The Influence of Culture, Community, and the Nested-Self in the Stress Process: Advancing Conservation of Resources Theory

Stevan E. Hobfoll*

Kent State University, USA

Conservation of Resources (COR) theory predicts that resource loss is the principal ingredient in the stress process. Resource gain, in turn, is depicted as of increasing importance in the context of loss. Because resources are also used to prevent resource loss, at each stage of the stress process people are...
increasingly vulnerable to negative stress sequelae, that if ongoing result in rapid and impactful loss spirals. COR theory is seen as an alternative to appraisal-based stress theories because it relies more centrally on the objective and culturally construed nature of the environment in determining the stress process, rather than the individual’s personal construal. COR theory has been successfully employed in predicting a range of stress outcomes in organizational settings, health contexts, following traumatic stress, and in the face of everyday stressors. Recent advances in understanding the biological, cognitive, and social bases of stress responding are seen as consistent with the original formulation of COR theory, but call for envisioning of COR theory and the stress process within a more collectivist backdrop than was first posited. The role of both resource losses and gains in predicting positive stress outcomes is also considered. Finally, the limitations and applications of COR theory are discussed.

INTRODUCTION

Throughout history, the stress process has been alternatively envisioned as an external, environmental phenomenon or an internal, mentalistic occurrence. In the biblical story, Job lost home, family, and wealth and was stricken with disease, for “But man is born unto trouble, as [certainly as] the sparks fly upward” (Job 5:7). Yet, despite these external events, it was his internal sense of faith and meaning that led him through his series of travails. The social and behavioral sciences have likewise vacillated between these two perspectives, but in fact have found value in both. Conservation of Resources (COR) theory (Hobfoll, 1988, 1989, 1998) has been offered as an integrative stress theory that considers both environmental and internal processes with relatively equal measure. Because of the almost exclusively cognitive nature of recent stress theorising and research, and within psychology in general, COR theory may appear to be largely environmental, forsaking the self. However, it is my purpose in this paper to delineate COR theory as integrating the individual-nested in family-nested in tribe, set in social context.

What I mean by “individual-nested in family-nested in tribe” is that attempts to separate any piece of this unit, without reference to the greater whole, will necessarily lead to limited predictive capacity. The self derives from primary attachments within biological families and intimate social groups. The self and the behavioral alternatives available to it, including thought, are reflections of cultural processes and delineated by cultural scripts and formulations. Moreover, the encounter of the self with stress is primarily situated in social context or involving social consequences (Hobfoll, 1998; Lyons, Mickelson, Sullivan, & Coyne, 1998). This is not to say that study of the self, and even molecular study of the brain, is invalid. On the contrary, they are rich avenues for study. However, the moment we are seduced into thinking that any one level is the primary active agent, we forestall the scientific

process and acquire scientific tendencies to guard the borders of our theories against the obvious veracity of broader perspectives (Baltes, 1997; Markus & Nurius, 1986).

Although COR theory is a model for understanding stress, it nevertheless remains difficult to define the term. The definition I favor is adopted from Kaplan (1983). Throughout this article I refer to stress as the internal state that:

...reflects the subject’s inability to forestall or diminish perception, recall, anticipation, or imagination of disvalued circumstances, those that in reality or fantasy signify great and/or increased distance from desirable (valued) experiential states, and consequently, evoke a need to approximate the valued states. (Kaplan, 1983, p. 196)

Although this definition focuses in part on perception, the perceptions that are referred to are primarily reality-based and socially common within a culture, even if there is also an important additional individual component to such perceptions.

Finally, I use the term tribe to refer to the complex social aggregations of people into groups beyond the level of family. This includes formal and informal groups of friends, colleagues, organisations, and communities. I refer to tribes because such organisations appear to have both social and biological components that seem to tie humans across history to a certain way of being with others that transcends time and any particular culture (Boas, 1911/1938; Shore, 1996). Although this could clearly fill the contents of another article or book, suffice it to say that there is great similarity across the principles that govern group behavior when it comes to issues as broad as territoriality, hierarchal organisation, role differentiation, gender relations, and meaning seeking. If we adopt the anthropological concept of tribe, we understand much of human behavior in groups.

THE GENERAL NATURE OF RESOURCE VERSUS APPRAISAL THEORIES IN THE STUDY OF STRESS

Resource-based theories of stress, among which COR is one, have received increased attention (Antonovsky, 1979; Baltes, 1997; Bandura, 1997; Holahan & Moos, 1987, 1991). They directly challenge appraisal-based stress theories, not because they disregard appraisal, but because they suggest that the fit of personal, social, economic, and environmental resources with external demands determines the direction of stress responding and resultant outcomes. Resources have been defined as those objects, personal characteristics, conditions, or energies that are valued in their own right, or that are valued because they act as conduits to the achievement or protection of valued resources (Hobfoll, 1988; Diener & Fujita, 1995).

Beyond the empirical basis of these approaches, the emphases on resources may be drawing greater attention due to the increasingly precarious condition of people’s resources which is the product of rapid transitions in economy, computers, and the political map. Early resource-based theories such as Caplan’s (1974) and Antonovsky’s (1979) were derived from circumstances surrounding the Holocaust and post-Holocaust periods in Israel, where events most clearly threatened and undermined people’s resource capacity. Recent events worldwide, such as the shake-up of the former Soviet Union and the economic recession that threatened the economies of seemingly unassailable economic engines such as Japan, Germany, and the United States have brought home the message that we are all captive to our resources, their availability, and the extent to which they are shared and stable. With employment instability even shaking the lifetime contract believed sacrosanct for workers in Japan, has come attention to the importance and centrality of resources. For less resource-endowed members of economically developed nations and for underdeveloped and economically challenged nations, the keystone nature of resources has always been a pivotal issue. These broader social trends are relevant as they serve as a socio-cultural backdrop that interacts with research and theorizing on more meso and microsocial levels. That is, resources are necessary and stress will occur where resources are threatened, lost, believed to be unstable, or where individuals and groups cannot see a path to the fostering and protection of their resources through their individual or joint efforts.

One obstacle in the advancement of stress theory has paradoxically been the introduction of a powerful and largely supportable theory of stress and the self which was introduced originally by Lazarus (1966) and advanced more specifically by Lazarus and Folkman (1984). In few instances has such a robust theory been offered so early in an area’s study. Lazarus and Folkman (1984) depicted stress as the primary outcome of personal appraisal and a great deal of evidence has supported this perspective. Why I call this an obstacle is that the vast majority of work following this theory has directed attention at the appraisal aspects of the model, rather than their much more inclusive transactional model in which appraisals are only one component. This emphasis was, in large part, shared by the Lazarus and Folkman themselves and the research in this regard clearly supports the position that the best proximal indicator on the individual level of stress is personal appraisal.

