

Chapter 2.5: Recursive Traps

*It is often possible to discern a structure to people's difficulties
in which internal states and external events
continually create the conditions for the reoccurrence of each other.
—Paul Wachtel*

Psychology is the discipline by which the Psyche (the soul) seeks to understand the Psyche. While the study of experiential phenomena is interesting in its own right, some people become psychologists because they seek to relieve the Psyche's suffering. Paradoxically, incentive use disorders, the cause of much of the Psyche's avoidable suffering, is maintained by the Psyche's motivation to relieve its suffering.

Negative emotional states are not necessarily pathological. Fear, for example, is an adaptive motivational response to threat. The bio-psychological changes that result from an encounter with an objective threat, a dangerous animal for example, are adaptive in that they prepare the individual for fight or flight, and, importantly, the emotional reaction dissipates after the threat has passed.

The fear evoked by worrying about events that may occur in the future is different. Here the emotional state was evoked not by an objective threat, but by the worrier's predictions about a potential threat. The fearful emotional state does not dissipate with time because there are always potential threats in the future. Rather than energizing adaptive behavior, the emotional state evoked by thinking this way depletes the very resources required to deal with objective threats.

Depressed individuals tend to see the world through negative filters and react to environmental challenges with negative expectations, an orientation that may interfere with good performance. Anxious individuals have a different set of perceptual biases and response tendencies, but their emotional reaction also hinders their ability to cope with challenges. The fact that individuals continue to react to events that happen in ways that make them miserable suggests that they are not learning from their painful experience.

Subjective Reality

Some of life's problems are self-correcting. You catch a cold, and the body's immune system learns to recognize the pathogen and defeat it. A child learning to ride a bicycle may fall a few times but will eventually get it. People who have fallen into a neurotic trap may never get it, because their pathogenic beliefs cause them to act in ways that confirm these beliefs. For example, the belief that you will not be able to cope with a challenge may impair performance and produce the unwanted outcome.

We assume that our experience is a natural reflection of objective reality. In fact, the limitations of our sensory apparatus filter what comes through from the objective world to our conscious awareness. The subjective reality we experience is a creative construction of our nervous system. Everything looks different when we expect success than when we expect failure. We

appraise environmental threats and our abilities to cope with them through one set of lenses when we are confident and through another when we are anxious. Because the lenses are invisible to use, we assume that we see the objective truth despite the continual shifting of lenses as our state changes from one situation to another.

Recursive Structures

Suicide bombers and corporate executives are made of the same biological material, but are biased by different beliefs and hence experience different subjective realities. There are many ways to misperceive, but some distortions are special: They have a recursive structure and so can maintain themselves indefinitely.

Blushing is an example of a recursive structure. If blushing is embarrassing for me, then any feedback that I am blushing enhances the physiological reaction. The more obvious the blush, the more embarrassed I feel, and the more embarrassed I feel, the more I blush, and so on.

Consider how a self-sabotaging recursive structure can continue to diminish the quality of life throughout an individual's biography: Barry, a 31 year-old engineer, has low self-efficacy regarding his social skills, and worries about making a fool of himself at the Friday office party. Thinking about it evokes emotions, appraisals, and behavioral tendencies that impair his social skills. In fact, Barry can be very funny and quick-witted when he is in the right state of mind, but when a co-worker made a joke at his expense at the office party he was inarticulate. Although he would have loved to respond with a clever comeback, his expectation of humiliation determined which state-dependent talents and abilities were available to him at the critical moment.

Barry's story illustrates the cause-and-effect relationships that tend to evoke self-confirmatory bias. Barry's belief that he is socially inept impairs his social performance, which confirms his handicapping belief. His social life is continually influenced by his expectation of social failure, and the objective evidence that Barry does, in fact, perform poorly in social situations continually validates this expectation. Because it has a recursive structure, it can persist indefinitely and continue to have a negative impact on Barry's actions and how his life unfolds. Fortunately for Barry, he had the intellectual gifts to appreciate how this trap works and to change the cognitive structure that maintained it.

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-Paul Wachtel

Self-Reference and Reciprocal Feedback

Recursion, in mathematics and computer science, is a method of defining functions in which the function being defined is applied within its own definition. The term is more generally used to describe a process of reciprocal feedback; for example, when two mirrors face each other a recurring sequence of nested images appears in each.

