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The Role of Mental Processes in the Failure of Inhibition

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Where you begin a journey often determines where you end up. Polivy began her travels toward the understanding of psychological inhibition in the study of dieting and eating, and her approach to inhibition thus begins with the self-control of behavior. From there, she moved into considerations of the role of emotion and motivation in behavior inhibition, and finally to the role of thought. This path has led her to conceive of cognitive inhibition as a latecomer of sorts, as she claims that "strictly cognitive mechanisms" (this issue) cannot explain the wide range of adverse reactions and emotional disturbances associated with the general phenomenon of inhibition. Instead, she advocates a model that emphasizes the interaction of biological and psychological motives in which unexpressed drives that are not sufficiently attenuated by psychological processes can build up and eventually unleash themselves in unintended, and potentially harmful ways.

We started with thought (e.g., Wegner, Schneider, Carter, & White, 1987; Wenzlaff, Wegner, & Roper, 1988), and this point of departure has led us on a very different trip. Whereas Polivy's model is vague concerning the psychological mechanisms that contribute to inhibition difficulty, and she acknowledges the need

for more research, we began our study of inhibition problems with a specific focus on the mechanism. We believe the basic outlines of this mechanism are sufficiently clear at this point that problems of behavior, emotion, and thought can all be traced to the cognitive processes involved in mental control. By assuming that the cognitive processes involved in thought suppression have limited applicability to the motivational aspects of inhibition, Polivy has prematurely dismissed a theoretical account that provides precisely the comprehensive perspective she seeks.

In large part, Polivy bases her assessment of the limited relevance of thought suppression on an early model of the process (Wegner, 1989). Essentially, the initial research on thought suppression simply reported that people have difficulty suppressing thoughts when they are instructed to do so, and examined some of the implications of this effect. Polivy has not kept up with this literature, unfortunately, as she offers no citation or assessment of the more general theory of *ironic processes of mental control* that grew out of the thought suppression work (Wegner, 1994, 1997; Wegner & Wenzlaff, 1996). This theory specifies the mechanisms involved in thought suppression, and mental

control more generally, as well as the circumstances that can produce cognitive, emotional, and motivational problems. A brief consideration of the theory highlights its relevance to the issues Polivy raises.

It is worth noting at the outset that mental control processes have implications beyond strictly cognitive phenomena—as thoughts directly affect motivational and emotional states as well as behavior (e.g., Gollwitzer & Bargh, 1996; Wegner & Bargh, 1998). If this were not the case and inhibition relied exclusively on domain-specific processes, we would face a dire predicament indeed. Although we can exert some modicum of control over our thoughts, without cognitive mediation how would we endeavor to inhibit unwanted emotions or drives? One might envision inhibitory techniques such as taking psychotropic drugs, remaining locked in a room until the unwanted urges pass, or rendering oneself unconscious. The point here, of course, is that a mental control model has direct implications for not only the cognitive aspects of inhibition but also for the emotional and motivational facets.

According to the theory of ironic processes, mental control involves two mechanisms: an intentional operating process that seeks thoughts that promote the preferred state and an ironic monitoring system that searches for mental contents that signal the failure to achieve the desired state (Wegner, 1994). Both processes increase the cognitive accessibility of the mental contents for which they are searching. So, when a person is trying to be happy, the operating process searches for mental contents pertinent to happiness, whereas the monitoring process searches for thoughts that indicate happiness has not been achieved. Although the operating process is effortful, consciously guided, and relatively proficient, the monitoring system is usually unconscious, less demanding of mental effort, and thus less proficient.

Under normal circumstances the two processes work in concert so that the operating system fills the mind with desired thoughts and the monitoring process subtly prompts it to further action at the first sign of failure. Because the monitor stays watchful of lapses in control, however, it keeps the mind sensitive to the unwanted material. Therefore, when mental capacity is taxed and the effortful operating process is limited, the more subtle sensitivity supplied by the monitor ironically can create the mental state that corresponds to control failure. Under mental load, then, intentions to control the mind unleash a monitoring system that not only searches for the failure of mental control but then also tends itself to create that failure (for reviews of research evidence, see Wegner, 1994; Wegner & Smart, 1997; Wegner & Wenzlaff, 1996).