Despite appraisal theory’s strengths, appraisal-based stress theories are problematic on two levels that COR theory attempts to address. First, to obtain appraisals we must wait until the proximal-moment where stress occurs and constantly hark back to the individual for his or her assessment at that state and time. This limits predictive strength and provides few insights for groups or systems. Secondly, the study of stress appraisals has

yielded little information about why people make certain appraisals, the extent to which their appraisals are automatic outgrowths of learned (over-learned) rules of interpretation (Bargh & Chartrand, 1999; Chaiken & Trope, 1999), and the extent that these appraisals are shared and culturally scripted. The interpretation that has been given, instead, is that appraisals are idio-graphic, that is peculiar or characteristic of the individual. This interpretation that appraisals are centrally idio-graphic is, I think, itself a reflection of the cultural, Western bias that champions the crystalised self and sees it as divisible from the embedded self (Baumeister, 1987; Sampson, 1988). In this article I will attempt to show instead how appraisals are embedded in the social context in which individuals find themselves, and that the idio-graphic aspects of appraisal are secondary to biological and overlearned automatic processes, on one hand, and socio-cultural processes, on the other hand.

...human thought is basically both social and public—that its natural habitat is the house yard, the marketplace, and the town square. Thinking consists not of “happenings in the head” (though, happenings there and elsewhere are necessary for it to occur) but of a traffic in...significant [shared] symbols. (Geertz, 1973, p. 45)

COR THEORY

COR theory follows from a set of tenets, principles, and corollaries that I will delineate next. The theory lays out a specific framework that leads to certain predictions, delineates the limits of the theory, and allows for a rejectable conclusion (Hobfoll, 1988, 1989, 1998).

The basic tenet of COR theory is that individuals strive to obtain, retain, protect, and foster those things that they value.

They do so in a world that they see as innately threatening and requiring a constellation of their personal strengths, social attachments, and cultural belonging in order to survive (Greenberg, Pyszczynski, & Solomon, 1986). These valued entities are termed resources, and may be delineated into object, condition, personal characteristic, and energy resources. Resources are not individually determined, but are both transcultural and products of any given culture. In our work on resources, we have found 74 resources (see Table 1) that represent a comprehensive set that appears to have validity in many Western contexts (Hobfoll, 1998). It follows that psychological stress will occur in one of three instances.

Stress will occur:

1. when individuals’ resources are threatened with loss,
2. when individuals’ resources are actually lost, or

where individuals fail to gain sufficient resources following significant resource investment.

Although individuals’ appraisals are one avenue to assess resource loss, most resources are objectively determined or observable. Resource loss for one individual would in most cases be perceived as loss by others in similar circumstances, and the ranking of resources’ importance is a product of

Note: *Although luxury resources, groups repeatedly admitted investing more in these two luxury resources than other resources they deemed more important.
From S.E. Hobfoll (1998).

(3) where individuals fail to gain sufficient resources following significant resource investment.

Although individuals’ appraisals are one avenue to assess resource loss, most resources are objectively determined or observable. Resource loss for one individual would in most cases be perceived as loss by others in similar circumstances, and the ranking of resources’ importance is a product of

culture. Indeed, how resources are ranked and valued is a reflection of what constitutes culture (Schwartz & Bilsky, 1990). Resources gain their essential character because they act to sustain the individual-nested in family-nested in tribe.

These ideas also distinguish COR theory from Person–Environment Fit (P–E Fit) theory (Caplan & Van Harrison, 1993; Edwards & Rothbard, 1999). In this regard, P–E Fit theory made a seminal contribution to the stress literature by arguing that it is the fit of resources to demands, or lack thereof, that constitutes stress. However, P–E fit research has almost uniformly assessed only individuals’ perceptions of P–E fit, rather than examining or emphasising the actual fit of resources. Still, many of the ideas central to COR theory overlap with those in P–E fit theory’s original formulation (French, Caplan, & Van Harrison, 1982).

A number of principles follow from COR theory’s central tenet, and these will be considered next:

Principle 1: The Primacy of Resource Loss. The first principle of COR theory is that resource loss is disproportionally more salient than resource gain.

This means that given equal amounts of loss and gain, loss will have significantly greater impact. Moreover, resource gains are seen as acquiring their saliency in light of loss. That is, in the context of resource loss, resource gains become more important. This principle distinguishes COR theory from reinforcement theory, as reinforcement theory and behaviorism in general do not differentially weight reward and punishment, and if, at all, has favored reward or gains as the means of influencing behavior. This principle also distinguishes COR theory from appraisal theory (Lazarus & Folkman, 1984) which leaves the extent of loss and gain’s impact up to the court of individual assessment, and does not emphasise the shared cultural nature of loss and gain assessments.

There is a great deal of cognitive evidence for the primacy of loss. Tversky and Kahneman (1974) noted that the gradient of loss is steeper than the gradient for gain in their prospect theory. In decision making they noted that the framing of an event as a loss engenders greater risk-taking than will the mathematically equivalent event if framed as a gain. Cacioppo and his colleagues (Cacioppo & Gardner, 1999; Ito, Larsen, Smith, & Cacioppo, 1998) in an elegant series of experiments have noted a greater weighting of negative information than positive information in what they term the negativity bias. Positive and negative motivational processes are seen by Cacioppo and colleagues as having separable motivational substrates, partially separable neurophysiological substrates, and to exist at the “automatic” evaluation-categorisation phase of cognitive processing. This means that the
tendency to overweight negative or threatening information is either innate or learned deeply and at very early levels of learning, such that they become automatic responses below the level of awareness.

Evidence that loss's impact is deeply cognitively rooted can also be found in recent work on immune neglect (Gilbert, Pinel, Wilson, Blumberg, & Wheatley, 1998). Learning theory would predict that people would adapt over time to the fact that they typically can overcome negative life events. That is, since the outcome of most stressful events, even rather severe ones, is ultimately one of prevailing over adversity, people should learn to be accurate assessors of the consequences of positive and negative events in equal measure. Yet, individuals do not tend to learn this in the sense that they continue over the life course to overestimate the duration and intensity of their affective reactions to negative, loss events. That is, they ignore the robustness of their psychological immune system. In contrast, the psychological immune system does not augment positive events. This has great significance for forecasting behavior because people's actions are in large part derived from their predictions concerning the emotional consequences of events they are likely to, and do in fact, encounter.

Although Darwinian explanations for behavioral phenomena are in many ways unprovable, there is general agreement among resource theorists that resource loss is primary because biological, attentional, psychological, and cultural systems found it adaptive (Carver & Scheier, 1998). For most of human evolutionary history, the loss of a key resource meant threat to survival for the individual or group. Although we cannot prove this idea, evidence from traumatic stress research can be used to argue the deep-seated, biological nature of this psychological process (van der Kolk, 1996a, 1996b). Specifically, traumatic events tend to imprint on the victim a memory for the event that alters the startle response to similar stimuli, is prolonged, is accompanied with the smells, sounds, and sites of the event, and is rekindled as if during the original event by associated stimuli. Such a trauma signature has been argued to be biologically based, as on a psychological level alone it would be predicted that the imprint would be counterproductive to functioning. Rather, the deep, almost indelible impact must serve the function of a reminder of the critical nature of such loss stimuli. Moreover, research has found that telling the story of the event has a healing influence on the individual and social group (Meichenbaum, 1994), suggesting that the codification of trauma events into the social history of the tribe has important survival value for the group as well.

