The Costs and Benefits of Optimistic Explanations and Dispositional Optimism

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ABSTRACT Explanatory style and dispositional optimism have been linked to physical health. In this issue, Peterson and Seligman and Carver and Scheier review an impressive series of studies which together suggest that there may be health risks associated with attributing bad outcomes to internal, stable, and global causes and with failing to maintain a generalized expectancy for good outcomes. We attempt to broaden the scope of these studies by describing the situational constraints on the observed relations and by presenting evidence that there may be health risks, as well as benefits, associated with dispositional optimism and an optimistic explanatory style.

The articles in this special issue offer diverse conceptualizations and methods for linking personality and health. What they share is an interest in the prediction of subsequent health based on aspects of current personality. Together, these papers converge on the conclusion that people's views of themselves, the world, others, and the future predict their vulnerability to illness and may even predict how long they live.

Our own research program focuses on the circumstances, appraisals, and coping strategies associated with emotional distress, morbidity, and

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mortality among individuals who have already experienced a serious illness or other medical crisis. Our findings and the findings of others who study adaptation to serious illness have important implications for the work described in this issue of the *Journal*. While our comments focus on the role of explanatory style and dispositional optimism in health and illness, they are relevant to any attempt to relate dispositions and motives to health outcomes.

We begin with a discussion of methodological and conceptual problems in studies of explanatory style. We then consider situational constraints on the observed relations of causal explanations and optimism to health, describe the potential health risks associated with optimism and perceived control, and argue that this area of investigation would benefit by moving beyond the assessment of generalized outcome expectancies. Finally, we discuss a phenomenon that has been virtually neglected by investigators of personality and health, but which demonstrates well the interplay between dispositions and situational factors, namely, that blaming other people for serious illness or other types of victimization is associated with psychological disturbance and adverse health outcomes.

Explanatory Style and Illness

Peterson and Seligman (this issue) present some fascinating evidence in support of their hypothesis that people who make internal, stable, and global attributions for bad events are at risk for subsequent illness and earlier death. Our own studies of people who are already ill or who are facing the illness of a loved one also support the contention that the perceived causes of events may influence emotional and health outcomes. We have found that causal attributions are associated with emotional and health outcomes among mothers of sick newborns (Affleck, McGrade, Allen, & McQueeney, 1985; Tennen, Affleck, & Gershman, 1986), chronically ill children (Tennen, Affleck, Allen, McGrade, & Ratzan, 1984) and adults (Affleck, Pfeiffer, Tennen, & Fifield, in press), and heart attack patients (Affleck, Tennen, Croog, & Levine, 1987).

Despite the convergence of evidence from our studies and those reported by Peterson and Seligman, we have three major concerns. Our first concern relates to Peterson and Seligman's assumption that people ascribe bad outcomes to sufficient causes. We also question the effect of method variance on these findings. Finally, we are concerned that in situations where control is not possible, internal-variable-specific attributions may impair rather than enhance health outcomes. We will address each concern in turn.

One assumption guiding the research on explanatory style is that a perceived cause is a person, event, or behavior that covaries with an outcome. If the attributed factor were absent, it is reasoned, the event would not have occurred. In the CAVE technique described by Peterson and Seligman, the most important criterion for defining a causal explanation is that the speaker believes that if the attributed factor were absent, the event would not occur. Peterson and Seligman also rely on the premise of sufficient cause to support their contention that bad events are perceived by victims as uncontrollable: "Although in each case of self-blame the individual believes that control was possible, in no case was it exercised. *If it had been, then the event would not have occurred*" (p. 240; italics added).

Our investigations of mothers of seriously ill infants and people with rheumatoid arthritis indicate that when faced with serious health problems, people who blame themselves for these problems simply do not think of their behavior as a sufficient cause.[1] We asked 92 rheumatoid arthritis patients about the causes of their illness. Nearly one-third of our sample implicated their own behavior in some way (Affleck, Pfeiffer, Tennen, & Fifield, in press). But when we asked these patients if the illness could have been prevented if the behavior had not occurred, only one patient answered "yes." We recently posed the same question to 69 mothers of infants in a neonatal intensive care unit. Again, those who thought that their child's condition was caused by their own behavior rarely concluded that their infant would not be ill if they had not engaged in that behavior. It appears that some bad events are thought to be caused by several factors, none of which alone may be causally sufficient. By focusing exclusively on sufficient causes, Peterson and Seligman probably underestimate both the incidence of self-blame and its impact on adaptation.

