Testing extrinsic and intrinsic motivation as explanatory variables for the safety climate–safety performance relationship among long-haul truck drivers

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ABSTRACT

The paper tests the proposition that the organizational climate-behavior relationship is based primarily on extrinsic motivation induced by climate perceptions. Using safety climate as exemplar, the effect of climate-induced extrinsic motivation was compared with that of engagement-induced intrinsic motivation on safety behavior and subsequent injury outcomes. Using a sample of long-haul truck drivers representing lone employees, (individual-level) safety climate perceptions and employee engagement predicted safety behavior, which mediated their effect on subsequently measured road injury outcomes. Consistent with meta-analytic evidence suggesting a non-symmetric compensatory relationship between extrinsic and intrinsic motivation, high safety climate undermined the effect of engagement on safety behavior with the reverse being true under low safety climate. This resulted in a moderation effect of engagement on the strength of relationship between climate perceptions and safety behavior. Theoretical and practical implications for climate, engagement, and lone work research are discussed.

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1. Introduction

Organizational climate definitions agree that climate perceptions are aimed at identifying the types of behavior that are rewarded and supported in work settings (see recent reviews in: Kuenzi & Schminke, 2009; Ostroff, Kinicki, & Muhammad, 2012; Schneider, Ehrhart, & Macey, 2011; Zohar & Hofmann, 2012). In other words, employees' climate perceptions are targeted at environmental attributes signaling what aspects of their roles are considered important at the workplace. Given the complexity, variability, and equivocality of the organizational environment, climate perceptions often require detection of weak environmental cues stemming from brief encounters or verbal exchanges with supervisors and co-workers. Consequently, they often require assembly of multiple pieces of information on which employees structure their work environment in terms of its underlying logics of action and resultant reward (or punishment) contingencies.

Organizational environment complexity, variability and equivocality stem from a number of sources: presence of competing values such as tradition vs. innovation (Quinn & Rohrbaugh, 1983), competing operational demands such as differentiation vs. integration (Lawrence & Lorsch, 1967), discrepancies between formal policies and enacted practices

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(i.e., decoupling; see: Meyer & Rowan, 1977; Scott, 2008), and variations in organizational policy implementations in individual sub-units (Zohar & Luria, 2005). Additional sources relate to the multiplicity of organizational policies and procedures, accompanied by the fact that they are often little known or understood by relevant employees (Hargie & Dickson, 2007; Stevens, Steensma, Harrison, & Cochran, 2005).

Given such complexity, the formation or emergence of climate perceptions is motivated by the need to structure key aspects of the organizational environment in terms of its personal implications for employees. Considering that the target or referent of climate perceptions is the true (vs. formally espoused) priority or importance of key role facets and that such priority defines the kinds of role behavior likely to be rewarded, it follows that such perceptions give rise to behavior-outcome expectations (Zohar, 1980, 2000). Whenever an activity is done in order to attain some desired outcome (i.e. due to positive behavior-outcome expectations), rather than due to its inherent satisfactions, its motivation is defined as extrinsic motivation (Ryan & Deci, 2000). It follows, thus, that climate perceptions generate extrinsic motivation for performing relevant behaviors. By default, therefore, considering that the target or referent of climate perceptions has been defined in terms of the expected payoff associated with alternative role behaviors, it follows that these perceptions engender extrinsic motivation for performing behaviors associated with the highest expected payoff.

Despite the wealth of research regarding climate-outcome relationships (Kuenzi & Schminke, 2009), there is limited work testing mechanisms capable of explaining this relationship and the above arguments have remained little studied, if at all. The purpose of the present study was to test extrinsic motivation as an explanatory mechanism for the well-validated climate-outcome relationship. Doing likewise, using safety climate as exemplar, is expected to expand organizational climate theory at large.

1.1. Extrinsic motivation as a mechanism for climate-outcome relationships

Self-determination theory (SDT) has served as a primary conceptual framework for studying the effects of extrinsic and intrinsic motivation on task performance and role behavior (Ryan & Deci, 2000). According to SDT, extrinsic motivation explains task performance in terms of its expected instrumental value for obtaining tangible rewards or avoiding undesired outcomes. Notably, the outcomes by themselves have nothing to do with the nature of performance itself such that the (extrinsic) motivation force depends on the perceived instrumentality and valence of performance outcomes as construed in expectancy theory (Lawler, 1971; Vroom, 1964). Intrinsic motivation, on the other hand, explains task performance in terms of the challenge and interest offered by task execution. Tasks whose execution is characterized by autonomy (i.e. self-determination in SDT terminology) and competence development enhance intrinsic motivation.

Taking safety climate perceptions as exemplar, given that such perceptions are assumed to be targeted at environmental attributes informing employees the likely (formal and informal) organizational consequences of safe performance, it follows that they constitute proximal antecedents of extrinsic motivation. For example, if performance safety is perceived to result in lower supervisory recognition or support than performance punctuality or speed, a poor safety climate will emerge, resulting in lower extrinsic motivation for safety by comparison with the better prioritized performance facets. At the same time, intrinsic motivation for safety behavior is likely to remain limited given that it is largely based on compliance to safety rules and procedures (Neal & Griffin, 2004, 2006), limiting employee autonomy and competence development opportunities.

The distinction between the two types of motivation gains added significance in safety climate research. Considering the fact that safety outcomes (i.e. near-misses or accidents) are low-likelihood, hence delayed and unsure negative events, and the outcomes of choosing unsafe behavior (e.g. working faster or disabling protective equipment) are immediate and high-likelihood, it is likely to assume that melioration bias will affect daily choices between safe and unsafe role behavior (Herrnstein, Loewenstein, Prelec, & Vaughan, 1993). A primary attribute of melioration bias is that delayed and unsure outcomes tend to be under-weighed, resulting in lower expected utility, whereas immediate and high-likelihood outcomes tend to be over-weighed, resulting in a sub-optimal tendency for choosing the latter. Employing this framework for analyzing the choice between performance safety and its competing operational demands (e.g. increasing performance speed or reducing its costs), Zohar and Erev (2007) indicated that, under routine work conditions, the expected utility of unsafe behavior will be greater than that of safe behavior. Melioration bias provides, therefore, an explanation for the reported prevalence of unsafe behavior and workarounds under routine work conditions (Halbesleben, 2010).

This analysis suggests that due to the melioration bias, subjective expected utility of unsafe behavior often exceeds that of safe behavior, resulting in greater extrinsic motivation for engaging in safety shortcuts or workarounds under routine work conditions. Safety climate, as a contextual variable indicative of the extent to which employees expect safety behavior to result in short-term and high-likelihood positive outcomes (e.g. supervisory recognition and/or approval), constitutes, therefore, a key antecedent for extrinsic safety motivation. Under high safety climate, the level of such motivation can be expected to exceed that associated with safety's competing demands, surpassing the effect of melioration bias.

Finally, given that SDT differentiates between different extrinsic motivation types indicating increasing internalization of externally-regulated behavior, it can be argued that safety climate endangers identification- or integration-based extrinsic motivation (Ryan & Deci, 2000). This argument stems from the fact that since safety behavior concerns self-protection, employees are likely to accept its external regulation as being assimilated with their own values and needs of self-preservation (Kjellen, 2000).