

A BETTER WORLD OR A SHATTERED VISION? CHANGES IN LIFE PERSPECTIVES FOLLOWING VICTIMIZATION

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Previous research has separately documented positive (Taylor, 1983) and negative (Janoff-Bulman, 1989) changes in beliefs following victimization. An integration of these literatures is proposed, considering the coping responses of the victim, the area of belief examined, and attributes of the victimizing event as mediators of change valence. Fifty-five cancer patients were interviewed concerning changes experienced in self-views, views of the world, future plans, relationships, and activities/priorities following diagnosis. Changes in activities/priorities and relationships were primarily positive, whereas changes in views of the self, the world, and the future were affectively mixed. Active coping was associated with positive belief changes, as was use of multiple coping methods. In addition, respondents experiencing ongoing threat reported more negative changes than did those not under threat. Implications of the findings are discussed.

In *The Razor's Edge*, Larry Darrell has a brush with death during a World War I battle. His life is spared when a fellow soldier takes the bullet for him, sacrificing his own life so that Larry might live. Awed by the "privilege of life," Larry sets out in search of its meaning,

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deciding that the world and his role in it are quite different from what he had previously assumed. Maugham's storyline is a typical one in Western literature. The tale of one who is confronted with mortality and changes his or her life or perspective as a result is a part of our cultural mythology. Is this depiction reflective of reality?

A great deal of research has explored the psychological aftermath of victimization. Much of it has focused on the negative consequences, such as fear and anxiety, feelings of vulnerability, long-term depression, problems in resuming life activities, and difficulty maintaining a sense of purpose or meaning in daily tasks and relationships (see, for example, Janoff-Bulman & Frieze, 1983; Silver & Wortman, 1980, for reviews). Victims of such diverse victimizing events as bereavement (Lehman, Wortman, & Williams, 1987), incest (Silver, Boon, & Stones, 1983), rape (Burgess & Holmstrom, 1979), and life-threatening disease (Wortman & Dunkel-Schetter, 1979) frequently experience severe disruption in their lives even decades after the victimizing experience (Silver & Wortman, 1980).

However, the victimization literature has also uncovered positive life changes following such events. As Taylor, Wood, and Lichtman (1983) noted, "victims of life-threatening attacks, illnesses, natural disasters, and other such events sometimes seem from their accounts not only to have overcome the victimizing aspects of their situation, but actually to have benefited from their experience" (p. 20). Such changes may include a positive reappraisal of one's life, self-knowledge or self-change, and a reordering of personal priorities, including an emphasis on personal relationships (Taylor, 1983; see also Chodoff, Friedman, & Hamburg, 1964; Frankl, 1963; Mechanic, 1977; Pearlin & Schooler, 1978; Rothbaum, Weisz, & Snyder, 1982; Visotsky, Hamburg, Goss, & Lebovits, 1961; Weisman & Worden, 1975; Wills, 1981).

The Assumptive Worlds Perspective, developed by Janoff-Bulman and her associates (Janoff-Bulman, 1989; Janoff-Bulman & Frieze, 1983; Janoff-Bulman & Timko, 1986) accounts for *negative* responses to victimization. These researchers noted that people hold certain cognitive assumptions about the world, including the belief that the world is both benevolent and meaningful (Parkes, 1971, 1972, 1975), the belief that the self is a worthwhile person (Epstein, 1980), and the conviction that the self is relatively invulnerable to negative events (e.g., Perloff, 1983; see Taylor & Brown, 1988, for a review). They argued that a victimizing event shatters this perception of personal invulnerability and, as a result, alters the assumptions of self-worth and world-meaning on which the belief was based. According to this model, the assumptive world must then be rebuilt and its content altered to assimilate the new, more negative information that resulted from the victimization. Recent results (Janoff-Bulman, 1989) support this hy-

pothesis. In a survey of 228 college students, those who had been victimized saw the world as less benevolent and saw themselves less positively than did students who had not been victimized.

A model explaining *positive* outcomes of victimizing events has also been proposed. Taylor's (1983; in press; Taylor & Brown, 1988) Cognitive Adaptation Perspective maintains that when people encounter damaging information and circumstances, they selectively distort it to reduce its negative implications for their views of themselves and the world, or they represent it in as unthreatening a manner as possible (for discussions of these issues, see Taylor, in press; Taylor & Brown, 1988). Moreover, when the negative consequences of an event cannot be denied, a person may attempt to offset them with perceived gains incurred from the event, such as finding meaning through the experience or believing that the self is a better person for having withstood the event (Taylor, 1983; Taylor, Wood, & Lichtman, 1983). Thus, the process by which illusions are maintained can actually lead to more positive beliefs than those held prior to victimization.

Consistent with this, Taylor (1983) reported that 53% of her respondents experienced positive changes in their lives following the cancer diagnosis. Many thought that they were not only well adjusted emotionally after the cancer experience but that they were better adjusted than they had been prior to its occurrence. These patients also reported having new insights about their lives and themselves and experiencing positive changes in their values and priorities.