Taken together, these studies point to a basis for asserting the primacy of resource loss compared to resource gain. Evidence suggests that the primacy of resource loss may be either biological, or deeply rooted in learning such that it is incorporated in the automatic responding of individuals. Further, these tendencies are supported by cultural processes, as the nested nature of
individuals in families and tribes makes loss’s primacy as important for the group as for the individual (see Westman & Etzion, 1995). As such, we would expect to find loss rituals strongly embedded within cultures worldwide. The narrative storytelling following disaster or trauma by indigenous tribes, as well as CNN media coverage, suggests that culture must digest trauma into a narrative format that serves some basic need of culture to protect against future loss just as the trauma signature imprints on the individual level. On each of these levels, the primacy and restorative rituals accompanying loss are unparalleled by any comparable process concerning gain.

**DIRECT EVIDENCE FOR THE PRIMACY OF RESOURCE LOSS IN THE STRESS PROCESS**

Consistent with COR theory, Taylor (1991) suggested that negative life events have an asymetrically strong impact compared to positive events on people’s physiological, cognitive, emotional, and social responses. Thoits (1983) also noted that only loss-related events have negative psychological impact, and that positive life events are only stressful to the extent they contain negative subevents (e.g. job promotion may also entail leaving friends behind). It follows that loss-related events will have marked impact and that stress will ensue as a consequence. We and others have examined this idea in a series of studies.

Hobfoll and Lilly (1993) had individuals report their recent resource gains and losses and their gains and losses over the past year, along with their depressive mood and anxiety. This was done on two occasions, spaced two weeks apart. It was found that resource loss was strongly related to emotional distress and that gains were hardly related to emotional distress whatsoever. Resource gains were, however, related to psychological distress after controlling for resource loss. This suggests, as predicted by COR theory, that gains become important in the context of loss sequences. Moreover, the impact of resource loss on psychological distress was much greater than the impact of negative life events found in prior research (Rabkin & Streuning, 1976). In other words, listing negative events accounts for less of the variance in resultant distress than does accounting for resource losses. This further supported the supposition that life events are too broad a unit of analysis, because they must be unpacked into the losses and gains that they contain (see also Dohrenwend, Raphael, Schwartz, Stueve, & Skodol, 1993).

The question arises as to whether resource loss only predicts negative affect, whereas resource gain might predict positive affect. This has been referred to as the dual valence theory of emotions, such that separate emotional channels are seen as operating for positive and negative events.

and affect, respectively (Reich & Zautra, 1981; Vinokur & Selzer, 1975). A recent study by Suh, Diener, and Fujita (1996) spoke directly to this question. They found that loss events were better predictors of both negative and positive affect. Positive events, in contrast, were almost unrelated to positive or negative affect, contrary to their hypothesis stemming from the dual valence theory of emotions, but quite consistent with COR theory.

We have also studied how gains become important in response to loss circumstances. Wells, Hobfoll, and Lavin (1997, 1999) prospectively studied pregnant women, many of whom were balancing career and family. Resource loss, but not gain, was directly related to changes in anger and depressive mood. However, resource gain became of greater importance for women who experienced higher resource loss. Specifically, women who experienced resource gains were significantly less negatively impacted by loss than those who had not experienced gains accompanying their losses, even though resource gain itself had no direct impact. Those who experienced losses, but not gains, were considerably more likely to experience psychological distress during this high demand period.

**Resource Loss and Disaster**

A number of studies of disaster have similarly found that resource loss is the critical ingredient in the stress process. Freedy and his colleagues (Freedy, Saladin, Kilpatrick, Resnick, & Saunders, 1994; Freedy, Shaw, Jarrell, & Masters, 1992), studying the consequences of two types of disaster (hurricanes and earthquakes), found that resource loss was the best predictor of motivation to cope and of the negative impact of disaster. Ironson et al. (1997) similarly examined resource loss in the face of Hurricane Andrew, which struck South Florida in 1992. She and her colleagues found that resource loss was the best of a host of predictors of post-traumatic stress disorder (PTSD) and general psychological distress. They also noted that resource loss was the only predictor of immune compromise in the form of decreased natural killer cell cytotoxicity and increased white blood cell count, the latter indicating the body’s response to attack.

Other disaster studies have likewise supported COR theory, including when other theoretical models were used as comparison perspectives. Examining the impact of Hurricane Andrew, Carver (1993) found that loss of resources was a better predictor of PTSD and general psychological distress than optimism–pessimism. Moreover, whereas optimism only predicted to what have typically been found to be negative coping patterns (e.g. denial, alcohol use), resource loss predicted to a general mobilisation of coping strategies, including those typically associated with positive (e.g. problem solving, planning) and negative outcomes (see also Benight et al., 1999). In another investigation, researchers compared the impact of resource

loss with the influence of having a strong sense of coherence following Hurricane Hugo (Kaiser, Sattler, Bellack, & Dersin, 1996). They found that resource loss overshadowed any positive impact of sense of coherence. Examining whether the effects of resource loss were both immediate and ongoing, Norris, Perilla, Riad, Kaniasty, and Lavizzo (1999) carefully examined both initial and more long-term responses to disaster. They found that resource loss had a marked impact on immediate traumatic responses, and that ongoing resource losses negatively influenced the long-term sequelae of Hurricane Andrew. Overall, the studies of Hurricanes Andrew and Hugo also addressed the possibility that resource losses are related to outcomes because of selective appraisal of such resources as hope, feeling positive about the self, etc. If this were the case, there could well be a confounding of resource loss indicators with outcome variables such as depression. In this regard, this series of studies selected resources that they felt were unlikely to be confounded with psychological outcomes (e.g. destruction of housing, loss of transportation, loss of employment).

Finally, in one of the few disaster studies of the influence of resource loss on children, Asarnow, Glynn, Pynoos, Nahum, Guthrie, Cantwell, and Franklin (1999) examined the impact of children’s resources on disaster outcomes. They found that exposure to the Northridge earthquake impacted children’s PTSD symptoms. In particular, pre-disaster psychological vulnerability, degree of objective exposure (i.e. threat of loss), and actual resource loss impacted post-disaster PTSD reactions. Most interestingly, by comparing siblings they were able to show that stress appraisals did not distinguish sibling reactions, whereas objective exposure to the earthquake threat did.

