

Schmale A H, Jr. Relationship of separation and depression to disease. I. A report on a hospitalized medical population. *Psychosom. Med.* 20:259-77, 1958.
[Depts. Psychiatry and Medicine. Univ. Rochester Sch. Medicine and Dentistry, Strong Memorial and Rochester Municipal Hosps., Rochester, NY]

Feelings of helplessness or hopelessness were reported as a reaction to life events and change in relationships prior to the apparent onset of disease which led to hospitalization. These feelings indicated that a psychobiological giving up had occurred in relation to a perceived impasse in patients' lives. [The *Science Citation Index*® (SCI®) and the *Social Sciences Citation Index*® (SSCI®) indicate that this paper has been cited in over 210 publications since 1958.]

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The ideas for this work began at the University of Maryland under the tutelage of Greenhill, Finsinger, and Lisansky and were brought to fruition under the direction of Engel, Greene, and others at the University of Rochester. As a result of a number of opportunities to interview unselected medical patients in emergency room, clinic, and hospital settings soon after the onset of the symptoms which led to their seeking medical help, I began to appreciate there were similarities across disease, personality, and demographic differences. Up until this time, the research emphasis on the psychological setting of disease onset had been on one disease or one versus another.

The response to the paper was predominantly favorable and fit with the observations of a number of investigators. (The observation that disease followed the loss of an important person or goal was not a new one

and had been repeatedly mentioned down through the centuries.) Those less impressed with the paper said it was a blinding glimpse of the obvious, or just a retrospective distortion for those who needed an explanation for getting sick.

Interest in proving or elaborating the process by which psychological state-environment interactions allow changes in health to occur has gone in spurts and followed many advances in theory and measurement in these areas. Life events, moods, engagement, and self-esteem have been the psychological variables considered most relevant to the model, while advances in measuring autonomic nervous system functioning, hormones, neurotransmitter substances, and, more recently, immune system functioning have led to studies trying to understand the biological changes associated with grief, depression, or learned helplessness.

One of the interesting and important sides of this work to me has been the recognition that there is a basic biological homeostatic regulatory mechanism underlying giving up. Engel and Reichman, in their study of a psychologically deprived infant, Monica, with an esophageal atresia, labeled a behavioral triad of relative immobility, quiescence, and unresponsiveness to the sight of a stranger conservation-withdrawal.¹ Their observations were found to be consistent with what was being seen in relation to giving up in adults. Conservation-withdrawal is built in as part of the homeostatic controls of all organisms which protect them from environmental extremes of too much or too little stimulation.² Such a shutting down is seen most clearly in hibernation and tonic immobility in animals and sleep and fainting in man.

As is true with much of science, what begins as a clinical observation which needs explanation becomes the elusive golden ring which provides the impetus for many other discoveries. The chase goes on.

1. Engel G L & Reichman F. Spontaneous and experimentally induced depression in an infant with a gastric fistula: a contribution to the problem of depression. *J. Amer. Psychoanal. Assn.* 4:428-52, 1956. (Cited 65 times.)
2. Engel G L & Schmale A H. Conservation withdrawal: a primary regulatory process for organismic homeostasis. *Physiology, emotion and psychosomatic illness*. Amsterdam: Associated Scientific Publishers, 1972. p. 57-75.