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The gravity of unwanted thoughts: Asymmetric priming effects in thought suppression

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Abstract

An unwanted thought appears to be cued easily by reminders in the environment but often the thought itself seems to cue nothing more than the desire to eliminate it from consciousness. This unusual *asymmetry* in the way unwanted thoughts are linked to other thoughts was the focus of the present research. Participants who were asked to suppress a thought or to concentrate on it completed a task assessing the influence of priming on reaction time (RT) for word/non-word judgments. Results revealed that suppression under cognitive load produced asymmetric priming: Priming with the associate of a suppressed word speeded RT for the suppressed word, but priming with a suppressed word did not speed RT for associated words. These findings suggest that thought suppression induces an unusual form of cognitive accessibility in which movement of activation toward the suppressed thought from associates is facilitated but movement of activation away from the suppressed thought to associates is undermined.

Keywords: Thought suppression; Hyperaccessibility; Priming

All too often, we find our consciousness drawn to a particular unwanted idea by most everything that comes to mind. But the idea itself seems to remind us of nothing much at all—except perhaps the fact that we would like not to think it. Unwanted thoughts have unusual gravity—an attractiveness that makes it easy for the mind to move toward them but difficult for it to move away. This power of suppression of unwanted thoughts reveals itself in an asymmetric pattern of reminding: Although anything related to an unwanted thought seems to remind us of that thought, the thought itself does not seem to remind us of other related things. This potential asymmetry of associative priming in suppression was the focus of this experiment.

To grasp this asymmetry, consider the predicament of an obsessive–compulsive disorder patient: The patient is convinced that encountering the number 7 will compel him to hurt someone. He tries not to think about the number, yet it seems that the idea of doing math homework turns his attention to it, as does a countdown in a game with friends, or even a glance at the clock. Cues in the environment automatically turn him toward the number 7, as do his own random thoughts when they drift too near the number. Once his focus is

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captured by the thought of 7, however, few cues in his surroundings can distract him from it. He does not seem to think of a 7–11 store, seventh heaven, the seven deadly sins, or any of a number of other related ideas that a person without his concern might have had come to mind on thinking of the number. The unwanted thought seems to give rise to an asymmetry of association, in which many associates act as reminders of the unwanted thought whereas the thought itself is something of a dead end, failing as a reminder of any of its usual associates.

Research has demonstrated two manifestations of the gravity of suppressed thoughts—the *ease of return* to suppressed thoughts, and the *difficulty of escape* from suppressed thoughts. An initial observation of ease of return by Wegner, Schneider, Carter, and White (1987) found that after a period of thought suppression, people instructed to discontinue suppression of the thought and instead to begin thinking about it reported more returns of the thought than occurred without prior suppression. This is particularly likely to happen under conditions of mental load. The ease of return illustrated by this ''rebound effect'' has since been observed repeatedly (see reviews by Abramowitz, Tolin, & Street, 2001; Rassin, 2005; Wegner, 1989; Wenzlaff & Wegner, 2000), including in studies with clinical samples. For example, Shipherd and Beck (1999) showed the inability to suppress rape-related thoughts in PTSD patients, Harvey and Bryant (1998) showed the same effect for accident-related thoughts in survivors of motor vehicle accidents with acute stress disorder, and Conway, Howell, and Giannopoulos (1991) showed impaired suppression of negative thoughts in dysphoric individuals. Common to these studies with clinical and non-clinical populations is the finding that the unwanted thought is faster to return to consciousness when it is being actively suppressed.

The difficulty of escape from suppressed thoughts has been found in studies examining the phenomenon of hyperaccessibility in interference effects. Wegner and Erber (1992) found that people suppressing a thought under cognitive load showed interference with the task of color-naming in a modified Stroop (1935) paradigm—more so than the interference found when people were concentrating on the thought under load. In essence, people could not switch attention to escape from the unwanted thought, and this difficulty became more pronounced with the imposition of cognitive load or distraction. This effect, too, has been observed repeatedly (e.g., Arndt, Greenberg, Solomon, Pyszczynski, & Simon, 1997; Newman, Duff, & Baumeister, 1997; Page, Locke, & Trio, 2005).

To account for such effects, Wegner (1994) proposed an ironic process theory of mental control. The theory suggests that thought suppression is accomplished by two cognitive search processes—an intentional operating process that consciously and effortfully searches for mental contents that are *not* the unwanted thought, and an ironic monitoring process that unconsciously and less effortfully searches for the unwanted thought. The processes work together to yield suppression, in that the relatively uninterruptible ironic process remains alert to the unwanted thought and prompts the operating process to be re-initiated if the unwanted thought returns to awareness. By maintaining such vigilance, however, the ironic monitoring process is likely to usher unwanted thoughts into awareness whenever competing cognitive demands undermine the effectiveness of the conscious operating process. These processes might explain both the ease of return to suppressed thoughts and the difficulty of escape from those thoughts.

The studies mentioned above support the notion of ease of return to, and of difficulty of escape from, suppressed thoughts. However, to date there have been no studies that have investigated the potential asymmetry of suppressed thoughts—the idea that thinking of things associated with the unwanted thought promptly results in a return to the unwanted thought, but that once back on the thought, it is difficult to disengage even to closely associated thoughts. Ironic process theory suggests that the suppression of a thought should influence the symmetry of associative pathways surrounding the thought. To appreciate this influence, it is worth noting that most theories of the association of thoughts—such as Collins and Loftus's (1975) spreading activation model—assume that the direction of associative links between thoughts is stable. The flow of thought is represented as a network of concepts or nodes, and the activation of a concept leads to activation of associated concepts that are nearby in the network. Although particular pairs of thoughts may exhibit asymmetrical associative links (e.g., *nose* leads to *job* more strongly than *job* leads to *nose*) these pathways of activation are understood as given by learned patterns of word association, not by transitory variations in mental control (e.g., Thompson-Schill, Kurtz, & Gabrieli, 1998).

Ironic process theory suggests that thought suppression under mental load should create asymmetric priming. If during suppression the operating process diverts attention away from the unwanted thought, it should