We also suspect that method variance contributes to observed associations between attributions and health outcomes. We were first confronted with this problem in our research with mothers of seriously ill infants (Tennen et al., 1986). When we asked these mothers a global

1. Shaver and Drown (1986) make a cogent argument for conceptual distinctions among causality, responsibility, and blame. For the sake of consistency, we will use the term self blame as it is empoyed by Peterson and Seligman and most other investigators, that is, a victim's belief that he or she caused the victimizing event.

question about the causes of their child's illness, 38% attributed it to their own behavior and 19% attributed it to someone else's (usually their obstetrician's) behavior. But when asked about self- and other-blame specifically, an additional 21% said that their own behavior was a cause and another 21% said that others were causally responsible. These findings led us to question whether techniques like the CAVE, in which judges rate spontaneous attributions, produce results similar to techniques like the ASQ, in which research participants rate attributional dimensions. Peterson and Seligman describe some promising findings in which CAVE-measured attributions among cohorts of healthy males predict life span and later health status, and ASQ-measured attributions predict later illness among college students. Do these techniques produce equivalent results? Some recent evidence suggests that they may not.

Vieyra (1986) interviewed 33 men and 31 women with impaired fertility. As part of the interview, participants were asked about the causes of their problem. Two independent raters scored the participants' response for evidence of five causal attributions (behavioral self-blame, other blame, chance, biological-medical factors, and emotional factors) in a fashion not unlike the CAVE technique. Each cause was rated on an eleven-point scale. The research participants made ratings on the same scales in a manner similar to the ASQ.

Vieyra (1986) constructed a multitrait-multimethod matrix (Campbell & Fiske, 1959) to determine if attributional characteristics transcend variations in measurement. The two judges were able to agree quite well in their ratings based on interview material (average $r = .94$). But evidence of convergent validity (between methods) was modest: The average correlation between self-ratings and judges' ratings was .37. Moreover, these methods produced divergent relationships between attributions and psychological adaptation as measured by the POMS-B (Lorr & McNair, 1982) and the SCL-90R (Derogatis, 1977). To be sure, Vieyra did not employ the exact methods described by Peterson and Seligman. Causal attributions were not spontaneous nor were attributions rated on the dimensions of locus, stability, and globality. But her findings suggest that multimethod assessment is needed. Until further evidence provides support for the convergent validity of these measurement strategies, the findings linking explanatory style and health, while promising, must be interpreted with caution.

Peterson and Seligman contend that internal-variable-specific attributions for bad outcomes are associated with the belief that future control

is possible and that this belief enhances adaptation: "Characterological self-blame is more psychologically debilitating than behavioral self-blame. . . . Indeed, behavioral self-blame may be an assertion of efficacy, a statement that bad events can be controlled in the future" (Peterson & Seligman, p. 261). Anyone familiar with the literature on the psychology of control (e.g., Langer, 1983; Seligman, 1975) would agree that behavioral self-blame is often associated with perceived control (Janoff-Bulman, 1979; Tennen et al., 1986) and that perceived control can enhance emotional and physical adaptation.

But are there potential costs for people who believe that they can control important outcomes? Perloff (1983) reviewed several areas of research related to this issue and concluded that " . . . people, in underestimating their own personal vulnerability to negative events, may have more difficulty adjusting to victimization should it occur" (p. 49). Wortman (1976; Wortman & Brehm, 1975) echoed this hypothesis and argued that when outcomes are in fact uncontrollable, giving up may be more adaptive than attempting to assert control. Similarly, Taylor (1979) suggested that people with strong control expectations may adjust poorly to hospitalization. They may resist treatment recommendations, manifest physical disorders associated with arousal, fail to comply with medication regimens, and actually may be discharged prematurely because they insist on maintaining personal control.

