

Vincent Gable

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Confounding Circles

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Consider a technique used by the legendary pickpocket [Apollo Robbins](#) . . . When the researchers asked him about his devious methods—how he could steal the wallet of a man who knew he was going to have his pocket picked—they learned something surprising: Robbins said **the trick worked only when he moved his free hand in an arc instead of a straight line.**

According to the thief, these **arcs distract the eyes of his victims** for a matter of milliseconds, just enough time for his other hand to pilfer their belongings.

At first, the scientists couldn't explain this phenomenon. Why would arcs keep us from looking at the right place? But then they began to think about saccades, movements of the eye that can precede conscious decisions about where to turn one's gaze. Saccades are among the fastest movements produced by the human body, which is why a pickpocket has to trick them: The eyes are in fact quicker than the hands. "This is an idea scientists had never contemplated before," Madnik says. "It turns out, though, that the pickpocket was onto something." **When we see a hand moving in a straight line, we automatically look toward the end point—this is called the pursuit system. A hand moving in a semicircle, however, seems to short-circuit our saccades. The arc doesn't tell our eyes where the hand is going, so we fixate on the hand itself—and fail to notice the other hand reaching into our pocket.** "The pickpocket has found a weakness in the way we perceive motion," Madnik says. "Show the eyes an arc and they move differently."

[Jonah Lehrer](#),

[WRED MAGAZINE: 1 7.05 \(1999-04-20\), *Magic and the Brain: Teller Reveals the Neuroscience of Illusion*](#)
