



RESEARCH ON EMOTION IN ORGANIZATIONS

VOLUME 6



EMOTIONS AND ORGANIZATIONAL DYNAMISM

WILFRED J. ZERBE, CHARMINE E.J. HÄRTEL
AND NEAL M. ASHKANASY

Editors

EMOTIONS AND ORGANIZATIONAL DYNAMISM

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RESEARCH ON EMOTION IN ORGANIZATIONS VOLUME 6

EMOTIONS AND ORGANIZATIONAL DYNAMISM

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INVESTOR IN PEOPLE

With love to my Mom, who lives on in me.
No matter the hardship, she lived these words she told us as
children – “tools are to be used, never people”.
C.E.J.H.

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Behavior and Human Decision Processes. Prof. Ashkanasy is currently the editor-in-chief of the *Journal of Organizational Behavior and Emotion Review*, and past associate editor of *Academy of Management Learning and Education*. He has also published six edited volumes, and is book series editor for *Research on Emotion in Organizations* (Elsevier/JAI Press). He administers two ListServes (Orgcult – The Organizational Culture Caucus; and Emonet – Emotions in Organizations) with a combined subscription of over 1,500.

OVERVIEW

Emotions have widespread effects in organizations and underlie a broad range of dynamics in organizations. This volume explores the role that emotion plays in such diverse organizational phenomena as entrepreneurship, change, service failure, and creativity. The study of emotions in organizations is broadening, with new phenomena being considered through the lens of emotions, and deepening, with theoretical approaches being refined and sharpened. The choice of theme of this volume reflects this tension. Organizations are dynamic, they change and they comprise elements that are constantly moving. They are simultaneously ordered and are complicated and complex. Emotions help us understand this dynamism. As the chapters in this volume help us understand and appreciate, emotions are often an underlying energizing and motivating force. Examination of the role of emotions as precursors or mediators of change or innovation or creativity is therefore essential to manage this dynamism.

THE 2008 EMONET CONFERENCE

The chapters in this volume are drawn from the best contributions to the 2008 International Conference on Emotion and Organizational Life held in Fontainebleau, France. (This bi-annual conference has come to be known as the “Emonet” conference, after the listserv of members). In addition, these referee-selected conference papers were complemented by additional, invited chapters. This volume contains six chapters selected from conference contributions for their quality, interest, and appropriateness to the theme of this volume, as well as seven invited chapters. We again acknowledge in particular the assistance of the conference paper reviewers (see appendix). In the year of publication of this volume, the 2010 Emonet conference will be held in Montreal, Canada, in conjunction with the annual meeting of the Academy of Management, and will be followed by Volumes 7 and 8 of *Research on Emotions in Organizations*. Readers interested in learning more about the conferences or the Emonet list should check the Emonet website <http://www.emotionsnet.org>.

THE CHAPTERS

In first of the three chapters that examine emotions and entrepreneurship, Marina G. Biniari describes the emotions that arise in organizations as a result of the success of the entrepreneurial efforts of corporate venture champions. She focuses on the process by which initiatives are selected and on the experience of envy that can result among proponents of competing initiatives. Although her chapter emphasizes how envy, experienced by others, can lead to an initiative not being selected, she also shows how positive emotional reactions have the opposite, contrary effect. The implications for those advocating corporate ventures and those selecting initiatives within a socially mediated organizational setting are clear: Emotions must be intentionally and carefully managed.

In the following chapter, Leonidas A. Zampetakis and Konstantinos Kafetsios build on the emerging body of research on the role of managers' regulation of emotion (ROE) in promoting entrepreneurial behavior within traditional organizations. In particular, they examine the effects of managers' ROE on group job satisfaction and group entrepreneurship. The findings indicate that trait ROE impacts on both the group's perception of the managers' ROE and group job satisfaction, which in turn, influence group entrepreneurial behavior. Interestingly, group entrepreneurial behavior by diverse groups appeared to be directly the result of group satisfaction created by high ROE. For both diverse and homogenous groups, group satisfaction was an important antecedent of group entrepreneurship.

In Chapter 3, David Goss addresses a classic question in the field of entrepreneurship in a new way: "Why do some individuals rather than others become entrepreneurs." Using a relational concept of agency, which brings to the fore the role of emotions, he posits emotion as a dynamic that produces motivational energy within situations involving agency. Goss' model offers a novel way of conceiving agency and relating this to generative processes within social situations. Goss outlines the theoretical basis for a relational conception of agency and establishes the need to incorporate an awareness of emotional dynamics and uses ideas from "interaction ritual chain theory." He then offers a reinterpretation of the "structural hole" theory of entrepreneurship, offering three novel propositions to extend this theory's explanatory power. By placing emotional dynamics at the heart of agency, Goss emphasizes the situation as the analytical starting point, placing individuals within specific interactional settings and relationally (rather than individually) generated dispositions as the motivation for entrepreneurial action.

As has been well recognized in both the change and the emotions literature, organizational change is often accompanied by strong feelings and the tone of these feelings often influences the success of the change effort. Further, the interplay between features of the change situation, organizational characteristics, and individual level variables add complexity to the role of emotions. The next set of chapters brings a variety of approaches to bear on these relationships.

In Chapter 4, Roy K. Smollan, Jonathan A. Matheny, and Janet G. Sayers describe a qualitative investigation of the role of personality and affect in an organization undergoing organizational change. In their study of a New Zealand organization undergoing change, they used semi-structured interviews to explore how employees believed their personalities played a role in their responses to the change, especially with respect to their affective responses. They found that personality dimensions of openness to experience, resilience, pragmatism, change self-efficacy, and locus of control influenced employee perceptions of their responses to organizational change and cognitive, affective, and behavioral responses. The authors conclude with a call for additional qualitative research into understanding the determinants of employees' emotional responses to organizational change.

In the following chapter, Christina Kirsch, Warren Parry, and Cameron Peake argue that effective management of organizational change requires a deep understanding of employees' emotional experience and its underlying structure. They point out that emotions are traditionally measured by asking individuals what they feel. However, most employees function within a collective – as team members or work colleagues – and their emotional experience is deeply intertwined with those of others. Therefore, Kirsch and her colleagues contend that a systemic approach to examining the collective emotional experience of change in the workplace is needed. They detail a study where a feeling scale was developed and administered to capture how employees were feeling at various stages of a change program; and how the emotional field of their work group was affected by various characteristics of the change taking place.

In Chapter 6, Yan Li, Neal M. Ashkanasy, and David Ahlstrom examine the dynamic nature of emotion from the point of view of complex adaptive system theory. Their bifurcation model of affect structure (BMAS) is proposed as a means to integrate the contentions of existing theories. It also provides a perspective to theorize new emotional phenomena like emotion oscillation and emotional transition, and in particular to understand how chaotic emotion might lead to innovation. Further research along this line should enrich our understanding of emotion in organizations as a dynamic process.

In light of the turbulent economic, political, and technological environment that organizations are currently operating in, the ability of employees to recover and even excel in the face of adversity has important consequences for contemporary workplaces. In Chapter 7, Glenda M. Fisk and Angela M. Dionisi examine the implications and development of resilience in organizational settings. Following a review of extant theory and research on resilience, they present an input-process-outcome (IPO) model of resilience that highlights the importance of affective experience and the regulation of negative emotions to adaptive coping. In an effort to identify the mechanisms underlying resiliency, they examine possible linkages between resilience and the Big Five, self-monitoring, core self-evaluations, and emotional intelligence. In addition, they outline a number of interventions through which resilience may be cultivated in organizational settings.

In Chapter 8, Stanley G. Harris and Eric B. Gresch examine the influences and consequences of emotions surrounding an organizational merger. Specifically, they examined the effect of specific appraisals of the change situation, such as perceived need, expected success, and the attractiveness of the change on satisfaction and turnover intentions. Moreover, they considered how feelings might mediate these relationships and how feelings might be expressed. In a test of their hypotheses in recently merged bank branches, Harris and Gresch found that, as expected, cognitive evaluations of the merger were associated with predicted outcomes and that employee felt pleasure played a mediating role. In addition to validating the role of emotions as a key determinant of reactions to change, the authors of this chapter shed significant light on the features of the change situation that matter.

In our ninth chapter, Graham L. Bradley, Janet R. McColl-Kennedy, Beverly A. Sparks, Nerina L. Jimmieson, and Dieter Zapf outline a new theory that they refer to as “service encounter needs theory” (SENT). The theory is intended to explain the inter-personal processes that arise from service failure, which result when a customer is unhappy with service provision, often resulting in conflict and intense emotions, necessitating service recovery. The authors outline a model and associated propositions regarding the mechanisms through which such difficult situations result in behaviors and processes that affect outcomes for both the customer and the service provider. Central to the model is identification of eight psychosocial needs (need for cognition; need for a sense of competence; need to feel in control; need for power; need to feel that justice has been served; need for trust; need to be treated with respect; and need to maintain pleasing relations). These needs underlie emotional experiences and displays that are proposed as important consequences of need fulfillment and violation. In the

chapter, the authors proposed a number of propositions based on their theory and discuss various cognitive, behavioral, and health-related outcomes of such difficult service encounters. They conclude with a discussion of opportunities for future research and practice based on their theory.

In Chapter 10, Nilupama Wijewardena, Charmine E.J. Härtel, and Ramanie Samaratunge draw attention to the role of emotions in an understudied field: humor in the workplace. Beginning with the idea that humor can be a potential management tool, the authors address both the bright and the dark sides of humor. In this respect, constructive humor can be a tool for good if it is used appropriately, resulting in uplifting positive emotional states and stress relief. On the other hand, destructive humor, such as inappropriate or sexist jokes or horseplay, can result in negative emotions and employee stress. Moreover, continuing incidences of constructive or destructive humor can have long-term consequences such as burnout through the effect they have on employee resilience, the ability of employees to adapt to changing situations; especially then things change for the worse.

At present, there are conflicting views on how mood affects creativity, such as whether positive and negative moods foster or inhibit creativity. In the final three chapters of the volume, contributors consider the relationship between emotions and creativity and innovation, at both individual and organizational levels.

In Chapter 11, March L. To, Neal M. Ashkanasy, and Cynthia D. Fisher discuss several key perspectives including the mood-congruent retrieval perspective, the cognitive tuning perspective, the mood-as-input perspective, and the hedonic contingency perspective before offering a new perspective on the relationship between mood and creativity. Their creativity-as-mood-regulation perspective has at its center creativity episodes, mood regulation, and goal orientation. The six propositions detailed in their chapter demonstrate that whether an employee chooses to engage in creativity as mood regulation is contingent upon the individual's goal orientation.

The next chapter, by Fabrizio Maimone and Marta Sinclair, describes an exploratory case study of the relationship between affective climate and creativity as contributors to knowledge creation in organizations. The authors base their study on the concept of *ba*, a Japanese word roughly translated as “space,” but which actually means much more, incorporating the idea of knowledge and wisdom creation in a time–space nexus (Nonaka, von Krogh, & Voelpel, 2006). Based on this idea, they predict that creativity and knowledge creation in organizations should be associated with affective climate. To test this idea, they collected questionnaire survey data in the Italian branch of a German automotive company. Maimone and Sinclair

found that creativity was supported by five dimensions of organizational climate, including what they referred to as “psychological comfort,” which relates to employees’ feeling of freedom to express their moods and personalities, and their recognition of a psychologically safe environment.

In our last chapter, Esther Maier and Oana Branzei examine the role that emotions plays in enhancing creativity in a very different setting from Maimome and Sinclair, that of an online community. They contrast the way that, compared to new users, more experienced members use conflict, and find that “masters” actually provoke emotional reactions in their audience, including negative ones. Maier and Branzei found that masters used the tension between positive and negative to engage others and to enhance creativity. Thus, in contrast to the large body of research focusing on positive affect as beneficial to creativity, Maier and Branzei highlight the potential that negative affect has to stimulate creativity, and also discuss the possibility that positive emotions may inhibit creativity by indicating contentment with the status quo. The authors argue that individual agency in seeking and processing feedback makes it more likely that negative feedback will stimulate creativity. Even when negative feedback triggers negative affect, individuals can reframe feedback to strike a balance between negative and positive affect. This balance maintains “creative tension” by simultaneously signaling the need for change and enabling positive anticipation of future efforts.

Collectively, the chapters in this volume illustrate that emotions at the individual and group levels require understanding and management to extract entrepreneurial and creative behavior, knowledge creation, resilience and adaptability to change, and effective customer service.

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CHAPTER 1

CORPORATE ENVY AND EMOTIONAL DYNAMICS IN THE INTERNAL SELECTION PROCESS OF CORPORATE VENTURING INITIATIVES

Marina G. Biniari

ABSTRACT

Corporate venturing initiatives, which exemplify corporate entrepreneurial behavior, follow an evolutionary path of variation, selection, and retention. While their external selection is a consequence of their performance, their internal selection is subject to forces of complementarity and legitimacy, and how well competition from other initiatives is overcome. This chapter aims to unfold the dynamics of the internal selection process of initiatives, focusing on its emotional dimensions. Assuming that organizational agents have a deliberate role in guiding the internal selection process of initiatives, the chapter examines how organizational agents' emotional dynamics influence this process. The chapter draws its theoretical basis from the intraorganizational evolutionary perspective and the literature on emotions in organizations. The case of a corporate venturing initiative and the narratives of four managers involved directly and indirectly in the initiative

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are used to illustrate how the emotional dynamics of organizational members evoked envy toward a venturing initiative and directly impacted its degree of competition and complementarity with other interacting initiatives, ultimately hampering its selection.

INTRODUCTION

We know that positive emotions experienced and expressed by entrepreneurs have a facilitating role in the entrepreneurial process (Baron, 2008; Cardon, Zietsma, Saporito, Matheme, & Davis, 2005). However, little is known about the affective dimension of the interaction between the entrepreneur and those who control resources central to the process. As a result, we overestimate the power of the entrepreneur and neglect the emotional influences of these interactions. In the context of corporate entrepreneurship, the entrepreneurs are organizational members who enact on an opportunity within the organizational boundaries. Besides the corporate entrepreneur, top managers and other organizational members controlling resources are central to the entrepreneurial process. These individuals (e.g., the CFO, board members, and champions of other competing initiatives) have an influential role in selecting entrepreneurial initiatives among others by allocating resources to them. While the existing literature has examined the effectiveness of this internal selection process from its cognitive side (e.g., Zollo & Winter, 2002), it has neglected to incorporate the emotional dimension of the interaction between the selectors and the champions of entrepreneurial activities. This is the prime gap this chapter sought to help fill.

We aim to do so by exploring the microprocesses of interaction (a) among champions of competing initiatives and (b) between the champions and the top management. We argue that a more complete understanding on the effectiveness of the internal selection of autonomous and entrepreneurial initiatives will be reached by exploring how emotions, as expressed and experienced by selectors, impact the selection process. While we know, for example, that champions of initiatives are passionate to make their initiatives work (Cardon et al., 2005), we do not know how top management feel about the initiative in question and whether their emotions influence its selection. Further, we do not know how the champions of other initiatives emotionally react toward the initiative in question and whether the expression of these emotions undermines or facilitates the selection of the initiative in question. We attempt to tackle these research questions by exploring the impact of the emotional dynamics evoked and expressed collectively by selectors during the internal selection process of an autonomous and entrepreneurial initiative.

Emotional dynamics are conceptualized as organization-level behaviors expressing (self-directed) and evoking (other-directed) emotional states at the individuals' level (Huy, 1999).

Huy's work informs us of the positive role emotional dynamics evoking positive emotional states play in facilitating the process of organizational change, assuming that organizational members behave as emotionally intelligent individuals. However, the role of emotional dynamics expressing negative emotional states remains mute. The experience of negative emotions in the workplace is a reality that has received limited attention by researchers. We argue that the expression of negative emotional states toward an initiative by the involved selectors may result to adverse selection and ultimately elimination of the initiative. Specifically, we are interested in exploring discrete negative emotional states and the emotional dynamics they generate at the organizational level. The chapter makes a conscious attempt to respond to the recent calls for studying discrete emotions in organizational behavior rather than overarching aspects of affect (Barsade, Brief, & Spataro, 2003). It is not our intention to neglect the presence and role of a multitude of emotional states impacting the selection process of initiatives. Rather, we argue that by focusing on a discrete emotion, a more detailed account of the mechanisms linking the emotional state, the emotional dynamics evoking it and their influence in the internal selection process can be provided.

Our proposal that emotions intervene in the internal selection process of initiatives is empirically supported through an instrumental case study. The case unfolds the internal selection process of an autonomous corporate venturing initiative by an organization. Corporate venturing is conceptualized as an autonomous initiative that exemplifies entrepreneurial behavior (Burgelman, 1983a) within an organizational context and introduces a new, for the corporation, approach in combining existing corporate resources and in creating new ventures (Birkinshaw, 2005). A corporate venturing initiative is subject to an internal selection process, facing internal competition from alternative initiatives the top management may choose to invest in its resources and focus on its attention. The discrete negative emotional state on which this chapter focuses on is envy; a social emotion experienced by organizational members when they find their social and economic well-being lower than that of their colleagues (Salovey & Robin, 1984). The emotional state of envy is understudied in the workplace due to the reluctance of employees to admit its experience and resulting postemotional behavior (Stein, 1997). While the majority of studies in emotions in organizations have been conducted through lab experiments, this case provides contextualized and textured narratives of actual organizational members within an organizational context facing real organizational challenges.

The chapter opens with a review on the internal selection process literature proposing the need for an emotional approach in studying its effectiveness. It continues by introducing the analytical mechanism of emotional dynamics in exploring how selectors contribute emotionally to the selection process. The case study of the internal selection of a corporate venturing initiative follows to illustrate how negative emotional states expressed through cost-generating emotional dynamics at the organizational level prevented the selection of the initiative. The chapter concludes with a discussion on the emotional dimension of the internal selection process and a call for further research in this field.

IN DIALOGUE WITH THEORY

Evolving Relative Efficiency of Internal Selection Process

Occupying a central role in the variation–selection–retention (VSR) evolutionary model, the selection process involves mechanisms that “differentially select or selectively eliminate certain types of variations” (Aldrich & Ruef, 2006, p. 21). While in the traditional VSR model organizations are treated as the unit of selection, we examine autonomous initiatives as the unit of selection, representing new opportunities for the organization to combine resources and capabilities (Galunic & Eisenhardt, 1996). Aldrich (1999) classifies selection mechanisms as external and internal to an organization. External selection mechanisms treat the external environment (primarily economic) as the main selector of variations, arguing for the alignment or fitness of an organization to its environment. Internal selection mechanisms involve “selective mechanisms that affect the internal dynamics of an evolving system (Campbell, 1974)” (cited in Durand, 2006, p. 84). The focus of this chapter is on the latter, building on Aldrich’s (1999, p. 40) observation that “indeterminacy is a key feature of evolutionary analysis, and human agency is very much part of the explanation” of the internal selection of a variation.

Henderson and Stern (2004) argue that internal selectionists view organizations as having a multipart and modular center, while external selectionists view the unit of selection as a monolithic whole. Meyer (1994) argues that the internal selection process does not predict higher performance, but on the contrary initiatives may be selected on the degree of their adaptability to other initiatives. Complementarily among initiatives (Galunic & Weeks, 2002) at the same level of analysis or between different levels (Brown & Eisenhardt, 1997) is proposed to increase an initiative’s

selection chances leading to organizational efficiency (Miller & Friesen, 1984). Moreover, legitimization and adaptability of an initiative in the organizational context are proposed to be the main internal selector mechanisms (Galunic & Weeks, 2002). Aldrich (1999, p. 26) identifies three types of internal selectors “contributing to the loose coupling of internal selection and environmental fitness: (1) pressures toward stability and homogeneity (Campbell, 1969); (2) the persistence of past selection criteria that are no longer relevant in a new environment (Campbell, 1994); and (3) the willingness of some organizational founders and leaders to accept a low performance threshold (Gimeno, Folta, Cooper, & Woo, 1997).” A common characteristic among these three selectors is the degree of inertia based on which variations are internally selected or not.

Durand (2006) argues that the internal selection process is highly political, as organizational members with access to resources interfere with the formation of selection criteria that favor their personal or organizational interests and reject market-driven variations. Zollo and Winter’s (2002, p. 342) introduction of codification as the process through which “individuals codify their understanding of performance implication of internal routines in written tools, such as memos, manuals, blueprints” extends our understanding of “cognitive inertia” in shaping the internal selection environment. The codification process is affected by the perceptions organizational members share, based on their aspirations. It is evident that the internal selection process can be characterized as a cognitive and path-dependent process, in accordance to Aldrich’s (1999) first two types of internal selectors.

Aldrich’s third type of selectors implies the deliberate role of managerial choice in influencing the internal selection process. Miner (1994, p. 77) proposes the role of managers “...to influence the internal evolutionary process.” Goal setting and establishing screening criteria for the initiatives’ survivability are examples of managerial influence in forming internal selectors. Burgelman’s work (1983a, 1991) stresses the role of top management in establishing administrative (strategic planning, control and reward systems) and cultural (situational rituals and behavioral norms) mechanisms, as part of an organization’s structural context, which act as internal selection mechanisms. In the case of autonomous initiatives, Burgelman (1991, p. 247) proposes the role of the strategic context determination process as the process through which an initiative can be “internally evaluated and selected outside the regular structural context, usually through the interactions of various types of ‘champions’ and top management.”

It is evident that this stream of literature positions cognition as having a central role in the internal selection process, while sporadically providing

anecdotes of how the selectors feel about the subject of their selection. Recent literature informs us of the existence of coevolutionary lock-ins, as sources of strategic inertia which are primarily associated with psychological sources of inertia (i.e., beliefs and feelings) (Burgelman, 2002a). While this literature explores how coevolutionary lock-ins expressed through the behavior of top management teams toward autonomous initiatives influence the internal selection of the latter, we know little of how these lock-ins are generated.

The existing literature focuses on the interaction between the top management and the champions of initiatives, but it neglects to explore the interaction among the champions of different initiatives and its impact on the internal selection process of the initiative in question. Anecdotal evidence informs us that coexistence with other initiatives is not conflict free (Burgelman, 2002b). Rather, the interactions among champions of competing initiatives involve people and their emotions (Lovas & Ghosal, 2000; Burgelman, 2002b). We propose that this interaction is of critical importance in understanding the efficiency of an internal selection process. Our proposition is based on the rationale that the behaviors of champions of other initiatives toward the initiative in question may provide the top management with information regarding the level of compatibility the initiative in question has reached in relation to other initiatives. The existing literature argues that this type of information could be sufficient to select or eliminate the initiative in question.

Drawing from these observations in the literature, we argue that a more insightful exploration of the efficiency of the internal selection process is required. We propose an emotional focus for research on the efficiency of the internal selection process of autonomous initiatives. We aim to do this by exploring the emotional dimension of the social interactions among the individuals directly (top management) and indirectly (champions of initiatives in question and champions of other competing initiatives) involved in the internal selection process of initiatives within an organization. While the top management selects the fittest initiatives, the information and emotional influences they receive from the champions of various initiatives indirectly impact the formation of the selection criteria and the final outcome of an internal selection process. Even though no analytical linkage between the internal selection process of a variation and the emotional states of individuals involved in the selection process has been established before, recent research in the social psychology field informs us that in the social environment, memes (the informational component of routines) undergo an emotional selection process. Ideas succeed in the social

environment not only based on the information they bear, but also on “their ability to tap emotions that are common across individuals ... and on their ability to provoke emotions” (Heath, Bell, & Sternberg, 2001, p. 1029). As the intraorganizational ecology of memes has attracted the attention of researchers in the field of the intraorganizational ecology of routines and initiatives (Galunic & Weeks, 2002), the impact of emotions on the efficiency of the internal selection process of variations is a fruitful area to explore.

Internal Selection Process of Autonomous Initiatives and Emotional Dynamics

The Emotional Side of Selection

There appear to be three groups of individuals involved in the internal selection process of an autonomous initiative, and their social interactions are proposed to bear emotions that impact the selection or elimination of the initiative in question. It is worth exploring in detail how each group contributes emotionally in the internal selection process, in an attempt to summarize existing empirical findings and uncover gaps.

Burgelman (1991), based on March's (1988) work, argues that organizational members are driven by obligatory and consequential logic to *champion autonomous initiatives*. “Obligatory logic” is related to the self-image of organizational members in relation to driving an initiative. “Consequential logic” is related to their self-efficacy and locus of control efficacy in considering themselves as capable to “build” such an initiative, or as an opportunity for them to enhance their career progress. The engagement in obligatory and consequential logic implies that the organizational members undergo a cognitive process evaluating their self-being, articulating their capabilities, and motivating them to become champions of an initiative. Besides this cognitive side, the entrepreneurship literature informs us that entrepreneurs who undergo a similar process in pursuing an opportunity are also passionate. Cardon et al. (2005) were among the first to analytically introduce the positive impact of positive emotions such as passion, love, and hope in facilitating the entrepreneurial process of growing a venture and establishing it in the market. They went on to use the “parenthood” metaphor to describe the relationship champions develop with their ventures. Baron (2008) proposes the positive influence positive emotions have on the entrepreneurs' cognition in recognizing an opportunity and in acquiring resources toward it. Assuming that the champions of autonomous initiatives undergo a similar emotional process in identifying and pursuing the creation

of an initiative, it should be expected that they express their passion and hope toward the initiative through determination and drive to success. Consequently, we expect that such emotional expressions give a positive signal to the top management of the level of commitment of these champions toward the initiatives, who in turn positively support the selection process.

While the cognitive role of *top management teams* in forming selection criteria is well established in the existing literature, it is quite unclear whether their enthusiasm or skepticism toward an emerging variation influences their decision-making and codification processes. Based on [Burgelman's \(2002b\)](#) work on the role of psychological sources of inertia in forming selection criteria, it can be argued that the way selectors feel toward the initiative in question has an impact on the selection process. For example, if they feel enthusiastic toward the initiative in question this will be reflected on the selection criteria they form, favoring the initiative. Adversely, when selectors are frustrated about the emergence of a new initiative, as it upsets the existing population of variations or the distribution of resources, this frustration will be expressed through the selection criteria they form toward the initiative in question. Further, in the corporate entrepreneurship context, [Brundin, Patzelt, and Shepherd \(2008\)](#) enhance our understanding on the positive role of the display of positive emotions from top management to their employees (middle and operational management) in enhancing the enactment of entrepreneurial behavior of the latter. Brundin et al., building on the social function of emotions literature, argue that through the mechanism of contagion employees feel encouraged to behave entrepreneurially when they see their management enthusiastic about their entrepreneurial activities. Extending this proposition to the internal selection process, it is expected that the display of positive emotions by the top management toward a variation is a positive signal of selection to the champions of the initiatives, and a conditional signal of the internal selection environment as formed by them.

For the third group of organizational agents involved in the selection process, the evolutionary theory suggests that variations face political struggle and intraorganizational competition from other variations ([Galunic & Weeks, 2002](#)). Preexisting internal criteria create cognitive "blocks" which tend to skew away new variations. The emergence of new variations may be interpreted as a threat by the *champions of other initiatives* and as a critical change in the population of initiatives within an organization. The intrafirm competition literature (e.g., [Birkinshaw & Lingblad, 2005](#)) informs us that the degree of charter intent's overlap between two units within the same organizational context and the level of clarity of definition of organizational boundaries of each unit moderate the level of intrafirm competition.

Organizational members' perceptions and cognitive interpretations of a new initiative as a threat or an opportunity play a key role in the level of perceived competition within an organization. However, the existing intraorganizational evolutionary theory is mute on how the emotional reactions of organizational members triggered by intrafirm competition may impact the development of a collaborative or non collaborative social logic toward the initiative in question, resulting to its selection by the top management (Galunic & Eisenhardt, 1996). We propose that the emotional states of the champions of other initiatives, as triggered by the emergence of a new initiative which seeks selection, will signal to top management the degree of compatibility of the new initiative with the existing ones, and it will influence the formation of criteria in selecting in or out the new initiative.

Moving from Emotional Reactions to Emotional Dynamics

The chapter has as its theoretical foundation the emotions' social function literature and, more specifically, the constructs of emotional interactions (George & Jones, 2001) and emotional dynamics (Huy, 1999). Empirical findings from the organizational groups and emotions literature inform us of the social function of emotions and their role in affecting social interactions among individuals and organizational groups. Emotional reactions, as an individual-level construct, describe the initial response to a discrepancy personally relevant to an individual's goals and interests (George & Jones, 2001). Emotions are about expectations and their violations. The creation of a new situation within an organization may be cognitively evaluated as a threat or as an opportunity to the well-being of organizational members related to the situation (Frijda, 1988). The positive or negative cognitive evaluation of a situation may cause positive or negative emotional states, accordingly, for these organizational members (George & Jones, 2001). Previous empirical research has argued that emotional dynamics expressing or evoking positive emotional reactions have a positive impact on organizational processes (Huy, 1999), assuming that organizational members behave as emotionally intelligent individuals. However, discussion of the role of emotional dynamics expressing negative emotional states from organizational members whose well-being is anticipated to be negatively affected by an introduced change within an organization remains mute.

The display of emotions through behaviors and actions affect the emotional well-being of the receivers of emotions and the facilitation of organizational processes and performance (Rafaeli & Sutton, 1987) in both positive and negative ways. Hareli and Rafaeli (2008), exploring the social influences of emotions in organizations, propose the existence of dynamic

emotional cycles in organizational dyads and groups. The main characteristic of these cycles is the existence of mechanisms through which emotions impact the behavior, cognition, and emotion of others in the same organizational context. The receivers of the original emotion react by developing behavior, cognition, and emotions which will impact future social interactions with the initial senders of the emotion. Jehn (1997) in examining types of conflict in organizational groups argues that emotions are important elements of conflict as they define individuals' subjective interpretations of reality and reactions to current situations. Her work highlights the importance of negative emotionality and measures the amount of negative affect exhibited and felt during conflict. She proposed that high emotionality leads "members to lose sight of the task and to focus instead on negative affect" negatively impacting group performance and member satisfaction (Jehn, 1997, p. 549).

George and Jones (2001), examining inertia as a microlevel phenomenon, propose a process model of individual change within organizations that seeks to explain how inertia and resistance to change arise at the individual and group levels of analysis. Their model "focuses on the dynamic interplay between human cognition and affect in initiating the individual change process and determining its nature and outcomes" (George & Jones, 2001, p. 421). They propose that "emotional reactions to discrepancies set the whole change process in motion" keeping "managers in tune with the changing circumstances they face. Emotional reactions to discrepancies are the important signals that managers and all members of an organization receive indicating the need to direct one's attention to a pressing concern, problem, or opportunity" (George & Jones, 2001, p. 438). Interpreting the introduction of a new initiative within an organizational context as a threat may lead to a negative emotional reaction toward the initiative. While George and Jones' work contributes to understanding the role of such reactions at the individual level of organizational change, this chapter concerns the meso-organizational level, in accordance to Huy's (1999) work and aims to explore whether resulting emotionally charged behavior (emotional dynamics) impacts the internal selection mechanism of an initiative.

Huy's (1999) work explores the interaction of emotions and strategic action, assuming that organizational members, as emotional intelligent individuals, address their emotional states triggered by radical change through behaviors. Organizations that are able to acknowledge, monitor, and attend to their members' emotions as manifested by organizational norms and routines related to feelings are proposed to have developed emotional capability. Emotional states at the individual level and emotional capability

at the macro-organizational level are proposed to be linked at the meso-organizational level with the existence of emotional dynamics. “Emotional dynamics constitute attributes of an organization’s emotional capability and are enacted through a specific set of organizational routines, and, on a smaller scope, they also mirror individual or group behaviors that arouse specific emotional states conducive to change” (Huy, 1999, pp. 333–334). Examples of emotional dynamics can be identification (expressing the emotional state of love), encouragement (expressing hope), and playfulness (evoking fun). Huy links such emotional dynamics with change dynamics such as receptivity, mobilization, and learning, accordingly, which facilitate radical change and link adaptation and change at the individuals’ level with change at the macro-organizational level. This argument raises questions of what kind of emotional dynamics emerges when organizational members are not emotionally intelligent and a negative emotion is expressed, and further how these evoked emotional dynamics impact an event of organizational change, such as the selection of an initiative.

*Focusing on a Negative Emotion and its Emotional Dynamics:
The Case of Envy*

Envy is a negative but prevalent emotion which has been largely overlooked in organizational research (Patient, Lawrence, & Maitlis, 2003), but received significant attention by sociologists and economists. Economists associate envy to be triggered by the thought of the possessions of others (Elster, 1998). Sociologists argue that semantically there is a distinction between jealousy and envy (Salovey & Robin, 1984; Bryson, 1977). The main difference between the two lies in the object of each emotion. Jealousy is triggered on the grounds of the belief or suspicion that a desired relationship is in danger of being lost, while envy is triggered by the desire for another’s attributes, reputation, or possessions.

Salovey and Robin (1984) argue that the triggering of envy involves a process of social comparison carried out by a person between the attributes, possessions, and attainments of him/her and those of another. A negative upward comparison around these variables leads to envy. We feel envy when our self-evaluation is threatened by particularly relevant performances, possessions, and/or attributes of the person we are being compared to. Parrott (1991) argues that envy is directed toward those equal to us or like us, but who are ultimately superior to us. Not all people and their attributes and/or performances can be the object of one’s envy. Envy is targeted at

people who are self-relevant (Salovey & Robin, 1984) to the comparator. In the workplace, envy can occur among coworkers who operate at the same or at higher organizational levels. The latter case is an occurrence of “neighborhood envy,” where each person, as part of a hierarchy, primarily envies the person immediately above him/her (Bos & Tillman, 1985).

Envy is experienced as a realization of inferiority (Goel & Thakor, 2005). It involves the feelings of unfairness and injustice, of anger and frustration caused by the realization of such inferiority, as well as the perception that the other members of the reference group enjoy more than the individual carrying out the comparison. It is experienced as a decline in the envious’ utility function as their monetary and nonmonetary well-being are lower than that of their colleagues (Mui, 1995). The object of envy (i.e., a person’s attributes, possessions, and performance) may be related to the success, happiness, material or financial well-being, job role and responsibilities, job and social status, power (social and economic), intelligence, privileges, and health that someone in a similar domain is enjoying. According to Adams (1963), in the case of organizational relationships and social comparisons, parameters of envy can be the inputs and outcomes of an individual in a working environment. For the purposes of this chapter, envy is perceived to arise from the comparison of monetary and nonmonetary benefits to other employees at the same organizational level. Monetary benefits can be wages, bonus, performance intensives, while nonmonetary benefits can be job status, easy access to resources, and operational autonomy.

Besides the intrapsychic dimensions of envy, the way it is externalized and expressed is of great significance in the organizational context. The emotion of envy has a social presence and involves at least two groups of agents: the envious and the envied employees. The displays of the original emotion involve emotional dynamics, facial expressions, moods, and cultural forms (i.e., narratives). The economics and sociology literature inform us that emotional dynamics evoking envy involve degrading the object of envy (their character and/or performance) (Salovey & Robin, 1984); retaliation toward the object of envy (Mui, 1995), rivalry and competition (Lehmann, 2001). Parrott (1991) and Ben-Ze’ev (1992) argue that envy presupposes social comparison, but not necessarily competition. Relevant studies show that when experiencing envy “man is not made happy by carrying out his urge to destroy the envied object or its possessor” (Schoeck, 1987, p. 69). Elster (1998) moves further to argue that to feel envy is about feeling inferior and as nobody wants to feel inferior, they develop dissonance reduction mechanisms through which they blame someone else (the envied) for their situation or to explain the envied’s superiority. Walton (1975) reports the

expression of envy as a self-limiting dynamic of resentment and resistance in the diffusion of new work structures in a Norwegian firm. However, [Kets De Vries \(1992\)](#) reminds us of the constructive role of envy in the workplace, evoking motivation to excel and stimulation for fostering creativity and adaptation.

EMPIRICAL CONTEXT

The Evolutionary Path of Corporate Venturing Initiatives

Corporate venturing encompasses the enactment of entrepreneurial behavior by organizational members within the context and structure of an organization, resulting in the creation of new ventures for the parent organization ([Venkataraman, MacMillan, & McGrath, 1992](#)). We approach corporate venturing as an initiative that faces entrepreneurial and managerial challenges along its evolution, and is subject to an internal selection process in order to gain legitimacy by the top management. The strategic context determination is the “political mechanisms through which middle managers question the current concept of strategy and provide top managers with the opportunity to rationalize, retroactively, successful autonomous strategic behavior” ([Burgelman, 1983a, p. 1350](#)). [Burgelman’s \(1983a\)](#) work is explicit about the cognitive dimension of the internal selection process venturing initiatives are subject to, emphasizing the role of agents and mechanisms in operation. Primarily, this mechanism involves the strategic determination context process and the active role of middle managers championing these initiatives. The champions delineate the strategic contexts of the new ventures, while negotiating with the existing structural context, and coaching and managing the venture portfolio. In parallel to this, top management, by motivating the experimental process toward the creation of new ventures, authorize the success of the latter, and determine the internal selection criteria to rationalize and to incorporate the new ventures into the corporate strategy, committing the corporation’s full support to them.

Corporate Envy as an Emerging Theme in an Organizational Context

One of the challenges in researching emotions in organizational settings is “gaining research access to situations in which strong or negative emotions may arise” ([Patient et al., 2003, p. 1017](#)). This study, employing an in-depth

qualitative research methodology (Marshall & Rossman, 2006), in a multi-case-study research design (Eisenhardt & Graebner, 2007; Stake, 2000) as part of an extended study on how venturing initiatives arise and are implemented within large corporations, allowed for the emergence of constructs not being a priori considered by the researcher (Glaser & Strauss, 1967). In the empirical setting we visited this emerging theme was the emotion of envy.

The extended study was organized to study the cases of four corporate venturing initiatives, each of which was located in four multinationals, involved in corporate venturing activities. For each case, we conducted semi-structured interviews with organizational members, directly involved in corporate venturing and senior corporate managers. In one of the cases (from now on mentioned as CV1 initiative¹), the interviewees referred repeatedly to “envy” as an emotion and as a reason for action (Sabini & Silver, 1986). It was not the aim of the extended study to research why similar emotions were not observed in the rest of the cases, or to explore the occurrence of other specific emotions. However, warned by the literature to be reflective during the data analysis process, we noticed the emergence of envy as a significant construct influencing the evolution of the CV1 initiative. The case of the CV1 initiative and its selection by the top management of its parent corporation (from now on Corporation ALPHA) constitute the instrumental case (Stake, 2000) of this chapter.

The data used in this chapter involve narratives from four interviewees: the champion of the CV1 initiative (Manager A), two operational members of the CV1 initiative’s team (Manager B and Manager C) and a senior corporate manager (Manager D). Table 1 summarizes the attributes of the interviewees. The quotes from the interviewees presented are textual references to emotional episodes of envy, containing the circumstances that led up to envy, the emotion itself, and subsequent events and actions. Parrott (1991) argues that an emotional episode is a narrative of an emotional event and he treats it as a natural unit of analysis for understanding human emotions. Secondary data in the form of corporate annual reports and media releases were used to construct the case and verify the validity of the primary data.

Envy may be experienced at the dyadic interpersonal and intergroup level of analysis (Stein, 2000; Smith & Kim, 2007). This analytic differentiation had implications in the way the narratives were analyzed. Early on in the analysis, it became apparent that the narratives referred to emotional episodes of intergroup envy; organizational members of other initiatives felt envy toward the members of the venturing initiative. However, the narratives revealed how the envied champions of the venturing initiative recognized and experienced envy toward them. Consequently, the level of

Table 1. Interviewees' Attributes.

Attributes	Interviewee 1	Interviewee 2	Interviewee 3	Interviewee 4
Code name	Manager A	Manager B	Manager C	Manager D
Gender	Male	Male	Male	Female
Association with CV1 initiative	Direct – Champion of CV1 initiative	Direct – Partner and CFO of CV1 initiative	Direct – Partner of CV1 initiative	Direct – Corporate Lawyer
Core responsibility	Managing Partner of the CV1 initiative	Managing CV1 initiative's portfolio	Managing CV1 initiative's investment process	Governance structure of CV1 initiative
Time of involvement in CV1 initiative	1994 – time of interview	1999 – time of interview	2000 – time of interview	1997 – time of interview
Employment background	Joined Corporation ALPHA in 1984	Joined Corporation ALPHA in 1996	Private equity firm – joined CV1 initiative's team in late 1999	Private law firm – joined Corporation ALPHA in 1997

perceived envy identified in the case was formulated considering the frequency of occurrence of the construct of envy in the narratives of each interviewee, and the interpretations provided by each interviewee on the significance of envy in the selection of the venturing initiative. Manager D's narrative is quite influential in this instrumental case, as her role and position in the organizational structure allowed her to be an observer of the emotion of envy and she provided a textured narrative which illustrated how envy was expressed by some organizational members and groups, and their resulting behavior toward the initiative. Examples of other studies on emotions which use both self-reporting and observers' account of individuals' emotional states (e.g., Bartel & Saavedra, 2000) provide analytical and methodological support for utilizing the narratives from observers of the emotion of envy in this instrumental case.