Empirical support for the idea that perceived control may have its costs is found in studies of rape victims, nursing home residents, people with chronic illness, mothers of acutely ill newborns, and from laboratory studies of perceived control. Scheppele and Bart (1983) interviewed rape victims and found that those women who had followed a set of rules to avoid rape had the greatest difficulty adapting to rape once it occurred. Janoff-Bulman and Marshall (1982) reported that patients who maintained a generalized expectancy of control before entering a nursing home adjusted most poorly to their new living arrangements. Affleck, Tennen, Pfeiffer, and Fifield (in press) found that among people with relatively severe rheumatoid arthritis, the expectation of personal control over the future course of the disease was associated with greater mood disturbance and less positive psychosocial adjustment. Most recently, Affleck, Tennen, & Rowe (1986) found that among mothers who had recently had an infant needing intensive care, those who had done more to prevent complications during pregnancy were more distressed by their infants' condition. Another (unpublished) finding was that mothers who

sought more personal control by participating in prepared childbirth or intending to do so were also more distressed following delivery of an impaired infant. Finally, laboratory studies (e.g., Pittman & Pittman, 1979) demonstrate that although an internal locus of control may aid adaptation to short term uncontrollability, it seems to impair one's capacity to adapt to chronic lack of control.

Reid (1984) and Taylor (1983) provide thoughtful rejoinders to the position that there are adaptational benefits of surrendering control in situations that are truly uncontrollable. Affleck, Tennen, Pfeiffer, & Fifield (1986) provide empirical support for Taylor's (1983) thesis that rather than relinquish control, victims will search for aspects of their situation in which they can assert control. But in certain situations, most clearly those involving genuine and chronic lack of control, expectancies of control may impair emotional and physical adjustment. We agree with Peterson and Seligman that stable-global attributions for bad outcomes are usually more maladaptive than variable-specific attributions. But work with victimized individuals suggests that a limiting condition of this proposition may occur when adherence to a variable-specific attributional style is followed by victimization in which control options are severely curtailed. We will return to this potential limiting condition in our discussion of dispositional optimism.

Costs and Benefits of Dispositional Optimism: The Down Side of Being Up About the Future

Scheier and Carver (this issue) suggest that there are benefits to being optimistic. We believe, however, that there may be some potential pitfalls of dispositional optimism. Our purpose is not to challenge the data or the assertions of Scheier and Carver, but rather to remind investigators and clinicians that every silver lining has a cloud—even if one is an optimist.

According to Scheier and Carver, optimistic people expect the best. They believe that things won't go wrong for them. They expect things to go their way. But things do go wrong. The best doesn't always occur. When things go wrong in a big way, the optimist may be particularly vulnerable.

Consider the basis upon which the optimist decides that there is reason for optimism. Does the optimistic person believe that no one is vulnerable to threatening events? Perhaps. But we suspect that even optimists have heard that one-third of Americans born in 1985 will develop invasive malignancies in their lifetimes (Silberberg, 1985, cited in Koocher, 1986) and that many people are seriously injured or killed in automobile accidents. If optimists are aware that bad things do happen to people, perhaps they believe that they are "uniquely invulnerable" to bad outcomes (Perloff, 1983; Perloff & Fetzer, 1986). Weinstein (1980) refers to the tendency to view oneself as less likely than others to experience bad outcomes as "unrealistic optimism."

The adaptational benefits of an "illusion of invulnerability" (Janoff-Bulman & Lang-Gunn, in press) or optimistic expectations are well documented. The psychological benefits of optimism may include reductions in anxiety as well as the ability to carry out everyday activities without being continually "on guard" (Perloff, 1983). Scheier and Carver add what appear to be significant health benefits. But several theorists have described the potential costs of optimism. Because optimists see a rosy future, they may fail to engage in preventive behavior or take appropriate precautions (Janoff-Bulman & Frieze, 1983; Perloff, 1983). There may also be detrimental effects for the optimist when he or she does encounter a major threatening event. Perloff (1983) summarizes a substantial research literature which supports the hypothesis that people who believe they are invulnerable may fail to engage in appropriate preventive behavior. For example, people who believe that they are less susceptible to illness are less likely to comply with medical regimens (Becker, 1974; Haefner & Kirscht, 1970).

