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Sommario/riassunto

We interact with our environment through perception and action. Perception is based on sensory components while actions are based on motor components. It is commonly accepted that these sensorimotor components constitute the foundation of knowledge (i.e., percepts and concepts), action and emotion. However, whether or not these components remain part of knowledge, action and emotion is still being debated (see Glenberg, Witt, & Metcalfe, 2013). According to the classical symbolic/abstracted approach of cognition, cognitive processes operate on symbols that are abstracted from these components. Reversely, embodied cognition theory states that knowledge, action and emotion remain grounded in these sensorimotor components (see Wilson, 2002). This embodiment revolution assumes that the interactions between present and absent -but simulated in memory- sensory-motor components determine the emergence of knowledge, action and emotion (Barsalou, 2008). It also implies that perception, memory (in particular conceptual knowledge), action and emotion interact together in a closer way that previously thought (e.g. Riou, Lesourd, Brunel & Versace, 2011; Corveleyn, Lopez-Moliner & Coello, 2012; Vermeulen et al., 2013). Despite the accumulation of empirical evidence showing that perception, memory, action and emotion interact together, less is known about the dynamics of these interactions. It remains to precise the temporal dynamic (when these interactions occur), the neural underlying networks, and the factors

that modulate these interactions. The present research topic focuses on the dynamic relationship between present and absent sensorimotor components across perception, memory, action and emotion in a grounded cognition perspective. This research topic aims 1) to demonstrate the validity of the embodied cognition theories 2) to highlight the dynamics of emergence of conceptual knowledge, action and emotion 3) to provide a comprehensive state-of-the-art theoretical explanation and/or models.