Integrating Empirical Findings

Corporation ALPHA and the CV1 Initiative

Corporation ALPHA is a leading corporation in the information and media industry with a range of business-to-business customers and a high volume

of individual users of its services globally. Corporation ALPHA, at the time of the research, had an operational profit of £126 million and employed approximately 15,000 people in 86 countries. Its business operations have been dependent on information technologies, and historically, Corporation ALPHA had been keen in following:

disruptive technologies, partly to see if we can be on the crest of the wave of the next big breakthrough, and partly to make sure that we are not overtaken by somebody else.
(Manager D)

By the mid-1990s, small, Internet-based start-up companies specializing in networks software were seen to have the potential to be the new leaders in the information and media industry. Silicon Valley-based start-up companies, such as Netscape, could operate at low operational cost and overtake traditional large companies, such as Corporation ALPHA. The network technology used by Corporation ALPHA was similar to Internet protocols, and in a scenario where the Internet was becoming commercially successful the threat was direct and significant for the corporation. However, the corporation did not have access to Internet-related software and technologies, as its in-house technology office had not developed similar technologies to keep up with the potential competition.

This gap in technological know-how was spotted early on in 1992 by Manager A who, with a sales background, had developed technical expertise in network-related technologies. He believed that Corporation ALPHA needed to start investing and gaining access to these technologies, and secure a first mover's competitive advantage in the new technological era. Silicon Valley was the cluster of such technologies. In 1994, Manager A persuaded his boss, the CFO of Corporation ALPHA, to create a fund and invest in start-up companies through minority equity investments. He moved to California to carry out the first corporate venturing investment on the Delta venture. In 1996, the Delta venture was floated and Corporation ALPHA achieved significant financial gains (it made an IPO of \$848m market capitalization in the first week) making the headlines. What started informally in 1994 as the corporate venturing activities of one manager became more formal in 1997. During this period, Manager A was the only individual in the corporation actively identifying external companies and investing in them. He was passionate and determined to lead his initiative to success: *"it was my thing; it was my project, my idea, my responsibility and my opportunity."*

In 1997, Manager A, after a successful investment period in the USA, returned to the UK to set up a small but formal corporate venturing team. The macroeconomic conditions of the late 1990s benefited the performance

of his team's portfolio and the market value of its quoted investments reached £438 million at the end of 1999. The CV1 initiative occupied a page in the 1999's corporate annual report, highlighting its successful activities and financial performance. As Corporation ALPHA's top management team was becoming progressively aware of the venturing activities of Manager A, a strategic interest in Internet technologies was developed. This led to a period of restructuring and reorganization for the corporation trying to incorporate the application of the Internet into its operations. As part of this restructuring process, the top management team of Corporation ALPHA decided to formalize the structure and activities of the CV1 initiative by setting up an organizational unit to host it. In 1997, a venture capital fund was created by the CFO and allocated at the CV1 initiative to conduct its investments. This fund was doubled in 1999, to reflect the funding needs of the initiative, and the positive expectations formed from its financial performance. In late 1999, an executive director was given strategic responsibilities in exploiting Internet technologies and a new business division responsible for "*investing in new initiatives in the internet and e-commerce areas*"² was created.

By early 2000, the new corporate "*strategy for the Internet age*"³ was announced, placing Internet at the core of the corporation's interest. However, in 2001 the market value of the CV1 initiative's venture portfolio declined significantly, resulting at a net loss of £145 million. Since the mid-2000, Corporation ALPHA's management team started to consider an IPO for the CV1 initiative involving external investors. In early 2001, the initiative was spun out, as "*it had reached a stage where its size and investment capacity exceeded [Corporation ALPHA's] strategic needs*"⁴. Previously, the CFO, the CV1 initiative's main political supporter, had resigned.

The Internal Selection Environment of Corporation ALPHA

It was culturally accepted and expected within Corporation ALPHA for corporate employees such as Manager A to be creative and proactive in noticing trends and changes in the external environment, taking risks and venturing into novel activities as "*nobody stopped you from being creative and doing things, and the company had the money to invest and do all those sorts of things*" (Manager B). "*So as long as you played the game where you just went off and did it and got on with it.*" Experiential learning and competition between internal projects were encouraged within the corporation being "*a great place to learn all [about] your mistakes and things and build a process and so forth*" (Manager B). Manager D described the corporate culture as anarchic, being adventurous and open to uncertainty,

allowing corporate managers to be involved in new activities, but expecting them to contribute back to the corporation. There was a commonly shared belief among corporate employees that such behavior would be rewarded through tangible financial rewards, but most importantly through intangible means such as hierarchical status and promotion:

[there was a] lot of encouragement to take risk, but also a lot of control to stop the risk being too much risk ... but you have to wait for the case sensibly and responsibly and you have to do your lobbying to get people to agree. (Manager A)

There is that piece of liking of adventure and uncertainty and kind of wild crazy ideas that might come home to roost fantastically well. (Manager D)

For an autonomous initiative to get the attention and rewards from the top management it required political lobbying (Durand, 2006), clear delineation of the initiative's intent (Burgelman, 1983a) and achievement of a level of performance in the external market. The corporation had resources to finance such initiatives at their experimentation process but further access to recourses would have required tangible outcomes and contribution to the corporation.

The Strategy Determination Process of the CV1 Initiative

It was within such a selection environment that in 1994 Manager A started to form the intent of his initiative: to invest in external ventures and gain access to their technological capabilities. He knew that he had the capabilities (self-efficacy) to conduct such activities (Harper, 2003). More significantly, his close relationship with the CFO allowed him an informal but direct access to resources and to communication avenues in order to delineate the intent of the initiative. He was determined to succeed in championing this initiative, as his motivation to have his own enterprise. His own interpretation of the situation the corporation was facing was that there was an opportunity to be explored. This process guided the formation of the CV1 initiative's strategic intent, which was "*to understand innovation*" by conducting "*minority investments to protect an existing franchise ... taking small stakes that were very speculative that would bring the little company closer to [Corporation ALPHA].*"

However, after 1997 and following the high financial performance of the CV1 initiative, the intent changed. According to Manager D "*the original plan was about acquiring technology... It was not financial at all. As it turned out, because of the dot com boom, it turned out to be hugely successful financially, but that was without doubt, not the original intention.*" The financial performance of the CV1 initiative had a direct positive impact on

the financial performance of the corporation, both in terms of return on investment rate and of generated profits. Individually each investment and the overall portfolio had a significant financial impact on the corporation. At the end of 1999, the portfolio reached its highest value ever (its market value was £438 million). The CV1 initiative was perceived as a “*money machine*” unit and associated with high financial gains.

The passion of the venturing management in leading the CV1 initiative contributed positively in defining the intent and organizational boundaries of the new unit (Cardon et al., 2005). Managers B and C argue that their determination to be successful forced the team formed around the initiative to develop its own capabilities and social network within and outside the organizational boundaries. The team developed sophisticated practices and increased its efficiency in conducting minority equity investments, identifying potential investors, and growing these ventures into successful IPOs. The organizational charter of the initiative was crystallized and its members perceived their team’s efficiency and performance as superior to other initiatives.

The positive financial performance of the CV1 initiative, coupled with the overall good performance of the corporation in 2000, led to the emergence of a positive emotional energy:

in 2000 actually, there was a shift in [Corporation ALPHA]’s culture to be much more adventurous, experimental and our share price was very high, and there was a sense of tremendous energy and ‘anything is possible’... and anyway the [CV1 initiative] was an element of that, but it wasn’t the driver of it, it was the whole market. (Manager D)

The dissemination of this positive emotional energy to the top management enhanced the legitimization process of the CV1 initiative, as the strategic intent of the initiative was articulated to them and could now identify with it. Huy (1999) argues that identification is one of the emotional dynamics that can facilitate organizational change. The instrumental case supports this proposition as enthusiasm, expressed through articulation and identification, enhanced the strategy determination process of the initiative in question. Manager A argues that between 1997 and 1999, other organizational members also “*were excited by [the CV1 initiative], it was considered to be fun and creative and fast moving and successful*” creating opportunities for intraorganizational networking to support his initiative.

Competition and Linkages with Other Initiatives

The organizational charter of the CV1 initiative was progressively crystallized, and the initiative increased its visibility to the top management and

gained further access to financial resources. Simultaneously, other organizational members involved in other initiatives became aware of these developments, as they observed an informal and small initiative that became quite significant and important for the corporation. An evidence of this was the Internet strategy the corporation was adopting after 1999. Among these organizational members were the employees of the Technology Office, the in-house R&D vehicle of the corporation, who traditionally would have been involved in developing new technologies for the corporation. Manager A's activities, in acquiring externally developed technologies, were perceived by the employees of the Technology Office as a direct competition to the Office's organizational charter (Birkinshaw & Lingblad, 2005). They felt that it was *"done deliberately ... but that is actually quite difficult to live with, if you are one of the people who is being challenged by this"* (Manager D). They felt intimidated and challenged, and started to interpret the emergence of the CV1 initiative as a threat to their unit's activities and survivability. Their expectations for exclusivity in delivering new technologies were violated, and their future appeared uncertain.

Besides this trigger of intrafirm competition, it became public knowledge within the corporation that Manager A and his team were enjoying monetary and nonmonetary benefits, such as high bonuses, options in the ventures they were creating, and developing a high profile within the organization. Other organizational members started to compare their well-being to that of the CV1 initiative's team members, finding their situation lower than that of the latter:

well my desk is here, and this person's desk [the CV1 initiative's employees] is there, and they have gone with the new business and they have been given options and they are going to become billionaires, and I am sitting here doing my boring job with company APHA options, and that is not going to get me anywhere. (Manager D)

As Manager D recalls, the outcome of this comparison resulted in the emergence of the emotion of envy toward the CV1 initiative's team members.

The CV1 initiative's team members became the object of envy, as they were perceived to violate the existing organizational justice perceptions on the distribution of income and remuneration rewards (Adams, 1963). It is evident that perceptions of equity and equality within a corporation are shaped on the basis of corporate policies regarding income distribution within the organization. Preexisting practices that are followed by a corporation regarding the remuneration system shape hierarchies within the corporation and their violation triggers a process of social comparison (Salovey &

Robin, 1984). The CV1 initiative “*was actually a special case,... that is when people in the organization started to be less amenable*” (Manager D) and the legitimization process followed by the top management appeared to upset other organizational members, jeopardizing any possibility for compatibilities and synergies among the CV1 initiative and other initiatives to emerge.

On the other hand, Managers A, B, and C, all core members of the CV1 initiative’s team, came to realize that their financial success had become the object of envy. They were experiencing envy as hostility and resentment to cooperation, as resistance, degrading of capabilities the CV1 initiative had developed, and through competition and isolation:

Corporate venture capital is compensation and jealousy: ‘why should I [non-venturing manager] help them [corporate venturing managers], because I am just helping them make money’, right? (Manager C)

... when we did have problems, later on, was when [the CV1 initiative] became very successful and all of a sudden making significant salaries, people got jealous and then they stopped being co-operative. (Manager A)

I actually think success within a corporate can breed jealousy, and therefore breed isolation. And it is not just ... it is anything if one business unit is particularly successful, then everyone is jealous of everyone who is in that unit, right? It doesn’t matter what the thing is, and you know, the way organizations are, you have little empires and there is a “wasn’t invented here” type mentality. (Manager B)

The emergence of negative emotional dynamics is suggested by the resentfulness of the Technology Office’s employees to assist the CV1 initiative’s activities. The CV1 initiative was dependent on the Technology Office for the successful acquisition of the ventures they were investing in. Some of these ventures required the cooperation of internal champions in order to grow, but as Manager D recalls, the Technology Office’s employees were denying any assistance and support in growing the CV1 initiative’s ventures as:

it was a combination of ‘non-invented-here’, and ‘why should I help [Manager A], because if I help him and his businesses do well, he becomes personally rich and I don’t’, and ‘I don’t particularly need to be disrupted by this new technology, actually I have got plenty on my plate doing what I am doing’.

This quote describes the comparison process an individual from the Technology Office carried out and the cognitive and behavioral consequences resulting from the emotion of envy the individual felt. We can consequently argue that, through emotional contagion (Bartel & Saavedra, 2000) envy was

experienced within the Technology Office and expressed at the group level as resentfulness, skepticism, devaluation of performance of and competition toward the CV1 initiative. Collectively, a negative perception was created toward the initiative and the top management team, such as Manager D started to become more and more aware of it.

The Internal Selection Process of the CV1 Initiative

The data indicate that Corporation ALPHA's top management team was more interested in and enthusiastic about the financial performance of the CV1 initiative, rather than associating its activities with other initiatives and increasing its complementarity. Interestingly, the initial intent of the CV1 initiative was the acquisition of external technological know-how and business models. However, there is no evidence of the establishment of integration or complementarity mechanisms to facilitate their internalization (Burgelman, 2002b). The inability of the top management to integrate the CV1 initiative, due to the lack of clear strategic vision of how to use it, triggered further feelings of uncertainty to those members who were in direct competition with the CV1 initiative's actions. In turn, seeing their internal selection not being efficient, the CV1 initiative's team focused on its financial performance, as this would have satisfied their external selection. Their rationale was that as long as internally the initiative could not achieve fitness with other induced initiatives, a positive contribution to the organizational performance would have ensured its survivability. The champions and members of other organizational initiatives perceived this change of focus as an arrogant and elitist behavior by the CV1 initiative, perceiving it as an independent venture capital company, creating further distance between it and other initiatives.

This was more than a perception, as progressively by 1998 "[the CV1 initiative's employees] compared themselves against external venture capital companies – and they were therefore not prepared to be bound by the restrictions, as they saw it, of being part of a big corporation" (Manager D). By that time, venture capitalists had joined the CV1 initiative's team and the comparison between the financial incentives of the venture capital industry and the corporation's remuneration policy was inevitable. This comparison altered the venturing managers' sense of perceptual justice. Manager C argues that "corporate venturing generally has a negative impact on culture, because it creates the culture of greed, of making a quick buck, of 'what am I worth', and 'what is my time worth to you' and short-termism." As the corporate remuneration scheme was not satisfactory for the CV1 initiative's members, a distinctive scheme similar to the one of venture

capital companies had to be established to compromise both parties. The top management was quite quick in satisfying the CV1 initiative's remuneration needs.

However, this amendment of the corporate remuneration policy for the special case of the CV1 initiative disrupted the preexisting cultural norms and perceptions of justice within Corporation ALPHA. Perceptions on justice motivate social comparison (Tyler, 1991). Norms regarding distributive (equity) (Adams, 1963) and procedural (equality) (Cohen-Charash, Mueller & Goldman, 2004) justice monitor the occurrence of envy within an organization (Cohen-Charash & Byrne, 2008). Manager D observed that the escalation of envy toward the CV1 initiative and its members led to rather destructive culture of competition and skepticism toward the level of the initiative's fitness to the rest of the corporation, resistance to cooperation, but more significantly declining political support in retaining the initiative:

As the fortunes or the returns of the [CV1 initiative] changed, there was a fairly high degree of skepticism. Some people who actually could have made a big difference, a couple of main people, some of the people who are in our Technology Office, which is kind of central office that deals with Technology generally – they were very negative about it, sort of skeptical and more so. And they poisoned quite a lot of people's attitudes toward it [CV1 initiative]. I always thought that was partly to do with envy and partly to do with just not believing in it. (Manager D)

Selection agents who had the political power to reestablish the strategic intent of the CV1 initiative may have been influenced directly or indirectly by the “*culture of envy*” surrounding the venturing initiative. This influence is suggested to have led to the formation of selection criteria which eventually selected out the venturing initiative.

DISCUSSION AND CONCLUSION

Efficiency of the Internal Selection Process and Emotional Dynamics

The case of CV1 initiative as presented in Fig. 1 illustrates how emotional dynamics influenced its evolution: its conceptualization as a new combination of recourses for Corporation ALPHA (variation), its initiation and authorization of allocation of recourses from the top management of the organization (selection), and its transformation from a small team into an organizational unit (retention). Manager A' enthusiasm and affect toward the opportunity he identified in early 1992 guided the political

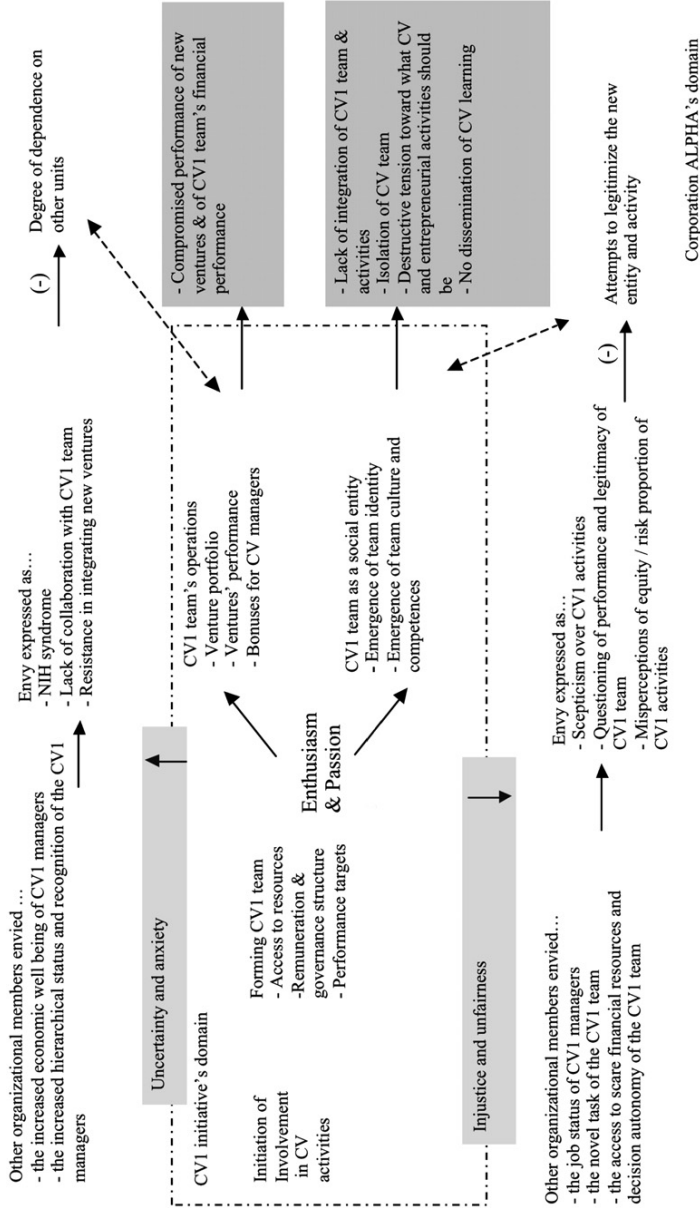


Fig. 1. Corporation ALPHA's Domain.

lobbying and intraorganizational networking to gain attention and trust by the top management, and to delineate the intent of his initiative (Burgelman, 1991). He perceived his initiative as an avenue for achieving career progress (consequential logic), deriving from a strong self-belief in his capabilities and skills to do so (Harper, 2003). These emotions were expressed and exemplified as identification with the initiative and motivation (Huy, 1999) to drive it to growth and success; two dynamics which the data indicate to have facilitated the strategy determination process of the CV1 initiative. The financial success of the initiative created euphoria among the top management, who started also to identify and financially and politically support the new initiative. The CV1 initiative gained attention and other organizational members were enthusiastic to join its activities and become members of it.

However, the emphasis of the top management team on the economic performance of the initiative and its enthusiasm solely on the initiative's financial contribution to the corporation led to an amendment of the strategic intent for the CV1 initiative. While Burgelman (1991) emphasizes that the effectiveness of the selection process of variations is on the correspondence of the internal selection process to the external selection pressures, in the case of the CV1 initiative its financial performance was its only selector. Internal selectors such as compatibility and fitness with other initiatives were absent.

Moreover, the internal selection environment formed between 1997 and 2000 within Corporation ALPHA had a negative, eventually, impact on the selection of the CV1 initiative. Influenced again by the enthusiasm of the initiative's financial performance, the top management team was keen in retaining the initiative and primarily its good performance. In response to this, the top management amended the corporate budgeting and remuneration structures to satisfy the needs of the CV1 initiative's managers. However, this amendment of the internal selection environment was rather catastrophic for the organization and the initiative. Other organizational members, working for initiatives that were also competing for attention from the top management team, perceived these changes as injustice and unfairness, while being uncertain and confused over how one initiative (CV1 initiative) achieved such a favorable selection. These organizational members felt a drop in their economic and social well-being, and started to feel envious toward the privileges, the attention, and the big bonuses the CV1 initiative was enjoying (Adams, 1963).

On the other hand, the establishment of a distinctive remuneration system to reward the CV1 initiative's managers was in alignment to their obligatory logic which made them to believe that there was a distance between them

and the rest of the corporation. Perceiving their group as of superior capabilities and performance in comparison to other group did not facilitate any degree of complementarity and integration with other initiatives. The distance with other initiatives had begun to grow, as their members feeling envious toward the CV1 initiative were reluctant to collaborate with the latter and establish any linkages with them (Lehmann, 2001). This resulted in further isolation of the CV1 initiative. When the external environment selected out the CV1 initiative due to its poor performance in 2001, the absence of internal selectors indirectly led to the termination of the initiative for the corporation. The emotional “fallout” as experienced by the emotions of envy created round the CV1 initiative continued to skew out its selection and fitness with the rest of the corporation (Walton, 1975).

The case of Corporation ALPHA and the selection case of CV1 initiative highlight three areas in which emotions may interfere in the internal selection process of autonomous initiatives: (a) in the strategic context determination process of a new initiative; (b) in the alignment of structural and strategic context in forming the internal selection environment of an initiative; and (c) in the establishment and maintenance of linkages between autonomous and induced initiatives. The instrumental case informs us of how negative emotional dynamics evoking negative emotions toward an initiative may undermine its internal selection. These negative emotions were generated by the top management’s mismanagement of the strategic context determination process of the initiative and by creating an ineffective internal selection environment (disruption of organizational justice norms and negligence of linkages among initiatives), resulting in high levels of autonomy and distance between the CV1 initiative and the rest of the corporation to develop.

Theoretical and Managerial Implications

The chapter unfolded through an instrumental case the role emotional states and resulting emotional dynamics have in the internal selection process of autonomous initiatives. It focused on the prevalent but overlooked emotional state of envy to examine how it emerges during and influences the internal selection process of an initiative.

Existing literature in the ecology of routines indicates that the internal selection process can be deliberate (Burgelman, 1983b; Miner, 1994) with organizational members participating in it influencing the process of “selecting for” or “selecting against” variations. This stream adopts a rational approach toward the role of these members. The role of the

emotional organizational member in affecting the internal selection mechanism was introduced in this chapter. The chapter responds to recent calls in the intraorganizational evolution field which beg for a closer attention to the role emotions have in shaping intraorganizational cognition and institutions (Fiol, 2002; Elsbach, 2002). The impact of postemotional responses on cognition and consequently on behavior has been well researched by organizational psychologists. Its extension to the intraorganizational ecology of routines is anticipated to extend our knowledge on how routines emerge, are selected and retained. Contrary to the modeling of the internal selection process of new variations as the outcome of the interaction between the middle management of a focal variation and the top management, this chapter proposed a three-party interaction model which influences this process. The chapter incorporates the notion of intrafirm competition among variations and argues that the interaction between competing variations and their champions is emotionally charged, influencing the adoption of a cooperative or competitive behavior among them to guide their evolution, and ultimately affecting the efficiency of the internal selection process of variations at the intraorganizational level of analysis.

The chapter suggests that the emotions (i.e., passion and enthusiasm) experienced by the individuals championing an autonomous initiative have a crucial role in its strategy determination process. This can be considered as a positive dynamic for these individuals in selecting among their personal options to be involved or not in entrepreneurial activities, confirming Cardon et al.'s (2005) propositions. At the intraorganizational level of analysis though, the chapter unfolded the role of emotional dynamics as negative dynamics in the selection process connecting cognitive inertia at the micro (individual) and macro (organizational) level, extending Huy's work on the role of positive emotional dynamics in facilitating organizational change.

The instrumental case also suggests that the emergence of envy throughout the internal selection process of an autonomous initiative is contingent on the strategic implementation of the initiative in question, including the remuneration structure and resource allocation system of the initiative, and on the social processes developed among the championing teams of co-existing initiatives. Further, the case unfolds the dynamics of the social influence of the emotion of envy and its resulting cognitive and behavioral consequences at the organization level in increasing the level of resentment for collaboration and the level of competition among initiatives. The case also highlights the role top management needs to pay in managing the emotional reactions across the organization triggered by amendments in the control and rewards systems, when selecting and retaining new initiatives.

The expression of envy through negative emotional dynamics from organizational members toward a new variation might explain the existence of cognitive inertia in forming selection criteria.

For researchers, this chapter builds on the sociological perspective in treating emotions as the link between agency and structure (Barbalet, 2002, p. 3), with emotions providing not only feedback and instant evaluation of circumstances, but also “influence the disposition of the person for a response to those circumstances.” In the internal selection process, agency and structure meet, with the former having an influential role in forming selection criteria and setting goals for the organization, and the latter providing preexisting selection criteria and environmental factors which create inertia in the selection process. Emotions, such as envy, toward a variation can be influential as signals of the dynamics and efficiency of the internal selection process. This proposition is of great importance in the corporate entrepreneurship context, as it provides an alternative explanation to the entrepreneurial and managerial challenges that entrepreneurial initiatives are faced with within an organization. Envy toward the rewards of enacting entrepreneurial behavior implies a negative feedback by the structure toward the entrepreneurial agency and its behavior.

For top and middle management, this chapter highlights their critical role in detecting emotions such as envy toward initiatives and in utilizing them as indicators of resulting behaviors toward them, considering their high risk and outcome uncertainly. Leadership may be a significant moderating factor in managing effectively the display of the emotion of envy by being sensitive about the formed expectations toward equity and equality among organizational members. Further, top and middle management may play a role in transforming envy into a positive emotional dynamic, such as motivation and creativity rather than solely as a negative dynamic (i.e., resentment). In the corporate entrepreneurship context this is crucial considering the managerial challenge in preserving the corporate identity of the employees, but at the same time creating incentives to allow them to develop entrepreneurial behavior.

The chapter acknowledges its empirical and analytical limitations. A single case study and a single visit at the empirical setting are not sufficient to provide generalized propositions. Further research is required in designing research projects which will examine the interference of emotions and emotional dynamics in the internal selection process of initiatives. The purpose of the chapter was rather to analytically propose the existence of such interference, and make the first step in highlighting its theoretical and managerial significance. Further, future research needs to

explore other discrete emotions such as passion, enthusiasm, hope, frustration which might be experienced by organizational members directly and indirectly involved in the evolution of initiatives. This will provide insight to a different range of emotional dynamics such as identification and learning to be explored and linked with the internal selection process. The study of a range of discrete emotional states in relation to the evolution process of initiatives will progressively allow for a better understanding and more coherent formation of propositions on the role of affect, aside other cognitive factors, in the internal selection process to be developed.

NOTES

1. The identity of the initiative, its parent corporation and of the interviewees remains confidential.
2. Corporate press release: July 6, 1999.
3. Corporate Press Release: March 22, 2000.
4. Annual Report, 2001.

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CHAPTER 2

GROUP ENTREPRENEURIAL BEHAVIOR IN ESTABLISHED ORGANIZATIONS: THE ROLE OF MIDDLE MANAGERS'S EMOTION REGULATION AND GROUP DIVERSITY

Leonidas A. Zampetakis and Konstantinos Kafetsios

ABSTRACT

The purpose of this study was to extend current work on corporate entrepreneurship by investigating factors that motivate group entrepreneurial behavior. Specifically, we proposed and tested a theoretical model that examined managers' regulation of emotion (ROE) influences on group entrepreneurial behavior. Data were based on middle managers and their immediate subordinates from traditional organizations. Results using Bayesian path analysis indicated that middle managers' ROE has a significant indirect effect on group entrepreneurial behavior via group-perceived manager's ROE and group job satisfaction. Additionally, evidence was found for the moderating effect of group diversity so that manager's perceived emotion regulation had a greater effect on job satisfaction and entrepreneurship in more diverse teams. We interpreted

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this as evidence in support of theoretical models that consider creativity at a group level and ultimately affect-laden processes (Zhou & George, 2003). Recommendations for further research are discussed.

INTRODUCTION

Over the last decade, basic and applied research on organizational behavior suggests that it is vital for large traditional organizations to support entrepreneurial behavior across all hierarchical levels in order to improve performance and increase competitive advantage (Hayton & Kelly, 2006; Kuratko, Ireland, Covin, & Hornsby, 2005; Mair, 2005; Morris & Jones, 1999). Although the complexity involved in the organizational entrepreneurial behavior (corporate entrepreneurship) phenomena renders it a concept difficult to explore and measure, there is consensus that activities related to corporate entrepreneurship eventually lead toward increased organizational growth and increased profitability (Vozikis, Bruton, Prasad, & Merikas, 1999), strategic renewal (Zahra, 1996), organizational change, and customer value-added services (Shaw, O'Loughlin, & McFadzean, 2005).

Corporate entrepreneurship research has identified crucial antecedents of individuals' entrepreneurial behavior within established organizations (Echols & Neck, 1998; Kuratko, Ireland, & Hornsby, 2004). However, research on the factors that motivate group entrepreneurial behavior is limited (Corbett & Hmieleski, 2007; Shepherd & Krueger, 2002). This is surprising, given that organizations have increasingly transitioned to use work group configurations (Cohen & Bailey, 1997) and the vital role that groups play in the understanding of the entrepreneurial orientation of organizations has been acknowledged (Anderson & West, 1998; Shepherd & Krueger, 2002). Moreover, although the role of middle managers in enabling entrepreneurial processes within established organizations is acknowledged (e.g., Kuratko et al., 2005), contemporary research has generated very limited empirical support for the mediating processes through which managers may affect group entrepreneurial behavior.

This chapter focuses on the intersection of three research streams: emotions in organizations, group diversity, and entrepreneurship. We approach entrepreneurial behavior as an affect-laden group-level process, and suggest that group entrepreneurial behavior is influenced by managers' certain emotional competencies as well as emotion-related processes internal to the group, such as group diversity. More specifically, we argue that

managers' emotion self-regulation has a significant indirect effect on group entrepreneurship and on emotion-related variables and work attitudes (such as job satisfaction). From our perspective, group diversity signifies more complex and affect-intensive processes within working groups that also require managers' intense regulatory efforts.

Before embarking on the theoretical underpinnings of the study, let us first define the main concepts utilized in the context of this research. A *work group* is defined as a collection of individuals "who are independent in their tasks, who share responsibility for outcomes, who see themselves and who are seen by others as an intact social entity embedded in one or more larger social systems" (Cohen & Bailey, 1997, p. 241). *Group entrepreneurial behavior* is conceptualized as a group-level phenomenon that encompasses Mair's (2005) conceptualization of "day-to-day" entrepreneurship and is in line with Stewart's (1989) collective entrepreneurship conceptualization. Stewart (1989) postulates that group-level entrepreneurship is a type of activity that is induced by opportunities contributing to the creation of value for the organization. Mair (2005) argues that "day-to-day" entrepreneurship includes a spectrum of activities ranging from independent/autonomous to integrative/cooperative behavior that lead to improvements in daily work processes and work designs ultimately aiming at value creation within organizations. A *manager* is a person who holds legitimate authority or power over a group of immediate subordinates. *Emotion regulation* refers to the process of modifying one's own emotions and expressions. It involves intentionally eliciting and sustaining pleasant and unpleasant emotions when appropriate (Gross & John, 2002). Finally, the terms "emotions," "affect," and "mood" are used interchangeably in the present study. However, we acknowledge that emotions refer to episodic and dynamic processes of a relatively brief duration, while mood refers to a diffusive affective state, low in intensity and relatively long lasting which is generally considered easier to measure (Barsade & Gibson, 2007; Tran, 2007).

The chapter proceeds as follows. Firstly, we discuss the role of middle managers in the promotion of entrepreneurial behavior within traditional organizations and the intersection of emotions and entrepreneurship in organizations. Secondly, we investigate group diversity and the intersection of entrepreneurship and group heterogeneity. Thirdly, we explore the three-way intersection of entrepreneurship, group heterogeneity, and emotions in organizations by developing and empirically testing an integrative model. The results suggest interesting new directions for future research on group entrepreneurship.

Group Entrepreneurial Behavior within Organizations

In the entrepreneurship research, there exists a long-standing tradition that focuses on the individual and embodies entrepreneurship in a mythical figure of a lone hero and pioneer (Shook, Priem, & McGee, 2003). However, this individualistic view does not acknowledge entrepreneurship as a process takes place at different levels and is not restricted to economic profit (Miller, 1983; Stewart, 1989). Additionally, several scholars argue that there is a need to reconsider entrepreneurship research with regard to the possible elevation of the team to the status of hero; according to Gartner, Shaver, Gatewood, and Katz (1994, p. 6) “the entrepreneur in entrepreneurship is more likely to be plural.”

Although scholars have presented various forms of collective entrepreneurship (e.g., Drakopoulou-Dodd & Anderson, 2007; Johannisson & Nilsson, 1989; Vyakarnam & Handelberg, 2005) the focus of the present study was on group entrepreneurial behavior within established organizations. According to Stewart (1989, p. 15), “The concept of entrepreneurial teams of employees may be rather unconventional, but it is consistent with the opportunity-centered interpretation of entrepreneurship.” In the present study, the notion of collective entrepreneurial behavior among group members is based on the idea that the degree of within-group agreement regarding the level of entrepreneurial behavior indicates the entrepreneurial behavior of the group (Chan, 1998). Group members perceive the shared entrepreneurial behavior as a characteristic of the group. We assume that groups differ in their entrepreneurial behavior. These differences among groups are measurable. That is to say, some groups may have high levels of group entrepreneurial behavior, whereas others may have low levels. Drawing on the literature of individual entrepreneurial behavior within organizations, we explore two internal group processes that may be important for group entrepreneurial behavior: group-perceived managers’ emotion regulation (ROE) and group job satisfaction.

Seminal to our analysis and conceptualization of leader-level trait effects on group entrepreneurial behavior is Zhou and George’s (2003) conceptualization of creativity in organizations as an ultimately affect-laden process. In keeping with the above-mentioned views of processes that facilitate (or not) group creativity, Zhou and George (2003) argued that central to the creative process is anxiety and frustration, especially in the first stages of novel endeavors when the uncertainty levels are high. An additional source of negative emotions and anxiety in creative teams derives from trying to resolve the paradox in inherent conflicts between existing systems and

practices in organizations and employees attempting to come up with new and better ways of doing things. Zhou and George's (2003, p. 547) final argument is that "critical for successful creative outcomes" is management with emotional intelligence (EI) in order for employees to "take advantage of, instead of falling victims to, their emotions." Therefore, a leader's emotion regulatory practices that diffuse to the group-level emotionality are particularly important in creating a work environment that supports and encourages creativity. By managing the group appropriately, leaders will be able to awaken, encourage, and support creativity among employees in organizations.

From this perspective, group affectivity is an important part of the proposed process. For instance, George (1990) found that teams could have distinct affective tone, which was defined as consistent emotional reactions by members of a work group. Likewise, Bartel and Saavedra (2000) found that many diverse types of work groups converged in their mood. These studies imply that the feeling states of work group members can be meaningfully considered as a team-level phenomenon. Recently, researchers have begun to explore emotions as a collective property of groups, and emphasized the influence of collective emotions among group members on group processes and outcomes (Barsade, 2002; Härtel, Gough, & Härtel, 2006; Rhee, 2007). Group emotions, are collective emotions among group members that emerge through several processes either conscious or subconscious (Rhee, 2007). For example, employees within groups may share emotions through social interactions such as conversations about emotional circumstances and related feelings resulting in collective emotions. Furthermore, George (1990) referred to "group affective tones" implying that shared experiences can lead to feeling similar emotions and that individual feeling states can be considered as a group-level phenomenon. In the course of interpersonal exchanges, subordinates will often catch their immediate managers' emotional states and expressions and bring them back within the group. Through the contagiousness of their own emotional states, managers may therefore be able to stimulate their groups' entrepreneurial behavior.

Managers' Emotional Displays Effect on Entrepreneurial Behavior

Recently, research and theory have suggested that managers' socio-emotional skills may be mostly needed for the development of important signals that influence subordinates' willingness to act, both at the individual

and group level (Brundin, Patzelt, & Shepherd, 2008; Druskat & Pescosolido, 2006; Newcombe & Ashkanasy, 2002). According to Affective Events Theory (AET; Weiss & Cropanzano, 1996), leaders are sources of affective events in the workplace, through which they can influence employees' attitudes and behaviors. For example, Newcombe and Ashkanasy (2002) found that emotions displayed by managers can have a strong effect on their employees' perceptions, therefore impacting their behavior. Druskat and Pescosolido (2006) extended research by suggesting that managers' socioemotional skills have an impact on the development of emotionally competent group norms. According to Shepherd and Krueger (2002), it is possible that middle managers send signals to their subordinates regarding the desirability and feasibility of acting entrepreneurially, thereby influencing the likelihood of individual entrepreneurial intent within the organization. It is plausible that these signals may be of emotional nature and could change the emotional state of the receiver, thereby influencing his/her behavior (Pugh, 2001).

In keeping with the above rationale, Brundin et al. (2008) found that emotions displayed by managers enhance their employees' willingness to act entrepreneurially, implying that the managers' ability to regulate their emotional displays could motivate entrepreneurial behavior among subordinates. Moreover, Brundin et al. (2008), found that managers' displays of positive emotions (such as confidence and satisfaction) enhance employees' willingness to act entrepreneurially, whereas displays of negative emotions (such as frustration, worry, and bewilderment), diminish their willingness. This is an important contribution if one considers such emotional displays as managers' conscious or unconscious attempts to influence the team affectivity of the group. Hence, the ability to regulate emotions entails adjusting emotional experience to attain desired affective states and adaptive outcomes, and is a crucial component of EI.

According to Mayer and Salovey (1997), EI encompasses four interrelated abilities involved in the processing of emotional information: perceiving emotions; using emotions to facilitate thinking; understanding emotions; and regulating one's own emotions and the emotions of others. Emotion regulation is a metacognitive aspect of EI that refers to "the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions" (Gross, 1998, p. 275). Individuals high in emotion regulation are likely to be good nonverbal actors capable of posing emotions on cue and adjusting their nonverbal behavior to "fit in" to various social situations (Gross & John, 2002). Emotion regulation influences social interactions by helping people to

understand and interpret internal and social cues, thereby guiding emotional self-regulation and social behavior. Research indicates that, emotion regulation promotes the use of effective social interaction strategies; sound decision making under stress; and executive functions associated with the coordination of numerous skills required for effective social behavior (Gross & John, 2002; Lopes, Salovey, & Straus, 2003; Lopes, Salovey, Côté, & Beers, 2005). Taking into account that emotions can be contagious (Barsade & Gibson, 2007), managers' emotion regulation may spill over to subordinates, thus influencing their emotional state and subsequent motivation to act entrepreneurially (Brundin et al., 2008).

To date, there has been limited research addressing possible mediating influence processes through which managers may affect group entrepreneurial behavior. Emerging evidence suggests that a manager influences group outcomes through group-level mediating processes such as group climate and norms (e.g., Sivasubramaniam, Murry, Avolio, & Jung, 2002). Pirola-Merlo, Hartel, Mann, and Hirst (2002, p. 575) argue that "most of the effects of leadership on performance was via team climate". Therefore, one should explore internal group factors that may influence the relationship between managers' regulation of emotion (ROE) and group entrepreneurial behavior.

We also conceptualize group-perceived managers' ROE as a characteristic of the group. This implies that groups develop a shared understanding of their managers' ROE. For example, a manager who is able to control his/her temper and handle difficulties in a rational way could be recognized by his/her subordinates as a good manager, thus developing a shared understanding of managers' ROE. Members of the same group may perceive high levels of managers' ROE where others, low levels. Presumably, a group that as a whole perceives their managers' ROE as low should have an impact on even those individuals within the group who perceive higher levels of their managers' regulatory abilities. Therefore, it is plausible to conceptualize group perceptions of managers' ROE as being independent of, although closely related to, the level of individual perceptions within the group and thus can be meaningfully considered as a group-level phenomenon.

Although group-perceived ROE as a group-level variable should exhibit within-group homogeneity, it should also exhibit between-group variance. As such, it may be that managers with different ROE have different group perceptions of their ROE. This implies that group-perceived ROE, to some extent reflects the dimension of managers' ROE. This is in line with the findings of Dickson, Smith, Grojean, and Ehrhart (2001), suggesting that when a leader is influencing the development of group norms, the climate

that is developed maintains a consonance with the team leader's individual personality. Therefore, one should expect group-perceived ROE to be positively related to managers' self-report ROE.