Scheier and Carver present evidence that optimists engage in problem-focused coping strategies when faced with threatening events (Scheier, Weintraub, & Carver, in press). But others (Wortman, 1976; Perloff, 1983) have voiced concern that people who feel relatively invulnerable may adapt poorly to misfortune and *fail to engage in necessary problem-focused activities*. With these conflicting predictions in mind, we conducted a study of the adaptational correlates of optimistic beliefs among a group of mothers whose infants were being discharged from a newborn intensive care unit (Affleck, Tennen & Rowe, 1986). We tested the hypothesis that parents experience less distress following the birth of a high risk infant, if during the pregnancy they had been optimistic about the outcome, that is, if they had believed they were at low risk for delivery complications.

At the time of their child's hospital discharge, mothers were asked their assessment of risk before anything went wrong with their pregnancy. Then they were asked for their estimate of the chances of delivering another infant who would need intensive care and to estimate the

chances for the average couple expecting their first child. Participants were then asked to describe what they could do during a subsequent pregnancy that might prevent such problems from recurring. Finally, we measured mood disturbance and mothers' stated inclination to attempt future pregnancies.

Two findings from this study bear on the potential costs of optimism. First, mothers who rated their prior risk as lower expressed greater mood disturbance at hospital discharge. Second, when we compared mothers' estimates of their own current risk with their estimates of the average couple's risk (i.e., relative risk), approximately 40% believed that their chances were still equal to or less than average. All medical evidence indicates that they are at greater than average risk. But many mothers maintained an optimistic perspective, stating to interviewers that this experience taught them what they would need to do to ensure positive outcomes in future pregnancies. Their optimistic perspective may help ensure their emotional well-being during a subsequent uneventful pregnancy, but should things not got their way, they appear more likely to experience distress.

There are two caveats to these findings. First, we did not measure dispositional optimism, so the mood disturbance associated with having held optimistic expectations about pregnancy outcomes may not generalize to dispositional optimism. Second, our measure of premorbid risk was retrospective, and may itself have been influenced by mood (Bower, 1981).

But our findings are suggestive and point to possible constraints on the benefits of expecting good outcomes. In this regard, we are intrigued with Scheier and Carver's conception of outcome expectancy which emphasizes the individual's subjective estimate that outcomes will or will not occur, and deemphasizes perceived control and self-efficacy beliefs. The mothers in our study who thought their prior risk was low (i.e., they were more optimistic) also reported having done more to prevent problems. That is, they engaged in problem-focused strategies just as Scheier and Carver predict. But it is not clear why this is so. Perhaps being optimistic and having a sense of control has different consequences than being optimistic and not having a sense of control. Studies have not yet explored possible additive and interactive effects of perceived control and optimism. At any rate, the application of Scheier and Carver's conception to our sample of mothers leads to predictions discrepant from our own—predictions which call for a direct test.

Imagine first a dispositionally optimistic mother who believes that she is no longer in a particularly high-risk situation because she has learned what to do during pregnancy and believes she can do what has to be done. She is optimistic, believes that outcomes are response-dependent, and feels self-efficacious. Carver and Scheier predict that her optimism anticipates positive adaptation. Bandura (1977) might predict that her perception of response-outcome dependence and self-efficacy ensure positive adaptation. But what happens if she is wrong and she really hasn't learned how to protect herself from future harm? Would her dispositional optimism buffer her even in the face of a second misfortune? Could her optimism withstand the assault?

Even more intriguing is the mother who is dispositionally optimistic but who does not believe that outcomes are response-dependent and does not experience self-efficacy. This woman might say to herself (as some mothers have said to us), "It happened once, so it won't happen again; things usually go my way." But statistically, this mother has a one in four chance of having another high risk baby, and there are things she can do to reduce that risk (Fotheringham, Hambley, & Haddad-Curran, 1983). But she must first acknowledge the risk.

Now imagine one hundred such women. Seventy-five have an uneventful pregnancy and delivery and their optimism may have had a significant positive impact on their psychological and physical health. But the other 25 women include some who might have prevented health problems in their children had they felt more vulnerable. One need not take issue with the position that there are health benefits associated with optimism to also agree that there are situational limits on this association and that a knowledge of these situations may both broaden our conceptual base and enhance our intervention efforts.

