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Elements in Perception
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ACTION UNDERSTANDING

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Action Understanding

Elements in Perception

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Abstract: The human ability to effortlessly understand the actions of other people has been the focus of research in cognitive neuroscience for decades. What have we learned about this ability, and what open questions remain? In this Element, the authors address these questions by considering the kinds of information an observer may gain when viewing an action. A ‘what, how, and why’ framing organizes evidence and theories about the representations that support classifying an action; how the way an action is performed supports observational learning and inferences about other people; and how an actor’s intentions are inferred from her actions. Further evidence shows how brain systems support action understanding, from research inspired by ‘mirror neurons’ and related concepts. Understanding actions from vision is a multi-faceted process that serves many behavioural goals, and is served by diverse mechanisms and brain systems.

Keywords: action recognition, mirror system, goal inferences, action observation network, observational learning

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