We hypothesize that group-perceived managers' ROE is related to group job satisfaction. Recent evidence provided by [Cote and Morgan \(2002\)](#) indicates that employees' emotion regulation influences their job satisfaction. Group-perceived managers' ROE can possibly be related to group job satisfaction. [Mason and Griffin \(2002\)](#) described group job satisfaction as the group-level counterpart to individual job satisfaction and as a group-level construct representing an attitude that is shared by all members of the group. This shared attitude represents a positive (or negative) evaluative judgment that members of the group share about their jobs or job situations ([Weiss, 2002](#)). In the context of the above analysis, we consider job satisfaction as a proxy of affective reactions at work (e.g., [Locke, 1976](#)). Affect Events Theory suggests that antecedent events at work lead to affective states that, in turn, can influence job satisfaction ([Brief, Butcher, & Roberson, 1995](#); [Weiss & Cropanzano, 1996](#)). Job satisfaction certainly involves both cognitive and affective components ([Brief & Robertson, 1989](#)). As will be explained in more detail in the next section about group diversity, assuming that groups develop a shared perception about the appropriateness of their managers' elicitation of pleasant and unpleasant emotions, group-perceived managers' ROE could be related to both affective and cognitive components of group job satisfaction. However, this shared understanding could influence different components of group job satisfaction, depending on whether the nature of the appeal of group-perceived managers' ROE matches rather than mismatches the base of the group attitude.

Finally, we expected that group job satisfaction would be related to group entrepreneurial behavior. A recent meta-analysis by [Harter, Schmidt, and Hayes \(2002\)](#) suggests that business-unit level employee satisfaction is positively correlated with business-unit behaviors and this correlation does not substantially vary across different organizations. According to [Stewart \(1989\)](#), group entrepreneurial behavior is pulled by opportunities for creating new value within the organization. In a recent study, [Kuratko, Hornsby, and Bishop \(2005\)](#) found that middle managers' job satisfaction was positively related to their entrepreneurial actions in general, to the number of new ideas suggested and implemented, and to the number of unofficial improvements in particular. It is possible that group job satisfaction will be related to group entrepreneurial behavior. [Weiss and Cropanzano \(1996\)](#) made a distinction between affect-driven behaviors and

judgment-driven behaviors. Affect-driven behaviors are those behaviors that have a relative immediate consequence of being in particular affective state. Affective attitudes are the proximal causes of these behaviors. Judgment-driven behaviors on the other hand, are those behaviors that are driven by more enduring attitudes about the job. Evaluative attitudes are the proximal causes of these behaviors. In light of the recent findings by [Brundin et al. \(2008\)](#), one could expect that the relationship between job satisfaction and group entrepreneurial behavior will be influenced by the base of group job satisfaction attitude, with the affective base being more strongly related compared to the cognitive base.

Group Diversity as a Moderator

Taking a general approach, research suggests that demographically diverse groups are particularly challenging as they are characterized by interpersonal and task conflict, and the difficulty of interaction makes such work groups less pleasant to be a part of than homogenous ones ([Horwitz, 2005](#); [Stewart, 2006](#)). Two theories provide competing hypotheses regarding the link between group diversity and group performance ([Bowers, Pharmer, & Salas, 2000](#)). On the one hand, similarity theory argues that homogeneous groups are likely to be more productive due to the mutual attraction shared by team members of similar demographics, while heterogeneous groups are predicted to be less productive because of inherent tensions between team members. On the other hand, equity theory postulates that group outcomes are enhanced by the tension that arises between dissimilar individuals within a group. However, no clear support exists for either of the two theories ([Bowers et al., 2000, p. 322](#)), suggesting that the effects of group diversity on group behavior and performance are more complex than either these theories imply. Indeed, [Härtel \(2004\)](#) argues that it is not the diversity in a group that matters but how this diversity is managed.

In a diverse group context, group members experience more emotional conflict and lowered satisfaction than members of homogenous groups, while at the same time diverse groups should have access to a broader range and depth of information than homogenous groups ([Phillips & Lount, 2007](#)). Emerging research evidence suggests that affective consequences of diversity may positively influence cognitive processing of information and subsequent interactions among group members ([Phillips & Lount, 2007](#)). This increased processing of information may benefit group entrepreneurial behavior. In the context of the present study, this implies

that if group-perceived managers' ROE creates a positive affective tone within heterogeneous groups, it will be related to the affective component of group job satisfaction. This could lead members of the heterogeneous groups to see their jobs in new and stimulating ways. Considering that entrepreneurial behavior benefits to a great extent from divergent thinking and the consideration of alternative perspectives (Amabile, Conti, Coon, Lazenby, & Herron, 1996; Madjar, 2005), it makes sense that the increased affective attitudes of group job satisfaction may allow individuals to pool information and combine ideas thus leading to increased group entrepreneurial behavior. This is in line with the notion that managers' displays of positive emotions enhance employees' willingness to act entrepreneurially as Brundin et al. (2008) proposed in the context of individual entrepreneurial behavior. In sum, we argue that although members of diverse groups may experience emotional conflict, managers' perceived ROE will influence the affective component of group job satisfaction and thus group entrepreneurial behavior will emerge as a direct response to the positive affective state of the group.

In the case of homogeneous groups, members experience less emotional conflict, therefore interactions among members are expected to be positive and smooth. Additionally, members of homogenous groups may be less focused and open to information processing because inside their group there exists an agreement and uncomplicated member interaction (Phillips & Lount, 2007). Under this context if group-perceived managers' ROE creates a positive affective tone within a homogeneous group, it will contribute to the existing positive tone of the group; but in this case, it will be related to the evaluative component of group job satisfaction and not the affective component. Thus, for homogenous groups entrepreneurial behavior will be the result of the evaluative component of job satisfaction.

Summary of Aims and Hypotheses

The present study is an attempt to link previous theory and research through the integrative model depicted in Fig. 1. In this model, managers' emotion regulation is conceptualized as an individual-level variable, whereas group-perceived managers' emotion regulation, group job satisfaction, group entrepreneurial behavior, and group diversity are conceptualized as group-level variables. Given the general distinction between distal and proximal antecedents (Shrout & Bolger, 2002), we conceptualize the impact of managers' ROE as an indirect influence on subordinates' entrepreneurial

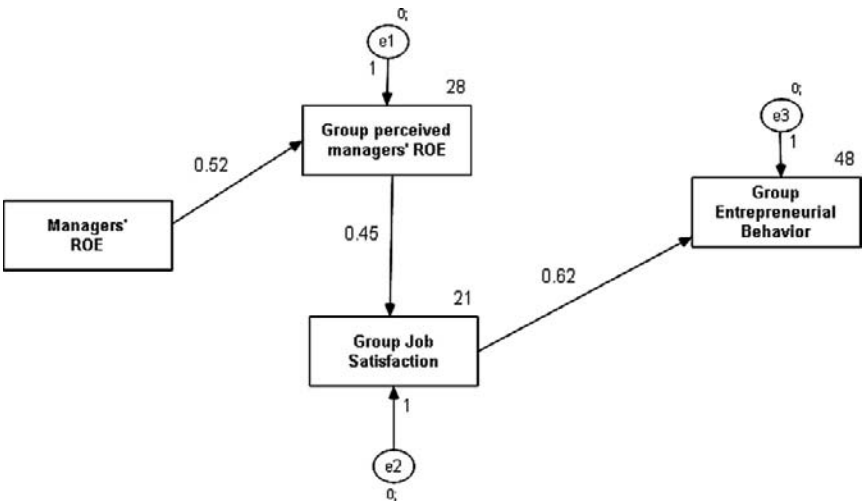


Fig. 1. Representation of the Hypothesized Theoretical Model. Note: Numbers represent common metric standardized parameter estimates.

behavior, operating through proximal antecedents (e.g., group-perceived ROE and group job satisfaction). Based on this thinking, we formulated two general hypotheses:

Hypothesis 1. Managers' ROE will have an indirect effect on group job entrepreneurial behavior through group-perceived managers' ROE and group job satisfaction.

Hypothesis 2. The indirect effect of managers' ROE on group job entrepreneurial behavior will be moderated by group diversity.

METHODS

Participants and Procedures

As part of a larger project on entrepreneurial behavior in established organizations (Zampetakis, Beldekos, & Moustakis, 2009; Zampetakis & Moustakis, 2007a, 2007b), we conducted a study in four public organizations located at the west (Organizations A and B) and east side (Organizations C and D) on the island of Crete, Greece. The organizations

included two prefectures (Organizations A and C) and two water companies (Organizations B and D). Prefectures are second level of the Greek State administration and each prefecture consists of directorates, each dedicated to a specific area of activity (e.g., the directorate of commerce, the directorate of planning and programming, the directorate of administrative services and personnel). Employees in the organizations are involved in varying tasks such as interacting with outside customers, inputting and retrieving data, monitoring of water quality processes, laboratory work, budget allocation decisions, or other similar tasks.

Data were collected using two surveys (one for middle managers and one for group members). A letter was sent to 72 managers explaining the purpose of the survey, as a study on organizational effectiveness and was accompanied with a questionnaire that assessed managers' emotion regulation along with demographic variables. Managers were informed that their immediate subordinates should also participate in the study in the near future and permission was requested for subordinates to complete a questionnaire during working hours. Forty-eight managers from all four organizations completed the questionnaire and returned it by mail to the first author (66.6% response rate). Three weeks later, we visited the managers at their workplace in the organizations. Managers' subordinates were informed that they were participating in a voluntary study on organizational effectiveness. Questionnaires were personally distributed by the authors to the subordinates. The questionnaires assessed managers' perceived emotion regulation and subordinates' job satisfaction and entrepreneurial behavior, along with demographic variables. Upon completion of the survey, employees deposited their responses in a sealed container onsite. A total of 156 questionnaires were returned (72.1% response rate).

The managers in the sample included 35 men (72.9%) and 13 women (27.1%). The managers were employed at their current management position for an average of 10.39 years ($SD = 7.1$), their mean age was 45.63 years ($SD = 7.5$) and almost 50% had a university degree. There were a total of 156 subordinates in this study with 3.1 subordinates per manager. Across the sample of 48 managers, 15 managers had two subordinate participants, 19 had three subordinates, 8 had four subordinates, and 6 had five subordinates. The sample of subordinates who participated included 72 males and 84 females aged 18–60 years ($M = 35.11$ years, $SD = 8.4$). The average organization tenure was 7.59 years ($SD = 7.2$) and 52.5% of the respondents had a university degree and 6.7% had a master or PhD degree. The average duration of having worked with their immediate manager was 3.2 years ($SD = 4.01$). Managers' and their respective subordinates'

participation in the present study was completely voluntary and there was no monetary incentive given to complete the study.

Measurement of Theoretical Constructs

All the main constructs included in the analysis were assessed with self-report measures based on multi-item scales. Responses to all items were made on 7-point Likert scales (1 = strongly disagree, 7 = strongly agree). Native speakers translated all the items into the Greek language. A back translation into English by other bilingual individuals revealed that the translation had worked quite well and that the wording had similar connotations. The specific measures used in the analysis, along with sample items of the relevant constructs, are outlined.

Managers' Emotion Self-Regulation

We used four items from the Wong Law Emotional Intelligence Scale (WLEIS, Wong & Law, 2002) that were previously adapted and used in Greek organizational settings (Kafetsios & Zampetakis, 2008). This is a self-report scale that assesses perception of self-regulation of emotions and therefore regards emotion regulation as a general coping strategy or mood regulation (For a critical review about trait and ability models in EI literature, see Conte, 2005 and Zeidner, Matthews, & Roberts, 2004). The four items are: "I am able to control my temper and handle difficulties rationally"; "I am quite capable of controlling my own emotions"; "I can always calm down quickly when I am very angry"; and "I have good control of my own emotions". Cronbach's alpha coefficient (0.73) for the four items was at satisfactory levels. The four items were then combined into a single ROE measure.

Perceived Managers' Emotion Regulation

We used the same four items of the WLEIS construct for individual employees, but the wording of the items referred to their immediate manager. That is, items were worded to reflect the level of analysis being assessed (e.g., "my manager"). This is what Chan (1998) referred to as the referent-shift consensus model. Examples of sample items for perceived managers' ROE are: "My manager is able to control his/her temper and handle difficulties rationally"; "My manager can always calm down quickly when he/she is very angry". To justify the aggregation of follower ratings to create group-level measures, we used indices of interrater agreement and

interrater reliability. More specifically, the $rwg(j)$ index was used to measure interrater agreement, that is, the consensus among raters within a single unit for a single variable (Castro, 2002; LeBreton & Senter, 2008). A 0.70 criterion for the $rwg(j)$ index has been used to justify aggregation (LeBreton & Senter, 2008). Intraclass correlation coefficients (ICCSs) were calculated to indicate the degree to which group membership accounted for variance in group member responses [ICC(1)] and the reliability of group level means [ICC(2)] (Castro, 2002; LeBreton & Senter, 2008).

The $rwg(j)$ value demonstrated a high level of agreement between group members ($rwg(j)$ mean = 0.82). The percentage of the $rwg(j)$ index above 0.70 was 82. The ICC(1) value of 0.49 ($p < 0.001$) demonstrated that a significant proportion of the variability in group-perceived managers' emotion regulation ratings was accounted for by group membership and that the aggregated group-level means were stable (ICC[2] = 0.95). Cronbach's alpha reliabilities for perceived ROE was 0.83.

Subordinates' Job Satisfaction

We adopted five items from the General Index of Job Satisfaction (Brayfield & Rothe, 1951). Items used were: "Most days I am enthusiastic about my job"; "I feel fairly satisfied with this job"; "I like my job better than the average employee"; "I find real enjoyment in my job"; and "I would not consider taking another job". The $rwg(j)$ value demonstrated a high level of agreement between group members ($rwg(j)$ mean = 0.75). The percentage of the $rwg(j)$ index above 0.70 was 79. The ICC(1) value of 0.11 ($p < 0.001$) demonstrated that a significant proportion of the variability in group job satisfaction ratings was accounted for by group membership and that the aggregated group-level means were stable (ICC[2] = 0.76). Cronbach's alpha for perceived ROE was 0.83.

Subordinates' Entrepreneurial Behavior

We assessed this construct using 10 items from Pearce, Kramer, and Robbins' (1997) measure of entrepreneurial behavior. Sample items were: "I display an enthusiasm for acquiring new skills"; "I cannot change quickly course of action when results aren't being achieved" (reverse scored); "I seldomly devote time to help my colleagues in order to find ways to improve our services" (reverse scored); "I encourage my colleagues to take the initiatives for their own ideas in order to improve our services"; "I create a cooperational and team working climate in my group in order to meet a challenge"; "I don't inspire my colleagues to think about their work in new and stimulating ways" (reverse scored). Prior to the main analysis,

we formed item parcels in order to control inflated measurement errors due to multiple items and improve the psychometric properties of the variables. Item parceling involves the averaging of groups of two or more items into subsets, which, in turn, are treated as indicators of the latent construct (see Little, Cunningham, Shahar, & Widaman, 2002). We created two parcels of this construct based on an exploratory factor analysis. We then assigned items to indicators on the relative size of their factor loadings in order to evenly distribute items across indicators. Coefficient alpha for all 10 items was 0.83 and for the two subscales, the alphas were Entre1 (5 items), 0.72; and Entre2 (5 items), 0.78. The $rwg(j)$ value for the entrepreneurial behavior scale demonstrated a high level of agreement between group members ($rwg(j)$ mean = 0.84). The percentage of the $rwg(j)$ index above 0.70 was 83. The ICC(1) value of 0.31 ($p < 0.001$) demonstrated that a significant proportion of the variability in group job entrepreneurial behavior was accounted for by group membership and that the aggregated group-level means were stable (ICC[2] = 0.82).

Group Demographic Heterogeneity

Subordinates reported their age, gender, organizational tenure, and education. We calculated the coefficient of variation (COV) to assess group heterogeneity in age, and organizational tenure (both measured in years). COV is a scale invariant measure of dispersion that is appropriate for interval-level variables (Klein, Conn, Smith, & Sorra, 2001). We used Blau's (1977) index of heterogeneity to measure heterogeneity in gender and education. We used dummy variables for gender (1: male; 2: Female) and education (1: Secondary education; 2: University graduate; 3: Master and PhD). For both indexes, values close to zero are interpreted as homogeneous and values close to one as heterogeneous. Following Van der Vegt and Janssen (2003), we averaged the age, sex, education, and tenure diversity scores to produce a summative demographic group diversity measure.

Control Variables

Leader tenure, gender, and education were used as control variables in the present study. Because a manager's prior work experience is often strongly related to leadership effectiveness, the number of years at the current position was used as a control variable. Leader gender was also controlled because prior research has shown that women tend to have greater social and emotional skills than men (Riggio, 1986). Furthermore, managers with a university degree and higher vocational training are more likely to be more

effective than middle managers with primary or secondary education (Wiersema & Bantel, 1993).

Analytical Strategy

The manager was the unit of analysis for the present study, and managers' ROE were averaged to create a scale score for each manager participant, whereas subordinates' ratings for the subscales of perceived managers' emotion regulation, job satisfaction, and entrepreneurial behavior, were averaged and aggregated. Prior to testing the proposed model and the associated hypotheses, confirmatory factor analyses were conducted to demonstrate the construct validity of managers' and subordinates' variables. We used the Analysis of Moment Structures (AMOS version 7.0) software (Arbuckle, 2006), and followed a Bayesian approach to estimate confirmatory factor analysis (CFA) of managers' and subordinates' measurement models along with Markov Chain Monte Carlo (MCMC) for model fit. Bayesian modeling does not rely on asymptotic theory, making it particularly useful when the sample size is small and thus classical estimation methods (such as maximum likelihood) are not robust. Gelman, Carlin, Stern, and Rubin (2004) provide a comprehensive treatment of Bayesian methodology. More introductory textbooks about this topic include Congdon (2003) and Berry (1996).

In Bayesian estimation, a point estimate of a parameter is the mean of the posterior distribution. Furthermore, unlike the conventional confidence interval, the Bayesian credible interval is interpreted as a probability statement about the parameter itself; $Prob(a \leq \theta \leq b) = 0.95$ literally means that we are 95% sure that the true value of θ lies between a and b . Inference in the Bayesian framework involves summarizing the joint posterior of all unknown parameters. MCMC simulation-based methods, in general, and the Metropolis–Hastings algorithm, in particular, were used to obtain random draws from the posterior density. The convergence of the MCMC simulation was verified using a variety of diagnostics such as time series (or trace) plots to graphically assess the quality of the mixing of the chain and autocorrelation plots (Gelman et al., 2004, p. 296).

In the present study, we considered a common situation that accurate prior information is not available for model parameters. Therefore, we chose flat prior distributions that assign zero probability to improper solutions for the variances (i.e., negative variances) of the model, that is, the variance parameters were constrained to have strictly positive values.

For the rest of the model parameters we chose noninformative normal priors. Under this design, for the variance parameters, the conjugated posterior distribution is an inverse gamma distribution and for the rest of the model parameters, a normal distribution (Gelman et al., 2004).

The adequacy of a Bayesian model can be assessed using posterior predictive model checking (Gelman, Meng, & Stern, 1996). Posterior predictive p -value (PP p -value) is the probability that the replicated data (i.e., the posterior predictive distributions) could be more extreme than the observed data. As suggested in Gelman et al. (2004, pp. 175–176), posterior predictive p -value should be near 0.5 for a correct model, with values toward the extremes of 0 or 1 indicating that a model is not plausible. This statistic has been applied to Bayesian analyses (e.g., Lee, 2007, pp. 128–129; Scheines, Hoijtink, & Boomsma, 1999) and has produced dependable results for assessing goodness-of-fit of the posited model. Furthermore, the Deviance Information Criterion (DIC) (Spiegelhalter, Best, Carlin, & van der Linde, 2002) was used as a method of choosing among the competing Bayesian models. The model with the smallest DIC is selected to be the best model.

In order to test the moderating effect of group demographic heterogeneity on the relationship between managers' emotion regulation and group entrepreneurial behavior, we used multigroup analyses for the detection of interaction effects. Multigroup analyses are more flexible than interaction modeling in the case of complex models (Rigdon, Schumacker, & Wothke, 1998). Specifically, we formed two subgroups (homogeneous and heterogeneous) by splitting the total demographic group diversity measure at the respective mean. Although multigroup analyses with continuous variables have the disadvantage that the mean of grouping is ad hoc and may lead to loss of information, Reinecke (2002) suggests this strategy in order to preview possible interaction effects.

RESULTS

Preliminary Analyses-Assessment of Measurement Models

The first measurement model tested the managers' emotional regulation variable postulating that each item would load significantly onto the common factor. Model fitting was accomplished using the Metropolis–Hastings algorithm. The initial 1,000 MCMC scans were discarded as burn in. The posterior summaries were based on a posterior sample size of 43,000 scans. The MCMC chain mixed well and standard diagnostics

suggest that the sample is approximated from the stationary distribution. Based on the standards for Bayesian modeling, the model demonstrated an acceptable level of fit (PP p -value = 0.42).

The second measurement model tested the subordinates' self-report variables, namely, perceived managers' emotion regulation, job satisfaction, and entrepreneurial behavior. Again, model fitting was accomplished using the Metropolis–Hastings algorithm, with the initial 1,000 MCMC scans discarded as burn in. The posterior summaries were based on a posterior sample size of 59,000 scans and the model demonstrated an acceptable level of fit (PP p -value = 0.72; DIC = 106.95), with each item to load significantly onto the corresponding factor. For purposes of comparison, we contrasted the hypothesized measurement model with a one-factor model, in which all of the hypothesized factors were set to load on a single underlying factor (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The hypothesized measurement model fit the data better than the alternative, both in terms of PP p -value and when directly contrasted with a change in DIC (PP p -value = 0.0; DIC = 231.61).

Hypothesis Testing

Table 1, presents means, standard deviations, and correlations of key variables in this study for managers and subordinates. Managers' ROE was related to group-perceived managers' ROE ($r = 0.529$, $p = 0.001$) and group-perceived ROE was positively correlated with group job satisfaction ($r = 0.461$, $p = 0.001$). Furthermore, group job satisfaction was positively related with group entrepreneurial behavior ($r = 0.630$, $p = 0.001$). Group-perceived ROE was positively related to group entrepreneurial behavior ($r = 0.488$, $p = 0.001$). Both group job satisfaction and group entrepreneurial behavior correlations with managers' ROE were nonsignificant ($r = -0.130$, $p = 0.37$, and $r = 0.104$, $p = 0.48$, respectively). Finally, results indicate that managers' characteristics (age, tenure, education, and gender) were not related to managers' ROE and group entrepreneurial behavior.

We used the Bayesian path analysis to estimate the proposed integrated model (see Fig. 1). Model fitting was accomplished using the Metropolis–Hastings algorithm. The initial 1,000 MCMC scans were discarded as burn in. The posterior summaries were based on a posterior sample size of 45,000 scans. The MCMC chain mixed well and standard diagnostics suggest that the sample is approximated from the stationary distribution. Based on the standards for Bayesian modeling, the model demonstrated an acceptable

Table 1. Means, Standard Deviations, and Intercorrelations among Measures.

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Managers' Gender ^a	1.27	0.45	1												
2. Managers' Age	45.63	7.52	-0.165	1											
3. Managers' Tenure	10.39	7.17	-0.001	0.106	1										
4. Managers' Education ^b	2.46	1.34	-0.034	-0.122	0.166	1									
5. Managers' ROE	5.46	0.88	0.029	-0.119	0.105	-0.110	1								
6. Group-perceived managers' ROE	5.26	0.90	-0.036	-0.042	0.209	0.108	0.529**	1							
7. Group job satisfaction	4.59	0.76	0.052	0.036	0.054	-0.188	0.130	0.461**	1						
8. Group entrepreneurial behavior	5.26	0.64	0.004	0.089	0.096	0.112	0.104	0.488**	0.630**	1					
9. Group diversity in age (COV) ^c	0.19	0.09	0.186	0.309*	-0.032	-0.191	-0.052	-0.233	-0.064	0.034	1				
10. Group diversity in tenure (COV) ^c	0.72	0.30	0.001	0.224	0.043	-0.176	0.051	-0.216	-0.007	-0.095	0.405**	1			
11. Group diversity in Gender (IH) ^d	0.32	0.21	0.195	-0.012	-0.022	-0.331*	0.107	-0.075	-0.078	-0.035	0.060	0.034	1		
12. Group diversity in education (IH) ^d	0.46	0.21	-0.133	-0.282	0.200	0.107	0.125	0.032	-0.135	0.039	-0.237	-0.338	0.011	1	
13. Total diversity index ^e	0.42	0.10	0.076	0.082	0.116	-0.290*	0.146	-0.234	-0.130	-0.060	0.433**	0.670	0.566**	0.221	1

Note: N = 48.
* $p < 0.05$ (two-tailed tests).
** $p < 0.01$ (two-tailed tests).
^aGender is coded such that 1 = male and 2 = female.
^bEducation is coded such that 1 = Secondary education; 2 = University graduate; 3 = Master and PhD.
^cCOV: Coefficient of variation (higher scores represent greater diversity).
^dIH: Blau's (1977) index of heterogeneity (higher scores represent greater diversity).
^eThe total diversity index is the average of the age, sex, education, and tenure diversity scores.

level of fit (PP p -value = 0.31, DIC = 29.04). Subsequent analysis of the path model and path coefficients, which represented standardized regression, yielded results that support the integrated model's hypotheses. Fig. 1 illustrates the path coefficients for the proposed model.

Hypothesis 1. Managers' ROE was strongly related to group-perceived managers' ROE ($\beta = 0.52$, 95% credible interval: 0.28–0.69); the standardized direct effect of group-perceived ROE on group job satisfaction was significant ($\beta = 0.45$, 95% credible interval: 0.19–0.66); and the standardized direct effect of group job satisfaction on group entrepreneurial behavior was also significant ($\beta = 0.62$, 95% credible interval: 0.42–0.77). The standardized total effect of managers' ROE on group entrepreneurial behavior was significant ($\beta = 0.14$, 95% credible interval: 0.05–0.27). The proportion of variance in group-perceived ROE, group job satisfaction, and group entrepreneurial behavior that was explained by the collective set of predictors was 28, and 21, and 48%, respectively. Thus, the results provide support for Hypothesis 1.

Hypothesis 2. Subsequently, we analyzed through multigroup (heterogeneous groups versus homogeneous groups) Bayesian path analysis. Model fitting was accomplished using the Metropolis–Hastings algorithm. The initial 1,000 MCMC scans were discarded as burn in. The posterior summaries were based on a posterior sample size of 39,000 scans. The MCMC chain mixed well and standard diagnostics suggest that the sample is approximated from the stationary distribution. Based on the standards for Bayesian modeling, the model demonstrated an acceptable level of fit (PP p -value = 0.46, DIC = 49.44).

For the homogenous groups, the standardized total effect of managers' ROE on group entrepreneurial behavior was not significant ($\beta = 0.05$, 95% credible interval: -0.02 – 0.19). For the heterogeneous groups the standardized total effect of managers' ROE on group entrepreneurial behavior was significant ($\beta = 0.27$, 95% credible interval: 0.07 – 0.51). Therefore, the results provide support for Hypothesis 2.

In order to find specific interaction effects, we performed a series of comparisons that incorporated increasingly restrictive equality constraints on the model path coefficients across the two groups. We found that constraining the paths from managers' ROE to group-perceived managers' ROE and from group-perceived managers' ROE to group job satisfaction to be equal across the two groups, resulted in improved model fit (PP p -value = 0.51, DIC = 45.91). However, posing an equality constrain for

the path from group job satisfaction to group entrepreneurial behavior model fit decreased (PP p -value = 0.10, DIC = 58.94). This indicates for an interaction effect between group diversity and group job satisfaction in the relationship between group job satisfaction and group entrepreneurial behavior. Thus, the positive relationship between group job satisfaction and group entrepreneurial behavior is stronger for heterogeneous groups compared to homogenous groups. Therefore, it seems that, the relationship between managers' ROE and group entrepreneurial behavior is positive for heterogeneous groups with high group job satisfaction. The path coefficient for the interaction term of managers' ROE \times group job satisfaction \times group diversity is significant ($\beta = 0.33$, 95% credible interval: 0.12–0.52). The interaction term explains an additional 11% of the group entrepreneurial behavior variance.

Comparing Plausible Alternative Models

Although the results presented above offer mostly strong support for the hypotheses of the integrated model, they do not rule out the possibility that competing models provide a stronger description of the data. Three alternative models were set up in order to compare their fit to that of the model tested above.

The first of these models involved a path from group entrepreneurial behavior into group job satisfaction (this was in the direction opposite to the path in Fig. 1). This path was significant for the heterogeneous groups ($\beta = 0.64$, 95% credible interval: 0.33–0.85) and insignificant for the homogenous groups ($\beta = 0.34$, 95% credible interval: -0.05 – 0.67). However, the overall model gave a very poor fit (PP p -value = 0.07, DIC = 62.50).

The nonrecursive model with a reciprocal link between group job satisfaction and group entrepreneurial behavior was then tested and provided a relatively good fit to the data (PP p -value = 0.14, DIC = 52.82). However, the return path from group entrepreneurial behavior to group job satisfaction was not significant either in the homogenous or in the heterogeneous group data.

The next model involved a path from group-perceived managers' ROE into group job entrepreneurial behavior. This path was not significant for both groups. Finally, we tested the nonrecursive model with a reciprocal link between group job satisfaction and group-perceived managers' ROE. The path from group job satisfaction to group-perceived managers' ROE

was not significant for both groups. Based on these results, the model in Fig. 1 was accepted as the most parsimonious interpretation of the data.

DISCUSSION

The present study extends an emerging body of research of the role of managers' ROE in promoting workplace group entrepreneurial behavior by demonstrating links between the manager's ROE, group-perceived manager's ROE, group job satisfaction, and group entrepreneurial behavior. Our attempt was aimed at explaining both how and when managers' ROE influence group job satisfaction. Our study revealed that managers' ROE was positively and significantly related to group-perceived managers' ROE. Furthermore, our analyses demonstrated the mediational role of group-perceived ROE and group satisfaction for group entrepreneurial behavior outcomes. In addition, we found evidence that group diversity moderates the relationship between managers' ROE and group entrepreneurial behavior. In keeping with recent studies at the individual level of analysis, our results demonstrated that managers' emotionality significantly relates to group job satisfaction and group entrepreneurial behavior (Brundin et al., 2008).

In keeping with central theoretical positions for emotion processes at different levels of analysis (Keltner & Haidt, 2001), we found that group-level perceptions of managers' ROE were more powerful predictors of group job satisfaction than managers' own perceptions of his/her regulatory skills. In the introduction, we conceptualized group perceptions of a manager's ROE as group-level phenomenon. The analyses revealed that group members have a shared understanding of their group's perceptions toward their managers' ROE. It is plausible that this shared understanding facilitates the development of a positive affective tone within the group that in turn affects group job satisfaction. Moreover, the variability in the employees' perceptions of the managers' skills and its effect on employees' work affectivity may be indicative of interactive effects between manager and employee personality, and also taking into account, organizational-contextual factors.

Group diversity was an important moderator in the evidenced processes. The relationship of group perceptions of managers' ROE on group entrepreneurial behavior was different between heterogeneous and homogenous groups. Consistent with the distinction made in AET regarding affect-driven and judgment-driven behaviors (Weiss & Cropanzano, 1996),

it seems that group entrepreneurial behavior in heterogeneous groups emerges as a direct response to the positive affective state of the group that is created by group-perceived managers' ROE on group job satisfaction. In the case of homogenous groups, the evaluative judgments of group job satisfaction seem to be related to group entrepreneurial behavior. Our results are in line with the notion that managers' displays of positive emotions enhance employees' willingness to act entrepreneurially, as Brundin et al. (2008) recently proposed, in the context of individual entrepreneurial behavior. Additional evidence for the interaction between phenomena at different levels of analysis comes from the findings that perceptions of the manager as having high emotion regulatory skills are more important in diverse groups where there are more opportunities for putting those skills into practice, in order to resolve likely conflicts, and hence influencing group affectivity.

In sum, the results direct attention to two main points. The first is that groups may perceive their immediate managers' ROE. The second and most important point relates to the indirect effect of managers' trait ROE to group entrepreneurial behavior. Results indicate that managers' ROE has an indirect effect on group entrepreneurial behavior via group-perceived managers' ROE and group job satisfaction. Furthermore, we found an interaction effect at the group level, where the relationship between managers' ROE, and group entrepreneurial behavior was stronger for heterogeneous groups with group job satisfaction. These results provide empirical support concerning the effects of managers' emotion regulation on the group they control expanding the literature toward the examination of more complex models of corporate entrepreneurship.

Although this study provides interesting evidence for multilevel emotion processes in entrepreneurial behavior and emotion at work theories, the study nonetheless should be read with the following limitations in mind. One limitation is that the data are cross sectional and self-report measures were used; therefore common method variance and social desirability are a concern. However, based on the recommendations by Podsakoff, MacKenzie, Lee, and Podsakoff (2003), our independent variable scales preceded the dependent variable scales by administering self-report measures at different points in time. Another matter of concern is whether the wording of the group-perceived ROE might have influenced the extent of homogeneity on group members' ratings of managers' ROE. However, the wording of the items referred to the level of analysis, that is, the manager (Chan, 1998) and items asked respondents to describe the extent they agreed or disagreed with objective characteristics of managers' EI, encouraging

them to assume a factual stance. Therefore, it seems unlikely that the wording of the items could have influenced group homogeneity. However, subordinates' participation in this study was voluntary, making it possible that selection effects were present in managers' ratings. Nonetheless, the low response rate in the study presents some concern for the generalizability of the findings.

RECOMMENDATIONS FOR FUTURE RESEARCH

In the present study, we used aggregated group members' individual job satisfaction ratings. Although this practice is typical in management research (Mason & Griffin, 2002), it is likely that additional variance could be explained if future research used a measure that directly assessed group job satisfaction (e.g., Mason & Griffin, 2002) and group entrepreneurial behavior. Additionally, we implicitly referred to the cognitive and affective components of group job satisfaction. Future research should consider specific constructs for the measurement of these components. Furthermore, future research should explicitly consider the construct of perceived group ROE. Is it an isomorphic construct? Does it refer to managers' perceived ROE and to what extent does it reflect other shared group properties? Is it group members' shared experiences, or social influences that give rise to shared understanding of group's perceptions toward their managers' ROE? To what extent does subordinates' ROE influence the perceived managers' ROE? Is it possible that a single individual can significantly influence a group's perceived ROE, group job satisfaction, and group entrepreneurial behavior? To what extent does the fit (or lack of it) between managers' demographic characteristics and the composition of their groups impact group outcomes? All these are important research questions that future research should address. Recently, there is a growing interest in the way organizational roles interact with managers' emotional capabilities (e.g., Kafetsios, Nezlek, & Vassiou, *in press*; Lindebaum, 2009) and answer to the above questions can contribute to understanding such processes.

Ultimately, additional research is clearly needed to determine the extent to which the pattern of results obtained in the present study applies to other organizations (e.g., nonpublic sector organizations) in different contexts. Particularly useful in this respect would be research designed to test whether the indirect effects of managers' ROE observed in the present study also hold true in non-Greek organizations.

CONCLUSION

Research presented herein indicates that managers' emotion regulation may have considerable utility for understanding group entrepreneurial behavior within organizations. This study examined the relationships among managers' ROE, group-perceived ROE, group job satisfaction, and group entrepreneurial behavior in a sample of employees working in public sector organizations. The model proposed provides evidence that an indirect relationship exists between managers' emotion regulation and group entrepreneurial behavior and this is moderated by group diversity, and therefore expanding the literature toward the examination of more complex models of corporate entrepreneurship. As such, results reported herein may be particularly valuable for management development educators as they provide important insight into mechanisms that may underlie group entrepreneurial behavior within organizations.

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CHAPTER 3

PUTTING EMOTION AT THE HEART OF AGENCY: A RELATIONAL PERSPECTIVE ON ENTREPRENEURIAL ACTION

David Goss

ABSTRACT

Despite its resonances, the sociological concept of agency – the ability to ‘make a difference’ – has not been widely applied to entrepreneurialism. This chapter makes a case for a relational conception of agency. It extends our thinking about entrepreneurialism into areas that, despite their empirical importance, have received little systematic theoretical attention, specifically, the role of emotions, corporeality and social interactions. The relational theory of entrepreneurial agency allows us to address, in new ways, one of entrepreneurship’s enduring questions: why do some individuals rather than others become entrepreneurs? Theoretically, by placing emotion at the heart of agency we propose a theory that can recognise individuality without recourse to individualism. We illustrate this approach through a re-analysis of structural hole theory, which is an attempt to explain (unsatisfactorily in our view) entrepreneurial behaviour by recourse to social network theory. We show how a relational concept of agency can resolve the unhelpful tension between the structural qualities of network relationships and the capacity for individual action.

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INTRODUCTION

In much everyday and social scientific discourse, agency stands for a bundle of attributes associated with notions of individual voluntarism and the ability to ‘make a difference’: ‘self-hood, motivation, will, purposiveness, intentionality, choice, initiative, freedom and creativity’ (Emirbayer & Mische, 1998, p. 962).¹ These notions are also deeply embedded in many of our normative conceptions of entrepreneurship: the ‘generalised entrepreneur’ frequently appears as an independent and heroic individual, ‘a symbol of self-determination ... of causal powers at the behest of uncaused causes that begin and end in ourselves’ (Moldoveanu & Nohria, 2002, p. 81).

But few entrepreneurship researchers use the agency construct as a theoretical term. For disciplines regarding entrepreneurship through the lens of methodological individualism, there are alternative and more established ways to portray individual action, such as rational choice or personality structure. For relational approaches, such as social network theory, the characteristics of *specific* individuals are usually assumed to be inconsequential in comparison to structural position. The most concerted attempts to incorporate notions of agency have been made by writers adopting forms of structuration theory. But even here the concept has struggled to add anything that is singularly distinctive in terms of explanatory power. Sarason, Dean, and Dillard’s (2006) well-developed structuration theory of entrepreneurship, for instance, conceives agency as an essential individual power that, through reflection and interpretation, enables actors to ‘make a difference’. Such a conception gives a welcome emphasis to the ways in which entrepreneurs are implicated in the dynamic and ongoing creation of opportunities: ‘knowledgeable entrepreneurs are empowered to act in a manner that influences structures (opportunities), and to reflexively monitor the impact of their actions leading to actions that reinforce, modify, or create new opportunities’ (Sarason, Dean, & Dillard, 2006, p. 292). But it does little to explain why some individuals appear to have a greater capacity for agency than others and why, in turn, some of the former apply this agency to entrepreneurship rather than other forms of action. As with most conventional agency theories, individual goal seeking and purposive deliberation are taken as givens rather than subject to explanation.

An exception to this tendency is Emirbayer and Mische’s (1998) ‘internally differentiated’ conception of agency (i.e. comprising processes of ‘iteration’, ‘practical evaluation’ and ‘projectivity’). By combining this with an emotional dynamic derived from Collins’s (2004) ‘interaction ritual chain theory’ (IRCT), we offer a theory that addresses the

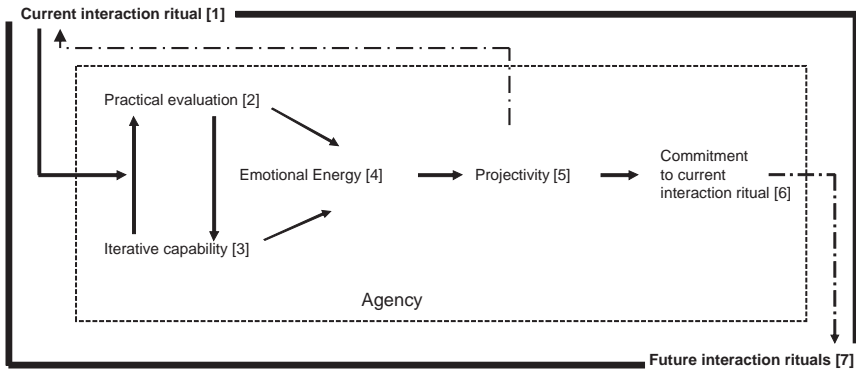


Fig. 1. Agency and Emotion.

manifestation of agency in entrepreneurial activity and explains how and why it takes the form it does.

Fig. 1 offers a generalised model of the processes to be outlined below. The diagram represents schematically one link in the chain of interactions through which individual lives are constituted.

