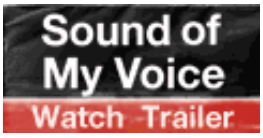

February 25, 2012

When Truisms Are True

By SUNTAE KIM, EVAN POLMAN and JEFFREY SANCHEZ-BURKS

WHAT ignites the engine of creativity? A popular metaphor in American business urges you to think "outside the box." Folk wisdom advises that problem-solving is helped by thinking about something "on the one hand" and then "on the other hand."

Is there any psychological truth to such metaphors for better thinking? Our research suggests that the answer is yes. When people literally — that is, physically — embody these metaphors, they generate more creative ideas for solving problems.

Recent advances in understanding what psychologists call "embodied cognition" indicate a surprisingly direct link between mind and body. It turns out that people draw on their bodily experiences in constructing their social reality. Studies show, for example, that someone holding a warm cup of coffee tends to perceive a stranger as having a "warmer" personality. Likewise when holding something heavy, people see things as more serious and important — more "weighty."

However, until recently it was not known whether bodily experiences could help in generating new ideas and solutions to problems. Our research, which will be published soon in the journal Psychological Science, discovered that it can.

For example, we asked 102 undergraduates at New York University to complete a task designed to measure innovative thinking. The task required them to generate a word ("tape," for example) that related to each of three presented clue words ("measure," "worm" and "video"). Some students were randomly assigned to do this while sitting inside a 125-cubic-foot box that we made of plastic pipe and cardboard. The rest got to sit and think outside (and next to) the box.

During the task we tracked the number of correct responses suggested by the students. We found that those thinking outside the box were significantly more creative: compared with those thinking inside the box, they came up with over 20 percent more creative solutions.

Even the outline of a box can influence creativity. In another study, our team examined the

originality of ideas among 104 students at Singapore Management University. First we showed students pictures of objects made of Lego blocks. Then we asked them to think of original uses for the objects, either while walking along a fixed rectangular path indicated by duct tape on the floor (marking out an area of about 48 square feet) or by walking freely as they wished.

The differences were striking: students who walked freely were better at generating creative uses for the objects — coming up with over 25 percent more original ideas. Such creativity was assessed in terms of fluency (the number of ideas generated), flexibility (the number of unique categories that described the generated ideas) and originality (as judged by independent raters).

Something similar happens when thinking about a problem on one hand and then on the other. In another study, 40 undergraduates from the University of Michigan were asked to lift and hold a hand outstretched (as you might while addressing an audience from a stage). Some were asked to lift just one hand, while others were asked to switch between hands. While they were doing this, we asked them to generate novel uses for a new university complex. Among students who were allowed to switch hands — in other words, to think about a problem on "one hand" and then "on the other hand" — we found a nearly 50 percent increase in the number of uses generated.

By showing that bodily experiences can help create new knowledge, our results further undermine the strict separation between mind and body — another box that has confined our thinking for a long time. In addition, although we're only starting to grasp how catchphrases shape how people think, it's possible to begin prescribing some novel suggestions to enhance creativity. For instance, if we're performing a job that requires some "outside the box" thinking, we may have to avoid working in cubicles.

But we shouldn't avoid cubicles altogether: to think outside the box, you first need a box.

Suntae Kim is a doctoral candidate and Jeffrey Sanchez-Burks is an associate professor, both in management and organizations, at the University of Michigan. Evan Polman is a visiting assistant professor of management and organizations at New York University.