
Experiencing time in peripersonal space

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Résumé

Time and space constitute the fundamental scaffoldings for an embodied agent who acts upon and interacts with the environment. From this perspective, experienced time and space are not merely abstract or geometrical fields but closely related to action possibilities. This phenomenal aspect of action space is reflected in the well-established concept of peripersonal space (PPS), which refers to the space immediately surrounding body parts. PPS functions as both a safety zone and an action space.

In contrast, psychological studies on time perception have primarily focused on bodily states and sentience, paying less attention to the dynamics of sensorimotor processes and actions. Nonetheless, a significant intersection exists between PPS and time perception. For instance, the presentation of a threatening object has been shown to expand PPS as a safety zone, while studies on time perception reveal a tendency for subjects to overestimate the duration of such events. Moreover, philosophers often characterise the phenomenality of PPS in temporal terms, such as the immediacy of action, the feeling of presentness, or the anticipation of near-future action.

Despite these connections, the felt time within PPS as an action-involving space remains underexplored, as does the felt space it describes. To address this issue, I will examine the interplay between the action speed of an embodied agent and the anticipated speed of environmental change. Particularly, I will analyse the constitutive role of time in the expansion or projection of PPS into far space, facilitated by the integration of tools into the body schema.

Mots-Clés: peripersonal space, time perception, enaction, tool use

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