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Embodied arts therapies☆

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ABSTRACT

The body is a particular kind of object. It is the only "thing" that we can perceive from the inside as well as from the outside. For this reason, it is intricately related to the problem of consciousness. This article provides an insight into embodiment approaches as they are emerging in phenomenology and cognitive psychology. The authors introduce important principles of embodiment – unity of body and mind, bidirectionality of cognitive and motor systems, enaction, extension, types of embodiment, relation to empathy –, and connect them with the arts in therapy.

What is embodiment?

Embodiment is a genuinely interdisciplinary recent theoretical approach with promising opportunities to develop empirical research suited to elaborate fields in art therapy. It provides a new perspective on the person as an organismic system (Smith & Semin, 2004), outdating the view of a cognitivist image of the person as an "information processor." It integrates a more physical and body-based view of the person as yielded by recent neuroscience research (Damasio, 1994) on the one hand, with a phenomenological knowledge-base concerning the role of the lived body and its qualia (Merleau-Ponty, 1962), kinesthesia (Husserl, 1952; Gallagher, 2005), and movement (Sheets-Johnstone, 1999) on the other hand.

Some researchers have claimed that embodiment approaches are merely part of the recent research tradition of situated cognition. This argumentation ignores the fact that that the body is a special category: It is the only "object" that we can perceive from the inside as well as from the outside. The body has a prototype function of our self- and world understanding and thus any cognition is primarily situated in the lived body. Moreover, embodied cognition, perception, and action often go beyond situated cognition in that many investigated effects generalize across situations, bearing witness to a certain universality (joint principles) of our bodily presence in the world. The following definition of embodiment provides the basis from which we scan begin with a stepwise clarification of embodiment principles:

> *Embodiment denominates a field of research in which the reciprocal influence of the body as a living, animate, moving organism on the one side and cognition, emotion, perception, and action on the other side is investigated with respect to expressive and impressive functions on the individual, interactional, and extended levels.*

The later two levels include person–person and person–environment interactions and imply a certain affinity of embodiment approaches to enactive and dynamic systems approaches (e.g., Varela, Thompson, & Rosch, 1991).

Bidirectionality assumption

The ways in which we move affect not only how others understand our nonverbal expressions, but, also provide us with kinesthetic body feedback that helps us perceive and specify, for example, certain emotions. In any case, the reciprocal influence of the body and the cognitive-affective system is a simplified construct (the components are only artificially separated) that has been introduced in order to highlight the bidirectional link between the motor system and the cognitive-affective system, and mainly to permit the experimental investigation of body feedback effects on cognition, emotion, perception, and action. We generally conceptualize body and mind, action and perception as a unity. The latter has been highlighted, for example, by Weizsäcker (1940) in the humanities and by Holst and Mittelstaedt (1950) in the sciences.

The bidirectionality assumption is useful for demonstrating various facts and relations. Fig. 1 shows how affect and cognition cause changes in movement (*expressive function*; Darwin, 1872), but also *how movement causes change in cognition and affect via feedback effects* (*impression function*; body feedback hypotheses; Laird, 1984; Riskind, 1984; Strack, Martin, & Stepper, 1988; Wallbott, 1990). In social psychology, such body feedback effects have been investigated since the 70s. However, *movement* as a basic

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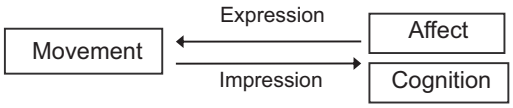

Fig. 1. Bidirectionality between the cognitive-affective and the motor system (Koch, 2011).

facility of the body has become a focus of these studies only recently (Koch, 2011). Such movement feedback can be defined as the afferent feedback from the body periphery to the central nervous system and has been shown to play a causal role in the the emotional experience, the formation of attitudes, and behavior regulation (Adelman & Zajonc, 1987; Zajonc & Markus, 1984). From a phenomenological understanding, the lived body is the mediator between and the background of the cognitive-affective system and movement. This understanding is also reflected in recent clinical embodiment approaches from phenomenology and psychology (Fuchs, 2011; Fuchs & Schlimme, 2009; Michalak et al., 2009).

According to embodiment approaches, movement can thus directly influence affect and cognition. For example, the mere taking on of a dominant versus a submissive body posture has been shown to cause changes not only in experiencing the self, but also in testosterone levels in saliva and risk-taking behavior after the intervention: both were higher in participants assuming a dominant posture (Carney, Cuddy, & Yap, 2010). Arm flexion as an approach movement and arm extension as an avoidance movement have been shown to influence attitudes toward arbitrary Chinese ideographs, causing more positive attitudes in participants in the approach condition (Cacioppo, Priester, & Berntson, 1993). Similarly, different movement qualities and movement rhythms have been shown to affect affective and cognitive reactions, such as smooth movement rhythms in handshakes leading to more positive affect and a more open, extroverted, and agreeable personality perception than sharp rhythms (Koch, 2011). A bi-directional link has also been demonstrated between the facial expression of emotions and the comprehension of emotional language: cosmetic injections of botulinum toxin-A, which suppress frowning movements, also hindered the processing and understanding of angry and sad sentences (Havas, Glenberg, Gutowski, Lucarelli, & Davidson, 2010).

