

Point/
Counterpoint **On the importance of the objective
environment in stress and attribution theory.
Counterpoint to Perrewé and Zellars**

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Perrewé and Zellars (this issue) present a highly ambitious and interesting paper. They argue forcefully that Lazarus' stress theory can be extended by incorporating causal attribution theory and, thereby, they suggest to develop a more adequate theory of emotion and coping in the workplace.

Having been involved in making emotion research useful to work psychology (Pekrun and Frese, 1992; Temme and Zapf, 1997) we sympathize with their emphasis on emotion. We think highly of the speculation that guilt, shame, anger, and frustration are a result of primary appraisal of stress and causal attributions.

Since this answer is supposed to be a 'counterpoint', and a short one at that, we would like to concentrate on two issues that we disagree with. First, the role of causal attribution theory. Second, the issue of objective stressors versus relying on individual appraisals.

Causal attribution research is without a doubt important for emotional processing (Ortony, Clore and Collins, 1988; Pekrun and Frese, 1992). However, there is one important finding that has persuaded us to be a bit more cautious about using causal attribution as a mediator in the stress-emotion relationship: Diener and Dweck (1978) found that helpless children were more likely to engage in an attribution process after failure. In contrast, mastery oriented children were less interested in attributions than in being action oriented and getting the problem solved. In the words of Diener and Dweck (1978, p. 461): 'Individuals have been considered to differ only in the *particular* attribution they make. The present research, however, suggests that ... the very occurrence of attribution may be a critical individual difference.'

The second issue is even more important. Perrewé and Zellars (this issue) have to receive credit for being very explicit in their statements on the importance of the cognitive world instead of the world 'out there': 'Research suggests that the existence of stress may be less important to an individual's well-being than how the individual appraises and copes with stress' (p. 739). 'Although the examination of the objective work stressors may be useful to broadly predict employee strain, the focus is entirely too limiting. In order to truly understand the components of the stress process, the primary focus should be on how individuals interpret objective conditions rather than simply relating stressors to strains,' (p. 740). It is this part of the paper, that we want

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to concentrate on. Our defense on the importance of looking at the objective stress situation can be summarized as follows:

- (1) Theory and research is driven by what we want to explain and what we want to do practically. Thus, if one's primary concern is to change people's conception about stress, it is legitimate to rely only on perceptions of stressors. However, many Europeans have been interested in the objective stress situation, because they want stress research to contribute to job design and therefore we need an answer on how we can develop work in such a way that there is no long-term psychological damage (Cooper and Payne, 1992; Frese, 1985; Greiner, *et al.*, 1997; Karasek and Theorell, 1990; Leitner, 1993; Semmer, Zapf and Greif, 1996).

The most important conditions obtained from these studies on the objective stress situation are the following: First, there is a correlation between the objective work situation and ill-health. Second, there are partly high and partly rather low correlations between the objective stress situation and the perceived one (in contrast to job content–job control and job complexity—where perceived and objective conditions are highly related). Third, stress perceptions are mediators in the stress process but there is little evidence for their role as moderators.

It would certainly 'castrate' work and organizational psychology if we stopped being interested in the interplay between the objective world and the subjective representation of it. Perceptions at least partially mediate the impact of the world on important variables. But that does not imply that we should only be interested in perception. For example, if one would find that self-efficacy is more highly related to training performance than cognitive ability, and furthermore that self-efficacy is a mediator between cognitive ability and performance, then it would not be a good argument to say, one should concentrate studies only on self-efficacy and should stop worrying about cognitive ability. Much of work and organizational psychology is interested in understanding how objective situations are translated into cognitive representations which again may have an influence on behavior. Perrewé and Zellars (this issue) remind us of a drunken driver, who says to the police, 'My problem is not drinking, it is just the blood alcohol level which was too high. Remember research has shown, it is not drinking *per se* that leads to drunken driving but the blood alcohol level.' No judge will be persuaded by this reasoning.

- (2) In a way Perrewé and Zellars (this issue) change the topic of coping and causal attribution from one of mediator analysis to one of moderator analysis. A mediator analysis argues that perceptions are necessary steps of the transition process between an objective stress situation to showing strain (this was the original issue for Lazarus as well). There is a fair degree of evidence for this viewpoint (Gerhart, 1988; Spector, 1992). But in Perrewé and Zellars (this issue) this process is underhandedly transformed into one of moderator. There are some people who just construe the stress situation in a certain way, regardless of the situation—and then they are either immune or affected. At times it even sounds as if the cognitive apparatus is completely remote and there is no more relationship between the stress situation out there and the psychological reaction to it, but that everything is construed without reference to such a situation. One gets this impression when one reads statements such as: 'Thus, the primary and secondary process generates emotion.' It can only generate emotion, if there has been a situation that could be appraised as stressful.
- (3) One problem of Perrewé and Zellars (this issue) may be that they have a rather constructivistic concept of perception. Neisser (1976) has convincingly argued that one can integrate an objectivistic theory of affordances of the environment (Gibson, 1979) with a cognitive point of view. It is surprising that this approach is so little incorporated into the

stress field. Related to this point is the issue of an active human being. We do not think that the emphasis of objectivity implies that human beings are passive reaction bundles. Action theory (Frese and Zapf, 1994; Hacker, 1973) has emphasized both the proactive role of human beings (cf. Perrewé and Zellars, this issue; Frese *et al.*, 1997) and the relatedness of action to the objective environment. This works via an active approach of the individual towards the environment and by being able to change environmental conditions. At the same time acting on the environment leads to feedback on the realities of the environment.