Resource Loss, Material Loss, and Burnout

COR theory has also been used as a principal explanatory mechanism for understanding the process of burnout and stress in work settings (Grandey & Cropanzano, 1999; Janssen, Schaufeli, & Houkes, 1999; Shirom, 1989; Westman & Eden, 1997; Wright & Cropanzano, 1998). Burnout is virtually opposite in stress intensity compared to disasters. It refers to the process by which individuals experience a gradual increase of distress that is characterised by reduced productivity, alienation from others, and emotional exhaustion (Maslach & Leiter, 1997). Burnout is thought to follow from the third stress condition of COR theory, such that there is a lack of resource gain (and sometimes exposure to minor, chronic losses) following significant resource investment of time, energy, lost opportunities, and borrowing from family time and intimacy to support work.

In a meta-analysis of studies of burnout, Lee and Ashforth (1996) divided indicators of demand characteristics of work that draw on people’s resources resulting in loss, and supportive elements of work environments that

add to people’s resources and thus constitute resource gains. The authors interpreted their results as supportive of COR theory in that five of the eight loss correlates were found to be strongly related to greater burnout, whereas only a single indicator of resource gain was related to lower burnout.

Further evidence for the insidious effect of chronic, minor losses was noted in a series of sociological studies by Siegrist and his colleagues (Siegrist, 1996; Siegrist, Peter, Junge, & Cremer, 1990). Relying on medical outcome data, rather than self-reported burnout symptoms, they found substantially increased odds of heart disease and cardiac-related deaths under conditions where workers had high resource investment in conjunction with reaping poor work-derived gains. Further, by assessing large-scale employment and compensation trends, rather than individual reports, the Siegrist studies are especially informative because they minimise the confounding of self-reported stressors.

Evidence for the primacy of loss’s impact was also noted by Kessler, Turner, and House (1988). They found that loss of employment had significant negative impact on depression. By studying economically driven, large-scale job layoffs, this research was able to dismiss the possibility that the individuals caused their job loss. This element in their research design removes the possibility of a confounding between job loss and depression that might have the opposite causal direction, because the workers’ behavior cannot be construed as the source of the job loss. Further, this study provides special insights, as the negative impact of employment loss was limited if individuals had other economic resources, and most importantly was fully reversed if their job was reinstated.

Most recently, we have also examined whether material resource loss is more impactful than resource lack. Certainly, chronic lack of resources engenders and makes people more vulnerable to resource loss (Dohrenwend & Dohrenwend, 1974). However, even vulnerable inner-city women may create a life niche that is supportive and in which they can minimise resource losses. We investigated this in a large sample of inner city women (Ennis, Hobfoll, & Schroeder, 2000) and found that resource “lack” in the form of lower education, lower income, and lower employment was almost unrelated to depressive mood. Material resource loss, in contrast, was highly related to depressive mood, controlling for the influence of resource lack. This finding is instructive because we used only objectively clear material loss items, and found that these impacted depressive mood independent of more psychological loss indicators. Thus, even though based on self-report, these findings limit the interpretation that loss reporting was confounded with depressive mood. They suggest that it is the element of loss that is most critical, and that even at low states of general resource endowment, people can guard against resource loss and remain resilient to the potential negative sequelae that their lack of resources might portend.

Principle 2: Resource Investment. The second principle of COR theory is that people must invest resources in order to protect against resource loss, recover from losses, and gain resources.

A related corollary of this (Corollary 1) is that those with greater resources are less vulnerable to resource loss and more capable of orchestrating resource gain. Conversely, those with fewer resources are more vulnerable to resource loss and less capable of resource gain.

The value of resources stems from their being desired goal objects, such as in the case of love, money, and home, and from their being instrumental in the acquisition or maintenance of desired resources. Resources such as self-efficacy and social support, for instance, may both be desired in their own right and important because they contribute to a maintenance of strong resource reservoirs.

In a series of studies, Schönflug (1985) illustrated how people develop decision and investment strategies to determine the payoff they will receive for resource investment. The process of resource investment might sound coldly economic, as when people determine work hour investment for financial payoff, but it applies equally well to investment of such abstract resources as time, energy, and trust for the acquisition and maintenance of love. Nor should one mistake this economy as being characterised by simple exchange principles, because since the self is attached to others, the desired goal may entail self-sacrifice for the communal good (Clark & Mills, 1979). In general, investment of resources exacts a price that must be considered because if such investment does not stem the tide of resource loss or contribute to other resource gains, then the net effect will leave the individual or group at a state of diminished capacity. Even in the case of internal resources, attempts at self-regulation have been found to result in diminished capacity for sustained goal-directed effort (Baumeister, Bratslavsky, Muraven, & Tice, 1998).

There is a wealth of evidence that personal, social, and economic resources can be invested to aid the process of stress resistance. This has been shown for single resources such as self-efficacy, optimism, and self-esteem (Bandura, 1997; Scheier & Carver, 1985) and for broad-band resources such as sense of coherence (Antonovsky, 1979), learned resourcefulness (Rosenbaum & Smira, 1986), social support (Antonucci, 1985), and personality hardiness (Kobasa, 1979).

Resource Caravans

There is strong evidence that resources aggregate in resource caravans in both an immediate and a life-span sense. Research by Cozzarella (1993) and by Rini, Dunkel-Schetter, Wadhwa, and Sandman (1999) support the idea.
suggested in COR theory that having one major resource is typically linked with having others, and likewise for their absence (Hobfoll, 1998). Hence, having a sense of self-efficacy is likely to be linked with optimism and the availability of social support in demanding contexts, whereas low self-efficacy is likely to be associated with poor social support, low self-esteem, and less adequate coping styles (Kobasa & Puccetti, 1983; Thoits, 1994).

Over the life-span, there appears likewise to be continuity of resources such that being in a state of resource lack at one time tends to carry over to future periods (King, King, Foy, Keane, & Fairbank, 1999). Change in resource levels can occur, but consistent with a caravan concept, the retinue of resources tends to travel together over time unless some inner or outside forces are specifically directed to alter the constellation of resources (Baltes, 1997). Thus, while we can examine a given resource, it should be recalled that other resources are probably underlying the overall protective influence (Turner, Lloyd, & Roszell, 1999).

Mechanisms of Resource Investment

This article cannot go into the plethora of studies of stress resistance resources. Rather, it is important to point out how resources may be invested or otherwise utilised to offset the potentially deleterious effects of stress. The first avenue is resource replacement, such as that where, for example, the loss of self-esteem may be met with attempts to re-establish self-esteem. The second avenue for stress resistance is resource substitution. In resource substitution, a lost resource may be substituted by a second resource of generally equivalent value from another resource domain. For example, loss through interpersonal conflict at home can be partially compensated for, at least, by greater investment in work-related resources (Hirsch & Rapkin, 1986). To the extent that the resource substitution or replacement is partial or of a less highly valued resource, the more negative would be the outcome.