But how can we systematize movement in order to investigate its effects? Clinical movement analysis differentiates two major categories of *movements*: movement quality and movement shaping (Kestenberg, 1975; Laban, 1960). Quality denotes the changes in the dynamics of the movement, which can be fighting or indulgent, and either can occur in tension flow (the alternations between tension and relaxation, which can be sharp or smooth), in pre-efforts (Kestenberg, 1975), or in efforts (Laban & Lawrence, 1974). Shaping denotes the shapes and shape changes of the body, such as open and closed postures, or growing and shrinking of the body as prototypically observed in inhaling and exhaling. In shaping, the body either expands or shrinks in different directions, either in response to an internal or to an external stimulus. These changes can all be described in specific movement terms and notated in writing. Movement rhythms – the earliest most unconscious movement qualities patterns we employ – are graphed by use of kinesthetic empathy (Kestenberg, 1975), a bodily attitude that makes use of the resonance of others' movements in one's own body (see also Fuchs & De Jaegher, 2009). The differentiations of the Laban and Kestenberg systems need to be taken into account when investigating the influence of movement on the self empirically.

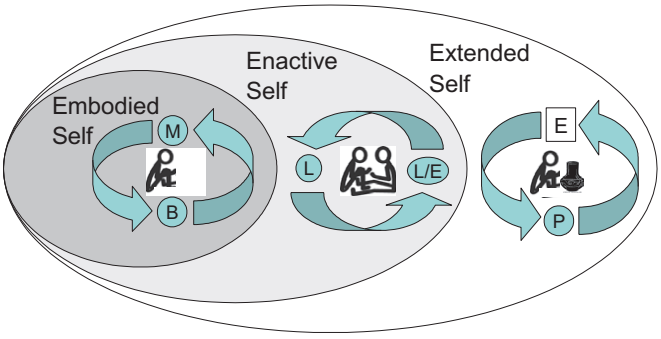

Fig. 2. Graphical overview of the embodied, the enactive and the extended self in relation (M = mind, B = body, L = life form; E = environment, P = person; Koch, 2011).

Three levels of embodiment: the embodied, enactive and extended self

Next to the individual level, mostly investigated in psychological approaches, embodiment influences the person–person and the person–environment *interaction* (Fig. 2). Interpersonal and environmental interaction from a more biological and dynamic systems perspective is the focus of the enactive approach, and interpersonal and environmental interaction from a more cultural and functional perspective is the focus of the extended approaches.

The *embodied self* is defined by our corporeality (Leiblichkeit, Merleau-Ponty, 1962) or mind-body unity. It is empirically investigated by the analysis of the relations between what is conceptualized as body (B) and mind (M). The embodied self unifies phenomena of embodied cognition, perception, emotion, and action (Barsalou, Niedenthal, Barbey, & Ruppert, 2003; Niedenthal, Barsalou, Winkielman, Krauth-Gruber, & Ric, 2005; Raab et al., 2009). The *enactive self* is conceptualized as a living system following the principles of autonomy, self-reproduction, plasticity, sense-making, and a coupling with the environment (De Jaegher & Di Paolo, 2007; Varela et al., 1991). If applied to person systems, it also denominates phenomena such as the self extended to a dyad or a group that constitute a new entity beyond that of the individual embodied selves (Fuchs & De Jaegher, 2009; Schlippe & Schweitzer, 1996). The *extended self* (Clark, 1997) is defined by the embodied self's intertwining with and reaching into the environment including cultural externalization such as in clothing, housing, gardening, and artistic expressions through the sculptures, pictures, songs, poems, and dance created by an individual. This aspect of embodiment includes externalizations and symbolizations of the self –, e.g., in the form of artwork – to which we can then put ourselves back in relation.

Embodiment provides a genuine approach to the interface of arts therapies and cognitive science. It entails the influences of postures and gestures on perception, action, emotion, and cognition. Since it emphasizes the unity of body and mind, and the experiencing of qualia, animation, and the kinesthetic sense, we need to acknowledge and follow up on dynamic approaches, taking into account *movement* such as dynamic body feedback (Koch, 2011), or spatial movement–meaning–relations (Koch, Glawe, & Holt, 2011), and *movement qualities* (Kestenberg Amighi, Loman, Lewis, & Sossin, 1999; Kestenberg, 1975; Laban, 1960; Sheets-Johnstone, 1999). Its enactive and intersubjective aspects are related to concepts such as empathy (Gallese, 2003) and rapport in therapeutic interactions (Ramseyer & Tschacher, 2011). And its extended aspects are, for example, represented by the artwork resulting in and from therapy, a picture to express one's depression, a sculpture to deal with one's loss of a body part, a courageous piece of improvised music to fight one's anxiety, a dance of joy to activate one's resilience, or a poem to put a traumatic experience into words.