- (4) Emphasizing objectivity does not imply that nothing happens between an objective stressor and psychological strain. We actually like Spector's (1992) model best, which describes self-reports of job conditions to be a function of cognitive processes, environment, social cues, mood, personality, and attitudes. However, one implication of this model is that objective reality cannot be neglected and the challenge for work and organizational psychology is to know more of what is going on in the processes that relate environment cues to perception. This means that appraisal processes and coping behaviors are partly rooted in the 'objective reality' as well, e.g. appraising a situation as controllable or uncontrollable, or attributing the cause of stressors to the individual or to the environment. If it were otherwise, we would not be able to have any experimental impact (in most cases the experimental environment is objective or at least can be maintained to be objective during the experiment). Thus, coping outcomes do not only depend on the goodness of fit between appraisal and coping (Perrewé and Zellars, this issue) but also on whether these processes fit to objective environment.

Even causal attribution theory has a tradition of being interested in precisely this part. Kelley (1967) argued that we tend to make causal attributions much like a scientist using an analysis of variance approach. We agree, of course, that there are errors and biases in these attributions (cf. also Funder, 1987). However, we do not just construct our cognitions. In organizational life, one receives a fair amount of feedback, one gets to know the situation quite well (unlike a short-term experimental situation) and one cannot be 'fooled' forever. Thus, one's cognitions are based on situational parameters, on past experiences in these and similar situations, and on one's biases.

- (5) Perrewé and Zellars (1998, this issue) seem to ignore that one motivation to use objective measures of stressors are methodological problems in measuring stressors and strains independently and avoiding the problem of common method variance (Frese and Zapf, 1998; Ganter and Schaubroeck, 1991; Spector, 1992). This does, of course, not question the theory outlined by Perrewé and Zellars. But it suggests to be careful when assessing the strengths of effects such as primary or secondary appraisal, attribution or coping. These effects corrected for method effects are typically not that much stronger than the effects of objective stressors.
- (6) What are issues that become important when one takes the problem of the interaction between the objective stressor situation and the subjective representation seriously? The following seem to us to be more important ones:
- (a) What kind of stressors will be perceived as stressors? There is an issue of extent and quality here. Very strong stressors will be more likely similarly perceived by most people (think of working in a 60 degrees centigrade environment, for example). We asked blue collar workers how much certain stressors bothered them in our pilot studies to the 'Stress at Work Project' (Grief, Bamberg and Semmer, 1991). We found a very high correlation between intensity and negativity (which we had originally wanted to differentially ascertain). High degree stressors are conceptualized more similarly than low degree stressors which hinge much more in individual factors. This differentiation is similar to the weak versus strong environment idea in occupational socialization research (Wiess and Adler, 1984).

The qualitative part of this issue is related to the issue that some stressors may be more 'hidden' from view in comparison to others. For example, socially transmitted stressors, such as role conflict, social stressors, etc., may be more 'subjective' and, thus, more in line with what Perrewé and Zellars (this issue) argue, than stressors, such as organizational interruptions and obstacles to do one's work or stressors related to bad human-computer interface or noise.

- (b) What moderates and mediates the process from the objective world to perception? We thought originally that some of the moderators found to be important in stress research would also be moderators here: Empirically, we looked at the effects of control at work (observed as well as perceived) and social support (only perceived) but found little impact of these variables on the relationship between 'objective' stressors and perception of them (partly reported in Frese, 1989). Using different research strategies Frese (1986) and Zapf (1989) found a moderating effect of denial between observed and self-reported stressors such as time pressure, organizational problems, and uncertainty. This does not exhaust the list of potential mediators and moderators. In any case, it is something that has not been studied much. We would challenge Perrewé and Zellars (this issue) to study precisely this with the variables they suggest (causal attribution).
- (c) One of the most important accomplishments of modern multivariate methodology has been to emphasize the importance of (co-)variance decomposition procedure (Spector, 1992). This supersedes the stale 'either-or' statements that have plagued work psychology for a long time. Thus, we do not need to put our 'eggs into one basket' or, as Perrewé and Zellars (this issue) say, '... the primary focus should be on how individuals interpret objective conditions rather than simply relating stressors to strains.' We can actually study *all* of the relevant issues of the stress process: what constitutes an objective stressful work situation: how does the objective work situation translate into perception of stressors; how do these perceptions lead to emotional or physiological reactions; and how do these reactions lead to long-term strain.

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