Thus, separate lines of research have predicted and found positive versus negative responses to victimization. Because each of these perspectives has focused on a single valence of change, one might infer, from one set of results, that victims' lives are shattered by their experiences; and from the other, that victimization is actually a positive, enriching experience. In reality it is likely that both types of change take place in response to threat. However, little research has been conducted taking this broader perspective. As a result, the factors that determine the positivity or negativity of victims' responses have yet to be determined. Below, we shall attempt to identify some of these variables.

COPING RESPONSES TO VICTIMIZING EVENTS

First, an examination of the research described above reveals a distinction between the specific changes assessed by each perspective, which may account in part for their incongruent findings. The literature examining negative outcomes (Janoff-Bulman, 1989) has focused on the *direct impact* that a victimizing event has on its victim. Because

the event itself is unlikely to contain any positive information about the self or the world, these direct effects should, as Janoff-Bulman finds, be negative. The literature describing positive effects (Taylor, 1983) has, in contrast, focused on victims' *active coping efforts* that are initiated *in response* to the victimizing event, that is, efforts designed to cope with, mute, or otherwise modify the direct impact of the event. These coping responses may lead to the paradoxical positive outcomes of victimizing events that victims sometimes report.

The coping process has been a central research problem in the victimization literature (Lazarus & Folkman, 1984). Coping is typically discussed as a method of alleviating or preventing negative change. However, it may also lead to more *positive* beliefs. Coping often involves new, more positive ways of looking at information or a switch to more positive activities and relationships. These changes, in turn, should result in more positive beliefs concerning the self and other people and a new set of priorities. We therefore propose that although the direct impact of victimization may be negative, the more an individual engages in active coping efforts such as cognitive reappraisal and behavioral change, the greater will be the positivity of his or her belief change.

The method of coping may be as important to changes as the amount of coping. Previous research on coping has focused heavily on individual coping styles such as repression versus sensitization (Byrne, 1961), focusing on the positive, coping through withdrawal, and problem-solving efforts (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986). However, not all people exhibit distinctive coping styles (Folkman & Lazarus, 1980; Folkman et al., 1986). Instead, many individuals employ a variety of coping strategies for dealing with a stressful event. Multiple strategies should enable one to address multiple aspects of a victimizing event, including both its objective impact and its cognitive interpretation. The impact of a single coping strategy is likely to be more circumscribed. A single coping method may limit positivity to specific life domains or may be inappropriate in some situations. We therefore predicted that people who cope with a stressful event by using multiple coping strategies will experience more positive changes following a victimizing event than those who draw on a single dominant coping strategy.

LIFE DOMAINS

A third factor that may be important in predicting the positivity of change is the particular life domain examined: Coping efforts may

foster change in some life domains more than in others. The areas that individuals are best able to influence through coping efforts should be most likely to exhibit positive change. From previous work on victimization, we identified five life domains that capture a broad range of beliefs about the world and one's role in it: views of the self, the world, daily activities and priorities, relationships with others, and visions of the future. Prior to a victimizing event, most individuals hold positive beliefs about these domains (cf. Greenwald, 1980; Lerner, 1970; Taylor & Brown, 1988). Below, we examine each of these areas.

The World. Janoff-Bulman's (1989) findings demonstrate negative changes in views of the world. Once confronted with an undeniable instance of their susceptibility to harm, people altered their beliefs about the world to include the possibility that bad things do happen to good people. These findings are consistent with the model of direct, passive responses to victimization versus indirect, active responses that we have proposed. Coping seems unlikely to allow the fact of the event to be restructured or changed.

Priorities and Relationships. In contrast, a person can plan, change, and modify daily activities or priorities and seek out the company of others, or not, in an attempt to cope with victimization. Thus, while there may be certain initial negative effects of victimization on these life domains, through the process of active coping, beliefs concerning daily activities, personal priorities, and relationships should become more positive following the event. This is consistent with Taylor's (1983) results.

The Self. Janoff-Bulman (1989) found negative changes in views of the self. Taylor, however, found positive changes centering on views of the self, such as feelings of self-efficacy and self-worth. Views of the self may have shown mixed changes in past studies because they are particularly vulnerable to both the direct and indirect effects of the event. The fact that one has been the target of a negative event is both undeniable and negative information. However, cognitive and behavioral coping efforts often focus on self-enhancement. Thus, the realization that one has survived the event, and the belief that one has become better as a result of it, are also likely.

The Future. Changes in beliefs about the future may also be mixed. On the one hand, the future is always uncertain and thus may be amenable to attempts at positive reappraisal. Nonetheless, future events are not always directly controllable. One cannot be certain to avoid accidents, illness, or criminal victimization even by taking precautions. Consequently, both types of change may occur following victimization. To our knowledge, no previous research has directly examined changes in these beliefs.