The following brief overview is intended to provide only a broad outline of the relationships between this chapter's key constructs. Detailed explication will be undertaken in the following sections (numbers in [] refer to constructs in Fig. 1). In outline, we propose that, following Collins (2004), social situations can be comprehended in terms of their ritual characteristics [1]. The effectiveness with which the ritual is enacted (see further below) determines the level of individual *emotional energy* (EE) and *group solidarity* produced. These factors influence an individual's commitment to an existing ritual. This can range from enthusiastic repetition, mild indifference, to repulsion and the search for a different form of interaction [7]. The solid lines linking present and future rituals represent the situational context for individual agency. The inner dotted box specifies the processes through which such situated interactions translate into varying levels of agentic capacity. As the ritual progresses, experiences of rising or falling levels of EE are appraised through *practical evaluation* [2] and the *iterative recall* [3] of previous situations' emotional loadings. Where this appraisal is positive there will be a growing enthusiasm and commitment to the ritual; where it is negative, indifference and withdrawal. This raises or lowers concurrent levels of EE [4] and shapes the nature of 'projectivity' [6], that is, the extent to which an individual directs his/her imagination towards

varying degrees of either repetition or innovation in social relationships, and his/her commitment to turn such 'plans' into actions.

By incorporating an emotional dynamic, the model offers a novel way of conceiving agency and relating this to generative processes within social situations. An analysis of such situations (concurrently and biographically) should, in principle, allow the prediction of individual agentive capabilities and their implications for particular patterns of action.

To develop this argument, this chapter is organised in four sections. The first outlines the theoretical basis for a relational conception of agency and establishes the need to incorporate an awareness of emotional dynamics. This is addressed in the second section, using ideas from 'IRCT'. There follows an illustration of the model's utility drawing on reinterpreting Burt's 'structural hole' theory of entrepreneurship, offering three novel propositions to extend this theory's explanatory power. The final discussion looks at the model's wider implications.

A RELATIONAL CONCEPTION OF AGENCY

Emirbayer and Mische (1998, p. 693) develop an internally differentiated notion of agency, the dimensions of which connect social situations and experiences. Agency is seen as an 'embedded process of social engagement', conceived in terms of three interpenetrating temporal orientations – iteration, projectivity and practical evaluation.

'Iteration' focuses predominantly on the past and involves the 'selective reactivation by actors of past patterns of thought and action, as routinely incorporated in practical activity, thereby giving stability and order to social universes and helping to sustain identities, interactions and institutions over time' (1998, p. 971). Although Emirbayer and Mische treat iteration as a conservative dimension, retrospection is also capable of producing a predilection for resistance, challenge and innovation (Barbalet, 2002; Goss, 2005b, 2007a; Jacoby, 1996; Kets de Vries, 1996; Scheff, 1990; Tangney & Dearing, 2002). Acknowledging iteration's disruptive capacity is clearly necessary for an understanding of entrepreneurial agency, not least because of its potential to stimulate Schumpeterian 'gales of creative destruction'.

'Projectivity', Emirbayer and Mische's second dimension, is future oriented. It encompasses 'the imaginative generation by actors of possible future trajectories of action, in which received structures of thought and action may be creatively reconfigured in relation to actors' hopes, fears, and

desires for the future' (1998, p. 971). This dimension is clearly relevant to entrepreneurialism, although within the field it has been conceived predominantly through the lens of cognition and rational planning/goal setting (see Shane, 2003 for an assessment). We argue it is necessary to extend this cognitive frame by incorporating cultural/symbolic discourses (Dodd, 2002; Nicholson & Anderson, 2005; Rigg, 2005) and emotions (Goss, 2005a, 2005b, 2007b) as drivers of the 'imaginative travel' that surrounds planned activity.

Agency's third and present-focused dimension is '*practical evaluation*'. This represents a 'contextualisation' of social experiences established via 'communicative transactions': '[through] deliberation with others (or sometimes, self-reflexively with themselves) about the pragmatic and normative exigencies of lived situations, actors gain in the capacity to make *considered decisions* that may challenge received patterns of action' (Emirbayer & Mische, 1998, p. 994). Here, too, we argue the need for conceptual extension. Whilst deliberation and communication are clearly involved in responses to social situations, it seems equally clear that many of these practical evaluative performances also have non-cognitive or para-cognitive dimensions that hinge on emotions and corporeality (Argyle, 1991; Urry, 2002). As Boden and Molotch (1994; also Collins, 2004) make clear 'deliberations with others' are not merely forums for the exchange of information; they have an *embodied* character that both motivates participation and 'authenticates' the information that is exchanged. An important part of such bodily proximity is the generation of emotion. Scheff (1990, 1997), for instance, contends that emotions such as pride and shame can be stimulated – almost automatically – by subtle non-verbal communications that convey evaluations of deference. As Goss (2005b, 2007b) has argued, these types of interactionally generated emotion are integral to entrepreneurialism and therefore need to be incorporated into a conception of entrepreneurial agency.

INTERACTION RITUAL AND EE

However, despite its relational focus, Emirbayer and Mische's theory fails to provide a definitive answer to the question of how agency – or more specifically, *variations* in agency – relates to the 'temporal-relational context of action', that is, structure. This means that the exact determinants of the interrelations between agency's three components remain ambiguous,

as do the effects that stem from them. We believe that by combining the three dimensions of agency with insights from Collins's IRCT, we can remove these ambiguities and move towards a theory of agency that has stronger explanatory power. To pre-empt the argument to follow, we suggest that these agentive dimensions are best regarded as individual processes for dealing with the *EE*² generated within social interaction. By understanding these emotional dynamics, we can better specify the nature of agentive powers under given conditions. First, however, we need to provide an account of interaction ritual chains.

Although he does not use the term, Collins (2004) offers a theory of motivation, driven by 'EE' that produces effects usually attributed to agency. EE is generated within social situations having the status of interaction rituals. Such situations form 'chains' that have both temporal and relational dimensions. The former (operating through memory) constitutes individual biography. The latter connects individuals in network relationships, the stability and intensity of which are shaped by ritual success or failure. Both individual motivation (agency) and the foundations of 'social structure' are ritually generated, the latter via collectively shared symbols and interactional solidarity, the former as EE.

Collins (2004) conceives interaction rituals in terms of ingredients and outcomes. Ingredients include group assembly, barriers to outsiders, a mutual focus of attention, and a shared mood. Together these have the potential to generate 'collective effervescence' (a sense of shared emotional engrossment and excitement). If sustained, this translates into the outcomes of collective solidarity, individual EE, group symbols and standards of morality.³ The underpinning theory of situational co-presence, interactional focus and solidarity is well established and will not be repeated here (see, e.g. Argyle, 1991; Boden & Molotch, 1994; Crow, 2002; Durkheim, 1965; Goffman, 1967; Hatfield, Cacioppo, & Rapson, 1994; Katz, 1999; Letiche & Hagemeyer, 2004). However, that relating to EE and symbolism is distinctive to Collins's work and requires elaboration.

EE is the lynchpin of IRCT. It refers to a long-term 'emotional tone' ranging from an 'up' tone of excitement and happiness to a 'down' tone of depression and sadness. An individual's level of emotional energy depends on the success of a given ritual and the nature of his/her participation within it. In broad terms, a highly intersubjective situation that succeeds in focusing actors' mutual attention will produce 'high points of collective experience'. The more central an individual's participant, the more EE he/she will feel: 'These are the events that we remember, that give meaning to our personal biographies, and sometimes to obsessive attempts

to repeat them ... if the patterns endure we are apt to call them personalities (2004, p. 43).

EE is the crucial motivating force of interaction rituals: 'human bodies come out of the [IR] situation charged with emotional outcomes, which in turn set up what will happen in their next situations' (2004, p. 105). Such interaction rituals constitute individual biographies and identities by forming 'chains' or networks of social attraction and repulsion:

The relative degree of emotional intensity that each IR reaches is implicitly compared with other IRs within those persons' social horizons, drawing individuals to social situations where they feel more emotionally involved, and away from other interactions that have a lower emotional magnetism or an emotional repulsion. (Collins, 2004, p. xiv)

This process is further facilitated by EE's cognitive dimension which operates through memory's ability to attach an emotional charge to ritually generated symbols, the valency of which stimulates a rational evaluation of available interaction opportunities in terms of their EE potential. It is by tracing these flows of emotions and emotion-laden cognitions, Collins claims that we can conceive how social order, produced on the micro level, 'concatenates into macro patterns' (*ibid*).

A successful interaction ritual produces group solidarity that, in turn, encourages members to construct symbols representing the group and its activities, either in the form of sacred objects (emblems, totems) or specialised discourses. Within IRCT, symbolic resources provide a crucial articulating mechanism, operating both within and between rituals – carrying emotions from one situation to another. These symbols, when committed to memory, retain some of the emotional charge generated during the rituals in which they were used, and thereby continue to exert an emotional influence after the ritual itself has ended. They are the temporal carriers of EE.

For Collins, IR chains create market-like conditions because of the opportunities they present for the matching of symbols and EE.⁴ As symbols acquire an emotional charge through their use in previous IRs, they serve as indicators of (potential) membership status in future interactions (highly charged symbols indicating secure membership and vice versa). Actors are initially attracted to others who value the same type of symbol, or, failing a direct match, who offer scope for symbolic compatibility. Because the emotional charge attached to a given symbol varies between individuals (depending on the success of the generative ritual), there is also scope for matching levels of EE. The greatest attraction will be to situations where there is a potential for matching symbols (however tentative) and the possibility of complementary EE exchange.

Regarding the latter, individuals with high EE tend, according to Collins, not to interact on a sustained basis with other high-EE individuals as this creates conflicts over control and initiative. Typically, they prefer interaction with moderate-EE individuals, sufficient to initiate the focus and mood for an IR, but not to challenge the EE ‘star’. Thus, an individual pumped up by previous IR experiences has the potential, if unrivalled, to act as a ‘unique catalyst’, focussing the encounter around himself/herself, and further reinforcing his/her EE (Collins, 2004, p. 156). Individuals with lower EE levels are likely to be prepared to act as deferential and committed followers, at least initially, expecting their association with a more powerful individual to enhance their symbolic capital and ‘share’ of the EE generated around them (Summers-Effler, 2002). We elaborate on the detailed implications of this below.

By combining Emirbayer and Misch’s notion of agency with IRCT we will now demonstrate how social context and individual agency can connect through the notion of EE.⁵ We develop this framework via a reinterpretation of structural hole theory.

ENTREPRENEURIAL AGENCY AND STRUCTURAL HOLES: AN ILLUSTRATIVE CASE

Structural holes reflect the distinction between redundant and non-redundant ties within a network. The former are characteristic of close/strong-tie networks where individuals share common interests, values and outlooks and interact on a frequent basis. Members of such networks view the world in a similar way to other members; information circulates within the network rather than between it and other, different, networks. Redundancy is produced because extending the network to other similarly minded and positioned people yields no additional information benefit – indeed, it results in a cost, as additional relationships have to be maintained. Where two or more closed networks exist, there is the potential for ‘bridging’ between them – a structural hole. This is the role of the entrepreneur: a broker of information between mutually closed networks. An individual who assumes this brokering role reduces redundancy in his/her network as each bridging tie adds new information, unavailable within a closed network.

Individuals with high numbers of structural holes in their networks are, according to Burt (2000a), best placed to engage in information arbitrage and to reap the benefits of this rare and potentially valuable knowledge

(social capital). They are entrepreneurs: people who add value ‘by brokering the connection between others ... In the swirling mix of preferences characteristic of social networks, where no demands have absolute authority, the tertius⁶ negotiates for favourable terms. Structural holes are the setting for tertius strategies, and information is the substance’ (2000a, p. 8). This involves gathering *information* and exercising *control* over how this is deployed to bring together people from opposite sides of the hole.

Within this formulation, however, there is a theoretical tension deriving from the recognition that the tertius role’s successful performance demands exceptional individual motivation: ‘such [brokering] behaviour is not to everyone’s taste. A player can respond in ways ranging from fully developing the opportunity to ignoring it’ (Burt, 2000b, p. 310). The tension arises from the difficulty of reducing a commitment to relational analysis to the recognition of individual agency and, whilst Burt, Jannotta, and Mahoney (1998) explore the role of personality, they remain cautious about causality. The agentive qualities of the network entrepreneur remain essentially untheorised. Below we show how a relational/emotional conception of agency can help fill this gap.

We begin our reinterpretation with agency’s *iterative dimension*. It will be recalled that iteration involves the ‘selective reactivation by actors of past patterns of thought and action’. Drawing on IRCT, we suggest that the way iteration informs agency depends on the extent to which an individual’s prior experience provides emotionally charged symbols that can be recycled (inter- or intra-subjectively) to stimulate action.

As brokerage involves working across group boundaries, we should look for IRs that produce and venerate EE-charged symbols encompassing such activity, and for individuals who play an active role within them. Iterative capabilities grow out of repeated participation, such that the symbols become familiar and ‘comfortable’ accompaniments to a ritual’s emotionally energising interactions (note that this does not need to imply that individuals are restricted to participation in a single form of IR with the same set of participants).

We hypothesise that, although such rituals will vary in form and content, they will share (a) a primary focus on some form of *joint activity between distinct groups*, and (b) a symbolic commitment to the principle that such joint activity is beneficial to the initiator. Condition (b) implies an element of competitiveness that could range from mutually gainful exchange transactions to benign or aggressive ‘conquest’ of the target group. Such rituals can range from the elaborate and formal (e.g. team sports, business takeovers) to the particularistic and mundane (e.g. negotiating a bargain

with local traders, turf wars amongst local gangs). The significance of these rituals lies not in their concrete outcomes as such, but in the ways achieving these produces group solidarity and individual EE.

Active participation confirms membership status and secures support from in-group members in perpetuating the ritual, manifested at the individual level in the enthusiasm and self-confidence induced through EE. The more central his/her participation, the more an individual is likely to be empowered to act with initiative in this regard. Out-group engagement is encouraged and supported by in-group ritual. This combination of closure within groups and brokerage beyond them is recognised by [Burt \(2005\)](#); our model provides an explanatory mechanism for this process, both at the point of brokerage and as part of an individual's developmental trajectory towards such a role. It suggests that closure will not automatically produce brokerage; it requires experience of rituals where a group's internal solidarity is generated through some form of in-group/out-group joint activity. Where solidarity results from purely internally focused ritual, a disposition for isolation is more likely than brokerage.

For those who have learnt to gain significant EE returns from a joint-activity ritual, establishing relations with an out-group will be an attraction, an opportunity for further EE gain. Our model proposes that by recycling symbols of competition and/or collaboration, an individual can iteratively 'pump-up' this motivation, creating an agentic capacity to find and secure these relational opportunities. Thus, the more sustained and enduring an individual's participation in joint-activity ritual, the greater his/her emotionally charged symbolic repertoire and, hence, his/her iterative capacity to produce relationship-bridging motivation. Given that brokering may often be perceived as risky or challenging (dealing with unknown parties), iteration may also serve as a means of bolstering an individual's resolve in moments of doubt. Such a process can work intra-subjectively, consciously focusing on feelings induced by past achievements ([Katz, 1999](#)), and/or inter-subjectively, as other members circulate confirmatory symbols by way of 'moral support'.⁷ By 'recycling' EE, iteration goes beyond mere passive retrospection. It provides a motivating impetus, particularly so when it develops an inter-subjective circuit, potentially becoming an interaction ritual in its own right. [Burt \(2000a, p. 20\)](#) gives numerous examples of how getting information 'live through personal discussion' is crucial to successful brokering, but offers no explanation of why the interpersonal quality of conversation makes it more potent than other forms of information access. As we have already suggested and will discuss further below, the emotional connotations of physical proximity are key to understanding this effect.

By way of illustration we can point to accounts of Richard Branson's early life (one of the UK's most accomplished 'brokerage' entrepreneurs). These illuminate the significance of in-group family rituals encouraging interactions with 'outsiders' as opportunities for the social advancement, and creating an 'iterative resource' for subsequent business dealings. According to one of his biographers, Branson's mother 'regarded shyness as a weakness; hiding behind skirts was not tolerated. Richard [and his siblings] were regularly pulled from their rooms to sing or offer some performance for dinner party guests' (Brown, 1998, p. 18). Despite apparent embarrassment, Branson recalls strong family solidarity: 'I cannot remember a moment in my life when I have not felt the love of my family. We were a family that would have killed for each other – and we still are' (Branson, 2000, p. 15). In this somewhat paradoxical way, it seems to have been the intensity of this bond (especially with his mother) that encouraged him to treat the world as an opportunity for self-promotion.

Neighbours recall [Branson's mother's] position under a high tree ... which had attracted stern warnings from all the other parents, forbidding their children to climb beyond a low height. 'Right to the top', she urged as her son perilously balanced on the highest branches. 'Higher', shouted the woman famous for hyperactively urging, 'Do something, Ricky'. Eve Branson's emotional exhortations created an obedient son convinced he could do no wrong and that self-doubt was a sin (Bower, 2000, p. 13).

Branson's autobiography makes numerous allusions to how recalling these family 'achievements' helped to give him confidence when undertaking potentially risky business deals – indeed, the book opens with one such anecdote.

Moving on, we have already suggested that some EE-symbol matches will be more fruitful than others for relationship construction, the guiding principle being that high-EE individuals are more likely to associate with moderate-EE others than with others high in EE. A key agency issue, therefore, is how individuals motivated to engage in brokerage determine the potential for matching EE. This is the part of *practical evaluation* that seems to hinge on physical co-presence and the 'compulsion of proximity' (Boden & Molotch, 1994). The 'thickness' of co-presence is integral to sensing and evaluating emotional signals as well as more cognitive forms of information. It can confirm initial impressions of others' symbolic-emotional 'potential' and, equally importantly, convince them of the attractiveness of collaboration. We know comparatively little, however, about what actually goes on in such meetings and what influences a decision to continue or abandon a possible venture. One factor may be an intense

sensitivity to deference-emotion markers (Goss, 2005b). Consider the following from the tycoon Tiny Rowland: 'I have an instinct, a deep animal instinct for the chemistry of people. I would be aware of everything that flowed out of you when we met, from your eyes and your voice, and I would know whether we were likely to be able to work together.' (Bower, 1993, p. 106). Accounts of Rowland's business style suggest that excluding 'challengers' was a lifelong concern (similar accounts of Robert Maxwell are common; see also Bower (2000) on Richard Branson).

In addition to evaluating others, meetings also create a forum for influence, for example, persuading others to join a possibly risky venture. Emotionally charged symbols/discourses can facilitate such interactions: 'When several individuals value the same collective symbol, it is easy for them to evoke it in an interaction and achieve a high degree of focus around it. It provides a content to talk about or a focus for action' (Collins, 2004, p. 151). An individual who has attached high levels of EE to competitive joint activity symbols as a result of previous interactions should be able to use this to gain influence. This is particularly so in situations where such symbols are valued but less highly charged, allowing the instigator to attract followers and supporters by dint of his/her knowledge and, more importantly, enthusiasm and focus (Goss, 2005b). Specifically, their ability to 'talk business' convincingly is enhanced (Boden, 1994; Dodd, 2002; Pitt, 1998; Rigg, 2005).⁸ This is not to say that such emotional-symbolic displays cannot be 'managed' or fabricated in a manipulative attempt to gain an exchange advantage; indeed, this may be at the heart of entrepreneurship's 'emotional labour' (Hobbs, 1988; Hochschild, 1983; Smith, 2004).

Continuing the Branson theme for illustration, Bower (2000, p. 203) cites how a successful, but comparatively modest businessman, Rory McCarthy, came under Branson's spell (to the former's subsequent regret):

Branson knew how to dazzle McCarthy by allowing him access to his social life of film premiers and dinners with endless introductions to the celebrities and powerbrokers. ... "I adore Richard on a personal level," McCarthy sighed after a weekend game of tennis. "His enthusiasm is so infectious. Just being around him you are sure to be having a good time. He's such fun, even when he appears positively stupid." (p. 203)

Bower (2000) also gives numerous accounts of how Branson's 'converts' could also unceremoniously be sent 'on their way', if the entrepreneur perceived them demonstrating less than the expected deference. Parenthetically, symbols deployed without enthusiasm or authenticity, risk undercutting an individual's reputation and credibility.

Finally, our model suggests that as individuals orient towards action, iteration and practical evaluation merge with *projectivity* – providing the symbolic raw material for ‘imaginative travel’. Where participation is intense, the symbols circulated within the ritual and subsequently, through iteration and practical evaluation will carry a high-EE charge that will be reflected in the enthusiasm with which ideas are addressed by an individual (i.e. his/her prioritisation within thought) and communicated to potential collaborators. Symbols ‘pumped up’ with EE and so communicated, can appear to others as compelling, imbuing their ‘originator’ with visionary powers and offering a rallying point for motivated collective action.⁹ Here projectivity focuses on how new in-group and out-group interactions can be matched in terms of emotional-symbolic complementarities. If a projected relationship with an out group is presented as a visionary possibility, the reaction of others will be crucial to its development.

Again, Branson provides a useful illustration. His ability for self-publicity and for convincing others that his future enterprises were about more than just making money – fun – created a culture where others were prepared to follow him (and share, or even assume, most of the risk) into an envisioned future:

“I work for Richard Branson.” Wherever they held court, regaling envious strangers about the Virgin family, Branson’s army [of workers] boasted something more important than share options and money. They shone status . . . employment by Branson was an adventure. The people’s tycoon satisfied their need for moral purpose. (Bower, 2000, p. 65)

The same ‘enthusiasm’ was also crucial in gaining business partners/backers. Bower recalls the time when, after a meeting with City bankers, Branson feigned not to have any money for a taxi: “‘Could anyone lend me £10 for a taxi?’ In the uproar of everyone reaching for their wallets, the French banker rushed forward and pushed £40 into Branson’s hand. The gauche schoolboy, in apparent need of protection, had secured another convert” (p. 97). Similarly, as part of his own imaginary travel, Branson claims to evaluate future business opportunities in terms of their potential for ‘fun’, perhaps explaining the eclectic mix of companies that comprise Virgin.

CONCLUDING DISCUSSION

As Burt (2000a, p. 22) points out, ‘There is no value to the venture if it only connects people already connected’, citing Stewart’s (1990) account of what entrepreneurs focus on, namely,

those points in an economic system where discrepancies of evaluation are the greatest and ... attempt to construct bridging transactions. Bridging roles are based on the recognition of discrepancies of evaluation, which requires an edge in information about both sides of the bridge. Because this requires an information network, bridgers will commit time, energy, travel and sociability to develop their personal networks. (Burt, 2000a, p. 23)

Our model offers a mechanism, missing from structural hole theory, to explain how and why some actors behave in this way, that is, why they exercise agency towards structural holes.

By way of summary we will now formalise our reinterpretation of structural hole brokerage in propositional form (relating back to Fig. 1, above). Following this, we will consider how this model could be extended beyond entrepreneurship, narrowly conceived.

P1. Individuals will exercise agency in relation to structural hole brokerage in proportion to the EE they extract from competitive joint-activity rituals.

Here we offer three broad generalisations. First, individuals who are attuned to extracting *intense EE* from such activity will *actively seek opportunities for brokering relationships*. This can be regarded as the highest level of entrepreneurial agency, producing both the motivation and capability for a sharp focus on relationship opportunities. Second, individuals who are attuned to extracting *moderate EE* from such activity will be able to enact a brokering role when, or if, a *contingent opportunity arises*. At this lower level of agency an individual will have the latent capabilities to enact brokerage, but limited motivation to initiate this. At this level the availability of structural opportunities may provide a stimulus, but these are unlikely to be actively sought out; they may be pursued, only if more EE-favourable relationship options are unavailable (see Goss, 2007b for further discussion). Finally, individuals who receive *little EE* from such activity, will *avoid or ignore opportunities for brokering relationships*. For such individuals there will be limited capacity for agency towards structural holes (although, of course, they may have strong agency towards other forms of ritual). Here the prospect of brokerage is likely to appear as an emotional drain, such that even apparently open opportunities are ignored, a form of behaviour that, if accompanied by agency towards other objects, may appear irrational and egregious (on this type of inertia, see Schumpeter, 1934).

P2. The level of EE extraction will be proportional to iterative, projective and practical-evaluative capabilities.

This proposition relates to the developmental nature of agency. As we have shown, the three dimensions of agency develop through an individual's experience of the interaction ritual chains that constitute their biography. As an individual acquires participative experiences and emotionally charged symbols, they enhance his/her capabilities for iteration, projectivity and practical evaluation and, hence, the enthusiasm and flexibility with which he/she can envisage and enact new relational possibilities. Thus, to understand an individual's level of agency towards brokerage, it is necessary to understand his/her IRC history.¹⁰ This qualifies Proposition 1 above. As agentic capacities develop in line with experience, entrepreneurial agency does not need to be treated as a fixed attribute. In principle it is a capacity that could develop at any point in an individual's life, depending on the nature of his/her network relationships. However, the earlier in life a particular form of ritually induced agency is initiated, and the more consistently it is enacted, the stronger is likely to be its effect in shaping individual action and the less such action is likely to be 'diverted' by contingent events that impede its exercise. Nevertheless, this means that entrepreneurial agency is potentially something that can be learnt.

P3. The stronger the agentic capabilities, the more opportunities for brokerage will be successfully converted into relationships with reduced redundancy and greater opportunities for control.

This proposition relates to the matching of symbols and emotional energies and is offered as an explanation of the effectiveness with which some individuals are able to create for themselves networks with a high proportion of structural holes. In this respect there is a dialectical relationship between the active individual and his/her network context, allowing our explanation to go beyond the assertion that network structure, in and of itself, creates entrepreneurial action (cf. Burt, 2000b). Rather, we argue that network structures create different agentic capabilities that, in turn, effect the establishment of bridging relationships. Interaction rituals are a part of these network structures, but their ability to build, through their own dynamics, highly differentiated levels of agentic effects, means that an understanding of their dynamics can connect *particular* individuals to particular types of network activity. By understanding how individuals acquire EE and how they symbolise relationships, we are able to specify where future brokerage is, or is not, likely to take place and how effective this is likely to be in relation to particular relational targets.

The model outlined above offers a conception of entrepreneurial agency that adds to our understanding of the influential structural hole theory.

Conventional theory conceives holes negatively, as absences of relationships, that are amenable to analysis only in post hoc fashion, that is, identified only once they have been bridged (Burt, 2004, p. 349). In contrast, our conception allows them to be viewed positively, as the result of an individual's propensity to construct and maintain social connections – but a propensity that is activated precisely because of that individual's network context. The appearance and disappearance of structural holes become a result of the agentive potential created by particular inter-subjective dimensions of network configuration.

The three propositions above offer answers to the questions of why some individuals rather than others find the prospect of spanning group boundaries attractive, and why some individuals are more effective at it than others. Although the propositions used above enhance our understanding of network processes, this approach to entrepreneurial agency has wider implications.

Firstly there is the distinction, made in passing above, between social *capital* and social *competence* (Baron & Markman, 2003, p. 43). Social capital has been one of the key concerns of network approaches such as structural hole theory where it has generally been conceived as equivalent to structural position leading to the proposition that 'individuals who do better are somehow better connected ... an individual's position in the structure ... can be an asset in its own right' (Burt, 2000a, p. 4). As Baron and Markman (2003) have argued, and as our model has sought to specify, to be realised, such positional advantages must be enacted, and enacted competently. In short, translating latent social capital into a usable resource is an inter-subjective achievement. A good deal of this work has focused on the development of cognitive capacities, better to understand the 'rules' governing social situations. Our model suggests that, whilst important, this cognitive dimension needs to be supplemented by a recognition of the significance of emotional processes that are, in part at least, independent of cognition. Such processes operate through non-verbal forms of communication and 'back-channel signals' from interactional performance. As the work of Michael Argyle, in particular, has shown, techniques to raise awareness of these sub-cognitive processes can be effective in modifying individuals' understanding of their actions (e.g. Argyle, 1981, 1988). Helping individuals to understand not only the 'logic' but also the emotional and corporeal dynamics of their interactions and motivations may provide an additional means of addressing the 'puzzling fact that some entrepreneurs who have sound ideas, possess considerable technical competence and demonstrate high motivation, still fail' (Baron & Markman, 2003, p. 57). Indeed, if our model is correct, it will allow us to push this question further by explaining, through

an exploration of the sorts of rituals from which they extract EE, why some entrepreneurs seem to succeed at any type of business, but others can succeed in one field but fail miserably if they move to another.

Secondly, and moving away from conventional entrepreneurship, it is possible to examine processes of organizational change and innovation through this lens. New product developments can be viewed not as a manifestation of individual ‘genius’ but, rather, as the outcome of agency linked to complex chains of social relationships. On the one hand, these provide the EE that enables individuals and groups to devote (obsessive) time and effort to an innovation’s development; on the other, they create emotionally charged symbols (representing the innovation) that can act as an emotional attractor, drawing in new supporters (‘early adopters’) who subsequently help to consolidate the innovation within the ‘mainstream’ (see [Goss, 2007a](#) for an application to the development of the personal computer).

There is also scope to use this perspective to unpack the phenomenon of ‘commercial wars’, the intense competitive rivalries that can erupt (often for no apparent rational motive) between individuals or corporations. These can be viewed in terms of ‘deference contests’ through which powerful emotions of shame and pride are generated ([Goss, 2005b](#); [Scheff, 1990](#)) and which, in turn get escalated and perpetuated through rituals of offensive and defensive solidarity. Again, the emphasis is on conflict and competition as the outcome of emotionally saturated interactions rather than simply as a manifestation of individual hubris or the mercurial personalities of key players (although these are likely to be shaped through this process; [Collins, 2004](#)).

Finally, we might offer a reinterpretation of supposedly individual organizational experiences such as stress and burnout. These could be conceived as EE deficits, engendered either through ineffective interaction rituals that blunt an individual’s powers of practical evaluation and projectivity and, thus, limit his/her agentive capacity, or as a consequence of excessively energising rituals that are, ultimately, unsustainable, leading to catastrophic collapse (rather than gradual withdrawal).

In summary, placing emotional dynamics at the heart of agency offers a novel perspective. It encourages us to take seriously the issue of individual differences – what we might term ‘individuality’ – but without reducing this to a contextually marginalising individualism. It encourages a focus on the situation as the analytical starting point, requiring us to place individuals within specific interactional settings and to specify how relationally generated dispositions concatenate at the individual level to produce particular forms of motivated action.

NOTES

1. On the debate over the nature of agency in sociological theory see, e.g. Barnes (2000); Bhaskar (1979); Bourdeiu (1990); Giddens (1979, p. 1991); Joas (1996).

2. The notion of EE is contentious and is often criticised for being a hypothetical or metaphoric construct. However, not only does Collins give a detailed account of its empirical basis and associated measurement techniques, but it is also possible to trace its provenance to emotion constructs that have a well-established position in empirical research. For example, the existence of such relatively enduring feelings of pleasantness/unpleasantness is well supported in the literature, sometimes labelled mood (e.g. Forgas, 1992; Forgas & George, 2001; Kelly & Barsade, 2001; Lazarus, 1991; Watson & Tallegen, 1985). This is also similar to Lawler's (2001) conception of emotion in his affect theory of social exchange which is an extension of Weiner's (1986) attribution theory: global emotions are outcome-dependent, 'first-level, involuntary responses, felt and perceived by the actors but sufficiently ambiguous to motivate an attribution process' (Lawler, 2001, p. 328). These equate to being 'up' or 'down'. They are 'motivating states in exchange relationships because, once they are part of conscious awareness, actors strive to reproduce positive feelings and avoid negative feelings' (Lawler & Thye, 1999, p. 235). The connection with solidarity is similar to Lawler's contention that global emotions from social exchanges that involve high interdependence of actors and non-seperability of tasks enhance both self-efficacy and collective efficacy (2001, p. 341).

3. *Interaction Ritual Chains* (Collins, 2004) lays out IRCT in great detail, together with underpinning theoretical and empirical evidence for its propositions and case studies of its application in a variety of contexts.

4. Collins (2004, Chapter 4) offers a detailed account of the market for interaction rituals and posits the use of EE as a common denominator of exchange relationships, thereby resolving many of the problems associated with rational choice theory.

5. The overlap between these theories is well illustrated in Collins's notion of the socially constructed personality: 'When a particular human body walks away from a social encounter, he or she carries a residue of emotions and symbols, and what he or she does in those moments alone comes from their interplay, whether reflecting backward in time, forward to future encounters, or into an inner space of thought, mind or subjectivity' (2004, p. 345). Our intention is to use Emirbayer and Mische's model to give clearer specification to this process.

6. *tertius gaudens*: the 'third who benefits'.

7. Burt et al. (1998, p. 356) refers to Collins's work on intellectual thought as one possible explanation of how individuals with experiences of more than one group might imaginatively combine ideas to produce new configurations.

8. This supports Baron and Markman's (2003, p. 43) distinction between 'social capital' ('the sum of actual and potential resources individuals obtain from their relationships with others') and 'social competence' ('overall effectiveness in interacting with others'), both of which have been empirically linked to entrepreneurial success. We conjecture that if such symbols can be regarded as equivalent to social capital, effective social competence will be achieved only when these symbols are charged with EE.

9. If successfully enacted, this can provide a basis for charismatic authority (see Goss, 2005b). Collins (2004) offers examples drawn from evangelical religious meetings, (p. 60), reputation building in the world of business (p. 86), and the role of firefighters in the wake of 9/11.

10. This, we suggest, offers a more precise formulation of Emirbayer and Mische's propositions relating to the effects of 'changing situations' and 'multiple temporal-relational contexts' (see 1998, pp. 1006–1007).

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CHAPTER 4

PERSONALITY, AFFECT, AND ORGANIZATIONAL CHANGE: A QUALITATIVE STUDY

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ABSTRACT

Published studies of the relationships between personality, affect, and organizational change have been overwhelmingly quantitative, while clinical and psychodynamic approaches have seldom dealt with the context of organizational change. We used semistructured interviews to explore the “middle ground”, by researching how participants in change believed aspects of their personalities contributed to their responses, particularly on an affective level. We found that traits such as openness to experience, resilience, pragmatism, change self-efficacy, and locus of control influenced participants’ perceptions of how they reacted to organizational change. The findings point to the important role that qualitative research into personality can play in improving understanding of emotional responses to organizational change.

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INTRODUCTION

Personality is one of the many factors that underlie people's cognitive, affective, and behavioral responses to organizational change. Weiss and Cropanzano's (1996) influential Affective Events Theory identifies disposition as a key element in responses to organizational events, such as changes. Organizational change can evoke emotions as staff assess positive and negative outcomes and the processes that deliver them (Fineman, 2003; Huy, 2002). Lay people often refer to people not wanting to move out of their "comfort zones" (Bareil, Savoie, & Meunier, 2007; Wanous, Reichers, & Austin, 2000) and the academic literature in various branches of psychology is replete with models of personality that include a reluctance or propensity for change (e.g., Digman, 1990; McCrae & Costa, 1987).

Extant empirical literature on personality and change appears to be almost exclusively quantitative, as it is in other organizational applications of personality theory, or emerges from studies where personality is not the main subject of investigation (e.g., Ablett & Jones, 2007). This chapter therefore seeks to break new ground in presenting the results of an exploratory qualitative study of personality, affect, and organizational change. We begin by presenting and defining concepts in personality and affect, then examine how they influence reactions to organizational change. Given the extremely rare appearance of qualitative studies in this field we outline why we have used an idiographic approach and how it supplements other avenues of research. Thus our aim is not simply to document how personality affects responses to organizational change but more to investigate how people *believe* their own traits influenced their responses to specific changes. The limitations of our unique study are discussed together with future research directions.

Personality and Affect

The literatures on emotion and personality provide intersecting constructs and authors in both fields have pointed out that there is a vast array of competing definitions (e.g., Hofstee, 1994; Russell, 1980).

Affect is an overarching term for emotions, moods, and temperament (Barsade & Gibson, 2007; Fisher, 2002; Frijda, 1993; Weiss, 2002). Emotions can be seen "primarily as intrapersonal states, such as feelings, states of arousal, or activation of certain motor patterns" (Frijda, 2000, p. 61) and are

triggered by specific stimuli (Lazarus, 1991). Mood is more diffuse in nature, less intense, longer in duration, and not necessarily derived from a specific event or stimulus (Barsade & Gibson, 2007). Mood can be state, which is brought about by an event or series of interactions, or trait, which is derived from personality, and the latter can influence the former (Barsade, Brief, & Spataro, 2003; Meyer & Shack, 1989; Plutchik, 1994). Temperament is concerned with one's nature and has a stronger biological basis (Bates, 2000). There are distinctly different conceptual approaches to the study of emotion and related terms such as the evolutionary (Cosmides & Tooby, 2000), cognitive (Lazarus, 1991), neurophysiological (Feldman Barrett, Mequita, Oschner, & Gross, 2007), sociological (Craib, 1995), and psychodynamic (Gabriel, 1998) and most have to some extent embraced the study of personality. Dispositional affect can influence how people feel at any given moment and specifically when an incident or event takes place (Fisher, 2002; Weiss & Cropanzano, 1996).

Personality, too, has been studied from a number of perspectives, which Leary (2005) lists as the psychodynamic, learning, humanistic, cognitive, and biological. While concepts and definitions of personality, disposition, and temperament, which are rich in emotional language, have been contested for decades (Hofstee, 1994), some researchers have used the terms interchangeably or have provided definitions that are very similar. The first concept, personality, has been defined as "the most important ways in which people differ in their enduring emotional, interpersonal, experiential and motivational styles" (McCrae & John, 1992, p. 175) and a debate has continued for decades whether it is based on heredity or environment or both (House, Shane, & Herold, 1996; Mullen, 2006). The second, dispositions, according to House et al. (1996, p. 205) are:

psychological, as opposed to physical or other objectively assessed characteristics of individuals – personality characteristics, need states, attitudes, preferences and motives...Dispositions are generally viewed as tendencies to respond to situations, or classes of situations, in a particularly predetermined manner.

They claim that dispositions vary in temporal stability, whereas Elias (1994, p. 289) states that "Dispositions are exclusive determinants of given aspects of behaviour *across situations and over time*" [italics in the original]. The third construct, temperament, in the view of Allport (1937, p. 54):

refers to the characteristic phenomena of an individual's emotional nature, including his susceptibility to emotional stimulation, his customary strength and speed of response, the quality of his prevailing mood, and all peculiarities of fluctuation and intensity of

mood; these phenomena being regarded as dependent on constitutional makeup and therefore largely hereditary in origin.

Temperament, is generally considered to have a much stronger biological or neurophysiological basis (Bates, 2000) and is therefore less amenable to change, but, as Elias (1994) has argued, it is not a fixed property and is to some extent subject to psychological and situational influences.

In research in organizational psychology, little distinction is usually made between the various personality constructs. Of more concern in various branches of psychology (including the organizational) are the number and structure of personality traits. Whereas Cattell (1956) identified 16 separate traits, Eysenck (1991) listed three superordinate traits, extraversion, neuroticism, and psychoticism, with all other traits subsumed under one of these headings. The most widely accepted model of personality is the Big Five (Digman, 1990; McCrae & Costa, 1987; McCrae & John, 1992), which includes all traits in one of five broad categories: openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism.

The Big Five model has been used in various organizational applications, such as performance (Barrick & Mount, 1991), selection (Moy & Lam, 2004), emotional intelligence (Vakola, Tsaousis, & Nikolaou, 2004), and leadership (Judge, Bono, Ilies, & Gerhardt, 2002). Notably, it has also been used to research organizational change (e.g., Vakola et al., 2004) and has focussed on isolating and testing relevant personality traits that influence individual responses.

Dispositional affect has been one of the cornerstones of emotions research for the past three decades, with various circumplex models identifying a range of moods that have two or three axes, with all having one for pleasantness/unpleasantness and one for what is variously termed intensity, arousal, engagement, or activation (Larsen, Diener, & Lucas, 2002; Russell & Feldman Barrett, 1999; Watson & Tellegen, 1985). The first two models also have axes for positive and negative affect. Watson, Clark, and Tellegen (1988, p. 1063) maintain that trait positive and negative affect are dominant features of the study of affect and “roughly correspond” with the traits of extraversion and neuroticism in the models of Eysenck (1991) and the Big Five (Digman, 1990; McCrae & John, 1992). Positive affect is the propensity to feel “enthusiastic, active and alert,” while negative affect is the dispositional tendency toward “anger, contempt, disgust, guilt, fear and nervousness” (Watson et al., 1988, p. 1063). Mood, both trait and state, and personality have been shown to contain similar structural elements (Meyer & Shack, 1989).

PERSONALITY, AFFECT, AND ORGANIZATIONAL CHANGE

The main research question that arises in this study is what role personality and its related constructs play in how people experience organizational change, and specifically its affective aspects. In particular, we seek to identify whether personality encourages people to drive, accept, or resist change, which traits are particularly relevant, and most specifically, how individuals understand their own dispositional responses to organizational change. The last point is particularly important because if people understand how they are predisposed to respond to change they might develop appropriate coping mechanisms (Lazarus, 1993).

Our point of departure is the Big Five model, given its widespread acceptance in personality research. After that we will identify a number of specific individual traits, contained within the Big Five, which have been found to be relevant to organizational change.

