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Understanding language about other peoples actions.

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Abstract

When people understand language about their own actions they activate premotor regions they use to perform these actions. Do people understand language about other peoples actions by imagining how they perform these actions themselves, or how they perceive others performing them? Here, we recorded BOLD fMRI while left- and right-handers read about and then imagined their own unimanual actions (e.g. you write) or others actions (e.g. she writes). When imagining their own manual actions, participants preferentially activated PMC circuits controlling their dominant hand. By contrast, when imagining others actions, participants PMC activity reflected both how they perform actions themselves and how they typically see actions performed by right-handers (about 90% of people they see). Language-induced motor imagery for our own actions reflects how we use our own bodies, whereas imagery for others actions also reflects how others use their bodies, even if their bodies differ from our own.