

The Seed of Our Undoing

by Daniel M. Wegner



According to Aristotle, the classic Greek tragedies tell stories of good people whose nature contains the seed of their own undoing. The research that my colleagues, students, and I have been conducting on *mental control* reveals the outline of just such a seed in the psychological processes that operate when people try to control their own minds. This seed is not quite tragic, as it does not always lead to wholesale undoing. However, it is certainly ironic--and we have been using the term "ironic process" to describe it.

The Irony of Not Thinking

The possibility that there might be an ironic process in mental control is easy to grasp in the case of thought suppression. A person who is asked to stop thinking about a white bear, for example, will typically think about it repeatedly as a result. In the [first studies](#) of this phenomenon (conducted with David Schneider, Sam Carter, and Teri White), we used stream-of-consciousness reports during suppression to measure this recurrence, but this suppression-induced preoccupation has now been found with less conspicuous methods. People who are [trying not to think of an emotional thought](#) such as sex, for example, show an increase in electrodermal response--as much as they do when they are specifically trying to focus on that thought. Under some conditions, suppression yields even more intense levels of preoccupation with a thought than does concentration.

People trying not to think about a target thought show such [hyperaccessibility](#)--the tendency for the thought to come to mind more readily even than a thought that is the focus of intentional concentration--when they are put under an additional mental load or stress. In [several studies](#) using the Stroop color-word paradigm (conducted with Ralph Erber and Sophia Zanakos), for example, we have found that trying not to think about a target word under conditions of mental load makes people unusually slow at identifying the color in which the word is presented. The word jumps into mind before the color and interferes with naming it. By this measure, unwanted thoughts are found to be more accessible than other comparison thoughts. And the ironic effect announces itself with a reversal of this finding under load for concentration: On average, any thought at all is more accessible than the concentration target.

Both of these observations can be explained by an ironic automatic process in the mind. The attempt to suppress a thought seems to conjure up an ironic psychological process that then works against the very intention that set it in motion. The suppressed thought is brought to mind in sporadic intrusions because of this sensitivity. The attempt to concentrate on a thought, in turn, seems to introduce an ironic psychological process that works against [the intention to concentrate](#), and that therefore enhances the accessibility of everything other than the concentration target.

Why might such ironic processes occur? One way of accounting for these findings is to suggest that [ironic processes are part of the machinery of mental control](#). It may be that in any attempt to control our minds, two processes are instituted--an *operating process* that works quite consciously and effortfully to carry out our desire, and an *ironic process* that works unconsciously and less effortfully to check on whether the operating process is failing and needs renewal.

In the case of thought suppression, for instance, the operating process involves the conscious and labored search for distracters--as we try to fasten our minds on anything other than the unwanted thought--whereas the ironic process is an automatic search for the unwanted thought itself. The ironic process is a monitor of sorts, a checker that determines whether the operating process is needed, but that also has a tendency to influence the accessibility of conscious mental contents. It ironically enhances the sensitivity of the mind to the very thought that is being suppressed.

Varieties of Irony

An ironic process theory can explain far more than the paradox of thought suppression--indeed, something like this might vex most everything we try to do with our minds. If the ironic process is inherent in the control system whereby we secure whatever mental control we do enjoy, then it ought to be evident across many domains in which we do have some success in controlling our minds. However, because the operating process requires conscious effort and mental resources, it can be undermined by distraction and evidence of ironic processes will then arise. When people undertake to control their minds while they are burdened by mental loads--such as distracters, stress, or time pressure--the result should often be the opposite of what they intend.

Studies in our laboratory have uncovered evidence of ironic effects in several domains. [Ironic mood effects](#) occur, for example, when people attempt to control their moods while they are under mental load. Individuals following instructions to try to make themselves happy become sad, whereas those trying to make themselves sad actually experience buoyed mood. Ironic effects also surface in the [self-control of anxiety](#). People trying to relax under load show psychophysiological indications of anxiousness, whereas those not trying to relax show fewer such indications. And ironic effects also occur in [the control of sleep](#). People who are encouraged to "fall asleep as quickly as you can" as they listen to raucous, distracting music stay awake longer than those who are not given such encouragement. Ironic effects also accrue in [the control of movement](#), arising when people try to keep a handheld pendulum from moving in a certain direction, or when they try to keep from overshooting a golf putt. In both cases, an imposition of mental load makes individuals more likely to commit exactly the unwanted action.

