and motor execution. The memory of the body is an impressive refutation of the dualism of pure consciousness and the physical body, for it cannot be attributed to either of them. When I am dancing, the rhythmic movements originate from my body without a need to steer them deliberately – and yet I am living in my movements, I sense them in advance, and I can modulate them according to the rhythm that I feel: I myself am dancing, and not a ghost in a body machine. The movements of my body are at my disposal, I am aware of my capacities, and thus I feel up to my present task as an embodied being. In the last analyses, all capacities acquired earlier in life point to a primordial capacity of the embodied subject, to a basic "I can" (Husserl 1952: 253).

The body is thus the ensemble of organically developed predispositions and capacities to perceive and to act, but also to desire and to communicate. Its experiences, anchored in body memory, spread out and connect with the environment like an invisible network, which relates us to things and to people. It is, as Merleau-Ponty writes, "our permanent means of 'taking up attitudes' and thus constructing virtual presents" (Merleau-Ponty 1962, p.181); in other words, to actualize our past and, with this, to make ourselves feel at home in situations. In a most comprehensive sense,

3. Thus, amnesic patients may learn to trace a contour or lay a puzzle and perform better from day to day, without being able to remember having seen the contour or puzzle before (cf. Milner 1962; Corkin 1968).