

EMBODIMENT IN ACTION¹

This contribution emerged as a commentary on a roundtable discussion on embodiment in research, held online on **the 29th of October, 2021**. The nature of this commentary reflects the background and interest of the author: the mechanistic understanding of human cognition and action. The commentary will thus make an attempt to translate the contents of the discussion between theoretically interested practitioners into mechanistic terms that, ideally, help to **form a bridge** between our mechanistic understanding of human embodiment and ‘embodiment in action’, as discussed in the roundtable. **My goal is to contribute to** a better understanding of what we can theoretically learn from practical experience, and how practical experience can be informed by theoretical conceptualization.

The practical examples that the roundtable discussants refer to reflects their experience as artists. Artists need and perform for an audience, which brings at least two agents into the theoretical game. Embodiment is a complicated concept for which no agreed-on definition exists,² but it in any case refers to some kind of interaction between one’s body and one’s experience and/or cognitive processes (which need not be strongly related)³. So let us begin with the individual units of the interaction of which performance is comprised. From a philosophical viewpoint, perceiving and identifying oneself includes sensory information about the here and now (the so called minimal self) and more conceptual information about one’s personal history (the so-called narrative self). The minimal self was aptly described **in 1739 in *A Treatise of Human Nature*** by David Hume (1711-1776), who suggested that it reflects the total of all currently available sensory information about oneself.⁴ This includes visual information, as I can see myself both directly (e.g., by looking at parts of my body and their movements) and indirectly (e.g., by watching an event from an angle, a perspective that in a sense implies the location and posture of my own body), hear myself creating sounds, feel myself moving, and so forth and so on. Hence, the minimal self is a multimodal stream of information that directly or indirectly specifies me in the here and now. What **Hume** did not consider is that not all components of this ongoing stream are equal. Humans are known to be rather selective with respect to the information they attend to and process, so that my effective minimal self will never be complete with respect to the resulting perception, but **will** rather highlight sensory components that are currently of interest for me. If I **play** sports, the quickness and effectiveness of my body movements will matter more than if I engage in acting, where the emotional qualities of my movements and my body posture may play a bigger role.

According to **Hume**, our self in a sense disappears if we fall asleep, because we no longer attend to the sensory information related to ourselves. And yet, our self-perception does not necessarily start from scratch every morning **when** we wake up, as we are familiar with ourselves, know who we are and what we commonly do, and more. This aspect of self-experience is captured in philosophical approaches by the concept of a narrative self.⁵ It consists of all the knowledge that

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² See Bernhard Hommel, ‘Embodied Cognition According to TEC (Theory of Event Coding)’ in *Foundations of Embodied Cognition, Volume 1: Perceptual and Emotional Embodiment*, ed. by Yann Coello and Martin H. Fischer (Psychology Press: 2016). See also Bernhard Hommel, ‘The Future of Embodiment research: Conceptual Themes, Theoretical Tools, and Remaining Challenges’ in *Handbook of Embodied Psychology: Thinking, Feeling, and Acting*, ed. by Michael D. Robinson and Laura E. Thomas (Springer: New York, 2021). See further Margaret Wilson, ‘Six Views of embodied cognition’ in *Psychonomic Bulletin & Review*, 9, 2002.

³ See Hommel (2016), art. cit.

⁴ Available online at: <https://librivox.org/treatise-of-human-nature-vol-1-by-david-hume> (accessed on July 10, 2021).

⁵ See Shaun Gallagher, ‘Philosophical Conceptions of the Self: Implications for Cognitive Science’ in *Trends in Cognitive Science*, 4, 2000.

we have about ourselves. Again, not all that knowledge will be active at the same time, so that even our narrative self will be selective to some degree. But we do have a lot of knowledge about ourselves available, so that we can make sense of our minimal self and create conceptual cues that try to capture some aspects of it. Importantly, a **conceptual cue** like ‘I am laughing’ can never really capture the richness of the sensory information it represents. It can also never achieve the reconstruction of the exact same sensory configuration that was present when the cue was created. If we are laughing frequently, say, this laughter will be accompanied by a present minimal self, including our sensory experience of our mood and affective attitude, that will be so complex that an exact copy of that experience will be impossible to create. According to the logic of Heraclitus, we can never be happy twice in the exact same way. If so, using conceptualizing cues, like the description ‘I am laughing’ or ‘I am happy’, can help us and others to re-create internal states that are similar to previous states associated with these cues, but this similarity will always be incomplete. Experiencing oneself at one particular moment in time will thus consist of two components: the currently attended components of all sensory information related to one’s body and its movements (the components of the current minimal self) and the currently activated components of all knowledge one has about oneself (the components of the current narrative self). I will refer to this weighted mixture of information as the ‘current self’.⁶

