

# Better Together

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Working Together: Participants of the study could not see each other, but together moved a mark on the disk into a target area. (Michael Peshkin)

Many things are just better in pairs. Can you imagine Strunk without White? Baskin without Robbins? Liz Taylor without [insert favorite ex hubby here]? But new research shows that people work better as a duo even when they think they don't, at least when it comes to coordinating tasks involving motor control. Results from a study led by Kyle Reed (Northwestern University) indicate that in such instances, performance improves when working with a partner. The study also isolated the role of haptic, or tactile, interactions as a form of communication involved in coordinating movements with others.

As illustrated in the photo (right), participants in Reed's study stood on opposite ends of a two-handled crank, separated by a curtain. The pairs couldn't see one another, and were asked not to speak, but each knew the other was there. Targets and messages were projected from above onto a disk attached to the crank; the messages instructed one or both subjects to grasp their handles and move a mark on the disk into the target area as quickly as possible, and hold it there until a new target appeared. Subjects also performed this task alone.

As pairs, participants reached the target faster than when performing the task alone. Many subjects perceived difficulty in synchronizing their actions, believing that coordinating with a partner slowed their performance. However, most pairs began to work together after only a few trials, developing specializations in which one participant accelerated toward the target while the other decelerated to avoid overshooting it. To arrive at this system, the pairs communicated only through their handling of the apparatus.

This result suggests an unconscious system of control between two people, a phenomenon not addressed in current motor-control theories.

The findings, says one of the researchers, Peter Vishton (College of William and Mary), are important to "understanding the continuum from perception to motor control to coordination, with implications across a wide variety of fields."

The project involved engineers as well as psychologists, and the collaborators continue to work together to build on these results. For example, to clarify how tactile communication occurs, the researchers are developing a project in which participants complete the crank task with a mechanical partner.

While cranks in a lab may seem far removed from everyday life (unless you work with a curmudgeon), when you think about it, coordinating your movements with others is key to so many things you do,

from moving furniture to waltzing. Maybe this will help us figure out how Ginger Rogers was so good at dancing backwards in heels.

Learn more about working together in “Haptically Linked Dyads,” in this month’s *Psychological Science*.