Baltes and Baltes (1990; Baltes, 1997) provide further insights as to the pattern that individuals follow in resource maintenance and replacement in their theory of Selective Optimization with Compensation (SOC). Specifically, they suggest that the first avenue of defense following loss is an optimisation strategy. In this way, no new resources have to be acquired, but rather individuals select circumstances or opportunities within circumstances that optimise their remaining resources, and in concert may fine-tune their resources for the task. For example, a worker who cannot bend nimbly due to an injury might rearrange her work table to make tools and task more accessible and use skills she possesses to meet the central task demands. Even well resource-endowed individuals are likely to utilise optimisation strategies because they maximise both efficiency and effectiveness by changing the field of operation to one that is most advantageous to the fit of

resources with demands. Hence, the duelist who is best with broad swords, chooses broad swords and avoids pistols, and can also gain by further sharpening the resources required.

Because resources may be too depleted or mismatched to allow optimisation, a second resource strategy is necessary, namely compensation. In compensation, individuals acquire additional resources that compensate for the loss of fit between capacity and demand. The use of a cane, the seeking of instrumental support, and efforts at rehabilitation following injury are all examples of compensation following either resource loss or a change in the environment that renders existing resources ineffective. This compensation can be external, as in seeking social support, or internal, as in going to therapy to enhance self-esteem or social skills.

With personal events or environmental change resulting in resource loss or poor resource fit, Brandstädter (1989; Brandstädter & Greve, 1994) speaks to the role that compensatory cognitions can play. As resource reserve capacity is increasingly inadequate following ongoing loss or in the case of otherwise poor resource reserves, compensatory efforts are seen as having “decreasing marginal utility”. As costs of resource investment begin to outweigh benefits, accommodative coping occurs. This entails downgrading goals, reframing outcomes, and letting old battles rest. However, unlike appraisal theorists that suggest that appraisal operates in a free field, Brandstädter provides empirical evidence for these appraisals as constrained by operating social models. For example, the elderly no longer need to see themselves as competing with young athletes in their running times. However, senior executives will actually be further harmed if they attempt to make comparisons outside of the social strictures that they have embraced for years concerning expected accomplishments for their age, gender, background, and talents. This leads to the prediction that attempts to reframe events through downward comparison, realigning goals, and altering ambitions will have negative impact to the extent that they are integral to self-identity or are held by a broad class of people in the society. Thus, Brandstädter makes the important point that because many stressors are central to identity, then cognitive reframing is often counter-productive. This is the opposite conclusion to the one arrived at by appraisal theory, which suggests that cognitive reframing is a primary stress reduction mechanism. Supporting this point, Krause (1999) recently found that when stressful events are encountered in a highly valued life domain, older adults not only do not reframe their goals, but become more committed to them.

Proactive Coping

The principle of resource investment also highlights the importance of proactive coping. COR theory suggests (Hobfoll, 1989) that resource
acquisition, maintenance, and fostering are basic motivational goals that require effort and other resource costs. Aspinwall and Taylor (1997) have similarly argued that proactive coping is one of the missing links in stress and coping research. This means that the stress process is not circumscribed by the reactive response to resource loss or threats. Rather, individuals and groups proactively cope by (1) striving to acquire and maintain their resource reservoirs, (2) acting early when first warning signs of some impending problem are evidenced, and (3) by positioning themselves through selection (see Baltes, 1997) in circumstances that fit their resources or otherwise place them and their family or social group at an advantage. Greenglass, Schwarzer, Jakubiec, Fiksenbaum, and Taubert (1999) have argued that proactive coping pertains to setting goals and having efficacious beliefs concerning the acquisition of those goals. Similarly, individuals not only do not necessarily wait for stress and tragedy to occur, but actively set about positioning themselves and their resources in an advantageous position. Once again, those who are well resource endowed due to their own efforts and their place in society (e.g. being a member of a non-stigmatised group, having wealth), are better able to plan for future contingencies, invest resources for further resource enhancement, and place themselves in positions that allow for risk minimisation and resource maximisation. In contrast, those who are lacking resources cannot risk resource investment because they either have no appropriate resources to invest, or must keep resources in reserve for emergency contingencies (Schönpflug, 1985, see also Corollary 4 below).

Two intervention studies speak to the need for both general and stress-specific resources in the proactive coping process. Their “controlled, clinical trials”-type design, with interventions matched for intensity and time also aids the possibility of assigning a causal interpretation to them. In comparison, most naturalistic studies are open to the criticism that resource absence or presence is confounded with perceptions or that resource level is a co-traveler with other factors that influence positive and negative outcomes. In the first such study, Freedy and Hobfoll (1994) found that when nurses received training aimed only at enhancing their sense of mastery, there was little positive influence on their ability to stave off burnout. However, when intervention included both mastery and social support enrichment, there was a marked positive enhancement of nurses’ resiliency in the face of chronic environmental stress. Similarly, Hobfoll, Jackson, Lavin, Britton, and Shepherd (1994) found that when inner-city women received intervention that was aimed at increasing their general health skills and communication competency skills, it made relatively little impact on their AIDS risk behavior. In contrast, when intervention focused these same resource acquisitions (i.e. health and communication skills) on specific target behaviors that related to safer-sex, marked changes in AIDS risk reduction were made. This study was also unusual in that it examined objective risk
behavior in the form of pharmacy reports of obtained condoms. Moreover, a follow-up study (Hobfoll, Jackson, Lavin, & Schroder, 1999) confirmed these findings and extended them to an objective clinical and laboratory report of sexually transmitted disease markers. Taken together, these studies further suggest that resources must also fit context in order to be invested effectively.

Greenglass et al. (1999) and Aspinwall and Taylor’s (1997) ideas are consistent with the COR thesis that stress responding need not be reactive to a given environmental stressor. Rather, people are active participants in looking forward in their lives, considering their goals, evaluating obstacles and advantages that the environment is likely to offer, and acting to enhance their resources and limit their resource losses. Together, with the work of Baltes and Baltes (1990), these theories expand an understanding of stress to the wider arena of motivational responding to internal goals and external exigencies (see also Carver & Scheier, 1998). Nevertheless, as COR theory and the work of Baltes and Brandstädtter emphasise, proactive coping is subject to limitations and advantages that are a product of people’s life-span development and their social status and access to societal affordances. The poor, the aged, and underprivileged social groups may be so consumed with reactive coping that they cannot afford to apportion resources for proactive coping.

Investment of Resources and Positive Stress Outcomes: The Sustaining of Human Fortitude

COR theory, with its emphasis on maintenance, fostering, and protection of resources also has implications for understanding the potential positive impact of severely stressful, even traumatic events. Specifically, in the wake of severe stress, individuals, families, and tribes seek to both repair the damage and to mobilise resources for further resource protection. That is, they are not only reactive to the stressor that has occurred, but move quickly toward being proactive through vigilance regarding the cascading stressful demands that are likely to occur in the wake of the lead event. This results, in turn, in their reliance on themselves and on others in new ways. In a sense, risk-taking is forced as old patterns are often found wanting and poorly fitting the pressing demands.