In sum, changes in the domains of personal activities and priorities and in relationships are likely to be primarily positive in response to a victimizing event, whereas changes in views of the world should be primarily negative. Views of the self and the future are likely to exhibit both positive and negative change.

NATURE OF THE VICTIMIZING EVENT

Finally, the manner in which beliefs are affected by a victimizing event may also depend on characteristics of the event. A central factor may be whether or not the victimization is ongoing. It may be difficult to ignore the negative implications of an event that is still in progress. People undergoing victimization are known to suffer a variety of distressing physical symptoms such as injury or pain as well as debilitating emotional responses such as anxiety or depression (Silver & Wortman, 1980; Taylor, Wood, & Lichtman, 1983). In addition, chronic victimizations may tax the resources of the individual and thus produce more negative change and less positive reappraisal. Therefore, it is likely that those under continuing threat will experience more negative and fewer positive changes as a result of victimization, compared to those for whom a victimizing event is over.

METHOD

Subjects. The sample consisted of 55 individuals recruited from a pool of 668 cancer patients who had previously participated in a survey of social support needs among cancer patients (Taylor, Falke, Shoptaw, & Lichtman, 1986). The diagnosis of cancer is clearly a traumatic experience, and cancer patients have been shown to exhibit many of the same thoughts and reactions as victims of other threatening events, such as loss of a limb, rape, or bereavement (Schulz & Decker, 1985; Silver & Wortman, 1980; Taylor, Wood, & Lichtman, 1983). To be eligible for the present study, patients had to be within 5 years of diagnosis or recurrence and between 30 and 70 years of age. Blocks of potential subjects by gender, estimated prognosis (good versus fair/poor), and support group membership (yes/no) were constructed for selection purposes.¹ Subjects were then randomly selected from

1. The inclusion of support group membership as a blocking factor was undertaken because another portion of the interview study concerned perceived social support following cancer.

these blocks and invited to participate in the interview study. Of the subjects contacted, 93% agreed to participate (i.e., 4 subjects declined).

The sample included 30 women and 25 men, ranging in age from 30 to 66 years with a median age of 54. Eighty-three percent were married, and 84% had children. Fifty-six percent were employed, and the median yearly family income was between \$40,000 and \$49,000. Ninety-three percent had completed high school, and 29% were college graduates. The sample was 44% Protestant, 25% Jewish, 13% Catholic, and 18% of another or no religious affiliation.

Participants had been diagnosed with cancer or had sustained a recurrence an average of 3.2 years prior to the interview ($SD = 1.7$). Twenty percent of respondents were receiving treatment for their cancer at the time of the interview. Using medical chart materials, an oncologist rated prognosis on a 5-point scale, with 1 indicating a very guarded or grave prognosis and 5 indicating probable cure. Thirty-six patients had cancers that were rated 4 to 5 (in remission), and the remainder (19) had prognostic ratings of 1, 2, or 3 (active cancers). Patients with all sites of cancer participated.

Interview. Respondents were telephoned, and the interview was arranged, usually in the home. At the beginning of the structured interview, respondents received an informed consent form, and permission to tape-record the interview was obtained. The average interview lasted between 1½ and 2 hours.

The interview covered basic demographic data, the respondent's past and current health status, social support experiences following the cancer diagnosis, beliefs about control and the cancer experience, social comparison processes, and items relevant to the present study. The items addressed by the current investigation concluded the interview protocol and were prefaced with the following statement:

Many times after a diagnosis of cancer, people experience changes in their activities and their views about the world, themselves, their future, and other people.² The next questions in the interview are about how cancer has affected you in these and other ways, if at all.

The first question then posed to respondents was "In what ways, if any, has having had cancer changed your priorities or altered your daily activities?" Questions 2 through 5 were identical in form, asking

2. It is possible that use of the phrase "many times" may have created a demand characteristic so that respondents felt they should report changes as a consequence of the cancer experience. Thus, the possibility exists that the absolute number of changes may be somewhat higher than it might have been with a more neutral instruction. It should be noted, however, that even if the demand existed, it would not affect the differential reporting of changes by domains or the particular types of changes reported.

subjects how, if at all, cancer had affected their plans and goals for the future (question 2), their views of themselves (3) their views of the world (4), and the ways in which they related to others (5).

Coding of Responses. Subjects' responses to these open-ended questions were coded into categories reflecting their content for data-analytic purposes. The development of the codes proceeded as follows: First, a random sample of responses was examined to develop an initial set of content codes for each question. Each of four coders then employed the coding scheme on a random sample of interviews. The content coding schemes were then revised to improve reliability and to add necessary categories that had not been included in the initial round of codes. The final codes included 13 regarding changes in daily activities, 7 for the question regarding plans and goals, 14 concerning the view of the self, 10 concerning views of the world, and 17 for the relationships question.³

All interviews were then coded by one of four interviewers. Each item was first coded to indicate whether the respondent reported having experienced a change in that area of life. The change or changes reported within each area were then categorized according to the content codes associated with that area. Each change was also coded as positive, negative, or neutral; this judgment was made on the basis of information provided by the respondent or was a judgment made by the coder from the contextual information regarding the change. To establish coding reliability, a random set of 16 interviews was coded by all four coders. Raters agreed on whether a change was experienced in 98% of instances. Interrater agreement concerning both the occurrences and nonoccurrences of specific categories was 97% (for occurrences only, the rate was 73%). Agreement on ratings of the positivity, negativity, or neutrality of each change was 88%.

