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#### An implicit plan overrides an explicit strategy during visuomotor adaptation.

Mazzoni P, Krakauer JW

*J Neurosci* 2006 Apr 5 **26**(14):3642-5 [[abstract on PubMed](#)] [[citations on Google Scholar](#)][[related articles](#)] [[FREE full text](#)]**Selected by** | Randy Flanagan

Evaluated 13 Apr 2006

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#### Randy Flanagan

Queen's University, Canada  
Neuroscience

New Finding

**This article is of considerable interest because it shows, for the first time, that implicit motor learning occurs independently of explicit strategies and appears to be obligatory.** Participants were required to move a cursor to targets on a screen under a visuomotor rotation that altered the normal mapping between wrist movements (controlling the cursor) and cursor movement. It is well established that people gradually adapt to such a rotation by monotonically decreasing the error between target and cursor directions. Here, the authors tested what would happen if participants were told about the rotation and given an explicit strategy to correct for it. Although subjects could initially implement this strategy with success, performance deteriorated because they implicitly adapted to the visuomotor rotation and thus overcompensated for the rotation. This result indicates that explicit and implicit adaptation in this task are independent and that the latter is obligatory and does not depend on task performance per se.

**Competing interests:** None declared

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