Consistent with this thesis, Updegraff and Taylor (2000) argue that positive changes that typically accompany severe stress lie in the domains of self-perceptions and relations to others. Thus, Collins, Taylor, and Skokan (1990) found cancers patients to experience positive changes in social relationships and Calhoun and Tedeschi (1990) found that two-thirds of a bereaved sample described themselves as stronger and more competent. Similarly, Folkman (1997) noted that AIDS caregivers experienced positive emotions as well as negative emotions.

What ties these changes together is their link to sustaining active coping behavior (Ickovics and Park, 1998). Thus, it is not that these positive changes are not accompanied by depressive mood, anxiety, and illness, but that they allow the individual, family, or group to sustain the behavior necessary to preserve the self-nested in family-nested in tribe. As Aldwin, Sutton, and Lackman (1996) argue, positive coping cycles build on themselves, and negative coping cycles may preclude these kinds of positive outcomes and their concomitant sustaining effect. Similarly, Meichenbaum (1985) theorised that individuals can partially inoculate themselves against major stressors by building on resources that were developed in instances of more manageable stressors. This suggests, in turn, that those who have built a stronger armamentarium of personal, social, economic, and other sustaining resources will be more well suited to adapt to severe and traumatic stress, by building on their already durable resource reserves in a proactive fashion (Updegraff & Taylor, 2000).

In summary of these points, proactive and reactive coping are distinguishable, but also often occur hand in hand as threat and loss are moving targets, not static occurrences. Individuals, families, and groups must invest resources in the service of offsetting resource loss, building sustaining resources, and for attempts at resource gain. Self-directed behavior plays a large role in this regard (Carver & Scheier, 1998; Greenglass et al., 1999), but social and cultural influences often direct, limit, or block efforts along prescribed corridors of action and response (Baltes, 1997). Baltes’ (1997) SOC theory may be particularly instructive in this regard. Moreover, it seems necessary to balance theories of cognitive reappraisal (Taylor, 1983) with an understanding of the limits of those reappraisals, as delineated by socially common constructions of the allowable self (Brandstädt, 1989). In this way, appraisals and attempts at reframing must be reconceptualised. Hence, individuals will attempt to sustain their resources through action and cognition and will endeavor to enlist their resources in proactive coping, but will do so within the limits set by their resource availability and the allowable channels of behavior and thought outlined by culture and its strictures.

**RESOURCE LOSS AND GAIN SPIRALS**

The first two principles of COR theory concerning loss primacy and investment of resources, in turn, lead to two further corollaries pertaining to resource loss and gain spirals (Hobfoll, 1988, 1998):

Corollary 2 of COR theory states that those who lack resources are not only more vulnerable to resource loss, but that initial loss begets future loss.
Corollary 3 mirrors Corollary 2, stating that those who possess resources are more capable of gain, and that initial resource gain begets further gain. However, because loss is more potent than gain, loss cycles will be more impactful and more accelerated than gain cycles.

Because resource loss is stressful and because people must invest resources to offset further resource loss, once initial losses occur, people become increasingly vulnerable to ongoing loss. In our study of middle-class pregnant women, we found that short-term resource loss had little psychological impact on this relatively resource-endowed group. However, when losses continued, there was an accelerated negative effect of ongoing loss spirals (Wells et al., 1997, 1999).

In other work, we (Lane & Hobfoll, 1992) found that patients with chronic obstructive pulmonary disorder (a life threatening condition) encountered an increasing series of resource losses. As losses increased, they became more angry. Their anger, in turn, tended to alienate potential support, making them increasingly vulnerable to further resource loss in an expanding spiral. In a similar vein, Rini et al. (1999) found that pregnant women who were Hispanic and had lower income and less education had weaker personal resources (i.e. optimism, self-esteem, mastery). Weaker personal resources, in turn, were related to higher stress, which in turn led to shorter gestations and underweight infants, major infant risk factors. Although they did not follow these mothers further, it is clear that negative birth outcomes would make further demands on resources and constitute continued stress that might well become chronic.

The action of loss spirals has been carefully examined in a series of social support and disaster studies by Norris and Kaniasty (1996; Kaniasty & Norris, 1993, 1995). Following COR theory they developed the social support deterioration deterrence model that posits that high demand circumstances such as disaster result in support mobilisation that limits psychological distress. However, at the same time, disaster contributes to support deterioration, as resources that initially rally are finite and tend to dissipate with time. Further, Kaniasty and Norris (1995) noted that poor, ethnic minority individuals are less likely to derive benefit from support cycles, because they are less resource endowed and less likely to be linked to societal resource reserves. Their findings in a number of disaster settings strongly demonstrated that resource loss is difficult to prevent and more powerful than resource gain. Consequently, initial post-disaster mobilisation of received support was only able to lessen, but not eliminate, lasting erosion of perceived social support in affected communities.

Norris and Kaniasty’s support deterioration findings are consistent with processes noted by Atkinson, Liem, and Liem (1986), Bolger, Foster, Vinokur, and Ng (1996), Ensel and Lin (1991), Lepore, Evans, and Schneider
(1991), Pennebaker and Harber (1993), and Quittner, Glueckauf, and Jackson (1990) in disaster, illness, and other chronic stress circumstances. The support-deterioration model also seems to apply to more general resources, especially when individuals experience a shared stressor on the family (Hobfoll & Lerman, 1988, 1989) or community levels (Palinkas, Downs, Pettersson, & Russell, 1993; Palinkas, Russell, Downs, & Pettersson, 1992).

Further evidence for loss and gain spirals was noted in a ten-year study of a random sample of community residents. In this investigation, the relationship between life events and depressive symptoms was found to be completely mediated by resource changes that occurred over time (Holahan, Moos, Holahan, & Cronkite, 1999). Resource loss and resource gain were related to increased or decreased depression, respectively. The authors noted that resource gain may have had more of a positive impact than COR theory would have predicted because it entailed substantial gains made over a prolonged period. Consistent with COR theory, however, they found that resource gains were most likely for those who were initially most depressed (i.e. prior loss elicits gain seeking). This suggests an attempt on these people’s part to mobilise resources. Nevertheless, Holahan et al.’s findings may call for a revision in COR theory such that long-term resource gain is seen as having greater impact on reversing psychological distress than previously thought.

Finally, the very long-term impact of loss cycles has been illustrated in several studies. King et al. (1999) noted that pre-Vietnam resource deficits among military personnel may have led to their lack of the resources required to address combat-related stressors. This resource depletion, in turn, appears to have been carried into the post-trauma environment, thus limiting the likelihood of recovery. Green and her colleagues have similarly illustrated the long tail of resource loss spirals in their long-term follow-up of the Beaver Creek Dam collapse. They found that when the community itself has experienced such resource loss it may be impaired in its ability to aid recovery on the individual level, further extending resource loss cycles (Green, Lindy, Grace, Gleser, Leonard, Korse, & Winget, 1990).