The measure of coping was a modified version of Folkman and Lazarus's (1980) Ways of Coping Inventory, included as part of the larger social support survey in which respondents had participated a year earlier. This version consisted of a 52-item list of coping behaviors (to be rated on a scale of 0, "never used," to 5 "used very often") that had been modified slightly for cancer patients from the original 67-item questionnaire (i.e., irrelevant items were deleted). Respondents indicated how often in the past 6 months they had used each behavior

3. Although some of the changes mentioned by respondents in response to a particular question (e.g., "I've gotten closer to my friends," reported in response to the daily activities question) might have seemed more appropriately categorized as a change in another area (e.g., as a change in one's relationships), we elected to retain the category code in which respondents designated the change.

to cope with their cancer. The derivation of particular coping methods and styles from this scale was based on a factor analysis described in the Results section below.

RESULTS

DESCRIPTIVE DATA

The majority of respondents reported that there had been changes in their perceptions following diagnosis. Eighty-four percent reported changes in their views of themselves; 83%, in their relations with others; 79%, in priorities/daily activities; 67%, in their plans for the future; and 66%, in their views of the world. Respondents reported an average of 1.09 changes per domain, or 5.43 changes summed across domains. Consistent with Taylor's (1983) and Janoff-Bulman's (1989) work, respondents reported both positive and negative changes following cancer.

Overall, this sample seemed able to derive more benefit than harm from their experiences. Respondents reported significantly more positive changes ($M = .67$) per domain than negative changes ($M = .36$), $F(1, 52) = 11.82$, $p = .001$. Neutral changes were extremely infrequent (and thus will be excluded from the analyses and discussion to follow).

To test for the effect of subject characteristics on the major changes experienced, four $2 \times 2 \times 5$ repeated-measures ANOVAs were performed, one for each of the four subject variables of gender, age, income, and employment status, with valence of change and domain as the two repeated measures. Respondents were split into groups at the median score on each of these independent variables (with the exception of gender) in order to conduct these tests. The analyses revealed no effects of these subject variables on the positivity of change experienced either across domains or within a particular area of life.

COPING RESPONSES

Coping efforts that involved cognitive reinterpretation or behavior change were expected to be associated with positive change following a victimizing event. To identify the coping methods used by our sample, a factor analysis of the Ways of Coping Inventory for cancer patients was conducted, using the principal factor method of extraction

with an oblique rotation.⁴ Five factors similar to those identified by earlier research were derived (Felton & Revenson, 1984; Marshall & Dunkel-Schetter, 1987). Together, these factors accounted for 87% of the variance, and each had an eigenvalue over 1.0. The first, labeled Problem-Focused Coping, was made up of 12 items measuring the utilization of information or social support in solving problems related to the stressful event. The second factor, with 9 items, measured Cognitive Escape/Avoidance, which includes such cognitive responses as wishful thinking and fantasy (e.g., "I had fantasies or wishes about how things might turn out"). Twelve items comprised a third factor, Distancing, which involved removing oneself from the problem and its damaging effects through cognitive or behavioral methods (e.g., "I didn't let it get to me, refused to think about it too much"). The fourth factor was labeled Positive Focus and contained 8 items assessing positive reappraisal of the stressful event. The fifth factor, which included 9 items, was termed Behavioral Escape/Avoidance and represented a combination of tension-release behaviors, impulsive behaviors, and behavior control items. Interfactor correlations ranged from .47 (for Problem-Focused and Positive-Focus coping) to .07 (for Distancing and Problem-Focused strategies).

To test the hypothesized association between use of each method of coping and the valence of cognitive changes, factor scores were computed for each subject on each of these five dimensions. Correlations were computed between each of these factor scores and total numbers (summing across domains) of positive and negative changes, controlling for prognosis. (Prognosis was covaried out to control for the likelihood that different stages of disease promote different coping strategies.) These correlations are presented at the bottom of Table 1. As the table indicates, increased use of all five methods of coping was associated with positive changes, as predicted, although the correlation for Distancing was not significant. It is interesting to note that the magnitude of the association between any given coping strategy and positive change appears related to the domain in which it is applied. We will discuss other domain differences in the following section. Regardless, the overall pattern of correlations obtained clearly supports the hypothesis that coping efforts facilitate positive change following a victimizing event. As expected, there were no associations between coping behaviors and negative cognitive changes except for the use of Dis-

4. The factor analysis was derived from the initial sample of 668, so the resulting structure is more stable than the *N* of 55 might suggest.