Beyond Generalized Outcome Expectancies

Generalized outcome expectancies play a pivotal role in Scheier and Carver's formulation of the influence of optimism on health. Expectancies are also key in Peterson and Seligman's explanation of how explanatory style may make one vulnerable to illness. Peterson and Seligman (cf. Abramson, Seligman, & Teasdale, 1978; Alloy, 1982) state: "In our research, we have usually measured explanatory style rather than expectations per se. However, we believe that explanatory style is important because it affects one's expectations about helplessness" (p. 241). Scheier and Carver similarly state: "Our laboratory research has gener-

ally borne out the importance of expectancies as determinants of behavior . . . " (p. 170).

The evidence makes it difficult to disagree with the notion that generalized outcome expectancies influence subsequent behavior and health. But we believe that a more complete understanding of the link between personality and health requires moving beyond generalized expectancies. We assert that the nature of a person's life experiences will influence his or her attributions, generalized expectations, and health. We propose that the *meaning* one ascribes to an experience may exert a powerful influence on both behavior and health, and that this influence may be independent of the influence exerted by expectancies.

An important source of a person's generalized outcome expectancies is the *actual events* he or she experiences. While expectancies themselves influence some of the aversive events people face, it seems fair to say that many aversive events occur independently of expectancies. In fact, the concept of learned helplessness rests on the notion that the generalized expectancy of response-outcome independence follows exposure to real noncontingent outcomes. We believe that the nature of one's life experiences may be a "third factor" that predicts global-stable attributions for bad events, pessimistic expectancies, and poor health.

Consider a person who experienced misfortunes that occurred over time and across many domains. If we employed the CAVE technique, we suspect that this person would make internal, stable, and global attributions for these events that have been consistent over time and across situations (cf. Abramson et al., 1978; Kelley, 1973). In view of all of these aversive events, we would not be surprised if this person scored on the pessimistic end of the Life Orientation Test (Scheier & Carver, 1985). Would this person also be susceptible to illness?

Despite significant methodological and measurement problems in the life events literature (Tennen, Affleck, & Herzberger, 1985), the convergent evidence points to a consistent link between exposure to aversive events and subsequent health. Life changes have been associated with subsequent myocardial infarction (Holmes & Masuda, 1973), duodinal ulcer (Stevenson, Nasbeth, Masuda, & Holmes, 1979), magnitude of rhinovirus infection (Totman, Kiff, Reed, & Craig, 1980), and other illnesses (Garrity, Marx, and Somes, 1977). Before asserting causal priority to expectancies, it may be important to consider the *reality* of people's existence in determining their attributions, expectations, and health.

(See Brown & Harris, 1981, and Coyne & Gotlib, 1983, for a similar conceptualization of the origins of depressive disorders).

If explanatory style and generalized outcome expectancies can be shaped by life experiences, it might be worthwhile to investigate the effect of health crises on explanatory style, dispositional optimism, and subsequent health. Evidence is amassing that health crises may themselves shatter cherished assumptions such as beliefs in personal invulnerability, personal control, and a just world (Janoff-Bulman & Frieze, 1983; Affleck, Tennen, Allen, & Rowe, 1986; Steil & Slochower, 1985). Neither dispositional optimism nor explanatory style may be robust enough to withstand the assault on one's assumptive world that results from a health crisis. Peterson and Seligman suggest that explanatory style may be malleable, and indeed there is evidence to support this speculation (Hamilton & Abramson, 1982). We believe that investigators interested in personality and health should begin to explore the effects of a health crisis on attributional style and dispositional optimism and how changes in these personality factors influence subsequent health outcomes.

The meaning that people ascribe to their life experiences may also influence their health, and this influence may be independent of generalized outcome expectations. Recent theorizing regarding responses to threatening events (Taylor, 1983; Janoff-Bulman & Frieze, 1983) suggests that following an aversive event, finding *meaning* may be as potent a predictor of subsequent adaptation as the expectancy of positive outcomes in the future. There have now been several demonstrations that any answer to the question "Why me?" is better than no answer (Affleck, Pfeiffer, et al., in press; Bulman & Wortman, 1977; DuCette & Keane, 1984; Lowery, Jacobson, & Murphy, 1983; Witenberg, Blanchard, Suls, Tennen, McCoy, & McGoldrick, 1983), and that the ability to find meaning or purpose in the event makes a unique contribution to the prediction of psychological and physical health (Affleck et al., 1987; Affleck, Tennen, & Gershman, 1985).

