

Averill J R. Personal control over aversive stimuli and its relationship to stress. *Psychol. Bull.* 80:286-303, 1973.
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Three main types of control were distinguished: behavioral control (direct action on the environment), cognitive control (reducing uncertainty and imposing meaning on events), and decisional control (having a choice among alternative courses of action). Each type of control is related to stress in a complex fashion, sometimes increasing it, sometimes reducing it, and sometimes having no influence at all. [The *Science Citation Index*® (SCI)® and the *Social Sciences Citation Index*® (SSCI)® indicate that this paper has been cited in over 195 publications since 1973.]

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"It has long been recognized that having control over an aversive situation may mitigate stress reactions, e.g., a nervous passenger may become carefree and even reckless when behind the wheel. There are, however, several problems with this simple observation. For one thing, the concept of control is exceedingly vague. For another thing, having control does not always reduce stress; for some people on some occasions, personal control may actually have the opposite effect. The *Citation Classic* article was written to address these two issues. The original impetus for the article was a study by me and Rosenn,¹ in which complex relationships were observed among coping strategies (listening or not listening for a warning signal), the availability of a control response (being able to avoid an aversive stimulus), and anticipatory stress reactions.

"A review of other research quickly revealed that personal control sometimes has detrimental as well as beneficial effects. But with few exceptions (e.g., the famous 'executive monkeys' studied by Brady, Porter, Conrad, and Mason²), this fact has received relatively little attention in the psychological literature. There is a general cultural bias (which I share) that personal con-

trol is a good thing; and, according to a rather simplistic line of reasoning, what is good should not have any bad consequences, except perhaps under pathological conditions. After publication of the *Citation Classic* article, one disgruntled reader suggested that I was fostering reactionary political tendencies by insinuating that personal control can have stressful consequences. Unfortunately, this reader's reaction is not exceptional. Furedy³ has also noted a strong bias in the psychological literature which supports the generalization that people show a strong preference for warning signals (a form of cognitive control); he cites a number of examples in which evidence contrary to this generalization has been ignored, while supporting evidence has been emphasized.

"I mention the above not simply because it illustrates a conflation of ideological and psychological issues, for that is not the major source of difficulty. Stress is a factor of considerable practical importance, e.g., in susceptibility to and recovery from illness. Strong incentives therefore exist to develop simple interventions for the alleviation of stress. The provision of personal control, even if only illusory, is one such intervention; and its beneficial effects are sometimes dramatic. However, in the rush for application, there has been a tendency to gloss over numerous ambiguities and counterinstances. One of the major ambiguities has to do with the very meaning of 'personal control.'

"Why has the *Citation Classic* article been cited so frequently? Largely, I believe, because it provides a simple scheme for organizing the various ways the concept of control has been operationalized by psychologists. Three major kinds of control were distinguished: behavioral, cognitive, and decisional or volitional. Subsequent research (e.g., Cornelius and myself⁴) has shown that these various kinds of control are not substitutable, nor are their effects additive. Rather, the various kinds of control can interact in complex ways, with one type enhancing, nullifying, or even reversing the effects of another, depending on the circumstances."

1. Averill J R & Rosenn M. Vigilant and nonvigilant coping strategies and psychophysiological stress reactions. *J. Personal. Soc. Psychol.* 23:128-41, 1972.
2. Brady J V, Porter R W, Conrad D G & Mason J W. Avoidance behavior and the development of gastroduodenal ulcers. *J. Exp. Anal. Behav.* 1:69-72, 1958.
3. Furedy J J. An integrative progress report on information control in humans: some laboratory findings and methodological claims. *Aust. J. Psychol.* 27:61-83, 1975.
4. Cornelius R R & Averill J R. The influence of various types of control on psychophysiological stress reactions. *J. Res. Personal.* 14:503-17, 1980.