How to Coordinate Joint Actions

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Abstract (118 words)

How do individual cognitive systems enable joint action? Recent behavioural and

neuroscientific studies have led to a new understanding of how people coordinate and plan actions together. These studies specify the conditions under which individuals integrate a co-actor in their own planning and how integrating a co-actor affects individual performance. Moreover, they indicate that individuals plan joint actions from a group perspective rather than an individual perspective. To perform actions together in real-time, as in joint music performance, individuals need to adjust their actions to temporally interlock with others', which can be achieved by entrainment or prediction. Thus in joint action individual cognitive systems combine interpersonal planning and perspective-taking capabilities with motor processes that can interlock with others'.

BOX 1: Joint decision making.

Common mechanisms for group perspective taking may drive both joint action and joint decision making.

BOX 2: Joint music performance

The joint action skills musicians exhibit in performing duets and ensemble music constitute a paradigm case requiring exquisite temporal interlocking.

BOX 3: The neural basis of joint action

Joint action may be supported by synchronisation of neural patterns across multiple separate brains.

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