One kind of reciprocal structure is the *Circular Chain*, which, like a snake swallowing its own tail, has no end and so may repeat indefinitely. Self-sabotaging sequences that have this structure

are particularly destructive because they can continue indefinitely. Low self-efficacy and dependence on external agency have a reciprocal relationship of this kind. For example:

H has become dependent on alcohol because it helps him cope with the difficulties of his life. He seeks a solution to his problem from an intensive treatment program. He does fine while in treatment but does not develop the coping skills required to manage high-risk situations independently. Soon after the external supports provided by the program fade away he relapses. The relapse is demoralizing and supports his belief that he is powerless and must depend upon an external agent to help him cope. Sadly, the mind set of powerlessness prevents him from developing the procedural skills required to finally escape this problem

Positive Feedback

When mirrors are parallel, the nested reflections do not go on forever because real mirrors are not perfectly reflective. Pathogenic structures have no such limitation. In fact, some produce amplification or positive feedback—analogue to a microphone that has gotten too close to a speaker causing a rapid and relentless magnification of the sound to the extreme. Panic attacks are produced by positive feedback of the fight-or-flight response: Specifically, the symptoms of anxiety, such as rapid heartbeat, are perceived as threatening, which results in the secretion of more fight-or-flight hormones, and so on.

Positive feedback can cause bingeing in much the same way. In the example below, the payoff—escape into mindless eating—is used as a method to help an individual cope with a negative *emotion*. The suffering produced by the choice amplifies the motivation to escape.

Desiree hates being fat and feels shame whenever she thinks about her obesity or sees herself in the mirror. She has also discovered that she can escape her self-critical monologue and feelings of shame by becoming absorbed in the pleasurable experience of mindless eating. The self-loathing caused by her failure to restrain her eating amplifies the bad feelings she has for herself, which increases her motivation to escape into the warm comfort of mindless eating. In this case, her emotional reaction to the failure is the amplification mechanism: The worse she feels, the more she is driven to eat, and the more she eats, the worse she feels.

Ruminative Self-Focus

A particular kind of reciprocal feedback forms the core structure of pathological depression, anger, and anxiety: Ruminative self-focus is a thinking strategy in which the focus of attention is the self, how one feels, and why one feels that way. It is ruminative in the sense that one goes over the same thoughts and images without achieving a resolution or plan of action. It masquerades as a problem-solving orientation, but very little problem solving actually takes place. As a rule of thumb, when the content of the rumination is the past, a depressive disorder is the diagnosis; and when the future provides the content, the rumination is called worrying and shows up as generalized anxiety disorder. Because of its recursive structure, ruminative self-focus maintains itself and can diminish the quality of an entire biography.

Julius Kuhl's research on conditioned helplessness¹ shows that when people fail, their focus shifts from figuring out how to be successful (problem solving) to perseverating thoughts about themselves, how they feel and why they feel this way (ruminative self-focus). This turns out to be a poor strategy because the rumination consumes cognitive resources that are then not available for problem solving. Kuhl found that conditioned helplessness appears to be maintained by the reciprocal relationship between failure and ruminative self-focus: Failure leads to ruminative self-focus and ruminative self-focus impairs performance, which increases the likelihood of failure.

Recent research on depression and the quality of social performance² shows that negative mood leads to self-reflective rumination, and self-reflective rumination leads to negative mood. Moreover, the ruminative self-focus and the depressed emotional state it engenders are found to impair subjects' social problem-solving abilities and to decrease their self-efficacy regarding their social skills, both of which impair social performance. Poor social performance, in turn, may result in loneliness and other negative consequences, which set up higher level recursive structures.

As you may have already guessed, any attempt to improve the self carries with it a trap that is especially debilitating to individuals who become emotionally attached to outcomes, or who are judgmental toward themselves.

You are about to begin a long, complex challenge and you are bound to make errors of all kinds, some of which will look particularly stupid or heinous if evaluated from a judgmental perspective. You will have to manage your emotional reactions so that you are less vulnerable to this trap of self-sabotage. By the time you complete the next section, you will appreciate several ancient solutions to this set of traps.

¹ Volitional Mediators of Cognition-behavior consistency: self-regulatory processes and action versus state orientation, Julius Kuhl Chapt 6. In: The Psychology of Action. 1996 The Guilford Press: New York - P. Gollwitzer and J Bargh Eds.

² Distinct Modes of Ruminative Self-Focus: Impact of Abstract Versus Concrete Rumination on Problem Solving in Depression Ed Watkins & Michelle Moulds -Emotion © 2005 by the American Psychological Association September 2005 Vol. 5, No. 3, 319-328