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A&E Teller tells all
posted by Amy Kingsley
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Wired published its Nevada, er, "Mystery" issue this week, and it features a piece on local illusionist Teller. The quiet half of the Rio's resident magic troupe opens up to reporter Jonah Lehrer about how his work exploits tics of human neuroscience that are just now beginning to be studied by researchers. The most interesting finding? That many illusions rely on saccades, eye movements that precede conscious decisions about where to direct the gaze.

Consider a technique used by the legendary pickpocket Apollo Robbins, another coauthor of the Nature article spearheaded by Macknik and Martinez-Conde. 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.

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, " Macknik 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," Macknik says. "Show the eyes an arc and they move differently."

Don't worry, science won't ruin your enjoyment of a show that's intended to subvert your expectations of the typical Vegas magic act. I've seen — and enjoyed — Penn & Teller's show. And I wouldn't be surprised if Penn finds a way to work a bit about saccades into his stage patter.

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