One of the Big Five factors, openness to experience, is a concept that virtually defines adaptation to change (McCrae, 1994) and Watson and Clark (1997) specifically identified a predilection for change in people with positive affectivity. From a conceptual standpoint the other four factors may also be relevant to organizational change. For example, people high in extraversion tend to make their views of change known and might gain useful influence; agreeableness and conscientiousness indicate that people will likely demonstrate goodwill in accepting change and perform at their best in making it successful; and people high in neuroticism tend to experience anxiety and stress over change. The Big Five model has been tested empirically in the context of change by Vakola et al. (2004), who found positive correlations between acceptance of change and extraversion, openness to experience, conscientiousness, and agreeableness, and a negative relationship with neuroticism. Brennan and Skarlicki (2004) found conscientiousness to be a contributing factor to the way survivors of downsizing continued to perform and Moon, Kamdar, Mayer, and Takeuchi (2008) reported conscientiousness being related to taking charge, a construct that includes initiating change.

A number of empirical studies have focussed on other dispositional variables. In a study of managers, Judge, Thoresen, Pucik, and Welbourne (1999) found seven personality factors predicted reactions to change, which they grouped into two main categories. Positive self-concept includes locus of control, self-efficacy, self-esteem, and positive affectivity, while risk tolerance includes openness to experience, tolerance of ambiguity, and risk

aversion. In particular, tolerance for ambiguity and positive affectivity were strongly correlated to self-reported ability to deal with change. Wanberg and Banas (2000) revealed that self-esteem, optimism, and perceived control were related to acceptance of change. Avey, Wernsing, and Luthans (2008) found that a combination of hope, efficacy, optimism, and resilience led to positive emotions and support for change. A number of researchers have reported self-efficacy, and more specifically change-related self-efficacy, to be a significant variable (Herold, Fedor, & Caldwell, 2007; Holt, Armenakis, Field, & Harris, 2007; Jimmieson, Terry, & Callan, 2004; Rudisill & Edwards, 2002; Wanberg & Banas, 2000). Lau and Woodman (1995) found a significant relationship between locus of control and the formation of change schemata but little impact of dogmatism on the latter. In developing and testing a dispositional resistance to change scale, Oreg (2003, 2006) found four major relevant personality factors: need for routine, emotional responsiveness, short-term focus on outcomes, and cognitive rigidity. Cross-cultural studies have confirmed the validity of the scale (Arciniega & González, 2009; Oreg et al., 2008). Kruglanski, Pierro, Higgins, and Capozza (2007) demonstrated that the need for closure and a predilection for locomotion (action) are additional personality traits that influence ability to cope with change. Rudisill and Edwards (2002) note that self-efficacy and locus of control play a part in determining how employees react to being laid off, but maintain that limited research has been done. Brennan and Skarlicki (2004) found that angry hostility moderated survivors' perceptions of the fairness of downsizing. Organizational justice perceptions have also been related to other aspects of personality, such as trust propensity, risk aversion, morality (Colquitt, Scott, Judge, & Shaw, 2006), and locus of control (Lilly & Virick, 2006), but seldom in the context of change. Pragmatism, which is a hallmark of the Myers-Briggs model (Myers Briggs, Kirby, & Myers, 1998), persuades people that they need to make the most of whatever occurs, but does not seem to have been empirically investigated in the context of change. Of the many traits listed by the researchers above, two in particular appear most frequently, locus of control and change self-efficacy.

Several others traits have attracted considerable research interest. For example, although not specifically mentioned in the Big Five, empathy was found to correlate with agreeableness by Del Barrio, Aluja, and García (2004). Empathy is considered to be a process by Rogers (1975, p. 3), who defined it as "perceiving the internal frame of reference of another with accuracy and with the emotional components and meanings which pertain

thereto.” It has also been identified as an ability in some of the emotional intelligence literature (Kellett, Humphrey, & Sleeth, 2002; Salovey & Mayer, 1990) and a trait in the personality literature (Del Barrio et al., 2004; Munro, Bore, & Powis, 2005) and some of the emotional intelligence (EI) literature (Vakola et al., 2004; Van der Zee & Wabeke, 2004). Carney and Harrigan (2003, p. 194) caution that interpersonal sensitivity is an ability and is not the same as the trait of empathy – sensitive people may understand what emotions others are experiencing and why, but not “feel what they feel.”

Of particular relevance is the literature on dispositional cynicism which “results in anger, bitterness, resentment and manipulation” (Abraham, 2000, p. 271). Cynicism can be a trait that influences a person to view events in a negative light and construe the motives of those orchestrating them as self-serving and untrustworthy. Dispositional cynicism must be distinguished from organizational cynicism (Dean, Brandes, & Dharwadkar, 1998) and management-related cynicism (Stanley, Meyer, & Topolnytsky, 2005), both of which emerge from perceptions of injustice or the incompetence, laziness or lack of integrity of others (Reichers, Wanous, & Austin, 1997; Wanous et al., 2000). Cynicism is also different to skepticism, which is a cognitive evaluation of the likelihood of the success of a venture (Stanley et al., 2005). According to Wanous et al. (2000), people who have high negative affectivity are inclined toward cynicism.

Organizational change represents a specific context in which various types of cynicism can arise. Stanley et al. (2005) reported dispositional cynicism to be one of a number of cynicism constructs that played a role in resistance to change. Wanous et al. (2000) used an instrument that included dispositional cynicism toward change and concluded from their empirical study that cynicism was more of a learned response than a dispositional one. Oreg (2003, 2006) developed and tested a tool specifically for measuring dispositional cynicism as a source of resistance to change and found considerable evidence of this form of cynicism in several studies.

It should be emphasized that while personality can play a key role in adaptation to change, other variables may be more influential for some people and for some types of change. For example, a person who is high in neuroticism, and therefore possibly predisposed against change, is nevertheless likely to react somewhat positively to an organizational change that lowers stress levels or delivers valued outcomes. Similarly, even those who show significant levels of agreeableness, conscientiousness, and openness to experience will probably resist a change that is clearly unfavorable and unjust (Bareil et al., 2007; Chawla & Kelloway, 2004). In one recent study,

Bareil et al. (2007) found dispositional discomfort with change to be the dominant factor in 23 percent of their sample, with the balance primarily affected by situational factors, such as espoused reasons for change and perceived impact on workload, organizational effectiveness, and customers. Kruglanski et al. (2007) found that organizational climate, specifically one geared to change, also played a significant role. Oreg (2006) reported on a range of nondispositional variables within the individual and organization that contributed to responses to change, such as trust in management, job security, and power.

Another relevant construct, emotional intelligence (EI) has been a controversial part of the debate on personality. Whereas Mayer and Salovey (1997) and their supporters (e.g., Ashkanasy & Daus, 2002; Jordan, 2005; Law, Wong, & Song, 2004) have taken the position that EI is the *ability* to understand and manage emotion, the approaches of Goleman (1995) and Bar-On (1997) have included other concepts, such as personality. A third group of researchers (e.g., Petrides & Furnham, 2003; Tett, Fox, & Wang, 2005; Van der Zee & Wabeke, 2004) consider trait EI to be a very different construct to ability EI. Trait EI, according to Tett et al. (2005), is a constellation of characteristics, categorized as self-orientation, other orientation and emotional sharing, and which are not related to any Big Five dimensions or positive and negative affect.

The focus of employee disposition has mostly been on recipients or managers of change. When people initiate change themselves they will naturally be supportive of it since they have “psychological ownership” of the change (Dirks, Cummings, & Pierce, 1996). Thus even if people have a predilection to avoid or resist change, they may think, feel, and behave differently when they conceive of and lead a change. According to Caldwell (2003), change leaders are high in creativity, integrity, risk taking, adaptability, and openness to new ideas. On the emotional front they tend to be excited, enthusiastic, passionate, and hopeful about the change they are leading, but need to address the frustration, anxiety, and disappointment that may accompany various stages (Day, 2004; Huy, 2002). Innovative people are characterized by “the desire for autonomy and social independence, a high tolerance of ambiguity in problem solving and a propensity for risk taking” (McAdam & McClelland, 2002, p. 88). Conscientiousness is a trait that can also lead people to initiate change (Moon et al., 2008).

The research evidence clearly indicates that personality does play a part in the way people respond to organizational change but very few studies have been done that explain why people responded the way they did.

METHODOLOGY

Methodological approaches to the study of personality have been fraught with controversy. Every form of empirical research produces different types of insight, and according to Engler (2003, p. 22), “the growing openness of personality theorists to more effective methods contrasts with the perpetuation by some other psychologists of a narrow view of science.” This optimistic view has arisen from “the ceasefire in the paradigm wars” (Mingers, 2004), the “science wars” (Mahoney, 2003), and the “personality wars” (Hogan, 2007).

At one end of the spectrum of empirical research into personality is quantitative work conducted within a dominant positivist paradigm. This work aims to “predict, modify and control behavior” (Winter & Barenbaum, 1999, p. 6). From an epistemological perspective, the positivist approach assumes that reality can only be *measured* with instruments that have been judged valid and reliable (Bryman & Bell, 2007; Leary, 2005) or from experiments and observations “typically conducted in an academic setting” (Engler, 2003, p. 6). Psychometric approaches to personality are able to produce some evidence as to *what* traits are helpful in explaining responses to organizational change. Studies that relate to organizational change have focussed on the broad Big Five dimensions (Vakola et al., 2004) or more specific constructs such as change self-efficacy (e.g., Jimmieson et al., 2004) and resilience (e.g., Oreg, 2003) and are useful in revealing relationships between traits and behavioral responses. These studies, however, are not able to provide insight into *why* people thought, felt, and behaved in reaction to a specific element of an organizational change. Nor are they able to adequately explain *how* different personality and contextual factors operate simultaneously in the way people respond to change. For example, did a person rely on dispositional resilience and/or extraversion to deal with an unfavorable change, insensitively and autocratically led? And what part did the ability to manage conflict and power issues at various hierarchical levels contribute to the response? Did the person act in certain ways *because* of a personality trait, or *despite* it?

At the other end of the research spectrum is the clinical approach (Engler, 2003). Theories of personality, including those developed by the founders of psychiatry, psychoanalysis, and psychotherapy, such as Freud, Jung, and Rogers, and their followers, rely on case histories and observations made through extensive counseling and therapy sessions with a host of clients or patients (Engler, 2003; Leary, 2005; Westen, Burton, & Kowalski, 2006; Winter & Barenbaum, 1999). Because this type of research is subjective in

nature, Shaver and Mikulincer (2005, p. 23) suggest that what they term the eclipse of psychodynamic theories of personality was partly because "it was difficult to create valid measurement techniques and obtain unambiguous empirical evidence for psychodynamic propositions." According to Winter and Barenbaum (1999, p. 7), "Mainstream psychologists ignored or criticized biographical and case study methods and were (at least initially) quite hostile towards psychoanalysis." Nonetheless, it is doubtful whether diagnostic approaches of this nature would adequately inform research into organizational change since the clinical literature is mostly focussed on people who have psychological problems and who have sought or been referred to professional help.

As organizational proxies to psychotherapeutic work, employee counseling and coaching sessions might shed light on personality as it relates to organizational change and thus extend the change literature. But, while theoretical treatments of the psychodynamics of organizational life (Carr, 1998; Gabriel, 1998) and organizational change (Carr, 1999, 2001; French, 2001) are evident, empirical qualitative expositions of this nature are rare (Vince, 2006) and seldom relate personality to the experience of change.

Personality traits occasionally do emerge in qualitative organizational research that was not explicitly designed to investigate the nexus between personality and change. For example, Ablett and Jones (2007) interviewed nurses on their experiences in cancer wards and found hardiness to be a trait that helped them cope with the rigors of their jobs and yet some of them, from a dispositional perspective, claimed to be uncomfortable with change. It is surprising that no qualitative studies of personality seem to exist in the organizational psychology literature, and therefore none in relation to organizational change. Many other aspects of organizational life, and in particular, emotional responses to change, have been researched with qualitative approaches (e.g., Bryant & Wolfram Cox, 2006; Kiefer, 2002; Vince, 2006; Wolfram Cox, 1997).

The "middle ground" in the spectrum of empirical research in personality is therefore mostly vacant, particularly in the field of organizational change. Whereas both poles of research, the quantitative and clinical, place the investigator in the position of making sense of the data, the advantage of a middle-ground approach stems from its emphasis on an idiographic focus. This approach to research "stresses the importance of letting one's subject unfold its nature and characteristics during the process of investigation" (Burrell & Morgan, 1979, p. 6). In personality studies, it "has continued to thrive" (Winter & Barenbaum, 1999, p. 14) and is enjoying a "resurgence of interest" (Engler, 2003, p. 287). According to Leary (2005, p. 19),

“the viability of any theory in personality psychology lies in the degree to which it can explain the realities of individual lives.”

Our study makes a valuable contribution to the literature by providing rich descriptions (Denzin & Lincoln, 2003) of participants’ realities – showing how individuals believe aspects of their personalities shaped their reactions to organizational change. While lay people will be unlikely to have a scholarly appreciation of constructs of psychology, and have been described as “naïve psychologists” (Russell, 1980, p. 1162), it is precisely their understanding of their own personality traits, and their application to organizational change, that we seek to reveal. People make sense of organizational change in many ways, including reflection on their personality traits, and idiographic accounts help researchers understand how people do this.

We contend that the phenomenological “reality” of the individual’s experience of change, and how this might be related to personality, can be addressed through interviews. We do, however, respect the concern of Westen and Gabbard (1999, p. 6), given in the context of psychoanalytical approaches to personality, of the

tendency of many researchers to take patient self-reports of their personality as an index of who they are, rather than as compromise formations that reflect an amalgam of their efforts to perceive themselves accurately, to regulate their self-esteem...to manage guilt or shame, and so forth.

More rounded analyses of personality would result if a combination of different methods were used, such as testing, observation, and interviews (Hanson, Creswell, Clark, Petska, & Creswell, 2005; Hofstee, 1994; Kelle, 2006), to research personality issues in organizational change. However, for our single-method study, we take the position that a focus on each participant’s “reality” offsets the potential loss of rigor and objectivity otherwise afforded by employing psychometric instruments, psychotherapeutic analysis, or the observations of others.

As part of a larger research project on emotions and organizational change we interviewed 24 people in Auckland, New Zealand, from a variety of industries, organizations, functional departments, and hierarchical levels. The participants comprised 13 men and 11 women, 16 European, 2 Maori, 3 Asian, and 3 of Pacific Island background. They could be loosely classified as change leaders, change managers, or change recipients, although these distinctions are not always clear cut in the literature, nor are they always easy to make in practice (Caldwell, 2003). Semistructured interviews lasted from 60 to 90 minutes and one of the questions specifically asked was: “In terms of your personality how do you usually react to change?”

Comments by participants in other parts of the interview also focussed on aspects of their personality. Some comments were directly related to change, others more indirectly. All comments on personality were highlighted on the transcripts and collated in a table.

FINDINGS AND DISCUSSION

We will first analyze participant responses in light of the broad dimensions of the Big Five model, as noted in the literature review, and then highlight a number of individual traits that have been signaled elsewhere in the change literature and therefore merit special mention here.

The most important Big Five characteristic in dealing with change is openness to experience, which produces cognitive reactions that in turn lead to emotions of varying levels of intensity (Vakola et al., 2004; Watson & Clark, 1997). Most participants claimed that they were comfortable with change, or positive about it, whereas B said it was “exciting,” Q found it “energising,” S remarked “I love change, I thrive on change,” and L indicated that she was “quite comfortable working without structure ... and in an environment where things are flying at you.” Tolerance for risk and ambiguity are hallmarks of people who adapt well to change (Judge et al., 1999).

The comments of some participants reflected some ambivalence and also the pragmatism that Myers Briggs et al. (1998) identify as a personality trait. If change was beneficial, particularly to them, but also to the organization or other people, they naturally embraced it more willingly. C commented:

I am quite relaxed about making change...I don't make change easily. I won't sort of chop and change every five minutes but I will make change. Everything I do is considered and if change is necessary I will make it...I guess also I was reasonably pragmatic...there were changes to be made and there were a lot of options and I guess I got on with things. Leave out started to work.

He said that he had lived in the same house, and until recently had been in the same company, for over 30 years and was content with that. In one sense he noted that he was out of his “comfort zone” in terms of moving to a new organization, but in another way he was “in the comfort zone because of ... things I can do in my sleep, same products, same people, same people I was dealing with outside this company.” Similarly, D confessed, “I always say I hate change and yet when I look back on my life I do tend to go for things that require change ... I do dislike change but once I've been through the pros and cons and I think it is a good idea then I move on.” J remarked, “My attitude to change is that it's expected and it's going to happen anyway

so it's not the change, it's how we respond to the change ... I find change to be natural and expected." V commented, "I think change is something that we just live with." This does not indicate a submissive or agreeable nature, but rather a cognitive orientation – which is neither optimistic nor pessimistic – that what cannot be influenced should not become an emotional bugbear. People who lack cognitive rigidity (Oreg, 2003) are likely to accept change when the necessity arises. Presumably, the affective and behavioral components of attitudes to change will likewise alter but some discrepancy or ambivalence can be expected (Piderit, 2000).

The second Big Five trait of relevance is conscientiousness, with a number of participants saying that when change was required, regardless of their thoughts or feelings, they did what was necessary, several claiming that it was the "professional" approach to take. Managers, in particular, were adamant that even when they disapproved of a change they felt it was incumbent on them to do what was expected of them in implementing it. Herscovitch and Meyer (2002) have defined normative commitment to change as a felt obligation. P said she was "disciplined" and that her "role as public servant is to implement government policy." L deprecatingly remarked that "up until that point in my life I've always done what is expected of me pretty much. I've always been very conscientious." R revealed, "I don't like to fail ... and I don't like to promise something and not deliver." Quantitative studies (e.g., Vakola et al., 2004) have shown that conscientiousness leads to acceptance of change and even to initiation of it (Moon et al., 2008).

Agreeableness is a characteristic that indicates that people will be pleasant when dealing with others and trusting, warm, kind, and considerate (McCrae & John, 1992). Of special note is L's reference to how she views her relationship with others affected by change: "I do care a lot about people's feelings and I don't like to hurt people" and she remarked about the way a rival for her position had been treated by management: "I felt sad. I constantly checked ... and reflected to make sure I had not contributed to any more bad feelings that she was already having." O also took responsibility for supporting a colleague who found change traumatic, and showed that sympathy can be altruistic and also beneficial to a person's own well-being:

I seriously had concerns for her health and she's a very shy, quiet person and her father had died actually, which probably compounded the situation ... it meant that I could focus on someone other than myself and care for her and provide support for her ... that feeling of helping is good.

Extraversion is a quality that enables people to voice opinions and feelings and can be used to influence change initiatives or in some ways help a person

cope with the change. Most respondents, particularly those in management positions, commented that they had debated the changes, and often argued against them, with their colleagues and superiors. Extraversion was detected more from what most participants said elsewhere in the interview than any comments they made about their personality traits. M, however, was more explicit: "I am a pretty open person ... I tend to be a vigorous debater" and he confronted his boss about aspects of the change even though the latter was known to frequently lose his temper. B claimed, "If it's change I don't like then I announce that I don't like it" and E believed his extraversion helped him respond to others' emotions during change.

The last of the Big Five variables is emotional stability which is more commonly referred to as its opposite, neuroticism, and which is characterized by such traits as being calm, at ease and relaxed, versus being worried, nervous, and highly strung (McCrae & Costa, 1987). None of the participants spoke directly about these traits and it is difficult to gauge this aspect of the Big Five. However, they did provide some insight when specifically asked the question how they had managed their emotions. Most believed that they had done well to control their emotions, even under difficult circumstances. Some exercised control as a protective mechanism, others because it was expected of them as "professionals", particularly if they were managers, and acting professionally was a reflection of their self-identity (Fournier, 1999). Being able to control one's emotions may be a sign of the *trait* of emotional stability but could also be taken as evidence of an emotional intelligence *ability* (Mayer & Salovey, 1997). While some respondents admitted that they had had been unable to regulate the display of emotion when they would prefer to have done so, one cannot take isolated incidents of control, or lack of it, to be representative of a personality trait.

In addition to the Big Five, a number of researchers have identified other personality traits (that in one form or another are found within one of the five factors) that are of special relevance to organizational change. Two of these are closely related: locus of control, the belief that one can influence events (Rotter, 1990) and self-efficacy, the belief that one has the ability to deal with certain types of situation (Bandura, 1977), such as change (Herold et al. 2007; Judge et al., 1999). Several respondents made it clear that the more control they had over change the more comfortable they were with it: "It all depends on whether I'm the architect of change or whether I'm having the change imposed on me" (A); "It's better if I'm driving it" (R); "I think I'm good with change to be honest. I like to initiate it, so I guess that's an issue and because I wasn't in control of part of that process and probably felt too far from the loci I suppose, which is something I learnt

about myself” (O). These findings support the results obtained in a number of empirical studies that locus of control and change self-efficacy strongly predict people’s ability to cope well with organizational change (Herold et al., 2007; Jimmieson et al., 2004; Judge et al. 1999; Wanberg & Banas, 2000). People with a high internal locus of control tend to have the confidence (self-efficacy) that they can deal with the cognitive, emotional, and behavioral challenges of an organizational change, and most of our participants believed they had the ability to cope with change. E spoke of some people who focussed on what he termed was a “circle of influence” and those who focussed on a “circle of concern” and that change often moves certain types of people from the former to the latter. They “love to spend their time worrying about what is beyond their ability to influence, so it depends on personality.” People with a high internal locus of control need the added capacity to know when they can influence events and when they cannot. A noticeable emotional reaction of those with a high internal locus of control was frustration when confronted with situations where they were unable to exert their usual influence. H noted:

Well, I tend to get quite frustrated and I show frustration, I find it very difficult to withhold...to not be frustrated. So to go to this environment ... there’s some absolutely ridiculous things happening and ... if I think something is ludicrous, I find it very difficult to not show my frustrations...But no, as far as change goes, I’m normally quite comfortable.

Another trait shown by many respondents was empathy (Del Barrio et al., 2004; Munro et al., 2005) and some of the comments were made in answer to a question as to how others (peers and subordinates) were coping with change. The comments by L and O, which were referred to earlier in the findings on agreeableness, are also indicative of empathy, which Del Barrio et al. (2004) found correlate. Participants in our study were keenly aware of how change was impacting on others, and the positive and negative emotions others were manifesting. G referred to the “trauma” and “anxiety” that accompany downsizing. C spoke of the “shock, dismay, real concern” when redundancies were announced but also noted some staff were “happier” and “somewhat pleased” at the prospect of redundancy pay. He reported that “With people who were obviously upset you had to try and sort of gauge how they felt ... and you treated each person differently.” Some of the change leaders specifically mentioned the term empathy to characterize some of their own responses to the emotions of others and pointed out that support needed to be provided:

I’ve been through nine organizational restructures in my 20 years of employment ... What I think it helped me most with though is actually having some empathy and

understanding for individuals who are in that situation. Until it's personal it's actually quite hard for people to kind of really understand what it means. (N)

Recognising the pain they're in you want to give them the best opportunity to get that out ... I find myself empathising with them...absolutely empathising with the situation they're in whether they're frustrated and angry ... so I try very hard not to take it personally. (Q)

I have empathy for people's situations. I've personally been made redundant from my employer twice so I know the impact it can have. (W)

Optimism is an aspect of positive affectivity (Judge et al., 1999; Watson & Clark, 1997) and was specifically identified by a number of participants as a way they tended to view organizational change (Wanberg & Banas, 2000). People who are optimistic about change are likely to support it or at least look for positive elements. "I am a natural optimist," said Q, "optimistic about the way people behave but never surprised by the way they behave." Some participants tended to focus on outcomes for self. For example, D and K were made redundant and reflected in the interviews that this helped them kick-start their own businesses. F moved into a new functional discipline within the same organization and started a satisfying new leg of his career. Some participants were optimistic that some changes would benefit customers, colleagues, or others. Optimism is also partially dependent on change self-efficacy (Avey et al., 2008; Herold et al., 2007). People who are convinced that a change will turn out well for them may partly believe this because they have the confidence to succeed at something new and partly because they think they have the capacity to deal with the emotional consequences. But as C explained, a positive attitude could not always be maintained: "I tried to be as positive as possible with various staff I had to work with and talk to in terms of the change ... at most times I tried to remain positive and look at a positive outcome ... It became difficult at times."

Resilience is a quality that helps people manage difficult situations, including those arising from change (Avey et al., 2008; Oreg, 2003; Wanberg & Banas, 2000). H remarked, "I consider myself quite a resilient person ... I'm used to having lots of things on the go ... and being quite resilient." However, after being demoted from the most senior management position following a takeover, she noted that "this time I didn't seem to have the resilience." Resilience may be a crucial factor in coping with change or even develop as a result of dealing successfully with change. Q, a change leader, observed that people in the company were "battle-hardened" and that "change happens all the time, get over it even when it's happening to you, [being made] three or four times redundant in a life isn't an unusual

thing.” Cole, Bruch, and Vogel (2006, p. 467) specifically found that psychological hardiness, which incorporates elements of “commitment, control and challenge,” contributed to resilience, predicted lower cynicism and produced more positive emotions. Yet, as H showed, when control is missing, hardiness may not be sufficient in dealing with the stress of a certain type of change. In their studies of nurses in cancer wards, Ablett and Jones (2007) found hardiness to be a helpful trait even though some nurses claimed not to like job-related change for various reasons.

The need for closure is one variable that Kruglanski et al. (2007) reported to be relevant in coping with change. V found that the extended period in which he fought a case of unfair dismissal was draining and that he reflected that “there’s only so much emotional hurt that you can go through and uncertainty and it was almost like closure, just knowing that it was over and that I could move on.” Change is often accompanied by uncertainty that triggers anxiety (Jordan, Ashkanasy, & Härtel, 2002; Kiefer, 2005) and the ending of a process, even one with negative outcomes, may bring relief. It is difficult to assess whether V’s need for closure was dispositional or situational, but it does seem likely that many people would find it difficult to cope with events of the nature that he encountered. People who suffer the agony of waiting to see if their name is on the redundancy list (Paterson & Härtel, 2002) also want closure since there are both practical and psychological implications. O decided to pre-empt this and found another job. Impatience is a different dispositional variable and several respondents claimed to be frustrated with the slow pace of change, particularly if they were leading it. However, none of them indicated that this was a personality trait of theirs.

Cynicism was evident in a few of the participants who were change recipients, although they did not specifically use the term. F remarked on one aspect of the change, “They’d recognized somehow that people were actually important in this process. Good gracious me.” At the end of her interview B commented on organizational change in general, not the specific change she had mostly talked about:

I don’t think I can consider an organizational change in any positive way in terms of the impact that it had on the organization afterwards. In terms of the individual ... I think sure there are big costs...it just ends up by being for the individual such a tough thing...It’s never about adding more stuff, it’s about taking away ... and it’s always pitched positively and people always know that’s a crock.

It has been shown that cynicism about organizational change can arise from previously failed change initiatives (Abraham, 2000; Connell & Waring, 2002; Reichers et al., 1997), or where change outcomes are

unfavorable (Oreg, 2006) and injustice is perceived (Brennan & Skarlicki, 2004; Chawla & Kelloway, 2004; Oreg, 2006). This can lead to resistance to change or at least lack of engagement in it (Connell & Waring, 2002; Reichers et al., 1997; Stanley et al., 2005). It is not easy, however, to gauge in a multifaceted interview, whether the cynicism of interviewees was dispositional, situational, or both (Stanley et al., 2005; Abraham, 2000).

To summarize, personality clearly can play a key role in how people respond to change and in different contexts different traits become salient. However, the cognitive, affective, and behavioral demands of a change may exceed people's coping mechanisms. The quote from H above on the limits to her resilience is a case in point. Dealing with the emotional aspects of change requires considerable levels of emotional intelligence (Jordan, 2005) that goes outside of the dispositional elements advocated by the trait approach to EI (e.g., Tett et al., 2005) and focuses on ability (Mayer & Salovey, 1997). The ability to deal with the technical aspects of the change is not only based on the trait of self-efficacy but also on experience and skill. Thus, while disposition may provide a foundation for individual responses to change, it has to operate in tandem with a wide range of factors that lie within the individual, the change leaders and managers, and the organization. Oreg (2006), for example, showed that while resistance to change may be partly dispositional contextual factors may be equally influential, and the readiness model of Holt et al. (2007) numbers dispositional factors among many others.

LIMITATIONS OF RESEARCH STUDY AND FUTURE DIRECTIONS

We sought to use an idiographic approach in uncovering how dispositional elements contributed to 24 participants' experiences of organizational change and based our analysis on comments they made in various parts of a one-off interview. In so doing, we have contributed to the extremely thin qualitative literature on personality, affect, and organizational change.

We certainly make no claim, however, that a single interview, only part of which was devoted to personality, in any way resembles a thorough investigation of personality. None of the researchers in this study are qualified psychologists and no attempt was made to produce a personality profile of the participants. For example, we could not answer the speculative questions of the nature posed by Gabriel (1998, p. 310): "When does ... healthy skepticism end and paranoid anxiety start? When does healthy pride become narcissistic self-delusion or megalomania?" However, interpretivist

approaches allow the researchers to make reasonable inferences from the statements made by participants (Denzin & Lincoln, 1994). We mostly explored their own reflections of how personality contributed to their responses to change and in some cases made our own observations. Our point is that their comments provide a meaningful way in which experiences of change can be reported within a qualitative research framework. As a future line of research, in-depth, semistructured interview studies dedicated to dispositional responses to various organizational changes should provide deeper veins of material. In addition, employing both quantitative and qualitative methods with the same participants would provide greater insight than a single method could. Not only would this approach reveal more about the individual personality, it would also uncover degrees of convergence between participants' perceptions of their own personalities and objective measures, and how different traits influenced responses to organizational change.

A second limitation of our research was the use of self-reports, an issue which penetrates literature on personality (e.g., Hofstee, 1994; Petrides & Furnham, 2003; Westen & Gabbard, 1999) and emotion (e.g., Diener, 1999; Feldman Barrett, 2004). Self-reports, whether quantitative or qualitative, may suffer from loss of memory, inaccurate perception and interpretation, self-serving bias (Gomm, 2004; Jimmieson et al., 2004; Tett et al., 2005), and impression management (Alvesson, 2003). For example, interviewees, particularly change leaders and others in management positions, may wish to look good in the eyes of the interviewer, or simply bolster their self-image. As an additional method, using the observations of other people who work with the participant would provide a fuller picture of a personality even though others may not have the insight or knowledge to make accurate observations of behavior, let alone of personality (Hofstee, 1994; McCrae & Costa, 1987).

A third limitation is the inadequate distinction we made in the findings between trait mood and state mood, particularly as they interface with the construct of personality (Meyer & Shack, 1989). Barsade and Gibson (2007, p. 44) suggest that "There have been more studies examining dispositional affect, but this may be because dispositional affect is easier to measure than mood, and much easier than measuring discrete emotions." Over a decade ago House et al. (1996) called for a clearer distinction between the terms used in dispositional research, while Russell and Feldman Barrett (1999, p. 816) have complained that "Vague and undefined terms, especially in theoretical writing and secondary resources, make the psychological literature on emotion a nightmare." Yet it seems that confusion, or at least multiple interpretations, still reign. In future interpretive studies of

organizational change interviewers could explore whether people believed that their affective states during a specific change were more influenced by discrete emotions, moods, or dispositions. While the differences in these constructs have been discussed earlier, it is conceivable that during the period of a change, which could endure for months, a person's affective experience would cover all three categories. In the current study, for example, one of the participants, B, got "absolutely furious" at the injustice of one event, experiencing what [Russell and Feldman Barrett \(1999\)](#) would term a prototypical emotional episode, experienced negative moods on various occasions as difficulties accumulated, and also seemed to manifest (in the interview) dispositional cynicism. The complex relationships between these constructs, their impact on behavior, and the relevance of contextual factors could be better mapped from extensive interviews, as well as in future quantitative studies of organizational change.

A fourth limitation, and one which we scarcely touched on, concerns the valence and intensity of emotional experience during change, and how these might be influenced by dispositional elements. Although there are conceptual differences between their approaches, the circumplex models of [Watson and Tellegen \(1985\)](#), [Russell and Feldman Barrett \(1999\)](#), and [Larsen et al. \(2002\)](#) plot these dimensions on axes of valence/pleasantness and arousal/intensity/activation. The question that arises in the context of organizational change is to what extent personality traits impact on the valence and intensity of emotional experience. Discrete positive and negative emotions, such as elation, excitement, contentment, anger, and anxiety, were reported by participants in our study, and at various levels of intensity. Were these simply the outcomes of contextual factors or did they have dispositional foundations? One-off incidents do not reveal much about personality and an in-depth research study would better reveal patterns of cognition, affect, and behavior that are more characteristic of personality.

A fifth limitation is the lack of attention we gave to the role of personality in emotional responses to perceptions of the fairness of change. Past research has identified the impact of personality in perceptions of justice (e.g., [Colquitt et al., 2006](#); [Lilly & Virick, 2006](#)), and specifically in the context of change ([Brennan & Skarlicki, 2004](#); [Moon et al., 2008](#)). Elsewhere in our interviews in the broader study of emotions and change, respondents made comments about various experiences of fairness and unfairness and how they triggered affective responses. However, personality dimensions specifically related to perceptions of fairness, such as trust propensity, risk aversion and morality ([Colquitt et al., 2006](#)), and locus of control ([Lilly & Virick, 2006](#)) were not directly investigated. The perceived fairness of change has been

found to contribute substantially to emotional responses to change (e.g., [Brotheridge, 2003](#); [Matheny & Smollan, 2005](#); [Paterson & Härtel, 2002](#)), but the relationships between fairness, personality, and emotion have been underexplored.

Finally, differing levels of understanding of personality, and insight into their own traits, and those of others, seemed to influence participant responses, but were not explored. People who have reflected on their own personalities – and particularly those who have been guided in doing so – are often able to cope with change in productive ways if they can harness their strengths and address their weaknesses. One respondent in the current study, G, was even aware of his personality profile in terms of one well-known model ([Myers Briggs et al., 1998](#)) and how it affected his response to an organizational change: “I’m not that demonstrative ... if you look at me in my Myers-Briggs profile I am an INFP, which is really strange for an HR manager but you learn that extravertiveness.” He provided some examples of how he thought his personality helped him deal with organizational change. “So that was how I was using my emotions. If somebody was angry I could empathise with the anger and I’d walk them through it. If somebody was denying that they needed to worry about getting a job, I’d say well, you know what’s going on in life.” Levels of previous exposure to theories of personality, emotion, and change, whether in academic or training courses, or through informal reading or discussion, is another subject for further empirical investigation.

In conclusion, people’s responses to organizational change have been shown, in the reflections of the respondents in our study, whether “naïve psychologists” ([Russell, 1980, p. 1162](#)) or not, to be at least partly influenced by dimensions of their personalities. People who have insight into their own dispositional responses to change should be better prepared to deal with change. Similarly, managers who understand the personalities of their staff should be in good position to facilitate change. It should also be emphasized that while personality may shape an individual response to a specific change, the exigencies of that situation may be more influential. Extremely difficult conditions may defeat even those high in resilience, self-efficacy, and optimism.

The overwhelming number of quantitative studies of personality and change, and the insights from psychodynamic approaches, should be supplemented by a range of qualitative studies that investigate how individuals make sense of their own responses to organizational change, and those of others, and to what extent they believe personality plays a role. We join with other researchers (e.g., [Hanson et al., 2005](#); [Hofstee, 1994](#); [Kelle, 2006](#)) who believe that a combination of different methods can

contribute to the development of a more holistic understanding of human nature. To date the qualitative field of research into personality, affect, and organizational change has scarcely been unearthed and therefore this “middle ground” promises to be very fertile.

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CHAPTER 5

THE UNDERLYING STRUCTURE OF EMOTIONS DURING ORGANIZATIONAL CHANGE

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ABSTRACT

In order to gain a deeper understanding of how emotional dynamics play out in organizations, a better understanding of the underlying structure of emotions in the workplace is needed. This study set out to investigate the emotional reality of work teams that are confronted with organizational change and to create a feeling scale that can be used to analyze and evaluate the emotional experience of employees involved in and affected by the change. This chapter outlines the results of an iterative statistical analysis to determine the underlying structure of emotions and basic dimensions on which emotions can be categorized. Feeling scales ranging in length from 22 to 42 feeling items were answered by up to 26,900 respondents as part of employee surveys that were used to investigate the subjective perception of organizational change. Factor analysis and self-organizing maps (SOMs) analysis were used in order to cluster and differentiate the underlying basic categories of emotions. The results show that feelings are mainly differentiated as either positive or negative and that those two main factors consist of seven underlying categories, which are summarized as the emotion scales: "Passion," "Drive," "Curiosity,"

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“Defiance,” “Anger,” “Fear and Distress,” and “Damage.” The basic dimensions of the emotions were “hedonic tone” and “affective focus.”

BACKGROUND

Organizational change processes vary in the pace and amount of change imposed on the organization and its members. Potentially, organizational change can be tumultuous in terms of the upheaval created in organizational structures and processes, and can affect the subjective experience of work for employees (Bareil, Savoie, & Meunier, 2007; Fugate, Kinicki, & Prussia, 2008; Huy, 2005). Change processes can instill a wide variety of emotions, ranging from excitement and curiosity to fear, anger, and sadness (Kiefer, 2002; Liu & Perrewé, 2005; Mossholder, Settoon, Armenakis, & Harris, 2000). In recent years it has become increasingly obvious that, in order to successfully manage change, managers need to be able to not only capture the minds of employees, but even more importantly, they need to be able to capture their hearts and harness the power of their emotions to create the energy needed for the change journey (De Klerk, 2007; Napoli, Whiteley, & Johansen, 2005; Sanchez-Burks & Huy, 2008; Suliman & Al-Shaikh, 2007).

When it comes to emotions, people typically think in terms of positive feelings as “good” and to be aimed for and negative feelings as “bad” and to be avoided. But this is too simplistic and fails to provide a sufficient basis to manage the more subtle interplay of emotional dynamics needed to bring about transitions from one state to another. Emotions cannot be considered static events because they continuously transform from one state to another. Research is needed to gain a deeper understanding of how these emotional dynamics affect the success of change. Most empirical studies to date have focused on a limited set of employee attitudes – job satisfaction, commitment, or engagement. This limited focus is insufficient to capture the complex emotional process of people confronted with dramatic changes. Therefore, we have seen a recent renewed interest in the role of emotions in organizational change (Allen, Freeman, & Russell, 2001; Greenberg & Rhodes, 1991; Kiefer & Müller, 2003; Turnbull, 2002).

If the emotional connotations of organizational change are neglected, they can negatively affect employee health and well-being, jeopardize the outcome of the change project itself, result in avoidance of or resistance to the change, and impair overall productivity and economic success (Abele, 1991; Scherer & Tran, 2001). Emotions in the workplace have been linked to

a range of performance-related behaviors, for example, helping behavior, organizational citizenship, cooperation, creativity, integrative thinking, inductive reasoning, greater decision making, and the use of more successful negotiation strategies (Damen, van Knippenberg, & van Knippenberg, 2008; Forgas & George, 2001; George, 2000; Job, 1987; Spector & Fox, 2002; Totterdell, Kelett, Teuchmann, & Briner, 1998; Weiss & Cropanzano, 1996; Zelenski, Murphy, & Jenkins, 2008).

“Employee engagement,” with its connotation of affective commitment and emotional attachment, has become the new buzzword in HR departments. There is increasing empirical evidence that “emotionally engaged” employees are the key to economic success and productivity (Robinson, Perryman, & Hayday, 2004). On the other hand, if people are fearful, angry, or frustrated, effectiveness will be reduced. A simple calculation shows if people are rendered ineffective because of difficulties in managing emotions for even 15 minutes a day (3% of the work time), this translates to nearly 7,000 lost days per year in a 1,000-person organization.

Negative emotions not only jeopardize the day-to-day productivity of an organization; they can also undermine attempts at organizational change (Carr, 2001; Kotter & Schlesinger, 1979). Any major change in our lives is related to intense emotional experiences: we are either “thrilled” by the prospect of change and new opportunities or fearful of its potential negative implications and threat to the status quo (De Jager, 2001; Folger & Skarlicki, 1999; Huy, 1999). Change causes unpleasant experiences because it is generally related to a feeling of “loss of control,” insecurity and the fear that resources might be taken away (Kiefer & Müller, 2003). Employees’ “readiness for change” will be diminished if the atmosphere is dominated by feelings of fear and anger, and if “toxicity” and negative affect is spreading (Paterson & Cary, 2002). Strong emotions may overwhelm the power of rational logic and undermine possible change interventions – communications might not be heard and understood if negative feelings run high. Messages might get distorted by rumors fueled by fear and doubt. High levels of confusion make role clarity impossible.

The emotional connotations of organizational change therefore are not only the antecedents, but also the precedents of successful organizational change (Cunningham et al., 2002; Tran, 1998). If the emotional reality of employees involved in or affected by organizational change is neglected, it can result in high levels of employee turnover, lack of commitment, cynicism, and other forms of overt or covert resistance to change (Vakola & Nikolaou, 2005).