TABLE 1
Correlations between Coping Behaviors and Positive and Negative Changes by Domain (Controlling for Prognosis)

DOMAIN	VALENCE	COPING STRATEGY					TOTALS
		PROBLEM- FOCUSED	COGNITIVE ESCAPE/ AVOIDANCE	DISTANCING	POSITIVE FOCUS	BEHAVIORAL ESCAPE/AVOIDANCE	
World	+	.02	-.05	-.19	-.02	.04	.02
	-	.22	.14	-.23	.12	-.09	.06
Self	+	.27*	.44*	.08	.39**	.17	.37**
	-	-.20	-.12	-.12	-.10	-.08	-.18
Future	+	.19	.23	.12	.10	.28*	.24
	-	-.04	.00	-.24	-.07	-.17	-.13
Activities	+	.24	.27*	.12	.27*	.25	.32*
	-	.23	.10	.03	.06	.23	.18
Relations	+	.38**	.33**	.26	.32**	.26	.44**
	-	-.03	-.10	.05	.09	.07	.02
Totals	+	.43**	.48**	.19	.42**	.38**	
	-	.04	.01	-.28*	.03	-.10	

* $p \leq .05$; ** $p \leq .01$; $df = 36$.

tancing. The more respondents used Distancing to cope with their illness, the fewer negative changes they reported.⁵

It was also hypothesized that those who used multiple versus primary strategies of coping would show more positive and fewer negative cognitive changes. Proportional scores were derived from the five factor scores, showing the percentage of each individual's total coping effort accounted for by any given factor. Subjects who used a particular method at least 5% more than any other were designated as utilizing a primary coping style (cf. Vitaliano, Russo, Carr, Maiuro, & Becker, 1985). Of the 53 respondents whose scores were computed (2 cases contained missing data), 25 had a primary style, and 28 used no particular method more than any other.

To compare the nature of changes reported by these groups of individuals, a $2 \times 2 \times 5$ (primary style vs. multiple styles by valence by domain) repeated-measures ANCOVA was conducted, using prognosis and total amount of coping as covariates (a person who uses primarily one coping style also may do less overall coping). The analysis revealed a significant interaction between coping style and positivity of change, $F(1, 37) = 8.26, p < .01$. Those who used a primary coping style made only slightly more positive than negative changes (M 's = 37.2 and 29.8, respectively), whereas those using multiple coping strategies made many more positive than negative changes (M 's = 89.6 and 49.8, respectively). The three-way interaction was not significant; this effect is independent of life domains.

Although most of the respondents who had a primary style used Distancing, an examination of means separately by coping style showed that its predominance could not account for the primary versus multiple strategies effect. The means for respondents who used Distancing as their predominant coping strategy were in the direction of positive change, as was true for those who used multiple strategies.

LIFE DOMAINS

Our prediction that different life domains would exhibit varying ratios of positive versus negative change rested on the assumption that

5. Correlations between Distancing and changes within each domain were conducted to clarify its apparently unique relation to belief change. None of the correlations reached significance, although there was an apparent trend toward a positive association between Distancing and positive relationship change. Distancing also appears to lead to fewer negative and positive changes in world views and fewer negative changes in future plans.

coping efforts would better facilitate positive change in some areas than in others. Specifically, coping was expected to lead to positive change in the areas of activities/priorities, relationships, and the self and possibly to affect perceptions of the future as well. Changes in world view were not expected to be associated with coping. The first step in testing this hypothesis is to examine the correlations between coping and change for each domain. Table 1 (last column) shows the correlations between total amount of coping (summing the factor scores across strategies) and changes within each domain. Positive changes in relationships, activities/priorities, and the self showed the strongest correlations with coping, as predicted (r 's = .44, .32, and .37, respectively). Although differences are not statistically significant, the correlations between coping efforts and changes in the world and the future appear lower (r 's = .02 and .24), as our analysis would also predict.

To test the hypothesis based on these relations—that the proportion of positive to negative changes would be different for different life domains—a 2×5 (number of positive vs. negative changes by domain of change) ANOVA with repeated measures on both factors was conducted. As predicted, there was an interaction between domain and valence of changes, $F(4, 208) = 11.96, p = .001$. Belief changes following victimization were more positive in some areas of life than in others.

It was further predicted that changes in activities/priorities and relationships would be primarily positive. Respondents did report more positive ($M = 1.09$) than negative ($M = .19$) changes in priorities and activities: $t(52) = 5.30, p < .001$. The most common changes were living for the day or appreciating life, doing things now instead of waiting (both positive changes), and having to cut back on activities or spend time on illness-related activities (a negative change). Changes were more frequently positive than negative in the area of relationships as well: $t(52) = 5.04, p < .001$; (M positive = .91; M negative = .15). Most prevalent among changes in relationships were becoming more sensitive to others' feelings, becoming more sympathetic and compassionate, and putting more time and effort into relationships (all positive changes). A list of high-frequency changes for all domains is presented in Table 2.