Research in other laboratories has revealed further ironic effects. Studies by Neil Macrae, Galen Bodenhausen, Alan Milne, and their colleagues, for instance, have established several remarkable ironic effects in the mental control of stereotyping and prejudice. People who are trying not to stereotype a skinhead as they form an impression of him, for example, show greater stereotyping under mental load. Individuals in this circumstance have been found to avoid even sitting near the skinhead as well. And people under mental load who are specifically trying to forget the stereotypical characteristics of a person (in a directed forgetting study) have been found more likely to recall those characteristics than are people without such load.

Ironic effects observed in yet other laboratories lend further credence to the basic idea. In work by Jeff Greenberg, Tom Pyszczynski, Sheldon Solomon, Jamie Arndt and their colleagues, for example, distraction tasks imposed after people have been asked to reflect for a while on their own death have revealed high levels of accessibility of death-related thoughts. This series of experiments suggests that people who are prompted to think about death turn shortly thereafter to the strategy of suppressing such thoughts even without instruction to do so--and thus suffer ironic returns of the thought. Related findings reported by Leonard Newman, Kimberly Duff, and Roy Baumeister indicate that people under mental load who are forming impressions of a person will project a personality trait onto the target when they are suppressing thoughts of the trait--whether in response to suppression instructions, or spontaneously because they dislike the trait in themselves.

Cultivating the Seed

These studies illustrate how it is that we can, on occasion, cultivate the seed of our own undoing. To begin with, we apparently need good intentions. Like Aristotle's tragic hero, the individual attempting mental control often does so for good cause--in hopes of achieving high performance, moral ends, or at least mental peace. People often begin on the path toward ironic effects when they try to exercise good intentions--to behave effectively, to avoid prejudice, to be happy, to relax, to avoid negative thoughts or thoughts of personal shortcomings, or even just to sleep. The simple adoption of a goal is no sin, but this turns out to be the first step toward ironic effects.

The next step in cultivating the seed, as illustrated in this research, is the pursuit of such noble goals in the face of a shortage of mental resources. When there is insufficient time and thought available to achieve the chosen intention, people do not merely fail to produce the mental control they desire. Rather, the ironic process goes beyond "no change" to produce an actual reversal. The opposite happens. These studies indicate, in sum, that ironic effects are precipitated when we try to do more than we can with our minds. Why would we do such a thing? At the extreme, we do this when we are desperate: We will try to achieve a particular sort of mental control even though we are mentally exhausted.

These straits are, of course, highly reminiscent of the circumstances of many people suffering from various forms of [psychological disorder](#). It makes sense that people who are anxious, depressed, traumatized, obsessed, or those with disorders of sleep, eating, movement, or the like, might frequently try to overcome their symptoms--and might also be inclined to attempt such control even under adverse conditions of stress or distraction.

Evidence from [correlational studies conducted in my laboratory](#) and elsewhere suggests a possible role for ironic processes in several such forms of psychopathology. We know from such correlations that attempts to avoid unwanted symptoms are often highly associated with those symptoms. The most obvious explanation of these associations is that people who experience unwanted mental states attempt to control them. But the more subtle and important possibility, as yet untested in large-scale studies, is that the attempt to control unwanted mental states plays a role in perpetuating them. The experiments showing that mental control attempted can yield laboratory analogs of unwanted mental states provide one basis for this conclusion.

Another line of evidence suggesting a role for ironic processes in the etiology of some disorders comes from studies of what happens when mental control is rescinded. The best examples of such work are the series of experiments by James Pennebaker and colleagues. When people in these studies are encouraged to express their deepest thoughts and feelings in writing, they experience subsequent improvements in psychological and physical health. Expressing oneself in this way involves relinquishing the pursuit of mental control, and so eliminates a key requirement for the production of ironic effects. After all, as suggested in other studies conducted in my lab with [Julie Lane](#) and [Laura Smart](#), the motive to keep one's thoughts and personal characteristics secret is strongly linked with mental control. Disclosing these things to others, or even in writing to oneself, is the first step toward abandoning what may be an overweening and futile quest to control one's own thoughts and emotions.

When we relax the desire for the control of our minds, the seeds of our undoing may remain uncultivated, perhaps then to dry up and blow away.

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