

# New Research From Psychological Science

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## [Choosing, Doing, and Controlling: Implicit Sense of Agency Over Somatosensory Events](#)

*Khatereh Borhani, Brianna Beck, and Patrick Haggard*

It is thought that agency (i.e., the feeling of control over one's actions and their outcomes) includes two forms of control: the selection of which outcome to pursue and the use of motoric control to imitate actions that lead to outcomes. In this study, the researchers investigated how each component of agency contributes to temporal binding (i.e., the perceived temporal attraction between actions and their outcomes). Participants received either noxious heat-pain stimulation or innocuous electrotactile stimulation. The researchers manipulated whether participants could choose whether they received high or low levels of stimulation and, by pressing a button, the time at which they received the stimulation. After receiving the stimulation, participants reported the time they pressed the button or the time they received the stimulation. They also reported the sensory magnitude of the stimulus. The results suggested that both motoric execution control and the ability to select the outcome influenced temporal binding and the participants' perceptions of the magnitude of the stimuli and that binding and sensory attenuation may serve as implicit markers of a sense of agency.

## [Distinct Motivational Effects of Contingent and Noncontingent Rewards](#)

*Sanjay G. Manohar, Rebecca Dawn Finzi, Daniel Drew, and Masud Husain*

The drive through which rewards motivate action is known as motivational vigor. Incentives may motivate behavior by increasing expected rewards or by increasing the value difference between successful and unsuccessful performance, known as contingency. The authors directly compared these two aspects of motivational vigor in three experiments. In the first two experiments, participants were instructed to move their eyes as quickly as possible toward a target. Rewards on the task were either

based on performance or were random (performance-based-gain condition and random-gain condition). In two additional conditions, rewards were given (or not given) irrespective of performance (10-pence-gain condition and 0-pence-gain condition). The third experiment was similar to the first two except that participants could also receive fixed, random, or performance-based penalties. Eye movements were faster when rewards were based on performance than when they were random or when a reward was guaranteed than when no reward was given. The motivation by contingent and certain rewards was not correlated, which indicates that the expectation of rewards and contingency separately impact motivational vigor separately.