Changes in views of the world were expected to be negative. Although this was true relative to changes in other life domains, in an absolute sense they were not significantly so ($p > .05$). An average of .35 positive changes were reported by the sample; the mean number of negative changes was .46. Frequently described negative belief changes were becoming concerned about carcinogens in the environment, perceiving the world as "all messed-up," and believing that

TABLE 2
Change in Views of the Self and the World Following Cancer

DOMAIN	% RESPONDENTS	M CHANGES
Priorities/Daily Activities		
Valence		
Positive	62	1.09
Negative	19	.19
Most Common Positive		
(+) Appreciating each day	23	
(+) Doing things now	17	
Most Common Negative		
(-) Cutting back on activities or engaging in illness-related activities	19	
Relationship with Others		
Valence		
Positive	62	.91
Negative	13	.15
Most Common Positive		
(+) More aware of others' feelings	26	
(+) More sympathy and compassion for others	13	
(+) Putting more effort into relationships	13	
Most Common Negative		
(-) Feeling less confident when socializing	4	
(-) Socializing less	4	
View of the Self		
Valence		
Positive	44	.60
Negative	47	.58
Most Common Positive		
(+) Feeling stronger/self-assured	26	
Most Common Negative		
(-) Feeling more vulnerable/less in control	27	
View of the World		
Valence		
Positive	34	.35
Negative	33	.46
Most Common Positive		
(+) Becoming more compassionate toward the unfortunate	11	
(+) Reordering priorities/values	11	
(+) Greater concern with world issues	11	

TABLE 2 (Continued)

DOMAIN	% RESPONDENTS	M CHANGES
(+) Belief that others should reorder priorities/values	9	
Most Common Negative		
(-) Concern with carcinogens	16	
(-) Concern that world is "messed up"	16	
(-) Belief that world is a frightening or threatening place	11	
View of the Future		
Valence		
Positive	29	.42
Negative	34	.44
Most Common Positive		
(+) Enjoying life now instead of waiting	24	
(+) Making each day count	11	
Most Common Negative		
(-) Making fewer plans because future is threatening or uncertain	18	
(-) Making plans for more serious illness or death	15	

the world is a frightening or threatening place. Positive changes in world views typically consisted of a reordering of priorities and values, becoming more compassionate toward the unfortunate, becoming more concerned with world issues, and feeling that others ought to reorder their priorities and values.

Changes in self-view were expected to be mixed, with no prediction made as to the predominant valence. Taylor's previous work had found positive changes in self-views, whereas Janoff-Bulman's documented negative change. In the present sample, changes in views of the self were indeed mixed. An average of .60 positive changes were reported in self-perceptions; negative changes occurred an average of .58 times (*t* nonsignificant). The most frequent changes were both related to perceived vulnerability: Some respondents felt more vulnerable and less in control; others felt more self-assured and better able to handle problems than they had been previous to the diagnosis.

Changes in perceptions of the future were also about evenly split between the positive and negative (*t* nonsignificant). The sample reported positive changes an average of .42 times and negative changes

an average of .44 times. The most frequently reported changes were an altered timetable (doing things now instead of waiting, a positive change) and not making plans because the future was seen as threatening (a negative change).

To summarize, changes in daily activities and priorities and changes in relationships were both predominantly positive, as predicted. Relative to these, changes in views of the world were negative, although they were only slightly so in an absolute sense. Changes in views of the self and the future were also affectively mixed.

The question arises as to whether some individuals are experiencing only positive change; others, only negative change; and perhaps a third group reporting mixed changes. This pattern of response would be interpreted differently from a pattern in which most individuals (as the mean tendencies we have thus far reported indicate) experience a tendency for positive change in some areas and mixed changes in others. We grouped respondents into three such categories to examine this question. Frequency data reveal that the majority of individuals in our sample (73%) made both positive and negative changes (6% made only negative changes; 20%, only positive). Thus, it appears that the use of averaged data produces a reasonably accurate picture of victims' responses to their experiences.

As can be seen in Table 2, some changes that were reported as occurring within one domain have a similar counterpart within another. For example, "appreciating each day" and "making each day count" occur in the domains of daily activities/priorities and views of the future, respectively. It may be that individuals experiencing a single life change reported this same change repeatedly, resulting in inflated estimates of its occurrence. To check for this, we identified changes that were highly similar across two domains. There were nine such categories. We then counted the frequency with which the same individual reported similar changes. This revealed that only 5% (13) of our responses represented this kind of data. Rather than reporting the same change repeatedly, it appears that some respondents experience a particular life change in one domain, and for others it occurs elsewhere and in a slightly different form.