Artistic performance commonly includes at least two agents: the performer and the audience, which both bring their current selves with them. Let us now try to reconstruct the main themes of the roundtable discussion in our theoretical terms. The discussion about the Alexander **T**echnique basically speaks to the fact that the contribution of the minimal self to the current self is determined by at least two important factors. First, there is the selection of sensory cues. The more I attend to some, the more I neglect others. This trade-off relates to other parts of the discussion, such as the relationship between the affective and aesthetic qualities of a performance, and the problem that increasing attention to one necessarily reduces one’s capacity to consider the other. Practitioners try to deal with this trade-off by trying to automatize their behaviour to some degree. Indeed, research on human attention traditionally assumes that making use of highly overlearned routines need less attentional capacity than novel or uncommon behaviour, so that automaticity can be expected to free **up** capacity to attend to other aspects. However, there are limits to this distribution, given that one can simply not attend to two different dimensions at the same time (try to consciously attend to the shape and colour of an event). Hence, to some degree this trade-off between different qualities of a performance will remain a structural problem. **There is, however,** another important factor that the Alexander **T**echnique tries to exploit: the amount or kind of sensory information. Behavioural control requires feedback, as we cannot control processes without knowing what our control efforts can and have achieved. This is why we cannot learn to control our breathing or heartbeat without valid information about how our control attempts effectively change breathing and heartbeat. Accordingly, any measure to increase the effectively available sensory information about one’s body posture and movements, be it with mirrors, biofeedback, or reactions of others, will increase one’s options to control one’s performance.

Another question being discussed is the degree to which one can truly capture and re-create the degree to which the original audience has reacted to historical performances. From a theoretical point of view, this question falls into two different sub-questions. The first relates to the relationship between the performer in the present and a possible, implied, or actual performer in the past (e.g., an actor playing Hamlet around 1603 in Shakespeare’s Globe Theatre). How tight can this relationship be, how well can a present performer reconstruct the current self of a past

⁶ See Bernhard Hommel, ‘The Me-File: An Event-Coding Approach to Self-Representation’ in *Frontiers in Psychology*, 10:3389, 2021.

performer? With respect to the sensory (minimal-self) contribution to the current self, this relationship can be very tight indeed. Dramas and similar instructions try to steer and constrain the ways performers think, feel, and move, at least to some degree, and given that our sensory hardware hardly changed during the past 200,000 years or so, the overlap between the self-perception of present and past performer will be very substantial. However, the conceptual (narrative-self) contribution is likely to depend rather strongly on culture and *Zeitgeist*. For instance, the full conscious experience of emotions strongly varies between cultures and even between individuals,⁷ so that a few hundred years are likely to have a very strong impact on how people conceptualize the total of their sensory experience.

The second sub-question relates to the relationship between performer and audience. Both are different, interested in different things, and likely to have a different background, so that it can be hard for the performer to predict how the audience might react. Accordingly, even if the performer knows what exactly she wants to create or re-create in the audience, this might be hard to achieve. Again, the probability of success depends on the component of the current self. While the sensory, minimal-self component is likely to be easier to transmit, as it can rely on the substantial overlap between performer and audience in terms of their cognitive and bodily hardware, the conceptual, narrative-self component might depend much more on more volatile commonalities between performer and audience. This has interesting implications for performance theory, like *Stanislavski's system, Method Acting* or Brecht's distancing technique. The latter relies much more on conceptual cues that only point to, but do not actually present embodied cognitive and affective states. This need not necessarily be less effective than actually embodying such states, as the Stanislavski method requires. But the success of transmission depends much more on shared cultural, educational, perhaps even economic background and other aspects of people's lives that are likely to affect the way they interpret their internal states. With respect to the relationship between past and present performer, successful re-creation of particular states in the present audience might in some cases even require entirely different strategies than those having been used by past performers. Whether this does or does not make sense depends on the goals of the present performer: does she want to re-create the internal states of the past performer as validly as possible, or does she want to re-create the internal states of the past audience? Different goals are likely to require different strategies and techniques.

Two other themes emerging from the roundtable discussion relate to identity. This is a complex, commonly ill-defined term that is difficult to deal with. If we accept that the current self is a mixture of weighted perceptual experience and conceptual knowledge, and that the current self provides the basis for one's identity (perhaps with a stronger impact of sensory sources *on* one's perceived identity, and a stronger impact of conceptual sources *on* one's ascribed identity), we can theoretically reconstruct the two themes. One relates to the performer and the way she changes over time. Both components of the current self are likely to change over time, even though the sensory component is likely to change much more quickly than the conceptual one. But once they have changed, they are different from the previous self, which in turn is unlikely to leave any overly literal memory about what it was. Accordingly, it makes sense to assume, as the discussion concludes, that engaging in a different way to represent artistic pieces, be that in drama or in music, by increasing or changing one's way to embody them, makes it impossible to somehow 'go back'. Naivety cannot be regained.

The other theme relates to the identities of the performer and the character she is playing. A character is unlikely to have shared the exact same past experiences as the performer, so that

⁷ See Lisa Feldman Barrett, *How Emotions Are Made: The Secret Life of the Brain* (Houghton Mifflin Harcourt: 2017).

some discrepancy may always exist. However, this aspect is restricted to the conceptual component of the current self. As mentioned already, the current self is not a reflection of all the conceptual information we have about ourselves, but only a tiny selection of those aspects that are currently of interest for the agent. With a strong 'Method Acting' attitude, this component may well be close to zero, thus leaving a very strong, dominant contribution from the sensory component. Depending on the weighting of the sensory information related to this component, the overlap between performer and character may thus be very high, so that in some sense the self-representation of the performer may more or less fully overlap with the self-representation that a writer might have envisioned for a particular character. In other words, under certain circumstances and with particular techniques emphasizing embodiment, a performer might actually merge her identity with that of a character, at least for some time.

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