Managers face this reality everyday as they strive to keep their change projects on track. In order to support them with feedback and suggestions on how best to manage emotional turbulence, we need a better understanding of the emotional patterns playing out in organizational change. First and foremost, we need to understand the underlying structure of the emotional experience.

Measuring Emotions

In literature, there are two approaches for defining and measuring the structure of emotions. The first approach compiles extensive lists of emotional words found in the specific language. An example would be the compilation by Clore, Ortony, and Foss (1987) of originally 585 English words, with affective content that was narrowed down to a list of 260. Shaver, Schwartz, Kirson, and O' Connor (1987) started with a list of 213 words with affective content that was narrowed down to a list of 135 emotion words. The other approach focuses on basic emotions and attempts to determine the "basic building blocks" of the emotional experience, usually listing between 3 and 11 emotions. Table 1 provides some examples of suggested "basic emotions" frameworks. These lists have been created by a variety of methods, for example, based on universally distinguishable facial expressions, statistical analysis of lists of emotions, and empirical studies of the emotional development in children (Plutchik, 1994; Stern, 1985).

Theorists in the latter approach generally assume that other emotions are a combination of these primary emotions. The debate regarding the adequacy of this assumption is controversial, and there is further need for an empirical test of the hypothesis that emotions can be reduced to a series of "basic emotions" or "principal components" (see Ortony & Turner 1990). Both of these approaches present challenges for the researcher seeking to understand the structure of emotions in the workplace. One of the problems related to the first approach is that it would be impractical to ask respondents at work to answer long lists of questionnaire items related to their emotional experience. For small groups of willing participants this is possible. However, there are limitations on the amount of time that respondents are willing or allowed to spend answering questionnaires, especially in the organizational field setting where respondents also have to accomplish their work tasks. In order to measure the emotional reality of people at work, we need short and succinct surveys that reduce the workload on the respondent and minimize the time required. An issue in the second

Table 1. A Selection of “Basic Emotion” Models based on Ortony and Turner (1990).

Author	Basic Emotions	Basis for Inclusion
Arnold (1960)	Anger, aversion, courage, dejection, desire, despair, fear, hate, hope, love, sadness	Relation to action tendencies
Ekman (2003)	Anger, disgust, fear, joy, sadness, surprise	Universal facial expressions
Frijda (1993)	Desire, happiness, interest, surprise, wonder, sorrow	Forms of action readiness
Izard (1977)	Anger, contempt, disgust, distress, fear, guilt, interest, joy, shame, surprise	Hardwired
James (1884)	Fear, grief, love, rage	Bodily involvement
McDougall (1926)	Anger, disgust, elation, fear, subjection, tender emotion, wonder	Relation to instincts
Oatley and Johnson-Laird (1987)	Anger, disgust, anxiety, happiness, sadness	Do not require propositional content
Panksepp (1982)	Expectancy, fear, rage, panic	Hardwired
Plutchik (1994)	Acceptance, anger, anticipation, disgust, joy, fear, sadness, surprise	Relation to adaptive biological processes
Tomkins (1962)	Anger, interest, contempt, disgust, distress, fear, joy, shame, surprise	Density of neural firing
Shaver et al. (1987)	Love, joy, anger, sadness, fear	Analysis
Watson (1930)	Fear, love, rage	Hardwired
Weiner and Graham (1984)	Happiness, sadness	Attribution independent

approach is that some of the basic emotions, for example, “disgust” or “shame,” are too extreme to be admissible in an organizational and work context. New inventories and approaches to analyze emotions that are suited to the organizational context are needed.

The Dimensionality of Emotions

One objective of this study is to create a feeling scale that can be used to analyze and evaluate the emotional experience of employees involved in and affected by the change. The statistical analysis aims to determine the basic dimensions on which emotions can be categorized. Some studies suggest categorizing feelings along two dimensions – hedonic tone and level of arousal (Larsen & Diener, 1992; Liu & Perrewe, 2005; Russel, 1989). Hedonic tone refers to the pleasantness of the emotion, with feelings of

surprise, joy, excitement, etc. being commonly considered as positive, whereas anger, fear, disgust, grief, etc. are generally considered as negative emotions. The level of arousal refers to the intensity of the experienced feeling with, for example, “excited” being an example of high arousal, whereas “content” would be an example of low arousal. Other suggested dimensions for the categorization of feelings are certainty/uncertainty (Tiedens & Linton, 2001), future-oriented versus past-oriented (Barbalet, 1998; Jones & Rittman, 2002), or event-preceding versus event-following states (Kirt & Vainik, 2007).

Individual versus Collective Emotional Fields

Traditionally, feelings have been measured by asking individuals what they feel. However, individuals do not feel in isolation. Most employees function within a collective – as team members or work colleagues – and their emotional experience is deeply intertwined with those of others (Hatfield, Cacioppo, & Rapson, 1993; Kelly & Barsade, 2001). The collective emotional reality of the work team is referred to as the “emotional field” and an individual’s emotional experience is influenced by as well as influences this emotional field. The emotional experience of organizational change cannot be investigated in isolation of other factors and needs to be considered as collective rather than a solely individual experience (Ashkanasy & Härtel, 2006; Bartel & Saavedra, 2000). Negative events and unpleasant emotions are more likely to lead to emotional contagion than pleasant emotions (Barsade, 2002). It has been suggested that the primary unit of performance in most organizations is the team rather than the individual (Katzenbach & Smith, 1993). Within the organizational context, most employees are working closely with a group of other people and the quality of their relationships matters. The dynamic of the group process is one of the main determinants of (a) the individuals’ emotional experience and (b) the efficiency and productivity of the team. In the context of organizational change, the “emotional field” of the team will influence and be influenced by the characteristics of the change project.

Therefore, a systemic approach to examine the collective emotional experience of change in the workplace is needed. It is recognized that, in taking this approach, several emotions may be present in various degrees simultaneously in any work group. Some people may be excited by a proposed change, while others may be confused or fearful. This approach investigates the complexity of emotions experienced within a group

setting by various group members simultaneously, which is in contrast to measuring individual feelings through self-reporting where a person will typically report a single or predominant experience at any point in time. A further advantage of asking for the emotions experienced within the team instead of by the individual lies in the fact that this allows to reduce the influence of “social desirability.” Social desirability taints individuals’ reported emotions because certain emotional experiences – e.g., fear or jealousy – are considered “weak” or “unattractive.” This can result in the individual emotional experience being rationalized, misinterpreted, or misrepresented, which can be avoided if the focus is on the team.

METHOD

In 1998, we commenced a major research project to analyze organizational change and to develop an effective “navigation system” for managing organizational change. A comprehensive database has since been built from the responses of over 250,000 individuals in more than 200 organizations around the world, undergoing growth, restructuring, cost reduction, and technology implementation programs. The survey does not measure feeling questions in isolation, but assesses many other aspects of change, including communications, involvement, accountability, leadership, clarity of direction, management competencies, and organizational values. Change journeys have been tracked across time, links to hard financial and outcome data have been proven in longitudinal studies, and the impacts of change interventions on company results and employees’ feelings have been examined.

In order to investigate the underlying structure of the emotional reality of employees, an emotion scale was included in the questionnaire. The feeling scale captures how employees are feeling at various stages during the change and how the emotional field of the work group is affected by various characteristics of the change taking place.

Research Steps

The development of the feelings scale occurred in four distinct phases.

Phase I: Item Pool and Survey Design

In the preliminary design phase, a pilot survey of 50 questions was developed, based on an item pool containing 200 emotion items. The feeling

items that were included in the item pool are based on the work of Kubler-Ross on grief cycles and major change (Kubler-Ross, 1973), Tomkins' work on the emotional development in children (Demos, 1995; Tomkins, 1962), recent research on emotions at work (Frost, 2002), and psychological literature on emotions (e.g., Damasio, 1999; Ekman, 2003; Ekman & Davidson, 1994; Greenberg, Rice, & Elliott, 1993; Izard, Kagan, & Zajonc, 1984; Lewis, 1992; Lewis & Haviland-Jones, 2000; Scherer, 2000, 2001; Tangney & Fischer, 1995; Zentner & Scherer, 2000). Tomkins' (1962) list of nine basic feelings – joy, interest, surprise, anger, distress, fear, disgust, contempt, and shame – were used as the starting point and combined with items that reflected the major components of the underlying emotions and which covered the whole range of affective reactions related to a specific emotion. Items that could be used in an organizational and work context were selected. Other studies show that while certain emotions may occur in organizational life – e.g., “terror,” “agony,” “misery” (Fisher, 1993), or “longing,” “lust,” “enthralment” (Shaver et al., 1987) – these items are rarely reported accurately in an organizational context. Those affective items were therefore eliminated.

The items chosen to represent the emotions needed to be experienced reasonably frequently in an organizational setting, which precluded us from using items that represented emotions that are generally not encountered, or not accepted in a work situation. Based on the dimensions suggested by Liu and Perrewé (2005) – hedonic tone and arousal – the feeling items selected for the original item pool included positive as well as negative feelings and feelings that suggested a high level of emotional arousal, for example, “anger,” versus low levels of emotional arousal, for example, “disapproving.” Based on the assumption that emotions within work teams are contagious and that the emotions experienced within a work team are a more accurate representation of the emotional reality at work than individually experienced emotions, we framed the items by asking “how many people in your team are experiencing the following emotion” The responses are scored on a 1–7 scale: none, some, all people. The objective was to capture complex emotional responses. Within a team several feelings can exist simultaneously, whereas an individual experiences predominantly one feeling at any point in time. The statistical analysis of the pilot data led to the elimination of items that did not seem to provide additional information and were duplicating other items of the scale. Items that only showed inconclusive or low factor loading were eliminated. The result was a list of 42 words representing emotions.

Phase II: Survey Refinement

For Phase II, the reduced scale of 42 emotion items was answered by 2,300 respondents from various companies.

The following items were dropped from the scale due to low or inconsistent loadings in the factor analysis:

- Anxious: Loading lower on the same factor as “fearful” and “threatened” in the factor analysis; redundant.
- Not pleased: Loading on the same factor as “cynical,” “sarcastic,” and “angry”; too general.
- Uncomfortable: Loading on the same factor as “anger,” “fear,” and “struggling and in-need”; too generic.
- Bitter: Loading on the same factor as “anger” and the “damage” factor characterized by shame and hurt; it can be assumed that bitter might be related to both and probably an outcome of being angry and hurt.
- Sarcastic: Too similar to cynical.
- Troublesome: Loading on the same factor as “humiliated” and “shocked”; redundant.

The survey results were presented to the respondents and discussed face to face with the participants undergoing change. The results and the derived theoretical model were described to them, and their reactions were recorded.

The scale “joy” was renamed “passion” because the latter term was more acceptable in the context of work. The scale “interest” was renamed “drive,” which is a better representation of the self-driven “push” characteristics of related feelings. By “push” we mean that the person experiencing the feeling is internally driven or “pushed” to perform certain actions, whereas the feelings related to “passion” are characterized by being encouraged or “pulled” externally to do something.

Phase III: Survey Refinement

In Phase III, the feeling scale was further refined and reduced to 32 items based on the empirical results from Phase II. The reduced scale of 32 feeling items was answered by 8,900 respondents undergoing a variety of changes including merger, restructure, growth, and new systems implementation. Items that clearly measured the same feeling and those that were amalgams of different emotions instead of “pure” feelings were eliminated.

- The feeling “experimenting” was dropped in the next reduction of the feelings scale, as it was consistently related to the feeling “curious.”

- “Feeling good” was dropped as it represented too general a positive feeling.
- The terms “helpful” and “listening” were dropped because they did not represent feelings as such, but rather behavioral dispositions, and loaded similar to “humorous.”
- The feeling “pleasantly surprised” was dropped as it seemed to provide a distinct factor, similar to “feeling good” which added little value to the overall scales.

The results were intensively discussed with managers and teams as they developed action strategies during the change process. In one organization, for example, one of the researchers conducted 90 one-hour face-to-face discussions in order to explore the accuracy and validity of the survey results with the respondents.

Phase IV

In Phase IV, the feeling scale was reduced to 22 items and answered by 26,900 respondents. In this phase, the survey questions were asked over a larger sample involving different companies, industries, nationalities, and all types of change processes. The results of the statistical analysis presented in this chapter are based on the analyses of Phase IV with 26,900 responses to 22 feelings.

Statistical Analysis Methods

The process that was followed in the development of the factor structure of the emotion scale is outlined in Fig. 1. We will consider each of the steps in the process. Besides the use of “traditional” methods of data analysis and item reduction, advanced new mathematical methods – Self-organizing maps (SOMs) (Fraser & Dickson, 2007) – have been used for the analysis, integration, and interpretation of complex interrelated data. SOMs (Kaski, 1997) are powerful adaptive algorithms that can be used for visualizing and clustering data. The SOM analysis was originally developed by Kohonen (2001) as an alternative to neural network and provides a new approach that can assist in the synthesizing and understanding of complex, integrated data, highlight relationships among the data, and support the process of knowledge creation from complex data.

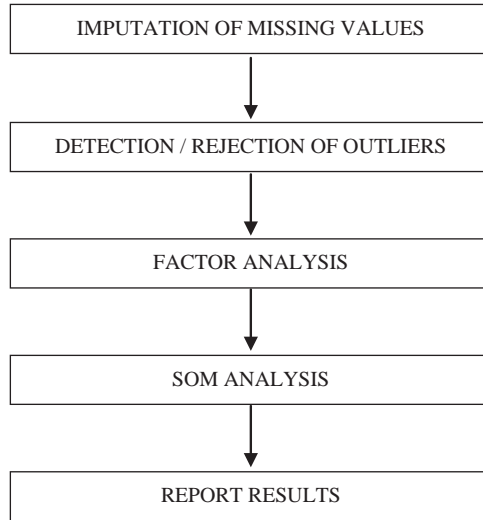


Fig. 1. Statistical Analysis Process.

A large amount of testing was carried out comparing results from alternative techniques and bootstrapping to provide assurance that the chosen statistical methods and techniques are appropriate for the current data.

Imputation of Missing Values

Although the Web-based questionnaire prevents the occurrence of missing data, there is a need to occasionally use responses from paper-and-pencil surveys with missing responses, either to complete an analysis or for feedback purposes; especially for small groups where every response is important. The data file occasionally has a number of missing values. Data are randomly missing because someone forgot or declined to answer that question, or turned over a page and missed several questions. About 1–5% of the data is randomly missing, and is imputed before the analysis commences. The imputed values are tagged, and can be identified at later stages of the analyses. In the past, we used an imputation technique based on the simulation of the joint normal distribution function – a version of multiple imputations (Levy, Palumbo, & Stern, 1997) – with acceptable results. Now, we use SOM for the imputation of missing data. This is due to the results of an empirical comparison of multiple imputation and SOM for

the imputation of missing data, which showed that SOM provided significantly more accurate estimates (Kirsch, Parry, & Peake, 2008).

Because of its vector quantization basis, SOM can both analyze data sets that contain missing data, and impute the values of the missing variables. In the first pass, the value for a missing variable in the sample vector can simply be taken as the value for that variable in the best-matching code vector. This initial estimate, however, can be improved by an iterative process, whereby after the initial imputed value is calculated, a subsequent SOM is recalculated and the new best-matching code vector value is resubstituted for the initial missing value. This process is typically repeated a number of times, and has the effect of imposing a probabilistic classification on the missing variables of concern. Throughout this process, the topographic and quality errors are also monitored, and they also typically approach some sort of limit as the number of iterations increases.

Detection and Rejection of Outliers

As the motivations of respondents to the questionnaire are not always certain, there is a need to check that the data are reliable, and that ongoing analysis is robust against foolish, facetious, or even malicious responses. To this end, the data are now being “filtered” or “cleaned” using the minimum covariance determinant (MCD) algorithm (Rousseeuw & van Driessen, 1999). The MCD method calculates a robust estimate of the variance–covariance matrix of the bulk of the data, and uses this estimate to calculate distances for each data point or case. The exclusion criterion is the 97.5% point of the square root of a chi-square distribution, with degrees of freedom one less than the number of questions asked. The implementation used on the ChangeTracking database conservatively bases its robust estimate of the variance–covariance matrix on three-quarters of the total data set. The method used is incorporated in several of the major statistical software packages, such as SAS and S-plus, and is claimed to be considerably faster than other competing robust methods.

Factor Analysis

The “cleaned” data set, with missing values imputed and outliers excluded, is then subjected to factor analysis. The method used is the oblique powered vector factor analysis (Overall & Klett, 1972). The robust MCD estimate of

the variance–covariance matrix is used in the factor analysis. The same analysis has been carried out using the moment estimate of the variance–covariance matrix, and the results were similar. It seems sensible to standardize on the robust method to provide added protection against future “oddities” in the data. The oblique powered vector factor analysis is carried out with both “tight” and “loose” settings, to provide full scope for potential factor groupings to reveal themselves. The oblique rotation was chosen because it can be assumed that the various extracted factors are correlated. The orthogonal rotation with Varimax rotation was used to confirm the obliquely rotated solution, to explore any differences, and to run out at least 12 potential factors and ensure that nothing else of value may have been missed. In the case of the data resulting in a single factor, this allows investigation of other potential factors that may have contributed to a reduction in variance.

SOM Analysis

A Self-Organizing Map (SOM) is a type of artificial neural network based on the work of Teuvo Kohonen, and is sometimes called a Kohonen map (Kohonen, 2001). The SOM is trained using unsupervised learning to produce a low-dimensional representation of the input space of the training samples, called a map. The map seeks to preserve the topological properties of the input space. This makes the SOM useful for visualizing low-dimensional views of high-dimensional data. SOMs, like most artificial neural networks, use either a training mode or a mapping mode. In the training mode, the SOM creates the map using input data. It is a competitive learning process, also called vector quantization. The SOM forms a semantic map where similar samples are mapped close together and dissimilar samples are mapped apart. This allows the clustering of variables with similar characteristics and the distinction of dissimilar variables.

RESULTS

In Phase IV, the feeling scale consisted of 22 feelings and the questionnaire was answered by 26,900 respondents. The results of the 26,900 respondents produced two factors (Table 2). The factor analysis of the 22 feeling questions produced two main factors, which could be clearly identified as positive versus negative feelings. The feelings “angry,” “disapproving,”

Table 2. Factor Analysis of 26,900 Responses to 22 Emotion Items.

	Factor 1	Factor 2
People feeling Bored	0.492	−631.0
People feeling Guilty	0.542	0.087
People feeling Humiliated	0.654	0.001
People feeling Confused	0.566	−440.0
People feeling Helpless	0.678	−60.0
People feeling Fearful	0.64	0.014
People feeling Sad	0.667	−440.0
People feeling Avoiding	0.664	−720.0
People feeling Angry	0.723	−330.0
People feeling Disapproving	0.681	−640.0
People feeling Cynical	0.612	−20.0
People feeling Blaming	0.663	−320.0
People feeling Struggling	0.589	0.047
People feeling Impatient	0.609	0.139
People feeling Stubborn	0.582	0.145
People feeling Curious	0.171	0.641
People feeling Humorous	0.031	0.602
People feeling Proud	0.001	0.632
People feeling Determined	−20.0	0.692
People feeling Decisive	−20.0	0.665
People feeling Creative	−20.0	0.688
People feeling Excited	−341.0	0.586

“helpless,” and “sad” had the strongest loadings on the negative feeling factor, accounting for 34.1% of explained variance (eigenvalue = 13.628). The feelings “creative,” “determined,” and “decisive” had the highest loadings on the positive feeling factor, explaining 9.4% of the variance (eigenvalue = 3.775).

Feeling “bored” is loading mainly on the negative feeling factor (0.492) but also loads negatively on the positive feeling factor, albeit with a small loading (−0.136). When more people in a team are bored, there seem to be fewer tendencies for people on the team to experience positive feelings as well. “Impatient” and “stubborn” on the other hand, which clearly load on the negative feeling factor, also have small loadings (impatient, 0.139 and stubborn, 0.145) on the positive feeling factor and therefore do not preclude positive feelings.

“Curious,” on the other hand, has a clear loading on the positive feeling scale (0.641) and also a small positive loading (0.171) on the negative feeling factor, which implies that it is possible that teams can simultaneously contain people who are positively curious while at the same time as there are

people within the team who have negative feelings. “Excited” is the opposite with a small negative loading (-0.143) on the negative feeling factor, which implies that teams who have many people feeling “excited” have a lower tendency to have people who feel negative simultaneously. This suggests that the feelings “excited” and “curious,” and “bored,” “stubborn,” and “impatient” might relate to different emotional categories.

As the objective was to provide a more detailed analysis of the underlying structure of emotions within teams, the principal component analysis was used to analyze the underlying factorial components in order to find the interplay between various emotions (Table 3).

- The first factor had strong loadings from Impatient (0.690), Stubborn (0.672), Struggling (0.620), Blaming (0.551) and Avoiding (0.496).
- The second factor had strong loadings from Humiliated (0.629), Sad (0.642), Helpless (0.665), but also Angry (0.652), Fearful (0.586), and Disapproving (0.532).
- The third factor had strong loadings from Confused (0.743) and Cynical (0.469).
- The fourth factor combined Guilty (0.615) and Bored (0.728). Bored had a negative loading on the factor that included the feelings Proud and Excited.
- The fifth factor is incoherent with low and inconsistent loadings and is therefore ignored.
- The sixth factor had strong loadings from Humorous (0.821), Determined (0.521), Decisive (0.512), Creative (0.500). Decisive also loads negatively on the factor that is dominated by the emotions Confused and Cynical.
- Curious (0.910) is loading as a separate factor seven.
- The eighth factor included Proud (0.809) and Excited (0.543). Excited also has a negative loading on the factor dominated by Humiliated and Sad, Helpless.

Results of SOM Analysis

The SOM analysis clustered the feelings according to similarity within a two-dimensional framework (Fig. 2). The SOM analysis confirms the findings of the factor analysis.

The first dimension is referred to as “hedonic tone” and classifies a feeling as either positive or negative. On the negative side of the hedonic dimension are feelings such as “disapproving,” “angry,” or “sad,” while on the positive side we find “creative,” “proud,” and “decisive.” The second dimension has

Table 3. Principal Component Analysis of 26,900 Responses to 22 Emotion Items.

Feeling Item	Eight Factors							
	F1	F2	F3	F4	F5	F6	F7	F8
Impatient	0.690	0.110	0.431	0.052	−0.013	0.025	0.037	0.000
Stubborn	0.672	0.028	0.165	0.424	−0.217	−0.065	0.031	0.032
Struggling	0.62	0.309	0.169	−0.077	0.431	0.14	0.037	−0.236
Blaming	0.551	0.314	0.200	0.381	−0.022	−0.169	−0.035	−0.124
Avoiding	0.496	0.385	0.167	0.317	0.259	−0.038	−0.115	
Helpless	0.276	0.665	0.265	0.167	0.169	−0.05	−0.112	−0.173
Angry	0.341	0.652	0.242	0.266	−0.033	−0.052	−0.103	−0.214
Sad	0.235	0.642	0.198	0.279	0.186	−0.106	−0.069	−0.106
Humiliated	0.289	0.629	0.035	0.321	0.258	−0.027	−0.119	−0.051
Fearful	0.103	0.586	0.440	0.201	0.274	−0.133	0.058	0.035
Disapproving	0.363	0.532	0.248	0.319	−0.127	−0.160	−0.033	
Confused	0.013	0.382	0.743	0.136	0.139	−0.098	0.090	−0.137
Cynical	0.350	0.353	0.469	0.229	−0.268	0.014	−0.160	
Guilty	0.139	0.197	0.052	0.728	0.446	0.022	0.042	0.081
Bored	0.038	0.203	0.310	0.615	−0.082	−0.003	−0.113	
Humorous	−0.139	−0.225	0.112	0.097	−0.191	0.821	0.081	0.114
Determined	−0.070	−0.009	−0.116	−0.197	−0.228	0.521	0.265	0.443
Decisive	−0.040	0.066	−0.429	−0.093	−0.312	0.512	0.410	0.159
Creative	−0.077	−0.056	−0.119	−0.186	−0.016	0.500	0.377	0.412
Curious	0.017	0.003	0.007	−0.007	−0.148	0.117	0.910	0.109
Proud	−0.062	−0.016	−0.074	−0.014	−0.285	0.223	0.083	0.809
Excited	−0.008	−0.316	−0.224	−0.072	0.152	0.253	0.380	0.543

been labeled “affective focus” (Fig. 3). This categorizes whether the emotion is focused externally on an object outside of the one who is experiencing the emotion, or if the focus is internal, on the person experiencing the emotion. For example, “curious” or “stubborn” are feelings with an external focus, whereas “excited” or “guilty” and “bored” have more of an internal focus.

**DISCUSSION AND CONCLUSION:
THE STRUCTURE OF EMOTIONS**

Across the iterative phases of factor analysis, a clear distinction between positive and negative feelings emerged. The principal component analysis

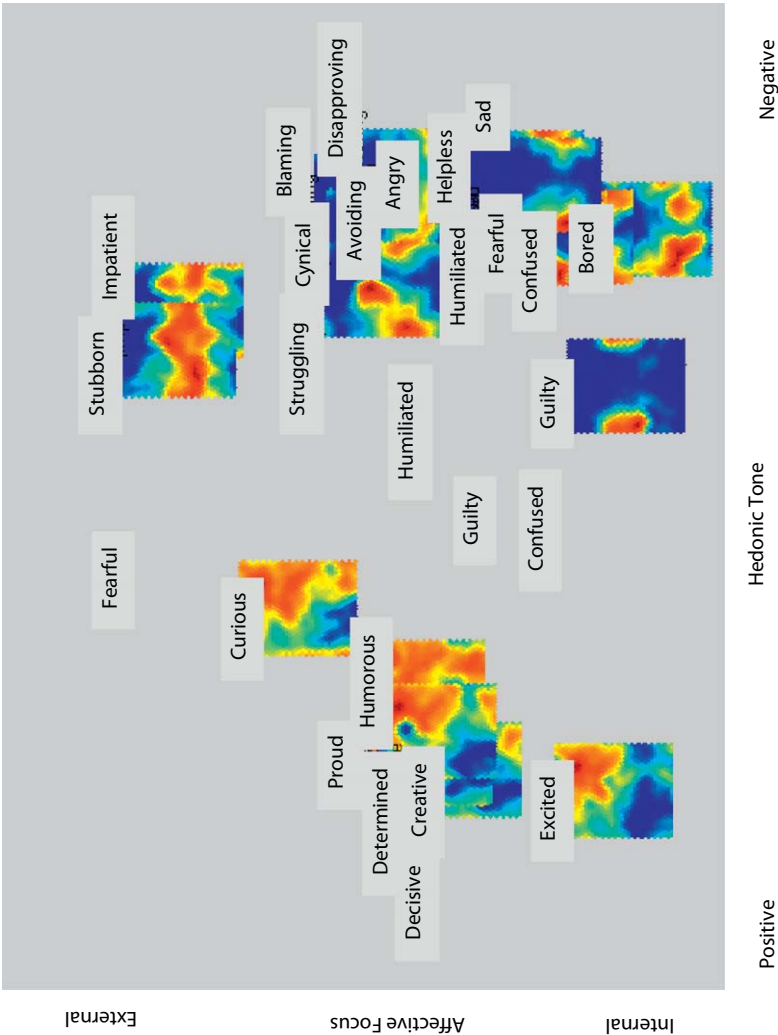


Fig. 2. SOM Map for Emotions with Main Dimensions “Hedonic Tone” and “Affective Focus.”

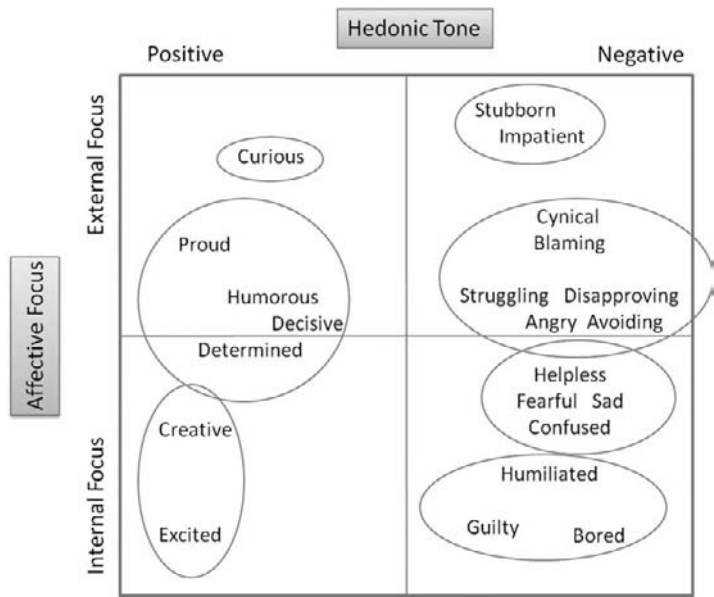


Fig. 3. Dimensionality of Feeling Scales.

Table 4. Final Feelings Scales based on Factor and SOM Analyses.

Positive feelings	Moving toward	Passion Drive Curiosity	Excited, feeling good, creative Determined, decisive, humorous, proud Curious, experimenting
Negative feelings	Moving against Moving away	Defiance Angry Fearful and distressed Damage	Stubborn, impatient Angry, disapproving, cynical, blaming, struggling Helpless, fearful, sad, avoiding Bored, guilty, humiliated, confused

resulted in seven basic emotional categories, which subsume 22 emotional aspects. The factors include “Passion,” “Drive,” and “Curiosity” as positive emotions and “Anger,” “Distress and Fear,” “Damage” and “Defiance” on the negative side (Table 4).

“*Passion*” encompasses the feelings, “excited,” “creative,” and “feeling good.”

“*Drive*” encompasses “determined,” “decisive,” “humorous,” and “proud.”

“*Curiosity*” is a separate factor with loadings from the feeling “curious.”

“*Defiance*” refers to the feelings “stubborn” and “impatient.”

“*Anger*” refers to “angry,” “cynical,” “blaming,” “struggling,” “avoiding,” and “disapproving.”

“*Distress*” includes the feelings “helpless,” “fearful,” and “sad.”

“*Damage*” was singled out as a separate emotional category based on the results of the factor analysis. Damage refers to feelings “humiliated,” “guilty” and interestingly, “bored.” “Damage” is distinguished from other negative feelings because it includes items that have a more permanent nature than other more transitory negative feelings. For example, “fear” or “anger” levels usually drop quite rapidly when the situation causing the fear or anger changes. However, someone who has been “humiliated” will still feel “humiliated” long after the situation has changed.

“*Passion*” is referred to, as a “pull” feeling. “Pull” feelings tend to be infectious – drawing others into the same experience. For example, if many people in a team feel “excited” and “creative,” few in the team will/may feel “cynical,” “angry,” and “confused.” “Push” feelings, for example, “determined” or “decisive,” while also being positive feelings relate to a tendency to use will-power to achieve something. For example, if people feel “determined” to get things done, they are not “confused” and they might use their respective power bases to influence others to do something. Where there are many people in a team who are “decisive,” there will be few people who are “confused,” “fearful,” and “helpless.” “Push” and “pull” therefore refer to different emotional and interactive effects within the work team.

Positive and negative feelings within a team are not mutually exclusive. Teams can have some members experiencing negative emotions and others positive at the same time. Whereas “excited” generally has a stronger polarizing effect, with a small negative loading (0.143) on the negative feeling factor, “curious” has a positive loading (0.171) on the negative feeling factor. Therefore, we can assume that even teams with a prevalent negative emotional field might be “curious.” Curiosity loads mainly on the positive feelings factor, but does not preclude negative feelings. Excitement, on the other hand, reduces the occurrence of negative feelings within the team. The feelings “stubborn” and “impatient” – subsumed under “Defiance” – load mainly on the negative feelings factor but also have small loadings on the positive feeling factor. This implies that teams with “impatient” and “stubborn” members can also have members experiencing positive feelings. “Curiosity” and “Defiance” are therefore nonexclusive, connotative emotional states, and could also be categorized as moods. It has been argued (Ekman & Davidson, 1994) that moods “alter the threshold for

excitation of particular emotions.” Curiosity, impatience, and stubbornness are rather persistent affective states, influenced by the individual’s personality. These affective states will impact the actual emotional experience. “Bored” has a negative loading on the positive feeling scale, which indicates that teams with members who are bored have a tendency to have fewer members experiencing positive feelings. Boredom reduces the occurrence of positive feelings within the team, whereas curiosity does not preclude the occurrence of negative feelings. The emotional categories of “Passion,” “Drive,” and “Curiosity” can be summarized to be related to a tendency to move “toward” an external object or experience, whereas the categories of “Defiance” and “Anger” are the tendencies moving “against” an external object or experience. The categories of “Distress” and “Damage” are related to a tendency to withdraw from the situation or object and move “away.”

Emotional Dimensions

Other empirical studies of emotions in the workplace found that, at the general level, the emotion items cluster in two basic factors – positive and negative emotions (Shaver et al., 1987, Fisher, 1993). This dimension of “positiveness” or “pleasantness” of feelings has been referred to as “hedonic tone.” Our findings clearly replicate the “hedonic tone” dimension within the factor structure that differentiates the feelings into positive and negative feelings, but do not replicate the “arousal” dimension for feelings (Larsen & Diener, 1992; Liu & Perrewe, 2005; Russel, 1989).

Instead, the statistical analysis revealed another dimension of “affective focus.” Internal or self-focused feelings include guilt, boredom, and excitement, and are associated with heightened internal focus. In contrast, external or other-focused feelings such as impatience, blame, and curiosity are associated with a focus on external objects or people. Other-focused feelings are generally more transitory in nature and change quickly with situations. Self-focused feelings affect deeper psychological levels and are more permanent. Therefore, we note the psychological imprint of self-focused feelings is stronger and potentially more damaging.

Curiosity is another important emotional cluster to consider because it is neutral in hedonic tone and can accompany positive and negative feelings. It can be hypothesized that teams are willing to investigate, look, and experiment, as long as they feel safe enough to do so and are not overpowered by much stronger negative feelings such as fear or humiliation.

Curiosity is linked to personal traits as well as situational factors and personal predispositions will determine the degree to which employees will accept challenge, stretching, and striving for new things. The interplay between individual trait and situation needs to be investigated.

Curiosity is the positive counterpart to another category of feelings that was repeatedly found in the factor analysis for “Defiance.” It is neutral on the hedonic dimension of the SOM and includes the feelings of “stubborn” and “impatient.” These are important feelings that teams and individuals need in order to overcome hindrances and persist in the face of adversity. This underlines the fact that negative feelings are not necessarily bad and to be avoided. Obstacles and challenges are normal occurrences when change occurs. It is more valuable to distinguish between feelings that will result in collective effort, as opposed to feelings related to defeat or capitulation, that is, guilt or boredom. The analysis of emotions in organizational change therefore needs to steer away from simplistic negative/positive, satisfied/dissatisfied evaluation toward a more differentiated perspective.

It can be concluded that this set of basic feeling categories allows us to describe the play of feelings in a team at any point in time and investigate how the emotional field of a work group is affected by various factors and how it impacts on the success of the change project and overall organizational performance.

Organizational change is related to a collective emotional journey. The individual experience constitutes only one piece in a complex puzzle of emotional roller-coasters and collective affective processes. Trying to understand just one individual’s reaction to organizational change is like an attempt to comprehend a symphony based on the score of a single violin. Therefore, the collective emotional field provides an innovative and efficient way of assessing the emotional reality of employees at work, not only in organizational change but generally in terms of organizational efficiency and performance. Disturbances in a team’s emotional field will affect its collective work orientation and negatively affect its performance. As managers need to optimize not only individual performance but the performance of the system as a whole, they need information regarding the emotional field of the team in order to determine which teams need most attention.

FURTHER INVESTIGATIONS

Further investigations are needed to test the assumption that we can accurately measure the “emotional field” of the work group.

The data could be contaminated by the following factors:

- The capability of the respondent to accurately perceive the emotions within the team. We would need to test if team members have a shared perception of the emotional reality and therefore need to test if the difference in means between teams is significant.
- The tendency of the respondent to project his/her own emotions onto the team. We assume that strong emotions (such as anger and fear) would be more easily projected onto the team and therefore that the perception of members that report high levels of those strong emotions would differ more strongly from the team average and have higher interteam variance than those with low levels of strong emotions.
- The willingness of team members to accurately express and share their emotions. This will be dependent on the level of trust within the team. Therefore, we would assume that teams with a high level of trust would have a more congruent and accurate perception and therefore lower levels of interindividual variance within the team.

Further studies need to investigate the implications of these findings and how the seven basic emotional categories that we found in this study play out in the context of organizational change. It needs to be clarified how the organizational change project and overall organizational performance are affected by the emotions in the workplace, and what the effects are when feelings are either positive or negative in the team. The main forms of “emotional fields” that can be found in work groups and the factors that influence them need to be determined, along with how different sets of feelings are present in work teams, in what combinations, how these feelings change in relation to each other, and what feelings might be experienced within work teams during the process of organizational change. We are also interested in what variables within the organizational setting and how the change project can have an influence on the emotional experience of the work team.

An investigation of how emotional dynamics play out in an organizational setting and how groups move from one emotional field to another would be of further interest. This will allow us to determine what this means for managing the emotional impact of organizational change in the workplace. In order to manage the organizational change process, managers need to know how to affect the emotional field of the work group and therefore they need clear guidance on what actions and interventions are required to address specific emotions.

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CHAPTER 6

COMPLEXITY THEORY AND AFFECT STRUCTURE: A DYNAMIC APPROACH TO MODELING EMOTIONAL CHANGES IN ORGANIZATIONS

Yan Li, Neal M. Ashkanasy and David Ahlstrom

ABSTRACT

To reconcile theoretical discrepancies between discrete emotion, dimensional emotion (positive vs. negative affect), and the circumplex model, we propose the bifurcation model of affect structure (BMAS). Based on complexity theory, this model explores how emotion as an adaptive complex system reacts to affective events through negative and positive feedback loops, resulting in self-organizing oscillation and transformations between three states: equilibrium emotion, discrete positive and negative emotion in the near-equilibrium state, and chaotic emotion. We argue that the BMAS is superior to the extant models in revealing the dynamic connections between emotions and the intensity of affective events in organizational settings.

INTRODUCTION

In the past 40 years, complexity theorists have rewritten and expanded conventional theories, in what amounts to a paradigm shift (Kuhn, 1970). Complexity theory as a paradigm reveals unique dynamic life processes and phenomena in a variety of fields, such as biology (Sole & Goodwin, 2000), economics (Arthur, 1999; Parker & Stacey, 1994), and management (Anderson, 1999; Brown & Eisenhardt, 1997; Guastello, 1997; Levy, 1994; Stacey, 1993). As such, complexity theory is distinct from the traditional paradigm of Newton mechanic physics – the simple and ideal linear relationships of causality. It is also referred to as nonlinear dynamics, or chaos theory. In this chapter, we elucidate how the principles of complexity theory may be applied to better our understanding of the dynamic nature of emotion in organizations.

Our theorizing builds upon the work of a small number of researchers working in the emotions field who have advanced contemporary theories based on a framework of nonlinear dynamic system theory (e.g., Izard, Ackerman, Schoff, & Fine, 2000; Mayne & Ramsey, 2001; Scherer, 2000). While these theories have helped define our knowledge of affect structure – how emotions are organized – little is known to date from the point of view of complex adaptive system theory. It is this gap we seek to address in this chapter.

Emotion theorists who have addressed the question of affect structure have taken different perspectives, such as whether emotion can be differentiated by considering physical responses, facial expression, cognitive appraisals, or cultural variation (e.g., see Ekman & Heider, 1988; Izard, 1991; Plutchik, 1962), or whether the variety of emotions can be simplified by certain dimensions and how affective experience is cognitively represented in mind (Russell, 1980). Each of these theoretical perspectives has entailed development of specialized methods to collect empirical evidence, which have further enhanced our knowledge of the field. Despite these significant contributions, however, the inconsistencies found between the different disciplines cannot be solved by any single extant theory in of itself. Cropanzano, Weiss, Hale, and Reb (2003, p. 832) concluded “the problem of how to conceptualize the structure of human affective experience awaits resolution.” Cropanzano and his associates suggest that one way to solve this conundrum is to seek a larger taxonomic structure compatible with the extant perspectives, extending to new fields of understanding.

Correspondingly, in this chapter we propose a perspective based on complexity theory. Our aim is to elucidate affect structure, and to attempt to

reconcile the theoretical discrepancies between existing theories, while expanding the inherent limitations of each theoretical account. This chapter is thus organized in three parts. In the first part, we review current theories of affect structure, including the underlying assumptions and the construct validity of measures based on the previous empirical findings. We also examine the limitations of each theory and point out inconsistencies, and discuss the doctrine and basic terminology of complexity theory. In the second part, we introduce the *bifurcation model* of affect structure to delineate the dynamic process of emotion in organizational change. Finally, we discuss the organizational implications of our model, suggest future directions for research, and conclude.