CHARACTERISTICS OF THE VICTIMIZING EVENT

Finally, whether or not the cancer threat was ongoing (operationalized as prognosis) was expected to affect the nature of changes experienced. Those for whom the threat had subsided were expected to show greater positivity and less negativity in their perspectives. Subjects

were divided into two prognosis groups: stable disease (physician's ratings of 4 and 5) and active disease (ratings of 1, 2, and 3). A $2 \times 2 \times 5$ (prognosis [between subjects] by valence of change by domain [both repeated measures]) ANOVA was then conducted on the number of positive and negative changes reported by each subject in each area. An effect of prognosis on the positivity of changes would be reflected as an interaction between prognosis and valence. The effect was significant, $F(1, 51) = 3.90, p = .054$. Individuals with a poor prognosis were less likely to perceive positive changes and more likely to perceive negative ones than those with a good prognosis. Examination of the means shows that those whose cancer was active at assessment reported approximately equal numbers of positive and negative changes, (M 's = .59 and .52, respectively). Those for whom the future looked more favorable described more positive changes ($M = .70$) than negative ones ($M = .28$).

The interaction between valence and prognosis was qualified by an unpredicted three-way interaction with the domain variable: $F(4, 204) = 2.48, p < .05$. Simple comparisons revealed that individuals with poor prognoses reported more negative changes in views of the world, activities, and future plans than did those with a good prognosis. In addition, those with better prognoses reported more positive changes in future plans than did poor-prognosis individuals.

DISCUSSION

Previous research on victimization has focused on primarily positive (Taylor, 1983) or primarily negative (Janoff-Bulman, 1989) responses to victimization. These incongruent perspectives have produced seemingly contradictory findings and have resulted in a failure to identify the specific factors that might predict when change will be positive or negative. The present study provides an integration of the two approaches that predicts perceptions of both benefit and harm in response to threat. The framework proposed suggests that, prior to victimization, individuals hold generally positive beliefs about themselves and their environments (cf. Lerner, 1970; Perloff, 1983; Taylor & Brown, 1988; Taylor, in press). When victimizing circumstances are encountered, the direct impact may be negative. However, people will respond by attempting to reduce or dismiss these negative consequences and to bring about positive changes if they can. The extent to which these processes are successful was expected to be dependent on the amount and diversity of coping efforts by the victim, the particular

life domain examined, and characteristics of the victimizing event. Our results provide support for this model.

ACTIVE COPING EFFORTS

As predicted, coping efforts (with the exception of Distancing) were associated with positive changes following cancer. The process of coping apparently leads victims to derive benefit from their experience. In addition, the inverse relation of Distancing to negative change suggests that people may also be able to avoid some of the negative consequences of victimization through coping. The finding that Distancing was unrelated to the derivation of positive change appears consistent with the change process we have proposed. Distancing was the only method of coping examined that does not involve the cognitive restructuring and/or behavior changes that were predicted to be the source of any benefits extracted from the victimization experience. Therefore, it is unsurprising that this method of coping was unrelated to positive outcomes.

As predicted, those individuals who coped with the threat of cancer by using a variety of coping styles reported more benefits from the event than did individuals who coped using one primary style, regardless of what that style was. Coping flexibility may be valuable in achieving positive change through one or both of two processes. First, because the effect of a strategy may be specific to a single life domain, the use of a primary coping style may limit one to a single positive change (e.g., a more positive self-image but no change in world views). Second, because victimizing events produce many problems and disruptions, different aspects of the event are likely to be amenable to different strategies of coping. For example, physical limitations are particularly amenable to active problem solving, such as a change in activities, and this may result in the discovery of new, enjoyable interests. In contrast, the regulation of emotions may depend on methods of cognitive restructuring. A repertoire of responses may allow individuals to take maximum advantage of each situation to facilitate positive perceptions and experiences. This in turn should lead to a greater preponderance of positive beliefs.

LIFE DOMAINS

We also predicted a relation between coping and domain such that only domains amenable to control through coping (namely, priorities/

activities and personal relationships) should show primarily positive change. It was expected that any positive effects in these areas would be in proportion to the active coping efforts respondents made. We were uncertain to what extent this relation would affect self-views, because we expected this area to be particularly susceptible to negative information as well. Consistent with our model, correlations between coping and positive change were high and significant in all three domains. In contrast, perceptions of the world and future were predicted to be less amenable to efforts at coping. In support of this, correlations between coping and changes in world view were consistently small and nonsignificant. Correlations between coping and views of the future were larger but also generally nonsignificant. It may be that coping efforts simply do not focus on the domains of the world and future as much as on other life domains, or it may be that coping efforts initiated in these domains are less successful in producing positive changes.

As was expected to follow from the above relations between coping and change, changes reported in the domains of daily activities/priorities and relationships were overwhelmingly positive. Changes in activities/priorities revolved around an increased focus on present happiness, as opposed to long-term goal setting, and an effort to increase enjoyable activities. In the relationship domain, new importance was assigned to interpersonal exchange, as evidenced by increased sensitivity to the needs and feelings of others and efforts to improve and maintain social relationships. These changes are consistent with the idea that people find benefit following a victimizing event in areas of life that they are able to influence through cognitive and behavioral coping methods.