**Defensive Responding Under Conditions of Resource Lack**

The fourth Corollary of COR theory posits that those who lack resources are likely to adopt a defensive posture to conserve their resources.

Scho¨npflug (1985) illustrated in a series of laboratory studies that resource depleted individuals often choose a defensive strategy of not investing coping effort and resources in order to conserve their resource reserves. Similarly, Breznitz (1983) suggested that those who are less psychologically capable will use seemingly counterproductive forms of extreme denial because they so lack resources. In contrast, those who are...
psychologically stronger, will only use temporary and more limited forms of denial, such as denying the need to act immediately or denying severe impact to the self, while they allow themselves to regroup and re-enter the coping fray with renewed effort after a short psychological respite.

Returning to the study of disaster, Carver (1993) found that disaster victims who experienced greater resource loss were more likely to develop PTSD, mediated by their level of denial. This suggests that greater resource loss may lead to the defensive posture of denial, rather than active coping. Even though denial has negative consequences, it may be that resource reserves are too depleted to act otherwise.

Similarly, in the area of close relationships, Hazan and Shaver (1994) found that those who have experienced interpersonal loss of important attachments, usually in their formative developmental period, may be less willing to invest resources in new relationships. Because they are lonelier, it might be hypothesised that those who have experienced relationship loss would be most likely to seek out strong relationships with others. But their fears of further loss, and their depleted relationship skills, prevent them from acting in a proactive fashion to alter their lacking relationships and painful emotions. In a direct test of this hypothesis, Boon and Griffin (1996) found that people with insecure adult attachment styles were less likely than people with secure attachment styles to choose risky relationship strategies that required investment of their sense of trust, time, and relationship commitment, even though the potential gain was having a strong, close romantic relationship.

Further evidence for this fourth corollary of COR theory is warranted. Although research points to the validity of this corollary it must be seen as preliminary at this time. In particular, it is necessary to study the difference between learned helplessness (Seligman, 1975) and a resource conserving strategy. In the service of long-term adaptation, temporary conservation of resources might still lead to later resource investment when conditions are more favorable or when new resources have been gained. If COR theory is instructive in this regard, it would be distinguishable from the predictions of learned helplessness theory. According to learned helplessness theory, individuals have essentially given up, whereas COR theory would alternatively suggest that a defensive posture would be a strategy aimed at conserving resources for later action. This would help explain why in many instances individuals appear less than proactive in addressing the current or potential stressors that they have or will encounter.

MODEL SUMMARY

There are many further implications of the COR model for life-span human development, the nature of loss and gain spirals for groups and organisations,
and regarding socio-historical processes germane to culture and society. For these the reader is referred to Hobfoll (1988) and Hobfoll (1998). The processes most relevant to stress and adaptational responding on the individual level, however, are for the most part detailed in the current paper. To aid the summary of these concepts, the pathways depicted in the current paper are schematised in Fig. 1.

As can be seen in Fig. 1, the processes of resource conservation are a product of both overall life conditions and chronic and acute resource loss circumstances. Conditions of resource lack tend to generate or enable resource losses processes. When losses occur individuals apply resource conservation strategies, whereby they utilise resources available to them in order to adapt as successfully as possible. Successful adaptation generates new resources which, in turn, replenish people's resource pools and offset the conditions that produce acute and chronic resource losses. Unsuccessful adaptation, in contrast, results in both negative functional and emotional outcomes and diminishment of the resources invested. Such unsuccessful adaptation further generates secondary resource losses which result in exacerbation of the chronic or acute loss circumstances and weakens the resource pool.
CRITICISMS AND LIMITATIONS OF COR THEORY

There are a number of potential criticisms of COR theory. The first made by Lazarus (1991) and Aldwin (1994) is that resource loss is itself the product of appraisal processes. This criticism in part leads from a misunderstanding of COR theory and, in part, has been met by substantial research findings to the contrary. As to the misunderstanding, it is of course true that appraisals are the best proximal indicators in the stress process and COR theory never stated otherwise. However, as this paper has attempted to delineate, these proximal appraisals are largely shared, scripted, and in many cases automatic. The individual (subjective) differences in appraisals that stress appraisal theorists emphasise also play a role, but that role is proximal and has little long-term or even mid-term predictive capacity if stripped of its objective and socially scripted components. Research evidence, much of which was addressed in this paper, indicates that (1) resource loss is a stronger predictor of outcomes than appraisal-based measures that do not focus on loss, (2) resource loss is more predictive than other indicators even when only objective indicators of loss are included, and (3) reinstatement of the lost resource rather immediately reverses loss’s impact. COR theory does not ignore appraisals, but states appraisals have a central objective component, a secondary socially scripted component that is common to individuals in a culture, a social component that is interpreted by the immediate social group, and finally, a personal component.

The personal subjective component of stress, COR argues, has received too much weighting and attributes of the appraisal process that are not idiographic have been assigned to individual differences in an unwarranted fashion because research has routinely ignored the objective and socio-cultural components of the appraisal process. COR theory suggests instead that subjective appraisals will be of greater importance when (1) the nature of the stressor is ambiguous, (2) objective circumstances are not omnipresent or overwhelming, (3) there is biological and cultural elasticity regarding the interpretation of the circumstances, and (4) the appraisal does not require reframing of cognitions central to people’s identity. In contrast, the objective nature of events will be of greater moment to the extent that (1) the stressor is unambiguous, (2) objective circumstances have strong impact on major resources or a broad array of key resources, (3) there is clear biological response or cultural meaning allotted to the circumstances, (4) the circumstances pose a major threat to the self-nested in family, nested in tribe. Finally, COR theory suggests that these processes operate on a continuum and in no situation should we either ignore subjective, socio-cultural, or objective elements of resource change.

A second potential criticism of COR theory is that loss evaluations are confounded with basic personality traits such as neuroticism and extroversion.
Suh et al. (1996) studied this possibility and found that loss-related events predicted to both higher negative and lower positive affect, after controlling for the impact of neuroticism and extroversion. Neuroticism and introversion may play a role by exposing people to greater loss events and decreasing their ability to recover from losses, but resource loss has a robust effect over and above the impact of these personality traits. Similarly, Asarnow et al. (1999) noted that resource loss impacted PTSD symptoms in children, even when pre-existing anxiety disorders were considered. Moreover, the impact of loss on outcomes has been found, as reviewed earlier, when only clear objective indicators of loss were considered such as household destruction, absence of insurance payback following disaster, and the fact of being part of a large-scale job layoff. These findings argue against the validity of this second criticism.

A third criticism of COR theory, mentioned earlier, relates to the long-held, dual valence theory of emotions (Reich & Zautra, 1981; Vinokur & Selzer, 1975). Specifically, it is possible that loss events would be related to negative emotions and that gain events would be just as strongly related to positive emotions. This would explain, in turn, why loss has been found to have greater impact, because most studies in this arena have examined outcome markers that are related to negative affect. Again, in a direct test of this, Suh et al. (1996) found no evidence for this criticism and, in fact, showed evidence that resource loss was clearly the best predictor of positive and negative affect. Somewhat related to this question, Carver (1993) and Freedy et al. (1992) noted that resource loss was the best predictor of both positive and negative coping styles. Clearly, however, further study of this criticism is warranted and the impact of resource loss on enhancing personal sense of meaning and stronger social ties is a rich area for further study.

