Action observation and action imagination: from simple movement to the excellent sport performance
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Understanding gestures is essential for communication learning and social behavior. We spend a huge part of our life observing and interpreting others people gestures to create an image of our inner and external world. Moreover, observing gesture is the first step toward imitation, which represents from born an important resource to built new behavioral strategies.

The so-called "mental representation" has recently proposed to be the possibility that the nervous system has for representing an action in the absence of any motor contingency. This hypothesis opens new exciting possibilities for the interpretation of some perceptual mechanisms, various forms of training (mental training) and learning (observational learning). Here I present results showing that through action observation and imagination individuals simulate the "technical" content of the action with the consequence of learning how to replicate it. The main idea is that the level of activity in the brain during action observation and imagination could be related to the level of details of the model that is internally represented for each individual.