Approximately equal numbers of positive and negative changes were reported in the areas of future plans and self- and world views. As in the activity and relationship domains, positive changes in visions of the future were characterized by an emphasis on greater enjoyment of the present. The downside of this trend was the belief by some persons that the future is uncertain or threatening. Although it had been hypothesized that views of the world would be negative, this domain also showed some unanticipated positive changes. That is, although respondents reported increased perceptions of threat, as Janoff-Bulman's perspective would predict, some of them considered this a positive change because it constituted an increased awareness of the importance of the environment in determining one's own and others' outcomes. Thus, victimization may not as directly and adversely affect beliefs about the world as we (and Janoff-Bulman, 1989) had believed. This finding merits further investigation. As indicated by

the correlations between changes and coping, changes in world view and the future were not mediated by the coping process. This is consistent with the relatively few positive changes found in these areas.

Changes in self-views were also mixed. Janoff-Bulman (1989) had found primarily negative changes in this area, arguing that victimization is likely to alter perceptions of vulnerability in a negative manner; however, Taylor (1983) had found that victims often developed a new stronger sense of self following victimization. Coping responses were, in fact, strongly related to positive changes in self-views. Apparently, the processes identified in both Taylor's and Janoff-Bulman's work apply to this domain. Although some people are unable to avoid the evidence of personal vulnerability represented by victimization, others are able to focus on the personal strength demonstrated by their weathering of the event. Thus, sense of self may be especially vulnerable following victimization, but it also appears to be amenable to active coping efforts directed at restoring a positive self-view.

ATTRIBUTES OF THE VICTIMIZING EVENT

Prognosis influenced the process of adaptation, as predicted. Those for whom the threat posed by further illness was relatively low derived substantial positive benefits from the experience. For others, those who continued to experience a stable and considerable threat, changes were mixed. Interestingly, this was not a simple increase in negativity but was limited to the domains of the future, activities, and the world, those that might be most vulnerable to the expectation of continuing victimization.

It seems likely that other event attributes may also determine the reactions of victims. Our finding concerning ongoing versus past threat has implications for understanding the long-term consequences of chronic versus acute victimization. In addition, the process we have proposed suggests that an interpersonal victimization—such as rape, incest, or assault—may have a particularly negative impact on the relationship domain by directly undermining beneficent perceptions of other people. There is some suggestive evidence for this hypothesis in the rape literature (Burgess & Holmstrom, 1979). Similarly, a victimizing event that leaves a person immobilized, such as a spinal cord injury or a stroke, might directly tax the domain of daily activities and priorities, a domain that was left relatively intact by a cancer experience.

CONCLUSIONS AND LIMITATIONS

The findings of the present study aid in understanding the cognitive changes that result from victimization. There are, however, a few cautions that should be raised regarding the results. This is not the definitive study of the conditions under which people's views of themselves, the world, and relationships change for better or worse following a victimizing event. Other studies exploring a range of victimizing events are needed. These studies may identify additional life changes produced by victimization and coping. Such research may also serve to clarify the number and boundaries of relevant domains. We chose our five domains a priori. Our results suggest, however, that they were not perfectly distinguishable from one another. As noted, some changes appear to be reported in two domains. This occurred for 9 of the 61 changes reported. The "duplicate" codes may, however, reflect subtle differences in the way some changes are experienced. For example, "appreciating each day" may indicate enhanced enjoyment of activities without a *change* in activity, whereas "making each day count" may refer to an increase in or alteration of daily activities. Further research should clarify the boundaries or overlap between domains that are positively influenced by coping versus those that are not.

Questions also arise regarding the retrospective nature of the data. The fact that precancer beliefs about life domains were not assessed or that postcancer beliefs were not assessed at several points raises the question as to whether patients' perceived changes in their lives actually occurred. Perhaps in the process of coming to terms with cancer, people infer that they have changed when they have not. In our judgment, the actual changes these individuals made in their lives may be less important than the perception of positive (or negative) change. The beliefs that one is a stronger person or a more caring partner, for example, may constitute the meaning derived from the experience more than any actual shifts on these attributes. Illusion can be as important as or even more important than reality in coming to terms with a threatening event (Taylor, 1983). Nonetheless, a study in which pre- and postmeasures of beliefs are included would clarify the exact nature of victims' experiences.

In closing, we offer a characterization of the process of coping with victimizing events that differs somewhat from those portraits painted by earlier theoretical viewpoints and underscores the validity of certain aspects of both perspectives. Reactions to a victimizing event may initially be negative, particularly regarding views of the self and

the world, as Janoff-Bulman has shown. The initiation of active coping efforts, however, appears to be conducive to the experience of positive changes following victimization, a process that is also facilitated by multiple coping methods as opposed to a single dominant coping strategy. What seems evident is that individuals actively struggle with victimizing events, attempting, often successfully, to derive benefits and value from the events but also accommodating their perspectives realistically to the adverse changes in their lives.

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