A fourth criticism of COR theory is more difficult to defend against. Specifically, it is arguable that resources are limitless and that as such the theory has circumscribed utility because it is too general. We have tried to address this issue by creating an instrument that lists 74 resources that community samples found to be key resources. Further, much research evidence suggests that there exist key resources, such as self-efficacy, self-esteem, optimism, and social support. Further work is nevertheless needed in this regard. As Thoits (1994) has argued, some resources may serve a central management function and are cornerstones to stress resistance. Recent work on proactive coping may also contribute to this discussion, as those resources that sustain effort at proactively solving problems are likely to become better understood in the process. By focusing on key resources that are broadly culturally held, we have attempted to avoid the slippery slope of devaluing resources until everything that is good is a resource. This vigilance against trivialising resources will need to continue if resource theories are to remain meaningful.
A fifth criticism of COR theory that I have asserted from the outset (Hobfoll, 1988, 1998) is that the theory delineates the general stress process, but itself is not contextual. Indeed, COR theory provides no predictive capacity about the relative role of, say, instrumental versus emotional support, in a given circumstance unless the person-in-context properties are known. To do this, we pair COR theory with an examination of the ecological congruence of the resources within the setting (Hobfoll, 1988, 1998). COR theory can only instruct how resources, once discovered, might operate and how resources in a general sense contribute to stress resistance and coping processes. It is a broad-based motivational theory and loses fidelity on the microanalytic level. At this level, appraisal theory, knowledge of the particular ecology at work (Trickett, 1995), and empirical testing will be the best avenues for making exacting predictions. In some instances, resources may even be harmful, despite their general salutogenic influence. Hence, for example, Hobfoll and London (1986) found women with greater psychosocial resources to have greater psychological distress during a period of widespread community stress, because they were being drained by having so many others coming to them for support.

Finally, whether a criticism or a strength, COR theory is certainly overlapping with a number of other resource and stress-motivation theories. Clearly, many of the ideas of COR theory are borrowed from the resource theories of Antonovsky (1979), Caplan (1974), and Schönflüg (1985). Further, they are consistent and share some of the same ideas of Baltes and Baltes’ (1990) SOC theory, Holohan and Moos’s (1987, 1991; Holohan et al., 1999) resource and coping interaction work, French et al.’s (1982) P–E Fit theory, and Greenberg et al.’s (1986) terror management theory, especially as to how resources and culture interact. Although COR theory has frequently been interpreted, no less by me, as an alternative to stress appraisal theories (Lazarus & Folkman, 1984; Taylor, 1983), it contains elements of appraisal that are consistent with those theories as well. This notwithstanding, COR theory, at the same time, argues that the impact of perceptions is more automatic, objectively determined, and socially constrained than traditional stress-appraisal theory has allowed. These differences may also be disappearing, as the dialogue regarding stress and coping in the literature continues (Aspinwall & Taylor, 1997; Updegraff & Taylor, 2000).

APPLICATIONS OF COR THEORY AND CONCLUSIONS

COR theory has definite implications for practice that distinguish it from most other currently held stress theories. First, COR theory would have those who wish to understand stress in the various settings that people occupy to focus on objective circumstances first. When workers are experiencing negative outcomes of stress in the form of illness or psychological...
stress, it is not their perception of resource fit or their appraisal of stress that is the first place to look. It has been the history of management to blame workers, rather than the conditions of the workplace for workers' maladies. Likewise, when women complain of feeling oppressed in the home or at work, it is not their attitude that requires adjustment. COR theory points to a need to search for the objective sources of stress, first and foremost.

Second, COR theory leads to an examination of common cultural interpretations of environmental difficulties that lead to stress. For example, the stress of seeing oneself as a housewife might have been more related to women's workload 80 years ago when the homemaker role was more prized. Today, the stress of housework may be more related to more negative social norms regarding the status in our society of being a homemaker. Culture may also be viewed on the organisational level, and not just the broader societal level. Hence, the US Marines have a certain culture or climate and what it means to be a “man” in the Marines is different from what it means to be a “man” in civilian life. Again, however, the commerce of resource loss and gains will be judged more or less commonly by those who belong to that culture.

Third, these first two applications have definite implications for intervention. Although having people reframe their perceptions of stress may have utility at some level (Brandstädter, 1989), COR theory leads to interventions that change people's resources or their environments. Some of these key resources may even have a perceptual component, such as self-efficacy. However, here too COR theory emphasises that it is a change in objective circumstances having to do with successfully meeting challenge that will enhance perceptually based resources (Bandura, 1997). When looking at environmental change, this will often mean removing obstacles to people's successful application of resources or altering environments so that they better fit the resources of those in that environment. On the concrete level this might be translated to lowering an assembly line to meet the average height of workers. On the more social level, this might require removing ethnic, religious, or gender biases that prevent certain groups from utilising their resources. One only need recall the Negro Baseball League during a time when blacks were not allowed to play professional baseball to see how biases can keep a whole class of people rich in resources from reaping the benefit of their resource–environment fit.

COR theory also raises attention to the process by which resources operate. This includes loss and gain spirals, resource caravans, and the tendency to conserve resources in circumstances where action will not bring likely resource gain, and may constitute major resource costs. The implications of these processes can only be alluded to here. Some key ideas for applications include the need to stop loss spirals early before they gain momentum, the difficulty and slow nature of instituting gain spirals, and the

expectation that those lacking in resources will be most vulnerable to new resource losses. Because resources tend to aggregate in caravans, those who lack one set of resources may well have more generally depleted resource reservoirs. This means that intervention will have to be broad-based and multifaceted. In contrast, for those who are well endowed with resources, intervention may only need to allow them respite in order that they remobilise their resource armamentaria (Westman & Eden, 1997).

In the end, COR theory’s value may be found in its ability to provide a broad picture of the coping process, while at the same time making specific predictions that allow it wholly or in part to receive confirmation or rejection. To be scientifically valid a theory must be refutable, and indeed it is the goal of theory to ultimately be rejected or incorporated into a broader, more inclusive theoretical structure (albeit not too quickly). By setting forth specific principles and corollaries, COR theory avails itself to this process and provides a heuristic structure for past and future work unveiling the elusive stress and coping process. To date, COR theory has been successfully applied to extreme stress, everyday work stress, stress in acute and chronic health circumstances, and role stress. In the future, research and intervention work examining COR theory will need to focus more on both the impact of particular ecological contexts on the stress process and circumstances where the principles of COR theory might apply more specifically, and other circumstances where they might apply less well.

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