

The New York Times

February 23, 2013

# Primed for Controversy

By SALLY L. SATEL, M.D.

IN 2005, the writer Malcolm Gladwell introduced readers to the phenomenon of “thinking without thinking” — the mental work we all do automatically — in his blockbuster book “Blink.”

Since then, the unconscious has been on a roll. Scores of popular books and articles have chronicled the power of subtle cues to influence our attitudes and actions.

Typical of the genre is a reliance on the “goal-priming effect,” in which study subjects automatically and unintentionally alter their thoughts or behavior when prompted by various kinds of information.

But now, goal-priming experiments are coming under scrutiny — and in the process, revealing a problem at the heart of psychological research itself.

In a classic experiment conducted in 1996, a team of psychologists at New York University “primed” students to walk more slowly by exposing them to words typically associated with older people, like “Florida,” “bingo” and “gray.”

The study is but one of many on goal priming, but thanks to Mr. Gladwell, who recounted the slow-walker experiment in his book, it soon became a staple of pop psychology. But why?

For one thing, people are fascinated by counterintuitive findings regarding human nature — who would think that reading seemingly incidental words would influence behavior? Also intriguing is the notion that we don’t have as much control of ourselves as we think.

Furthermore, goal priming carries an exculpatory whiff of “don’t blame me, blame my brain” — or better yet, “blame the world around me.” After all, if stimuli we are not aware of can influence us, then perhaps we are not as accountable for our actions as others might want to hold us. (The unsettling flip side, of course, is that we are ripe for manipulation by priming-happy marketers and policy makers.)

Such popularity has made goal priming ripe for closer inspection, and research examined the method have found it wanting. A team led by the Belgian cogniti Cleeremans and another at the University of California, San Diego, led by Hal I the slow-walker study and found no difference in the rates of walking between



OPEN

MORE IN OF  
**Op-Ed (**  
**Good fc**  
Read More

unprimed subjects.

Mr. Pashler's team [also tried](#) without success to replicate a dozen other goal-priming experiments, including one showing that exposure to money made subjects more likely to endorse a free market, and another reporting that exposure to a picture of an American flag prompted subjects to express nationalist attitudes.

To be sure, a failure to replicate is not confined to psychology, as the Stanford biostatistician John P. A. Ioannidis documented in his [much-discussed 2005 article](#) "Why Most Published Research Findings Are False." The cancer researchers C. Glenn Begley and Lee M. Ellis could replicate the findings of only 6 of 53 seminal publications from reputable oncology labs.

This is because, in a variety of fields, subtle differences in protocols between the original study and the replication attempt may cause discrepant findings; even little tweaks in research design could matter a lot. In the case of the slow-walker study, the finding was modest to begin with — only a one-second difference in walking duration between the primed and unprimed students. The larger issue, though, is that because relatively few replication studies appear in the academic literature, it is difficult to know why several seemingly comparable experiments yield conflicting results. The dearth is largely because of scientific journals' strong bias for accepting positive results. Meanwhile, a publish-or-perish world offers little reward for researchers who spend precious time reproducing their own work or that of others. This is a problem for many fields, but particularly worrisome for psychology. The field is suffering a "crisis of confidence," as Mr. Pashler put it, thanks to a glut of neat results that are long on mass appeal but short on scientific confirmation.

IN response, last year a group of psychologists established the [Reproducibility Project](#), which aims to replicate the first 30 studies published in three high-profile psychology journals in the year 2008.

Ideally, the psychologists will be able to illuminate the extent to which studies fail when they are reproduced by a different set of researchers, the factors that predict a study's reproducibility and, perhaps, the conditions under which the goal-priming effect, assuming it exists, is most robust.

For now, the goal-priming controversy should not be seen as a refutation of anyone's work but rather as an impetus to address two problems in the field of psychology: how best to elicit and measure intriguing properties of the unconscious and, more broadly, how to ensure that the tenets of science — transparency, skepticism and self-correction — manifest themselves in its conduct.

*Sally L. Satel, a scholar at the American Enterprise Institute and a lecturer in psychiatry at the Yale School of Medicine, is a co-author of the forthcoming book “Brainwashed: The Seductive Appeal of Mindless Neuroscience.”*