AFFECT STRUCTURE: THEORETICAL WAYS OF ORGANIZING AFFECTIVE EXPERIENCE

Discrete Emotion Theory

Affective experience reflects the subjective feelings of the events occurring in individuals, organizations, and social relationships. Discrete emotion theory considers that emotion is not a general subjective feeling, but instead it is viewed as grids of feelings. It underscores that each emotion holds a unique functional, adaptive, and relational meaning (e.g., see Izard, 1991; Izard et al., 2000; Plutchik, 1962; Lazarus, 1991). Lazarus (1991) argues in particular that discrete emotions (such as fear, happiness, surprise, shame, regret, disgust, guilt, anger, and sadness) indicate unique connections to an event that has occurred in the environment, and encapsulate the way people develop subtle relationships with their proximal circumstances. Researchers of this doctrine put their efforts into finding evidence to support notions that each discrete emotion has a unique program of occurrence, including facial expression, cognitive appraisal, and/or motivation.

Discrete also implies that the function of each emotion is not cumulative. Researchers of appraisal theory (Ellsworth, 1991; Lazarus & Smith, 1988; Parkinson & Manstead, 1992; Scherer, 1988) have found that an event is likely to activate various particular emotions depending on how the discrete event is cognitively appraised. For example, while both sadness and anger are negative emotions, *anger* is activated by the appraisal of *other-agency* (Ellsworth & Smith, 1988; Scherer, 1988). That is, the actor comes to believe that others should take the responsibility of the outcome of the event.

As a result, the actor perceives that her or his goal has been blocked, resulting in frustration. S/he thus will want to remove barriers or sources of frustration toward the goal resulting in impending aggression. *Sadness*, on the other hand, is activated by the appraisal of an *impersonal source*. The actor in this case is likely to feel the loss of a valued object or a lack of efficacy (Malatesta & Wilson, 1988). Roseman, Wiest, and Swartz (1994) note in particular that each discrete emotion is associated with a distinctive goal and action tendency resulting in particular thoughts and feelings.

In the decision-making process, Lerner and Keltner (2000) found in their experimental studies that, while fear and anger are negative emotions, they differ in risk perception. Fearful people estimate risks pessimistically and are averse to risky choices, whereas angry people are optimistic in risk estimation and prefer risky choices over certain choices.

Several researchers have identified different discrete emotional taxonomies. For example, in a study of facial expression identification, Plutchik (1962) distinguished eight primary emotions. Izard (1991) later recognized 11 fundamental emotions: joy, interest, surprise, anger, sadness, fear, guilt, shyness, shame, disgust, and contempt. Ekman's work on cross-culture identification of facial expressions has found the consistency of expressions such as contempt (Ekman & Heider, 1988). Izard and associates (2000) note in particular that emotions also are a systematic phenomenon, distinct from cognition, and involving hierarchical interactions between neural, expressive-behavioral, experiential components, and motivation.

Despite its usefulness in explaining the functional mechanisms of emotion, discrete emotion theory also raises the question: How many discrete emotions are sufficient to capture emotional experiences? In this respect, headline researchers such as Plutchik (1962) and Izard (1991) seem unable to reach a consensus on the number of discrete emotions. Weiss and Cropanzano (1996, p. 19) comment further that "intuition tells us that there are many different kinds of emotions, each of which involves a unique phenomenological experience." Moreover, important emotions that crop up in the decision making and economics literature, including regret (e.g., Bell, 1982; Zeelenberg, Beattie, Plight, & Vries, 1996) and passion (Smith, 1759), appear to be missing from most of the traditional taxonomies. Finally, we note that low-activation emotions, such as relaxation and calmness, which represent important components of affect structure, have yet to receive sufficient attentions in the discrete emotion literature.

Given the diversity of emotions and the importance of understanding emotional functions, it is becoming clear that discrete emotion theory is critical to interpretation of the psychological mechanisms governing

affective phenomena. Consequently, attempts to organize emotions into parsimonious affective structures raise a number of issues. In particular, the question remains as to whether discrete emotions share properties in common, or whether they are functionally distinct from each other in certain key characters. We argue here that discrete emotion theory has yet to provide a theoretical interpretation to solve this conundrum. Moreover, in the absence of the necessary connections between emotions, discrete emotion theory lacks a theoretical point of view to describe how emotions can switch dynamically from one to another with changing of circumstances. This is what we attempt to resolve in this chapter.

The Circumplex Model of Affect

How are discrete emotions organized to represent a structure of affect? The circumplex model of affect (see Fig. 1; Russell, 1980; Larsen & Diener, 1992; Reisenzein, 1994) seeks to address this question and to categorize and aggregate emotions in terms of pleasure and activation dimensions. Thus, rather than organizing emotions by the underlying psychological mechanism

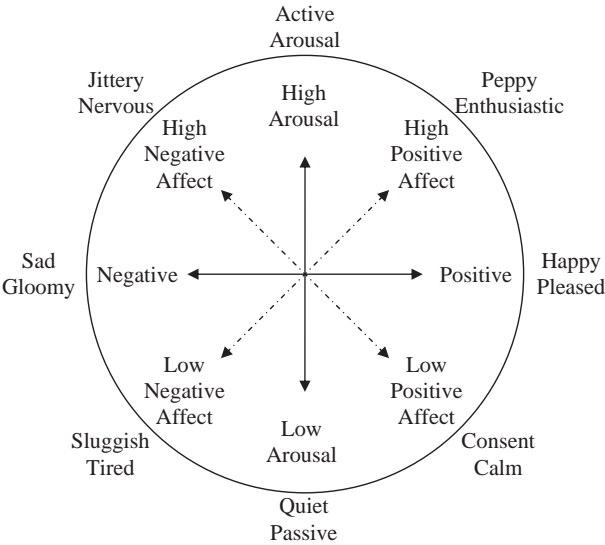


Fig. 1. Circumplex Model of Affect. Source: From Russell (1980), reused with permission of the APA.

or function, this approach seeks to describe how people categorize emotions in terms of certain dimensions, such as arousal level (intensity) and valence (positive or negative).¹ To identify the distribution of emotions by these two dimensions, the developers of the circumplex model typically asked participants to put semantic emotion words into eight categories based on four bipolar dimensions: pleasantness (pleasure vs. misery), excitement (excitement vs. depression), activation (arousal vs. sleepiness), and distress (distress vs. contentment). We argue in this chapter that, although this approach emphasized emotion's representation in the lay mind, it fails to reveal the functional meaning of emotions.

Although the various circumplex models use different names to denote the dimensions, two dimensions are consistently regarded as basic dimensions of affect: valence (pleasantness vs. unpleasantness) and arousal (Larsen & Diener, 1992; Reisenzein, 1994; Russell, 1980). It is important to note, however, that the four sectors formed by these dimensions entail multiple emotions, rather than a single emotion. For example, happy and pleased are both categorized as positive affect; while sad and gloomy are associated with negative affect. Within the sectors, content and calm are categorized as low-arousal negative affect, and jittery and nervous are high-arousal negative affect.

Notably, while the circumplex model of affect helps us to see how the properties of emotions share commonalities, it is silent when it comes to *understanding* affective structure. Moreover, subsequent research using structural modeling methods (e.g., see Barrett & Russell, 1999; Watson, Wiese, Vaidya, & Tellegen, 1999) has failed to achieve a good model fit. As such, there is ongoing doubt about the integrity of a model that entails bipolar dimensions of valence and arousal. Larsen and Diener (1992) argue further that grouping multiple emotions in terms of valence and arousal dimensions does not differentiate emotions sufficiently well. Fear and anger, for instance, are both negative high-arousal emotions in the same region of the circumplex model, yet, as we noted earlier, these emotions are functionally quite different from one another. In this respect, Feldman (1995) and Barrett (1998) empirically examined the idea that people differ in their perception on valence and arousal when rating their emotional experiences. For example, some people tend to use only one dimension, either valence or arousal, so that their ratings on emotion distribute on one rather than two dimensions, casting doubt on the octant structure of affect. More recently, Rafaeli and Revelle (2006) found that sadness and happiness in particular are not bipolar opposites.

We argue that the circumplex model, which represents affect in people's minds by categorizing emotions in terms of valence and arousal dimensions,

fails to reflect the real relationships between the activated emotion and affective events. It leads in particular to ambiguity about the psychological meaning of each emotion group around the circumplex. For instance, what are the common psychological meanings associated with the negative high-arousal emotion group including fear and anger? Grouping emotions by intensity is also problematic because it assumes that relationships among the emotions are invariant on the dimension of intensity. We argue that this misrepresents the nature of people's real feelings. In certain circumstances, for example, we might experience more sadness (middle-level activated negative emotion) than anger (highly activated negative emotion), but this is completely missing from the circumplex interpretation of affect. As such, we posit that grouping emotions by intensity fails to represent adequately our understanding to the structure of affect.

A further issue is that, while the emotion groups are ordered around the circumplex, this fails to represent the relationship between groups adequately. For instance, we are unable to tell the nature of the relationship between low-arousal emotions and high-arousal emotions, nor can we tell how emotion changes from one group to another. As to this issue, [Barrett \(1998, p. 579\)](#) commented, "static, nomothetic theory may not accurately describe the subjective affective experience." In this case, we propose that a dynamic framework of emotion is needed to reveal the nature of affect and to increase its predictive power.

In an attempt to simplify the affect structure and so achieve better psychometric properties, [Watson, Clark, and Tellegen \(1988\)](#) developed the positive affect and negative affect scale (PANAS) based on the circumplex model. The PANAS is a rotated solution with dimensions of positive and negative affectivity, determined from a factor analysis of 20 emotion adjectives. Positive affectivity, on the one hand, is characterized in terms of high energy, enthusiasm, and pleasurable engagement. Negative affectivity, on the other, is representative of distress, unpleasant engagement, and nervousness. Watson and his colleagues demonstrated that this structure exhibits better psychometric properties than the circumplex model, although it continues to sidestep the issue of affective function and its relationship with environment. Nonetheless, PANAS has come to be broadly used in current research (e.g. see [George, 1991](#)) and, because of its parsimony, it has come to be regarded as representative of the fundamental structure of affect ([Weiss & Cropanzano, 1996](#)).

As a simplified circumplex model, the PANAS structure implies an arousal dimension, and excludes low-activation emotions such as calmness or relaxation ([Wright & Doherty, 1998](#)). The remaining emotional states

represent hedonic tone (positive vs. negative emotion). Note, however, that while the remaining negative emotions, such as upset, sadness, and anger, share a common hedonic tone, they are functionally different. Moreover, these functional differences may well be larger than the common variance implied by the shared hedonic characteristic of each emotion. [Watson and his colleagues \(1988\)](#) were aware of this issue, and explained that, unlike emotion or affect, PANAS measures moods, which are diffused and enduring emotional states, and lacks the clear relationship with environmental stimuli that characterize discrete emotions. Moreover, by simply differentiating emotions in terms of hedonic tone, this theory fails to reflect the nature of affect based on its occurrence, changeability, and relationships with the environment. Empirical evidence also demonstrates its limitations in predicting behavior as compared to its components, regardless of whether affect is seen to be mood or emotion. For instance, [Lee and Allen \(2002\)](#) found that the single PANAS emotion of hostility significantly predicted deviant work behavior over and above general negative affect.

Considering the issues we have outlined above relating to the affect circumplex, the emerging evidence based on discrete emotion theory might render a better framework to understand the functional meanings of discrete emotions and their role in the structure of affect. Organizational researchers correspondingly have also pointed out that discrete emotions should replace general pleasant or unpleasant affect to predict and interpret organizational behavior (e.g., [Amabile, Barsade, Mueller, & Staw, 2005](#); [Frijda, 1993](#); [Gooty, Gavin, & Ashkanasy, 2009](#); [Lazarus & Cohen-Charash, 2001](#); [Shaver, Schwartz, Kirson, & O'Connor, 1987](#)).

Putting all this together, we conclude that the circumplex model, which attempts to simplify and organize emotions to reflect important features of affect (valence and activation), lacks acceptable theoretical and psychometric integrity. This is most likely because, in [Russell's \(1980\)](#) original formulation of the model, it was developed to represent how lay people organize their emotional experiences in their minds. In this instance, we argue that the circumplex model fails to explain affective structure in terms of the nature of basic emotions and their functionality. As a simplification of the circumplex model, the PANA achieves better psychometrics, but still fails to permit us to understand the function of emotions because it continues to aggregate its discrete emotional components.

Discrete emotion theory, on the other hand, while addressing the functions of the different emotions, and their linkages with antecedents and consequences, lacks the key properties of organizing the diversity of discrete emotions. As such, all of the current theories concerning affective structure

cannot adequately explain the relationships between discrete emotions and their relationships with affective events.

Integrating the above theoretical inconsistencies, Vallacher and Nowak (1997, p. 74) noted from the perspective of complexity theory that,

Because it is impossible to capture the complexity of our knowledge in a single coherent theory, many specific theories have been developed to explain very specific aspects of social psychology. The account provided for a given phenomenon, moreover, looks radically different and seemingly incompatible when approached from different levels of analysis.

Consequently, and in response to Cropanzano and colleagues' (2003) call for a larger taxonomic structure to resolve the nature and structure of affect that includes the dynamic properties of emotion, we utilized the knowledge system of complexity theory to interpret the emotion–circumstance association. To do this, we utilize May's (1976) *bifurcation model* as an alternative paradigm to build an affective structure, enabling us to understand qualitatively the important features of emotion and their temporal variation. This approach is also consistent with Nowak's (2004) call for psychological theories to be studied from the perspective of nonlinear dynamics.

THE BIFURCATION MODEL OF AFFECT STRUCTURE: A STRUCTURE DERIVING FROM COMPLEXITY THEORY

Complexity Theory as a Paradigm

From the perspective of a paradigm, complexity theory postulates rational ground rules in revealing and analyzing the nature of complex systematic phenomena. Utilizing complexity theory as a research paradigm to interpret affective structure implies a substantial change in scientific thinking. It is opposite to the traditional reductionism, where the aim is to understand the whole by studying subcomponents individually. Indeed, any living system cannot simply be explained by a reductionist study of its parts. Instead, complexity theory studies the process of whereby a higher level global structure evolves from local interactions. Unlike simple linear phenomena, complex adaptive systems will attempt to return to an equilibrium state automatically once the equilibrium is disordered. Therefore, complexity theorists (e.g., Abraham & Gilgen, 1995; Barton, 1994; Kenrick, Li, & Butner, 2003; Lewis & Granic, 2000; Nowak, 2004;

Sergent & Dehaene, 2004) rely on very simple tenets to decipher complicated systems and across a broad range of disciplines, such as biology, economics, ecology, and psychological processes. In the context of emotions, Izard and associates (2000) were the first to interpret the occurrence of discrete emotions in terms of self-organizing concepts. Our theory goes a step further than this, however, in that we address the dynamic nature of discrete emotions and emotions aggregate (or disaggregate) depending on different environmental circumstances.

In complexity theory, an open system, such as emotion, is considered to be dissipative (Prigogine, 1961). As such, it exchanges energy and information with the environment in which it is embedded, and involves both positive and negative feedback loops (Wiener, 1948). In a positive feedback mode, an environmental event that disturbs the initial equilibrium status of a given system amplifies the distance between expected state and the initial equilibrium, ultimately placing the system far from its equilibrium – a state of either a near-equilibrium or chaos. In this situation, the system needs continuous energy input to keep it at that state. Counter to this, the system can recover from chaos to near-equilibrium status or from near-equilibrium status back to equilibrium through negative feedback processes. In *self-organizing* systems, transitions between the states are spontaneous (Ashby, 1947), with no need for guidance from an external source.

In a complex adaptive system, a tiny change is likely to be amplified through numerous iterations leading to macrolevel qualitative emergence or bifurcation (May, 1976), despite the likelihood that there might be vast interactions between sublevel systems. As Poincaré (1890) pointed out following this logic, a butterfly's movement in New York might generate a global weather change. This is the well-known *butterfly effect*. In this way, relationships between cause and effect no longer appear as linear and predictable. Instead, the system presents macrolevel structural emergence or bifurcation, which May refers to as equilibrium, near-equilibrium, and chaos. The specific structural emergence is highly dependent on the initial conditions, in terms of sensitive dependence on initial conditions (Poincaré, 1890). In other words, the same event is likely to generate significantly varied consequences even for the very small differences at the initial status.

May (1976) developed a difference equation to model the dynamic process of an open system in the case of an insect population. The equation is:

$$X_{t+1} = rX_t(1 - X_t) \quad (1)$$

In this equation, r is a critical value representing the intrinsic growth rate of insects. The population of next generation insect X_{t+1} is determined by

the interaction between the positive and negative effect loop. On the one hand, X_{t+1} will increase with the increase of the product of r and X_t (the current population). In other words, the higher growth rate r and insect population at the previous time X_t , the higher insect population at the next generation X_{t+1} . This distance between the current population and the population at the next time is amplified by the function of rX_t – the positive feedback loop. On the other hand, with the growth of population, nutrition becomes scarce. The competition for resources leads to more deaths. This function is denoted as $(1-X_t)$, the negative feedback loop. It reduces the population distance between the two time points $(t, t+1)$.

The interaction between positive and negative feedback loop results in various patterns emerging. But the consequences are still dependent on the critical value a . To illustrate how this works, we refer now to [Sole and Goodwin's \(2000\)](#) bifurcation modeling of another animal population: rabbits. According to these authors, when parameter r (the intrinsic growth rate) is larger than 1 and less than 3, the population of rabbits always stabilizes at a fixed point over time, irrespective of the number of X_t . For example, suppose $r = 2.5$ (the intrinsic growth rate is 2.5), calculating X_{t+1} using Eq. (1), the results always converge to 0.6, no matter the initial population at the time t (Fig. 2a). If the maximum size of a rabbit

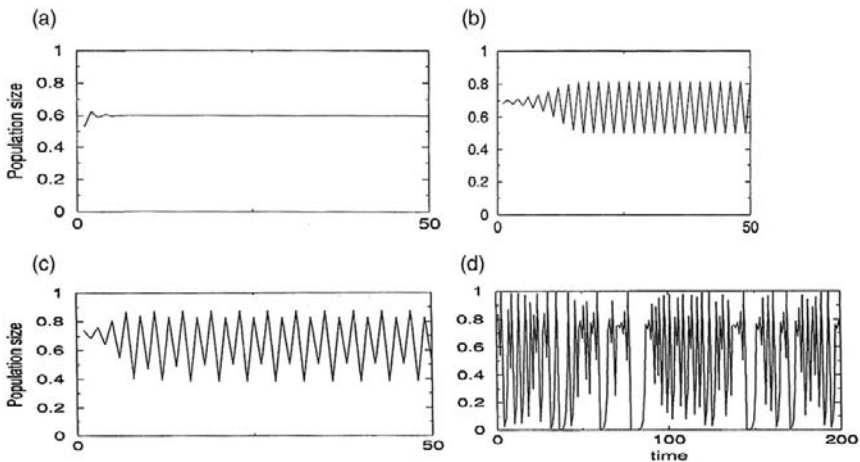


Fig. 2. Rabbit Population Growth as an Example of Bifurcation. (a) Equilibrium, (b) 2 Bifurcation, (c) 4 Bifurcation, and (d) Chaos. Source: [Sole and Goodwin \(2000, p. 7\)](#), copyright © 2002, reprinted with permission of Basic Books, a member of the Perseus Books Group.

population is 10,000, it means that the rabbit population will always be 6,000 ($0.6 \times 10,000$). This is the equilibrium state for the rabbit population. Just like a small steel ball on the side of punch bowl, no matter its initial position, it will always end up in the bottom of the bowl after swinging from one side to another. This is an example of a *point attractor*.

Assuming $r = 3.3$, Eq. (1) generates two values (0.48 and 0.83). The system cannot stabilize at one fixed point; it has to oscillate continuously between two stable points. The rabbit population in this example will oscillate between 4,800 and 8,300 in a continuous cycle (Fig. 2b). Here, the analogy is with the pendulum of a clock, which swings between two fixed points so long as a continuous impulse force is applied (i.e., as with a clock spring). When $r = 3.5$, more complicated patterns emerge with four fixed points. The system will oscillate between the four points (Fig. 2c). Thus, when r is in the range of 3–3.57, the system becomes increasingly unstable, and needs more and more energy to maintain stability. Despite the increase of instability, the system will still oscillate within finite patterns, while consuming more energy. The state within this range, therefore, is called *near-equilibrium*. When r increases to over 3.57, the value at the next time step will have infinite possibilities. Unpredictability appears without any pattern or order (Fig. 2d). This state is called *chaos*. The endurance of a chaotic state needs more energy. The relationship between critical value r and the states of a system at the next time X_{t+1} is displayed in the bifurcation model (May, 1976; Fig. 3).

In the bifurcation model May (1976) proposed that the status of a system is differentiated only by the critical value r . With r greater than 1 and less than 3, the system is at equilibrium status with a constant value irrespective of the value of X_t . If r is greater than 3 and less than 3.57, the system is at the near-equilibrium state. It bifurcates as r increases. At each bifurcation, the number of fixed points (or stable points) increases exponentially following the series 2, 2^2 , 2^3 , ..., 2^n . The more bifurcation, the more unstable the system is and more energy is needed to maintain the system at that state. Importantly, the smallest differences in a can lead to significant different consequences. In the end, when r is greater than 3.57 but less than 4, chaos occurs with infinite number of fixed points. If r is less than 1, no matter how X_t varies, X_{t+1} is zero. The system dies out.

May (1976) emphasized that three important aspects of the bifurcation model need to be understood. First, at the near-equilibrium state, the number of bifurcation increases as the exponentiation of 2. Li and Yorke (1975), however, had already modeled a 3^n bifurcation process. In response, May (1976) acknowledged that the system is able to represent multiple

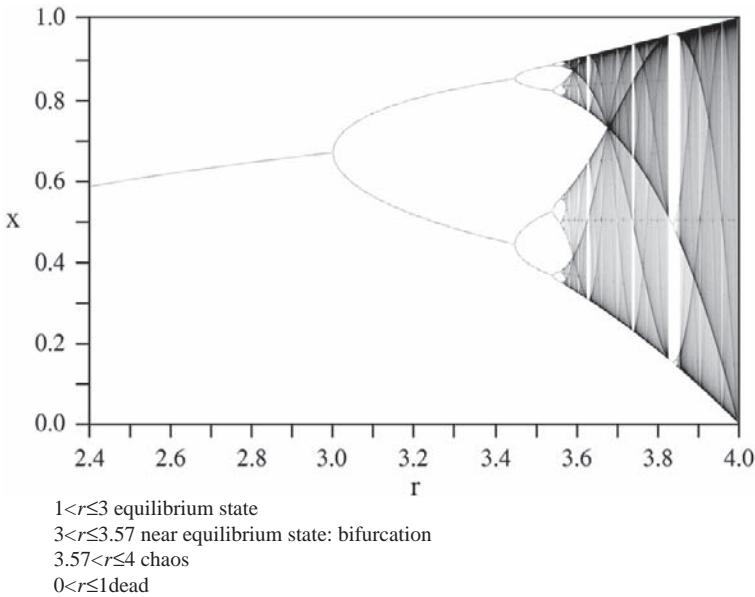


Fig. 3. The Bifurcation Model. Source: Taken from http://en.wikipedia.org/wiki/File:LogisticMap_BifurcationDiagram.png#filehistory

discrete states, in addition to the 2^n process. Second, the oscillation between n fixed points can be represented as a macrolevel n -pattern cycle, although it can also be represented by one macrolevel pattern with no fractal oscillations at the microlevel (Parker & Stacey, 1994). Third, May's (1976) model represents the bifurcation process only by one dimension (the critical value a). In real complex systems, however, bifurcation is likely to be more complicated and influenced by more dimensions.

The Bifurcation Model of Affective Structure

Based on the bifurcation model proposed by May (1976) and its associated terminology (dissipative system, positive and negative feedback, self-organizing, nonlinearity, and sensitive dependence on initial conditions), we now develop an affective structure intended to reveal the dynamic relationships between emotions. In so doing, we elucidate the mechanisms by emotion occurs from the perspective of complex adaptive system, which we call the *bifurcation model of affective structure* (BMAS; see Fig. 4).

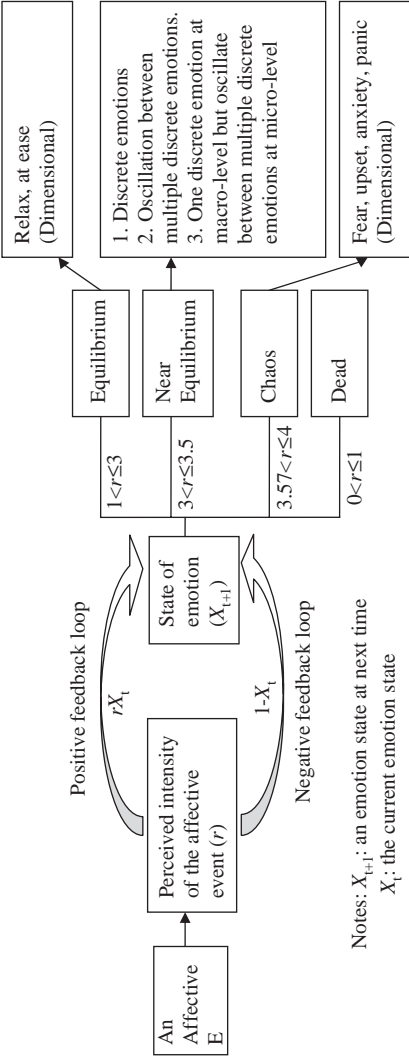


Fig. 4. The Bifurcation Model of Affective Structure (BMAS).

In the BMAS, emotion is represented as a dissipative system that exchanges energy and information with the external environment. It reacts to environmental stimuli emotionally and presents as a bifurcation in accordance with May's (1976) model. Within the model, emotions are represented as falling into three states: equilibrium, near-equilibrium, or chaos. The emotional system is capable of self-organizing transitions from equilibrium to near-equilibrium to chaos and back again over time. In other words, the emotional system is able to maintain its equilibrium and to recover from a chaotic state without external force.

As we explained earlier, the state of the emotional system depends upon the perceived intensity of the affective event; where slight differences in intensity perceived will result in significantly different state emergence. This can occur through elicitation of a positive feedback loop, which results when an affective event is perceived as highly intense, and the amplifying signal comes to be elicited by the event itself, continuously increasing the distance between the next emotional state and the previous one. This is in contrast to a negative feedback loop, which involves processes that serve to reduce the distance between emotional states at two points in time. The dynamic interaction and balance between positive and negative feedback loops thus determine subsequent emotional states.

Equilibrium State

In the dynamic process of emotion occurrence, an affective event – the event that is likely to generate emotional responses to the environment (the organization), such as a job promotion, a meeting notification, or a demanding coworker (Weiss & Cropanzano, 1996) – is perceived at first. The state of emotion is determined by the individual's perceived intensity of the affective event (r). Following on from our earlier discussion, we see that slight changes in r will lead to different emotional consequences. For example, if the perceived intensity of stimuli (r) is low ($1 \leq r < 3$), the emotional system is at an *equilibrium state*. The individual feels that the proximal environment is constant. No matter how many such events occur around the individual, s/he will consider that nothing is worthy of expending energy or a reaction out of the ordinary. For example, in a working day, an employee might complete writing a document. Then s/he goes to the conference room for a meeting that was scheduled two days ago. The signal of meeting does not elicit any strange feelings because it is routine. The positive feedback loop of amplifying the meeting signal is as strong as reducing the signal by the negative feedback loop. Therefore, the employee feels an equilibrium state exists for the meeting.

At the equilibrium state, emotions show simple characteristics, for example, calmness, ease, relaxation, and comfort. Within this range of perceived intensity, the emotional system is always stabilized at a fixed point. Relaxation, calmness, and comfort are the low-activation emotions in the circumplex model and denote, in complexity theory parlance, a *nonfractal state*, that is, an equilibrium state. In this instance, therefore, we argue that it makes little sense to try to differentiate between the emotional feelings of relaxation, calmness, and comfort. Consequently, it is appropriate to treat the equilibrium emotions as dimensional form of affect, rather than as discrete emotions.

Near-Equilibrium State

As previously discussed, the near-equilibrium state is attained when the perceived intensity of stimulation r increases beyond the critical value of 3. At this point, the system becomes unstable. The intensity of the affective event is now strong enough so that positive feedback dominates the change, amplifying the gap between the next emotional state and the equilibrium. People in this state cease to feel relaxation or calmness. The emotional system now enters new states apart from equilibrium. The activated emotion reflects individuals appraising the properties of the stimulation, and the specific relationship between the person and the event in terms of the relational connection. For example, mild anger as distinct from sadness or happiness as distinct from surprise. *The near-equilibrium emotions, therefore, exhibit discreteness.*

Consistent with May's (1976) bifurcation theory, as the perceived intensity of the stimulus increases, the number of oscillation nodes increases from two to four, to eight, or more, although still a finite number of discrete emotions. Note, however, that, as the number of bifurcations increases, the emotional system becomes progressively more unstable, requiring more and more energy to maintain at that state.

Indeed, recent studies have provided evidence to support the existence of multiple discrete emotions and the oscillation between them. For example, employees can have ambivalent emotions (e.g., happiness and sadness) toward the organization they work for (Dasborough & Ashkanasy, 2005; Larsen, McGraw, & Cacioppo, 2001; Pratt, 2000). Or, as Smith and Ellsworth (1987) found, upcoming exams can elicit more than two discrete emotions. For example, an entrepreneur might experience a range of blended emotions (Shepherd, 2009). Li (2010) found that blends of emotion such as regret, sadness, surprise, hope, and anger on the outcomes of a new business

influence entrepreneurial judgment of the business' attractiveness and the possibility of successfully starting up future enterprises.

At the near-equilibrium state, the oscillation is likely to present as one dominating macrolevel emotion, but with microlevel oscillations. For example, consider an employee who is irritated because the computer software s/he is using is playing up. S/he calls the IT Department, but they refuse to fix the problem since they believe the problem is caused by her/his lack of adequate training. The employee thus becomes annoyed and angry. But at the same time, s/he also feels regret that s/he may not have paid enough attention to the training programs when they were offered. In this instance, although the employee experiences switching from anger to regret at microlevel, her/his presentation to the IT Department indicates just anger, with nothing to suggest that s/he also feels regret.

Although bifurcation model reveals the oscillation phenomenon, the emotional system is a relatively more complex system. The oscillations between emotions at the near-equilibrium is likely to be more complicated than the possible ways May (1976)'s model suggested (Carrera & Ocejja, 2007). Clearly, more sophisticated studies are needed to explore and to clarify the possible ways of emotional oscillation at the near-equilibrium state.

Chaos

When the perceived intensity of an affective event r increases beyond the critical value of 3.57, the intensity becomes so strong that the positive feedback amplifies the distance between the experienced emotional state and equilibrium, resulting eventually in an emotional state far from even the near-equilibrium state described above. Ruelle (2001, p. 3) defines chaos as "practical unpredictability for certain deterministic systems." Emotions in this state change erratically without patterns. The affective event is too complicated for individuals to differentiate whether they feel anger, sadness, regret, disappointment, or mixed. People feel inability to appraise the affective event and chaos in cognitive and behavioral responses ensues. The emotional experience in that situation is defined as chaotic. Maintaining the chaotic state also dissipates more energy. Chaotic emotion is an intensively activated and uncomfortable experience. Individuals in this state perceive threats, uncertainty, and ambiguity. The semantic cluster associated with this state includes anxiety and fear, together with an experience of being scared and upset (Beck, Epstein, Brown, & Steer, 1988; Shaver et al., 1987). Similar to the equilibrium state, the emotional system at chaotic state is not fractal. No matter what emotion is being named, from a

psychometrics perspective, these emotions are undifferentiated denoting a single undifferentiated affective dimension: chaos.

Chaotic emotion is painful and energy consuming. But it is not all bad. Although emotion in a chaotic state cannot be stabilized at any fixed point, it offers an opportunity to try novel ways of responding to uncertain affective events. Researchers such as Cheng and Van de Ven (1996) and Stacey (1993) go so far as to suggest that chaos may lead to creativity and innovation.

From the perspective of psychometrics, Li, Ahlstrom, and Ashkanasy (2010) found, using confirmatory factor analysis, good fit for a model involving one dimension at the equilibrium and chaotic emotional states, and discrete positive and negative emotions at near-equilibrium states. Model comparison also showed that the bifurcation model is better than simply aggregating the positive discrete emotions and negative discrete emotions as PA and NA. This model also achieved better predictive validity in explaining affective antecedents of organizational commitment.

DISCUSSION

According to Kuhn (1970), a new theory emerges and comes to be accepted because of a crisis of extant theories, not merely because it advances understanding of phenomena. We proposed the BMAS as a means to integrate the contentions of extant theories. We argue that this model, which is based on rational grounds of complexity theory, solves the fundamental discrepancies between circumplex model, discrete emotion theory, and the positive and negative affect structure. Table 1 presents a summary of the different approaches.

Dimensional versus Discrete Models of Affect

The BMAS provides in particular a means to reconcile the conflicting views of advocates of the dimensional and discrete points of view related to the structure of affect. A solely dimensional or a discrete emotion perspective results in an incomplete understanding of affective structure (Cropanzano et al., 2003). Only by combining discrete and dimensional approaches can a theory reflect the variety of emotional experiences while simultaneously simplifying the structure of affect. In the BMAS model, activated emotions reflect the status of the system. The equilibrium state (relaxed, calm,

Table 1. Theory Comparison.

Theory	Theory Assumption	Research	Structure	Psychometric Characters	Theoretical Drawbacks
Discrete emotion	Each emotion has unique function, adaption, and relationship with its elicitor.	Identify the emotions with consistent physical responses, facial expression, cognitive appraisals, or cultural variation (e.g., Ekman & Heider, 1988; Izard, 1991; Plutchik, 1962)	Primary emotions (Izard, 1991; Plutchik, 1962).	Discrete	Absence of a simplified structure.
Circumplex model	Represents the way lay individuals organize emotions in their mind.	Study how semantic emotion words are distributed by the dimension of valence and intensity (Russell, 1980; Larsen & Diener, 1992; Reisenzein, 1994).	Eight categories based on four bipolar dimensions: pleasantness (pleasure vs. misery), excitement (excitement vs. depression), activation (arousal vs. sleepiness), and distress (distress vs. contentment).	Poorly supported	We cannot reflect the nature of emotions from their occurrence and dynamic changes by such categories.
PANA	A simpler affect structure can be achieved by the factor analysis.	Aim to solve the psychometric problems associated with the circumplex model.	Dimensions of PA and NA (Watson et al., 1988)	Better than circumplex model	Cannot reflect the function of discrete emotions.
Bifurcation model	Dynamic affective structure can be modeled based on the idea that emotion is a complex adaptive system.	Study the dynamic process of emotion and its psychological mechanisms. Study how emotion oscillates and transitions; particularly how chaotic emotion turns into innovation.	Affect dimension at the equilibrium state; discrete positive and negative emotions at the near-equilibrium state; single affect dimension in the chaos state.	Better than PANA (Li et al., 2010)	Scientific understanding relies on the knowledge of complexity theory.

comfortable, or at ease) corresponds to an invariant environment, where experienced emotions are undifferentiated. Likewise, the chaotic state (upset, fear, anxiety, or scare) indicates a disorganized situation at the time when the perceived intensity of the event becomes too great for people to evaluate the event itself and its outcome. For these two states, differentiating subtle feelings is not necessary, and so they are appropriately characterized as affective dimensions. This is in contrast with what occurs in the near-equilibrium state, which reflects specific and discrete emotional responses to concrete situations (affective events). Moreover, the resulting emotions demonstrate discreteness in functional and relational connections with stimuli (Lazarus, 1991). In this way, people experiencing these emotions can respond flexibly in an appropriate manner to cope with varied situations (affective events).

In the near-equilibrium state, a person's emotional system can perceive that the novelty of the environment precludes equilibrium, resulting in a discrete emotional reaction. The response, irrespective of the particular emotion involved (e.g., anger, sadness, regret, surprise, or happiness), implies a specific and subtle relationship with the affective event (Lazarus, 1991). For example, if an employee perceives a boss's helping behavior as task-based versus relationship-based, the subtle differentiated feelings toward the boss will result in dramatically different responses in each instance. Therefore, at the near-equilibrium state, emotions are most appropriately regarded as discrete.

Intensity of Affect versus Intensity of Affective Events

Both the circumplex model and the BMAS address the importance of intensity in organizing affective experience. But there is an important difference. In the BMAS, intensity means the perceived intensity of affective events. In the circumplex model, on the other hand, intensity refers to the nature of the particular emotion – a dramatically different conceptualization.

In the circumplex model, affect is organized by intensity; for example, anger is of higher intensity than sadness (Russell, 1980). Because such differentiation is derived from lay cognition without recognizing the real context of emotional experience, it fails to take into account the psychological mechanisms of emotion's occurrence. As a result, the circumplex approach represents an attempt to organize affect by abstract comparisons. As such, this approach is precluded from revealing the functional nature of emotion and cannot therefore be used to infer the psychological meaning of emotions. In real life, emotional intensity varies across different

affective events. A particular individual might feel strong sadness after losing a good friend, or a little angry if a friend is late. So it makes little sense to conclude that anger is a more intense emotion than sadness in a real emotional context.

The BMAS emphasizes the role of perceived intensity of affective events. As an open dissipative system, disordering the original equilibrium needs amplifying energy to end up so far from the equilibrium state (Parker & Stacey, 1994). In this respect, the perceived intensity of the affective event denotes the amplifying effect; the higher the perceived intensity, the more likelihood that event will bring the system to a state of instability. Thus, it is the *intensity* of experienced emotion that determines the state of an individual's emotional system.

A further consideration is that the perceived intensity of affective events is subjective rather than objective. The same event is likely to be perceived in varied ways by different individuals because of variations in individual personality, experience, and knowledge (Frijda, Kuipers, & ter Schure, 1989). Some people may perceive a given event to be more intense; some lower. Clearly, more research is needed to unveil the psychological mechanisms underlying variations in the perceived intensity of affective events and their effects on the transition of emotions.

Emotional Oscillation

Although a growing number of researchers have studied mixed or blended emotions and emotional oscillation empirically (Dasborough & Ashkanasy, 2005; Larsen et al., 2001; Li, 2010; Pratt, 2000; Scherer & Tannenbaum, 1986; Shepherd, 2009; Smith & Ellsworth, 1987), we believe the BMAS is the first to provide an account of emotional oscillation. In the BMAS, emotional experiences of individuals oscillate between two or more discrete emotions. This is because the emotional system cannot be stabilized at one fixed point when the equilibrium is disordered in the near-equilibrium state and chaos. Future research, however, is needed to reveal the psychological mechanism of emotional oscillation, its possible linkages with cognitive appraisal, motivation, and decision making.

Chaotic Emotion and Innovation

In complexity theory, the stability and chaos of a system are both bounded (Parker & Stacey, 1994). An emotional system changes its state to react to

the affective events. Even at the equilibrium state, the stable feelings of quiet and calmness derive from a balance between positive and negative feedback, and so is not absolutely static. Similarly, chaos is a temporary state that can be recovered, not a simply disaster. Individuals in this state find that they cannot utilize their existing routines to cope with such intense affective events, and struggle with the provoked feeling of anxiety (Fonseca, 2002). Consequently they may try different ways to remove the uncertainty. Skills and knowledge are correspondingly increased by the feedback they obtain from their new behavior and the new skills turn chaos into a new equilibrium (Stacey, 1993). From this point of view, a chaotic state may become a turning point, providing new possibilities for learning and innovation. Clearly, however, research is needed to uncover the specific mechanisms whereby chaotic emotions might lead to innovation.

IMPLICATIONS AND CONCLUSIONS

We believe that some important theoretical and empirical implications devolve from the BMAS framework. From the perspective of theory development, our analysis suggests that understanding of emotions and especially how emotions change dynamically may be best reflected in a system view. In particular, the BMAS offers a means to solve the discrepancies that have emerged in past conceptualizations, such as the circumplex model, the positive versus negative affect dimensional structure, and discrete emotion theory. Moreover, we argue that our robust theoretical account based on the bifurcation model legitimates the phenomenon of emotional oscillation and provides new opportunities to explore further emotional transitions and the psychological mechanisms of dynamic emotion change. Empirically, the BMAS provides a means to measure emotion with more developed psychometric characteristics, while reflecting the nature of emotion occurrences and change. As such, our model has important theoretical and empirical implications suggesting a new line of research into emotion, emotion change, and the influence of emotion on social relationships in organizations.

The BMAS is a new model of affective structure and, as such, offers the potential to impact our further understanding of emotion in organizations in several ways. In particular, it is the first model as far as we can discover to structure affective experience from a dynamic systems perspective. Based on this theoretical background and the concomitant increase of our understanding on complex adaptive systems, researchers may be able to obtain a deeper understanding of the effects of affective events in

organizational settings, even broader contexts. Moreover, the BMAS reveals how emotions react to changes in the organizational environment, and especially to changes in the perceived intensity of affective events. It implies that organizational managers can modify employees' emotional responses by moderating the perceived intensity of affective events. The BMAS also differentiates the variety of emotions in terms of the state of an emotional system. This should facilitate our understanding of emotional functions in organizations, and how these relate to the state of the emotional system. Finally, in a dynamic process, it seems worthwhile to explore whether emotional transitions will influence leadership, teamwork, innovation, and strategic decision making.