Our suggestion that the meaning ascribed to victimization may exert an influence on health should not be construed as a fundamental disagreement with Scheier and Carver or Peterson and Seligman regarding the potential influence of generalized expectancies on health. First, there is evidence to suggest that the search for meaning may not be universal (Affleck, Pfeiffer, Tennen, & Fifield, in press; Gotay, 1985; Silver, Boon, & Stones, 1983). Moreover, our own findings support the assertion that

outcome expectancies influence health and support Scheier and Carver's contention that sometimes attributions determine expectancies, which in turn influence emotional and physical health (Tennen et al., 1986). We are also in general agreement with Thompson (1985) who speculates that finding positive meaning in the face of adversity may itself be due to dispositional optimism. Nonetheless, we suspect that the search for meaning is a powerful human motive that will enhance our understanding of personality and health.

Blaming Others for Misfortune: A Challenge to Investigators of Personality and Health

We recently reviewed the literature on attributions for threatening events for evidence of other-blame and its adaptational consequences (Tennen & Affleck, 1987). We identified nineteen studies in which both attributions and adaptation were measured. These studies varied dramatically in the nature and chronicity of the stressor, the timing of inquiry, the measurement of attributions, and the criterion employed to tap adaptation. Despite this diversity, other-blame was reported in fifteen studies and it was associated with poorer adaptation in twelve of these studies. In no case was other-blame associated with putative measures of positive adaptation. A number of the studies reviewed involved seriously ill individuals, and employed diverse measures of health including biochemical measures, rehospitalization for illness, self-reports of physical complaints and symptoms, and long-term survival. This robust set of findings appears highly relevant to those who are investigating the relation between personality and health. Yet, they have been virtually neglected by attribution theorists who have been more interested in discussing the equivocal findings regarding the association between self-blame and adaptation.

One possible explanation of these consistent findings is that those who blame others possess a personality characteristic or cluster of characteristics prior to their victimization that put them at risk both for blaming others and for maladaptation. But none of the studies reviewed assessed personality factors before the threatening event occurred (see Metalsky, Abramson, Seligman, Semmel, & Peterson, 1982; and Wortman, 1985 for examples of how such investigations could be conducted). Predictions derived from Peterson & Seligman's concept of explanatory style could contribute to our understanding of the other-blame-maladaptation link. Similarly, dispositional pessimists may blame others and show ad-

aptational deficits. Or perhaps blaming others for threatening events leads to greater pessimism which in turn leads to poor adaptation.

We are equally impressed with the situational factors that appear to contribute to victims' beliefs that others are the cause of their misfortune. For example, we found that a relatively high proportion of mothers of high risk infants blame others (Affleck, Allen, McGrade, & McQueeney, 1982; Tennen et al., 1986), but that no mothers of children with juvenile diabetes believed that someone else caused their child's illness (Affleck, Allen, Tennen, McGrade, & Ratzan, 1985). In a study of infertile couples which is in progress, we find that other-blame is offered by a significant proportion of people as an explanation of the problem, whereas in our research with arthritis patients (Affleck, Pfeiffer, Tennen, & Fifield, in press) we found very little other-blame. This series of findings on other-blame provides a remarkably consistent pattern that awaits a thoughtful explanation guided by well-designed longitudinal investigations.

Our focus on people who are already ill and on person-situation interactions as they relate to personality and health is guided not only by current conceptions of personality (Mischel, 1968; Monson, Hesley, & Chernick, 1981; Snyder & Ickes, 1985) but by factors inherent in the study of health and illness. Personality variables such as explanatory style and dispositional optimism appear to account for significant variance in subsequent health. But many people with generalized expectancies for good outcomes will nonetheless become ill or face a medical crisis. A complete understanding of what appear to be health enhancing personality factors requires that we extend our investigations to examine situations in which there may be potential costs as well as benefits of these aspects of personality.

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