The ironic effects that occur when the operating system is disabled can be attenuated depending on how the goal of suppression was originally framed. Although it would seem equivalent to say that a person

who desires to be relaxed also desires not to be anxious, these frames differ subtly in their implications for the search strategies that will be undertaken during suppression. To create relaxation—an approach-oriented goal—the operating process would seek relaxing mental contents and the monitoring process would seek failures to create such thoughts. The monitored failures could range from anxiety-producing contents to a wide variety of neutral or relaxation-irrelevant contents. Disruptions in the operating system would thrust into awareness the contents of the monitoring system that, in this case, would be both nonrelaxing thoughts and a wide range of thoughts irrelevant to anxiety. This might produce only a small increase in anxiousness.

On the other hand, to avoid anxiety—an avoidance-oriented goal—nonanxious mental contents would be needed. This would require an operating process seeking both relaxing contents and neutral or relaxation-irrelevant contents and a monitoring process seeking only anxiety-relevant contents. In this case, disruption of the operating system would shift attention to exclusively anxious thoughts, thereby producing marked increments in anxiety. Thus, the way in which one frames the goal state determines the extent to which cognitive demands lead to ironic thought suppression effects (cf. Wegner, Broome, & Blumberg, 1996; Wegner, Erber, & Zanakos, 1993).

The theory of ironic processes of mental control offers insights into the questions Polivy poses concerning the deleterious and often paradoxical effects of inhibition. A reanalysis of some of the specific examples she highlighted shows the potential utility of the mental control model. For example, as Polivy points out, individuals who should be highly motivated to control their dangerous behavioral excesses (e.g., drinking, eating, smoking, etc.) are often the very people for whom inhibition seems to backfire. It is worth noting, however, that the paradoxical effects of inhibition rarely occur immediately; people who practice abstinence typically enjoy an initial period of relative success. The inhibition-induced backsliding that can occur is often precipitated by stress or situations that cue the unwanted behavior (e.g., Heatherton, Herman, & Polivy, 1991; Sayette, 1993). The mental control model predicts that the resulting cognitive demands would disable the operating system and facilitate the ironic effects of the monitoring process that, in turn, would cause an upsurge in unwanted thoughts and desires. The discouragement and self-reproach that follows a binge episode would exacerbate matters further and could lead the person to forsake the desired goal state, thereby allowing the monitoring process to proceed unabated. The process described here is equally relevant to the inhibition of a wide range of thoughts, perceptions, emotions, and behaviors, including those associated with depression (Wenzlaff & Bates, 1998; Wenzlaff et al., 1988), anxi-

ety (Trinder & Salkovskis, 1994), movement (Wegner, Ansfield, & Pilloff, in press), sleep (Ansfield, Wegner, & Bowser, 1993), and prejudice (Macrae, Bodenhausen, Milne, & Jetten, 1994).

A test of any theory of inhibition is whether it can account for not only instances of inhibitory failure but also of success. There are certainly examples where through inhibition people have lost weight, stopped abusing substances, gained greater control of their emotional lives, and otherwise benefitted. Ironic process theory can account for these successes by taking into consideration the contribution of stress and goal framing. In cases where the individual has framed the goal as the absence of a state (e.g., not sad, intoxicated, overweight, etc.), the operating system will be successful as long as cognitive resources are sufficient to respond to the monitoring system's failure warnings. Under stress, however, the ability of the operating process would be impaired and attention would shift to the antithetical focus of the monitoring system, thereby producing ironic effects. The stress-related unfettering of the monitoring process would be less likely to have such deleterious effects if a more approach-oriented goal is established at the outset (be happy, sober, slim, etc.). This type of goal would create a monitoring system that would seek any goal-irrelevant contents, including neutral information that would be less likely to produce ironic effects when cognitive capacity is low.

That thought suppression is not strictly a cognitive enterprise in the sense that Polivy characterizes it should be clear from this discussion. The mental control process both influences motivational states and is influenced by them. Indeed, our current understanding of the reciprocal relation between cognition and motivation suggests that it could not be any other way. The potential contribution of mental control theory to our understanding of inhibitory processes is further highlighted by the fact that inhibition is essentially an exercise in self-control and it is difficult to imagine how attempts to impose such control could occur in the absence of some cognitive process. The theory of ironic processes, then, provides a useful model for understanding the cognitive mechanisms involved in inhibition and helps explain why inhibition so often produces undesirable outcomes.

Notes

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