In conclusion, the BMAS demonstrates how emotions occur from the perspective of complex adaptive systems. In terms of psychometrics properties, it also is a predictive discrete-dimensional model. It is predictive because an emotional state is seen to be predicted by the perceived intensity of affective events. It is a discrete emotion model because the emotion activated at the near-equilibrium state depends on the nature of the affective event, the subsequent cognitive appraisal, and psychological function of the discrete emotion evoked. It is unidimensional in the equilibrium state and chaotic states, where emotions are undifferentiated in terms of functional and relational meanings. Moreover, the three systematic states of this model simplify affect structure as compared to existing models. As such the BMAS reflects the nature of affect based on its occurrence and dynamic change as well as its relationship with the environment. In this case, we argue that it offers a contribution to solve the inconsistencies of extant models, such as the PANA, the circumplex model, and discrete emotion theory. It also provides a perspective to theorize new emotional phenomena like emotional oscillation and emotional transition, and in particular to understand how chaotic emotion might lead to innovation. Further research along this line should enrich our understanding of emotion in organizations as a dynamic process.

NOTE

1. Readers sometimes are confused by the axes in [Fig. 1](#). The perpendicular axes discussed here refer to high versus low arousal (vertical) and negative versus positive valence (horizontal), while the 45° axes shown as dashed lines in the figure refer to high versus low negative affect (upper left to lower right) and high versus low positive affect (upper right to lower left). Thus, for example, the positive emotions of happy and pleased lie at the high end of positive valence, and fall in the sector corresponding to high positive and low negative affect.

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CHAPTER 7

BUILDING AND SUSTAINING RESILIENCE IN ORGANIZATIONAL SETTINGS: THE CRITICAL ROLE OF EMOTION REGULATION

Glenda M. Fisk and Angela M. Dionisi

ABSTRACT

This chapter examines the implications of resilience for contemporary work life. Consistent with current research, we propose that resilience will be associated with work-related attitudes and behaviors via its linkages with positive emotion (Avey, Wernsing, & Luthans, 2008). Further, building on calls to identify the mechanisms underlying resilience, we present an input-process-output (IPO) model of resilience and describe how a variety of individual differences – including those related to the regulation of negative emotional experience – can contribute to a better understanding of the processes involved in maintaining psychological and physical well-being following adversity. We conclude our work by outlining various risk-prevention and asset-focused strategies that may be useful for developing resilience in workplace settings.

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INTRODUCTION

More than education, more than experience, more than training, a person's level of resilience will determine who succeeds and who fails. That's true in the cancer ward, it's true in the Olympics, and it's true in the boardroom. (Becker, as cited in Coutu, 2002, p. 47)

While research on the “dark side” of organizational life abounds, the burgeoning field of positive psychology and positive organizational behavior (POB) examines the strategies by which individuals and organizations excel. Put another way, POB scholars are interested in learning more about “positively oriented human resource strengths and psychological capabilities that can be measured, developed, and effectively managed for performance improvement in today's workplace” (Luthans, 2002a, p. 59). Resilience is a topic subsumed within a POB framework that has recently gained some traction in the human resource management literature, as it is one individual difference that can help to explain how employees manage occupational stress, crises, and change.

Generally speaking, resilience has been described as one's ability to rebound from negative life experiences. When faced with negative events or circumstances, resilient individuals not only maintain “relatively stable, healthy levels of psychological and physical functioning” (Bonanno, 2004, p. 20), but also often tend to experience a sense of personal growth and renewed purpose (Richardson, 2002; Sutcliffe & Vogus, 2003, p. 97). In light of the turbulent economic, political, and technological environment that organizations are currently operating in, the ability of employees to recover and even excel in the face of adversity has important consequences for contemporary workplaces. The purpose of this chapter is to therefore examine the implications and development of resilience in organizational settings. To this aim, we begin by exploring the academic origins of resilience – including reviewing extant theory and research on resilience from the field of organizational behavior and human resource management (OB/HR). Consistent with this previous work, we propose resilience will be associated with generative and meaningful work experiences via its association with positive emotions (Avey, Wernsing, & Luthans, 2008). We also consider how a variety of individual differences can contribute to a better understanding of how people maintain psychological and physical well-being when facing stressors. To conclude, we discuss the practical implications of our work for organizations and their employees, as well as suggest avenues for future research.

WHAT IS RESILIENCE? A BRIEF HISTORY AND CONSTRUCT DEFINITION

Historically, the study of resilience is rooted in the fields of developmental and clinical psychology, where early work focused on understanding why some children exposed to aversive life events (e.g., those with chronic illnesses, or those with mentally ill or abusive caregivers) were able to overcome and even thrive in the face of their traumatic experiences (e.g., Anthony, 1974; Cyrulnik, 2009; Garmezy, 1993; Luthar, Cicchetti, & Becker, 2000; Masten, Best, & Garmezy, 1990; Murphy, 1974). Since that time, resilience has been explored in a number of different populations and literatures (e.g., Barnes, 1999; Hunter & Chandler, 1999; Jacelon, 1997), although surprisingly, has only recently been applied to understand the experience of individuals working in organizational settings.

Generally speaking, to be considered resilient, a person must (a) be exposed to subjectively significant threat, risk, or harm, (b) adapt positively, and (c) not lose normal functioning (Bonanno, 2004). Defined as “the positive psychological capacity to rebound, to ‘bounce back’ from adversity, uncertainty, conflict, failure or even positive change, progress and increased responsibility” (Luthans, 2002b, p. 702), resilience is commonly conceptualized as an individual difference variable with significant implications for determining how individuals fare when faced with personal challenges (e.g., Block & Block, 1980; Block & Kremen, 1996). Highly resilient individuals tend to respond flexibly to situational pressures, and while it is most often discussed in terms of its ability to facilitate coping during times of misfortune, failure, and despair (e.g., death of a loved one, divorce, personal illness, job loss), the characteristics associated with resilience can also play a significant role in managing eustress (e.g., birth of a child, retirement, work promotion) (e.g., Luthans, 2002b; Masten, 2001).

Resilience: Convergent and Discriminant Validity

Resilience is complex, and in an effort to address some of its intricacies, scholars have taken steps to identify similarities and differences between resilience and related constructs. *Hardiness* is one personal resource that, like resilience, is believed to buffer individuals against work and life stress (Kobasa, 1979). Importantly, however, hardiness differs from resilience in light of its trait-like nature (Norman, Luthans, & Luthans, 2005) and by virtue of the fact that it is comprised of three distinct factors not always

explicitly linked to resilience – commitment, control, and challenge (Maddi et al., 2006). Resilience has also been differentiated from other similar concepts such as *vigor* (Shirom, 2004), *thriving* (Spreitzer, Sutcliffe, Dutton, Sonenshein, & Grant, 2005), *healing* (Powley & Piderit, 2008), and *coping* (Harland, Harrison, Jones, & Reiter-Palmon, 2005), and has further been identified as a component of larger core constructs such as *confidence* (Stajkovic, 2006) and *psychological capital* (PsyCap; Luthans, Luthans, & Luthans, 2004; Luthans & Youssef, 2004). Importantly, the role resilience plays – both on its own and in relation to these and other constructs – varies widely in the literature. In reference to the core construct of PsyCap for instance, Luthans, Vogelgesang, and Lester (2006) conclude that the dimensions of optimism, hope, and confidence may serve as predictors of resilience or alternatively, as moderators of the relationship between resilience and other outcomes (p. 29). Thus, resilience plausibly functions as either an antecedent to, or outcome of, adaptive psychological states and positive functioning (Luthans et al., 2006).

RESILIENCE AND RESPONDING: FURTHERING AN INPUT-PROCESS-OUTPUT MODEL

As noted previously, the classification of an individual as resilient requires not only the presence of a demonstrable threat or risk, but also a positive response and adaptation to that threat (Masten & Reed, 2002; Norman et al., 2005). Nevertheless, defining what constitutes successful adaptation has been a source of debate in the literature – some researchers draw on cultural or societal “standards,” some use the absence of impairment or symptoms, while still others employ a combination of both (Masten, 2001). Furthermore, debate exists around whether internal (i.e., psychological or physical health) or external (i.e., work achievement) criteria best capture successful adaptation (Luthar & Cushing, 1999; Masten, 1999). Finally, although many scholars maintain that resilience is evidenced by a return to baseline or homeostasis following adversity, others argue that it requires an individual to “rebound from adversity strengthened and more resourceful” than before (Luthans et al., 2006; Walsh, 1998, p. 4). Given dissenting views over how to best conceptualize resilience, this chapter presents an input-process-output (IPO) model of resilience. Although IPO models (e.g., McGrath, 1964) have typically been applied to explain team or group functioning (Kelly, 2001), we believe this framework can be used to describe resilience at the individual level of analysis and argue that resilience impacts attitudinal and behavioral

outcomes by virtue of its effect on how individuals process affectively laden events in the environment (see Fig. 1). We contextualize our chapter in an organizational setting as we seek to understand how employees can build and use resilience to manage workplace adversity.

Inputs to Resilience

To date, resilience researchers have focused predominantly on identifying the personality profile associated with surviving and thriving in the face of adversity (e.g., tenacity, spirituality, ability to tolerate negative emotions; Connor & Davidson, 2003; Wagnild & Young, 1993). Although there is no well-established taxonomy of the traits associated with resilience (Luthans et al., 2006), theory and research have furthered a multidimensional view of this construct (e.g., Connor & Davidson, 2003; Polk, 1997; Richardson, 2002) and from a conceptual standpoint, resilience may be conceived of as a dynamic higher order mechanism encompassing a variety of psychological and behavioral characteristics. For instance, resilient people tend to be high in cognitive ability, emotional stability, dispositional optimism, and openness to experience (Block & Kremen, 1996; Tugade & Fredrickson, 2004). Resilience has also been noted to positively covary with individual differences in social skill (e.g., the ability to read and elicit favorable responses from others), problem-solving ability (e.g., the ability to plan for the future and seek assistance when necessary), possession of a strong personal identity (e.g., recognizing and adhering to personally held beliefs and values), and high self-efficacy (Benard, 2004; Hass & Graydon, 2009). Overall, highly resilient individuals look toward the future with a sense of agency, believing they will be successful in changing their environment and that circumstances will work out for the best (Maluccio, 2002). The fact that resilient people tend to have a broad range of interests, are ambitious and socially skilled, undoubtedly contributes to their ability to face adversity head-on (see Letzring, Block, & Funder, 2005). In this chapter, we give additional attention to the linkages between resilience and the Big Five, self-monitoring, core self-evaluations, and emotional intelligence.

The Big Five

The Big Five or five-factor model (FFM) of personality represents a nomothetic approach to the study of individual differences, categorizing personality traits into five broad dimensions: *openness to experience* (i.e., curious, seeking novel or unfamiliar experiences), *conscientiousness* (i.e.,

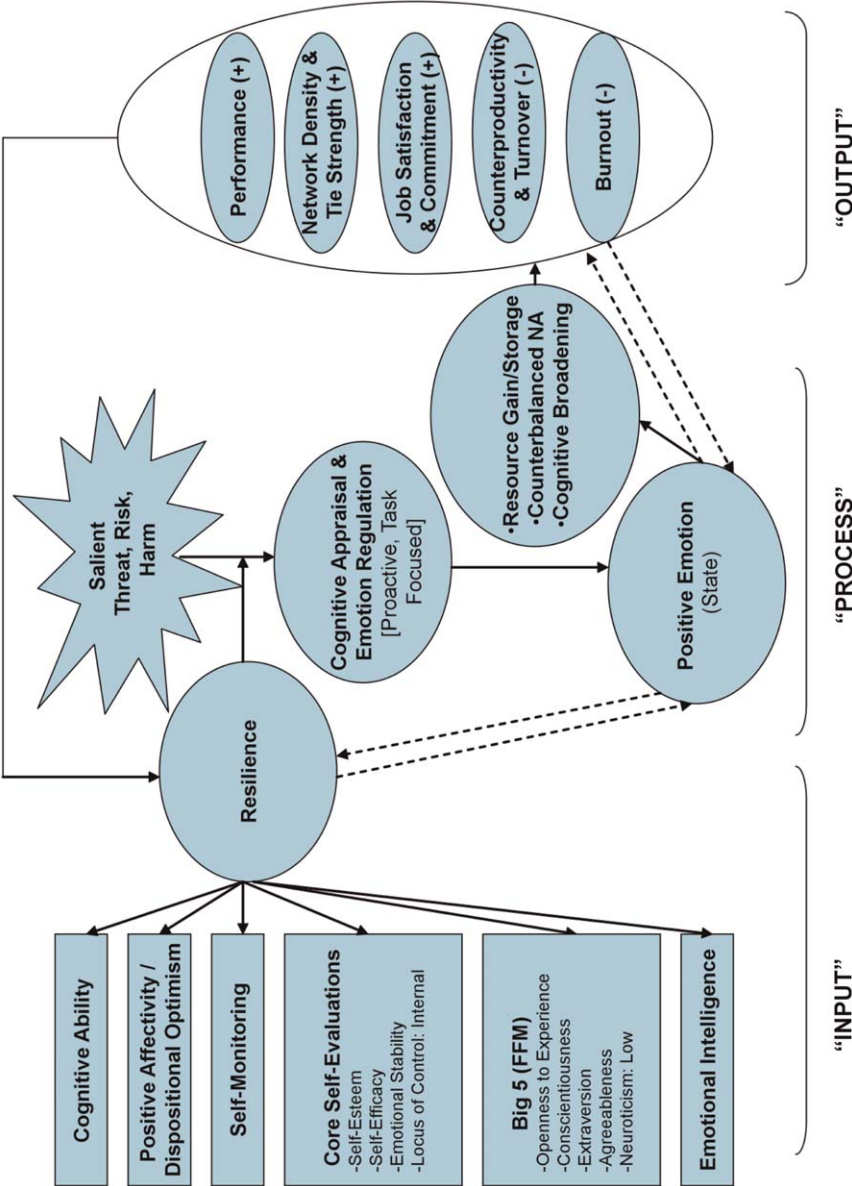


Fig. 1. An I-P-O Model of Resilience at Work.

productive, reliable, and careful), *extraversion* (i.e., gregarious, unreserved, outgoing), *agreeableness* (i.e., cooperative and nonconfrontational), and *emotional stability* (i.e., low in negative affectivity and emotional reactivity) (e.g., McCrae & John, 1992). According to Robins, John, and Caspi (1994), resilience predicts patterns of behavior that may be understood with the FFM. In their study, resilient teenagers were found to be highly conscientious, emotionally stable, agreeable, extraverted, and open. In a work context, entrepreneurs – individuals widely regarded as possessing high levels of personal resilience – have been found to not only be less neurotic and agreeable, but also more conscientious and open to experience than traditional managers (Zhao & Seibert, 2006). Taken together, this research suggests resilience has a characteristic personality profile that represents a “combination of the well-adjusted poles of all Big Five dimensions” (Robins et al., 1994, p. 273; also Block & Kremen, 1996; Campbell-Sills, Cohan, & Stein, 2006; Fredrickson, Tugade, Waugh, & Larkin, 2003; Friborg, Barlaug, Martinussen, Rosenvinge, & Hjemdal, 2005).

Self-Monitoring

Proficiency in the ability to adjust expressed behavior is often considered to be one indicator of “effective social and interpersonal functioning” (Snyder, 1974, p. 526). Self-monitoring, or the process by which self-relevant feelings, cognitions, and behaviors are observed, regulated, and controlled, may be enacted to meet a number of different goals (e.g., convey authentic personal experience, communicate a state that is not actually experienced but demanded by the situation, or suppress “socially inappropriate” thoughts or feelings; Snyder, 1974). High self-monitors are consistently aware of – and comply with – role demands, while low self-monitors place a high value on being themselves regardless of the situation (Day, Schleicher, Unckless, & Hiller, 2002; Kilduff & Day, 1994). Interestingly, self-monitoring has been linked to resilience. In one study testing the effects of minority (racial or gender-based) status on performance, high self-monitors were found to react to negative stereotypes by performing at higher levels than low self-monitors (Inzlicht, McKay, & Aronson, 2006). Furthermore, the ability to self-monitor has been associated with healthy emotion management styles such as deep acting – a finding that has significant implications for emotional and physical well-being (Bono & Vey, 2007).

Core Self-Evaluations

Resilience has been described as reflecting a variety of individual difference factors, many of which are also central to definitions of core self-evaluations.

Core self-evaluations represent a higher order latent factor encompassing four personality traits – *self-esteem* (i.e., the value ascribed to one's self-worth), *self-efficacy* (i.e., the perceived ability to perform well across time and situations), *neuroticism* (i.e., the tendency to endorse a pessimistic attributional style), and *locus of control* (i.e., beliefs regarding the causes associated with life events; Judge, Erez, Bono, & Thoresen, 2003, p. 303). Given that resilient individuals tend to have high self-efficacy (e.g., Bandura, 1997), be emotionally stable (e.g., McCrae, 1990), and possess an internal locus of control (e.g., Horner, 1996; Kliever & Sandler, 1992), it follows that they should score highly on core self-evaluation measures. The relationship between these constructs is practically significant, as core self-evaluations, like resilience, have implications for goal commitment, performance, and persistence in the face of adversity, as well as for general levels of satisfaction across work and life domains (e.g., Erez & Judge, 2001; Judge, Bono, Erez, & Locke, 2005).

Emotional Intelligence

Finally, emotional intelligence refers to one's ability to "recognize the meanings of emotion and their relationships, and to reason and problem-solve on the basis of them" (Mayer, Caruso, & Salovey, 1999, p. 267). Mayer and Salovey (1997) define emotional intelligence as being comprised of four core competencies: (a) perceiving, appraising, and expressing emotion, (b) accessing and generating emotions when they influence cognitions, (c) comprehending and analyzing emotion-relevant information, and finally, (d) managing self- and other-experienced emotion. Although theory linking emotional intelligence to resilience is somewhat lacking, some empirical evidence does support the convergence of these constructs. In one survey study of undergraduate students, "emotional resilience" (i.e., the ability to recover from negative emotions and react positively to new experiences) and flexibility were positively correlated with multiple emotional intelligence subscales (Tett, Fox, & Wang, 2005). There is also reason to believe emotional granularity (i.e., the ability to name and convey emotions with precision) is linked to adaptive forms of coping and therefore, resilience (Tugade, Fredrickson, & Barrett, 2004).

Resilience-Related Processes

Consistent with definitions of resilience, Fig. 1 originates with a precipitating threat or perceived risk that an individual deems potentially harmful. In the work setting, such threat or risk may include any number of circumstances including interpersonal conflict, resource shortages, role conflict or

ambiguity, enhanced responsibility, and impending job loss – to name just a few (e.g., Spector & Jex, 1998). Such triggering stressors or “affective events” have been described as coinciding with a primary appraisal phase in which potential threats are evaluated and their personal relevance considered (Lazarus, 1991). Assuming personal relevance, individuals should experience high-arousal negative emotions (e.g., fear), followed by a secondary appraisal phase where regulatory processes influence the nature of subsequent responding (Lazarus, 1991).

As depicted in the model, whether or not individuals engage in effective emotional processing or regulation (i.e., coping) depends, at least in part, on that person’s level of personal resilience. Resilience has been noted to buffer the effects of negative events on well-being (e.g., Beasley, Thompson, & Davidson, 2003) as well as increase the odds that individuals will engage in task (adaptive), as compared to emotion-based (maladaptive) coping (e.g., Campbell-Sills et al., 2006). Resilience is therefore depicted as moderating the effect of affective events on coping such that those individuals high in resilience will be more likely to respond to stress-eliciting events by engaging in effective, task-related regulatory strategies compared to those who are less resilient. More specifically, task- or antecedent-focused emotion regulation contributes to the reappraisal of threatening events and tends to be highly functional, as acting early (before emotional experience is fully realized) “permits the modification of the entire emotional sequence, including the experience of more positive and less negative emotion, without notable physiological, cognitive, or interpersonal costs” (John & Gross, 2007, p. 352).

Resilience-Related Outcomes and Feedback Loop

The management of negative emotion plays an important role in our model, as regulation of these feelings through strategies such as reappraisal enables individuals to build and potentially sustain positive emotions in response to strain. Positive emotions in turn, form the keystone to personal resilience. Fredrickson and colleagues (2003), for instance, found the experience of positive emotions to fully account for the relationship between trait resilience (as measured prior to the September 11 terrorist attacks on New York City’s World Trade Center) and individuals’ postattack indicators of (a) depression and (b) psychological growth. Importantly however, while empirical research links resilience and positive emotion to personal thriving, there remains some debate about *why* this effect occurs. Scholars have suggested resilience leads to favorable outcomes by a variety of paths,

including the conservation of personal resources as well as the counterbalancing and “broadening” effect of positive emotions – each of which are reviewed briefly, below.

Resource Conservation

Negative or stressful events can deplete personal well-being, weakening one’s ability to guard against strain and resource loss (Grandey & Cropanzano, 1999; Hobfoll, 1989). Conservation of resources models (Hobfoll, 1989) maintain people look to secure and keep resources, particularly those that are useful in offsetting future effects of stress. Many resources commonly discussed in relation to conservation (e.g., self-efficacy, optimism) are also associated with resilience, which suggests that resilient individuals may be particularly adept at protecting themselves in the face of anticipated or actual resource loss (see Hobfoll, 2001, p. 342).¹ By using adaptive coping strategies, it becomes more likely that individuals will gain and maintain both instrumental (e.g., employment) and relational (e.g., social support) resources that may be stored and drawn upon in difficult times.

Dynamic Model of Affect

Cognitive resources are finite and individuals often have difficulty negotiating emotionally complex states, particularly under conditions of psychological duress. The experience of stress can lead to an inverse relationship between positive and negative emotional experience (Reich, Zautra, & Davis, 2003; Zautra, Smith, Affleck, & Tennen, 2001). The dynamic model of affect (Zautra et al., 2001) suggests that whereas deficits in positive emotions leave people vulnerable to stress, a surplus of such emotions can counteract it (Ong, Bergeman, Bisconti, & Wallace, 2006, p. 731). To the extent resilient individuals experience high levels of positive affectivity, they should be protected from negative experiences and the ongoing coping efforts that such experiences entail (Zautra et al., 2001). Empirical evidence collected from a variety of populations (e.g., chronic pain sufferers, bereaved widows, and individuals from the general population) supports the role of positive emotion as foundational to stress resilience via its ability to interrupt and overpower negative emotional experience (Ong et al., 2006).

Broaden-and-Build

Consistent with work from social cognition (e.g., Fiske & Taylor, 1991), positive emotions have the ability to “broaden one’s thought-action

repertoire, expanding the range of cognitions and behaviors that come to mind” (Tugade & Fredrickson, 2004, p. 321; also, Fredrickson, 1998, 2001). Positive emotions evoke thought patterns that are more flexible (Isen & Daubman, 1984), creative (Isen, Daubman, & Nowicki, 1987), receptive (Estrada, Isen, & Young, 1997), and integrative (Isen, Rosenzweig, & Young, 1991), supporting the notion that positive affectivity can fuel employee resilience by strengthening the resources an individual has to draw upon when faced with adversity (Fredrickson, 2003). Moreover, and consistent with an “undoing hypothesis,” positive emotions have the ability to counteract the physical reactivity commonly associated with negative emotion (e.g., increased heart and respiratory rates) and free the individual to interact with the world in a less-restrictive way (e.g., Fredrickson & Levenson, 1998; Tugade et al., 2004). Cognitive broadening associated with positive emotions has also been shown to contribute to the efficient processing of self-relevant information and promote effective goal setting (Fredrickson et al., 2003). Thus, in the short term, positive emotions expand one’s arsenal of coping strategies which, when used over time, may exhibit long-term benefits to personal well-being.

Regardless of the mechanism(s) through which positive emotions exert their effect, research supports the relationship between positive affect (state and trait indicators) and desirable behavioral and attitudinal outcomes. At work, these outcomes may include – but are not limited to – decreased burnout and withdrawal behaviors (e.g., counterproductivity, turnover), enhanced task and contextual performance, as well as increased levels of job satisfaction and organizational commitment (see Lyubomirsky, King, & Diener, 2005; Thoresen, Kaplan, Barsky, Warren, & de Chermont, 2003 for meta-analytic reviews). Strength and number of social network ties are also included in our model, as individuals high in positive affectivity are more likely to have (or at least report) strong social support and to receive help from those individuals when needed (e.g., Staw, Sutton, & Pelled, 1994).

Finally, it remains important to note that the relationship of resilience to emotion and the outcomes depicted here may be bidirectional (e.g., Lyubomirsky, 2008). Successfully negotiating difficult, even painful life or work experiences (e.g., by performing better, experiencing less exhaustion) could be expected to reinforce many of the latent factors associated with resilience (e.g., self-esteem, self-efficacy) and therefore, resilience and positive emotions have the ability to mutually reinforce each other to predict spirals of well-being (Fredrickson & Joiner, 2002).

STRESS AND WORK: THE NEED FOR RESILIENT RESPONDING

At a macro level, stress-related illnesses cost the (US) economy billions of dollars each year (Thomas & Ganster, 1995). In the workplace, individuals experiencing high levels of strain tend to be absent more often, perform more poorly, and have more accidents than their less-stressed counterparts (Jex, 2002). Moreover, work-related stressors have been linked to negative job attitudes (e.g., low job satisfaction and organizational commitment) and behavioral (e.g., turnover) intentions (see Jackson & Schuler, 1985). Balancing multiple roles, along with negotiating difficult work conditions (e.g., harassment, interpersonal conflict, job overload, underemployment, negative performance feedback, and lack of required materials or resources), can have significant implications for employees' levels of psychological and physical well-being. Research supports the important role resilience plays in helping people manage work-related stress. In early work on this topic, Maddi and colleagues found a select group of hardy employees working at a telecommunications company undergoing massive downsizing were able to maintain their health and performance in the face of such hardship (Maddi, 1987; Maddi et al., 2002). More recently, Ferris, Sinclair, and Kline (2005) concluded that a perceived lack of resilience may predict biopsychosocial strain and ultimately, cardiovascular disease. Finally, in their examination of the PsyCap of Chinese factory workers, Luthans, Avolio, Walumbwa, and Li (2005) found characteristics related to resilience to be positively correlated with supervisory performance ratings. Overall, existing research suggests that resilience (e.g., psychological capital) has significant implications for job-related attitudes (e.g., satisfaction, commitment, engagement, cynicism; Larson & Luthans, 2006; Luthans et al., 2005; Luthans, Avolio, Avey, & Norman, 2007; Youssef & Luthans, 2007) and behaviors (e.g., absenteeism, deviance, and organizational citizenship behaviors; Avey, Patera, and West, 2006; Avey et al., 2008). Such findings point to the potentially important role that resilience plays in shaping individuals' appraisals of, and reactions to, their work experiences.

Developing and Sustaining Positive Emotions at Work: A Central Path to Personal Resilience

Although once thought to be a relatively rare and stable trait, recent work suggests resilience is both common and malleable – a potential consequence

of normal developmental experiences (Masten, 2001). In light of this evidence supporting the developable capacity of resilience (e.g., Masten & Reed, 2002; Youssef & Luthans, 2005), the ability – and perhaps even responsibility – of organizations to encourage the growth of this psychological resource in their employees is clear. According to Masten and Reed (2002), resilience can be promoted through the use of *risk-focused* (i.e., reducing and preventing risks/stressors), *asset-focused* (i.e., improving the number/quality of individual resources available to cope with stressors), and/or *process-focused* (i.e., mobilizing adaptation systems) strategies. Below, we outline a number of interventions designed and shown to boost psychological well-being and resilience. Our discussion is not meant to be exhaustive; rather, we focus on those interventions adaptable to the work environment.

Risk-Focused Strategies

As noted above, risk-focused strategies aim to reduce and/or prevent stressors in the environment. In an organizational setting, fostering a climate built on social support, reciprocity, and trust may encourage employees to not only take risks, but to also persevere in the face of adversity (Luthans et al., 2006, p. 32). We contend that psychological safety – or the perception that the interpersonal environment is supportive of risk-taking – is a climate-related construct that has significant implications for reducing perceived threat and enhancing resilience at the group level (e.g., Edmondson, 1999). Indeed, psychological safety has been found to correlate positively with collective levels of efficacy, perceived control, and performance – factors inextricably tied to resilience (Edmondson, 1999). Communicating clear and persuasive goals, creating an enabling work environment (e.g., providing ready access to required resources and information), and using directive leadership techniques have been shown to predict perceived safety, suggesting that organizations seeking to build employee resilience would be wise to adopt these practices (Edmondson, 1999, p. 356).

Asset- and Process-Focused Strategies

Although removing stressors from the work environment is a laudable goal, it may not always be practical – or even possible – to do so. Thus, it is important to encourage individuals to develop the knowledge, skills, and abilities to manage difficult situations. Helping individuals connect with others in the work environment (e.g., via socialization or mentorship programs) may facilitate the development of social networks, indirectly boosting resilience by providing access to social support and scarce resources (e.g., Ibarra & Andrews, 1993). Similarly, job design (e.g., job rotation) is

another strategy that may be useful in building employee resilience. In their study of pharmaceutical employees, Campion, Cheraskin, and Stevens (1994) found the rate of job rotations to be correlated with perceived skill acquisition, positive affect, and multiple career-related outcomes – including organizational integration. Overall, the experiences and skills learned during job rotation build resilience, as they may be drawn upon in stressful situations (e.g., job promotion, employment interviews) to buffer strain.

Finally, training employees to reflect upon and evaluate recent job-related setbacks may increase employee hope, optimism, and resilience (i.e., their psychological capital; Luthans, Avey, & Patera, 2008; Luthans et al., 2006). Incorporating process-focused practices – such as mindfulness-based stress reduction or expressive writing activities – into training programs could have significant implications for building employee resilience. Mindfulness, or the ability to pay attention in a nonjudgmental manner to the “here and now” enhances the “veridicality” of experience which, in turn, enhances coping, emotional processing, self-efficacy, and modifies perceived locus of control (Grossman, Niemann, Schmidt, & Walach, 1994, p. 36). In a similar vein, expressive writing allows for the release of repressed thoughts and feelings, making room for positive emotion, proactive coping, and self-management (Lepore, 1997; Pennebaker, 1997). In an intervention targeting the employees of a software and information technology company, meditative practices were found to boost workers’ personal resources (e.g., social support) via increasing daily experience of positive emotions. Increased personal resources were, in turn, noted to enhance life satisfaction and reduce symptoms associated with depression (Fredrickson, Cohn, Coffey, Pek, & Finkel, 2008). Expressive writing programs have met similar success in helping individuals demonstrate resilience in response to job loss (Spera, Buhrfeind, & Pennebaker, 1994) and workplace injustice (Barclay & Skarlicki, 2009).

DISCUSSION

With its implications for helping individuals cope with trauma and adversity, resilience is one individual difference variable that warrants more attention in OB/HR literature. In this chapter, we take a multidisciplinary approach to resilience, reviewing extant research from the domains of clinical, social, organizational, and positive psychology. In line with calls to further explicate the processes responsible for resilience’s beneficial effects, we present an IPO model that highlights the importance of affective experience and the regulation of negative emotions to adaptive coping.

Although previous work has described the importance of regulating *positive* emotions to resilience (e.g., Tugade & Fredrickson, 2007), we incorporate stress-appraisal theory (e.g., Lazarus, 1991) and the modulation of high-arousal negative emotions as a precursor to these processes. In our model, resilience is depicted as a higher order factor that impacts positive emotion directly as well as indirectly via its ability to moderate the relationship between strain and proactive forms of emotion management. Consistent with extant research, the experience of positive emotion retains a central role in the model and is described as predicting positive work-related outcomes through various mechanisms, including the broadening and building individuals' thought-action tendencies (e.g., Fredrickson, 1998, 2001).

It should be noted that over time, perceived threat may automatically trigger a resilient pattern of responding characterized by the immediate activation of positive emotions. Indeed, to the extent that regulation of negative, and cultivation of positive emotions occur repeatedly over time, this process may eventually become automatic, blurring the need to tease apart intermediary processes (Tugade & Fredrickson, 2007, p. 322). This "dual-process" explanation is accounted for in our model – deliberate regulatory processes are linked by solid lines in the path model, while automatic processes are indicated by dotted lines. Recognizing that practice effects may automate what initially begins as a conscious, effortful process reinforces the need to take a longitudinal approach – not only to resilience, but also to the study of emotion regulation itself.

In addition to describing our model, we present some potential strategies through which resilience may be cultivated in organizational settings. Building on the work of Masten and Reed (2002), we focus on the ability of organizations to take risk-, asset-, and/or process-focused approaches to build employee resilience. Although interventions aimed at bolstering individuals' subjective well-being is a common fixture in the positive psychology literature and has been examined in a number of different contexts (see Lyubomirsky, 2008 for a review), studies testing their application and utility in workplace settings remain a relatively understudied and therefore, fruitful avenue for future research.

It should be noted that while this chapter focuses on resilience at the individual level, the ability of resilience to emerge at the team and organization level should also be acknowledged. Empirical work has recently begun to explore the role contagion mechanisms may play in the development of a resilient workforce (e.g., Norman et al., 2005).

Taking a macro approach, Youssef and Luthans (2005) maintain that organizational resilience can be developed by focusing on those buffering

processes (e.g., strategic planning, organizational learning, organizational alignment, corporate culture awareness; Horne & Orr, 1998) that allow for the effective utilization and/or management of organizational assets and values. It has been theorized that individuals (especially leaders) working in resilient organizations are more likely to demonstrate resilience themselves, as such environments provide opportunities to discover, utilize, and enhance one's personal assets.

CONCLUSION

In today's trying social and economic times, "a science of positive subjective experience, positive individual traits, and positive institutions promises to improve quality of life and prevent the pathologies that arise when life is barren and meaningless" (Seligman & Csikszentmihalyi, 2000, p. 5). Thus, perhaps now, more than ever before, the time is ripe to incorporate positive themes – including the study of resilience – into organization-based research and practice.

NOTE

1. Importantly, the focus of COR is on understanding stress as resulting from resource loss and therefore, the theory may be applicable to understanding the buffering effects of resilience only under negative conditions.

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CHAPTER 8

THE EMOTIONS OF CHANGE: MERGER SENTIMENTS, PLEASURE, AND EMOTIONAL EXPRESSION

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ABSTRACT

Heightened levels of emotions, often negative, accompany the prospect and implementation of organizational changes. The failure to manage the emotions of change is cited as a reason for implementation problems and resistance to change. In this chapter, we examine the influences and consequences of emotions in the context of a large merger. Specifically, we examine the relationships between three cognitive assessments of the merger and the emotional reaction of pleasure toward the merger. With regard to consequences, we explore how pleasure with the merger relates to the length and affective tone of written suggestions for organizational improvements and postmerger attitudes of job satisfaction and turnover intention. Implications of our results are drawn for both scholars and organizational change agents.

INTRODUCTION

Emotions are an inherent part of the workplace (Ashkanasy, Zerbe, & Hartel, 2002) and have a bearing on individual attitudes and performance including trust and commitment, turnover intentions, and work slowdowns (George & Jones, 1997; Kiefer, 2005; Weiss, 2002; Weiss & Cropanzano, 1996). Because of their consequences and general uncertainty surrounding them, organizational changes frequently engender strong emotional reactions among organizational members (Coch & French, 1948; Liu & Perrewé, 2005; Piderit, 2000). In terms of positive consequences, change can offer opportunities for personal and career growth, empowerment, improved salary, benefits, and working conditions, and enhanced employment security. However, the negative consequences of changes and the losses and fears they engender receive the greatest attention.

Negative consequences of change often include the high costs of establishing new relationships, skills, and patterns of activity (Cartwright & Cooper, 1992; Kiefer, 2005; Kotter, 1995), reduced income, increased workload, and job loss. When individuals perceive threats attributable to change as high, their emotional responses and resistance to change are likely to be strong as well. Therefore, it is not surprising that Kiefer (2002) summarizes the three major findings of the change literature as follows: change causes fear and stress, negative emotions are an obstruction to change and equated with resistance, and negative emotions need to be eliminated to avoid resistance. Such a pejorative view of workplace emotions seems most valid in circumstances where very strong emotions are present, especially unpleasant emotions like anxiety, anger, and disgust (Ashforth & Kreiner, 2002). Some studies on resistance to change have indicated that unwillingness to support a change is correlated with negative emotions (Judson, 1991; Kiefer, 2005). Research has indicated that the inability to manage the type and strength of emotions resulting from organizational change can be an important reason for change program failure (Liu & Perrewé, 2005; Paterson & Hartel, 2002). To this end, research suggests that an important part of the change process includes helping organization members process and label the emotional turmoil of a transformation process as positive rather than negative in tone (Mossholder, Settoon, Armenakis, & Harris, 2000). Recently, Fredrickson and Cohn (2008) have highlighted the advantages of focusing on positive emotions.

The idea that organizational change prompts emotional reactions by change recipients, which in turn lead to subsequent attitudinal and behavioral consequences, is consistent with Affective Events Theory (AET; Weiss & Cropanzano, 1996). AET argues that aspects of the work environment, including environmental conditions, roles, and job design, initiate

emotions in organizational settings (Ashkanasy et al., 2002). Expanding upon AET, Elfenbein (2007) recently proposed the integrated intrapersonal process framework for emotion in organizations, which articulates the relationships between organizational events, emotional “registration” or appraisal, emotional experience, and emotional expressions and responses. Elfenbein’s model proposes that organizational events prompt felt emotions which in turn lead to postemotional responses, including attitudes, and emotional expressions recognized by others in the form of expressive cues.

Building off the work of Lazarus (1991), Liu and Perrewé (2005) developed a cognitive-emotional model of reactions to organizational change that addresses the influence that primary and secondary change appraisals have on the emotions experienced during an organizational change. Liu and Perrewé’s model mirrors Elfenbein’s framework but focuses specifically on organizational change as the emotion-eliciting stimulus. Liu and Perrewé suggest that the appraisal of change leads to emotional reactions, which in turn, generate coping behaviors relative to the change. They also suggest that change agents can communicate in such a way as to positively influence these appraisals and the subsequent emotions, attitudes, and behaviors.

Liu and Perrewé’s (2005) coping behaviors and Elfenbein’s (2007) expressions and responses have strong implications for the behavioral and attitudinal support individuals give to organizational changes. In this chapter, we utilize data drawn from a large-scale merger of two organizations to examine the relationships between cognitive appraisals of the merger, positive emotional reaction to the merger, and employees’ expressive cues and postemotional responses that are crucial to overall change support. The research offers a field-based test of central propositions in the stage models offered by Elfenbein (2007) and Liu and Perrewé (2005). Specifically, we examine the relationships between three cognitive appraisals of the merger and positive emotional reaction to the merger. We then explore the implications of the emotional reaction for job-related attitudes and voicing of opinions regarding the merger. In addition to providing empirical examination of these models, our research can benefit both change scholars and change agents by offering greater understanding of the role of change sentiments in shaping emotional reactions and subsequent attitudes.

LITERATURE REVIEW AND HYPOTHESES

Elfenbein’s (2007) integrated intrapersonal process framework for emotion in organizations provides an integrative view of the individual emotional

process and recognition that some aspects of this process are automatic (e.g., emotional experience), while others are controlled (e.g., emotional display regulation). Organizational stimuli (in our case, a merger) are proposed to elicit sense-making efforts (emotional registration) which, in turn, drive emotional experience. Emotional experience, in turn, is likely a major influence on emotional expression and postemotional attitudinal and behavioral responses.

Emotional Reactions to Organizational Change

Appraisal theories of emotion suggest that emotions are elicited and differentiated by an individual's subjective evaluation of important events or situations (Scherer, Schorr, & Johnstone, 2001). Most appraisal theories agree that events are evaluated in relation to a person's goals, needs, or concerns (Roseman, 2001). The primary aim of appraisal theories is to identify the evaluative criteria that predict the emotion that will be elicited in an individual as a result of their motivational state and perceived coping potential (Scherer et al., 2001). Appraisal theory posits that emotions are generated because of particular appraisals being made. A majority of emotions are reactions to events, and reactions are dependent on the way the situation is perceived and evaluated by a particular person (Roseman, 2001). Appraisal theory is seen as having two core theses (Frijda & Zeelenberg, 2001). The first is that appraisal is responsible for emotions; without appraisal, there is no emotion. The second is that appraisal is responsible for the differentiation of emotions; different appraisals cause different emotions. Because the perceptual system is designed to notice change (e.g., Ornstein, 1991), organizational changes are events that trigger a process of appraisal and subsequent emotion (Roseman, 2001).

Despite the way they are often portrayed, emotions are rule based and not chaotic or irrational (Kiefer, 2002; Lazarus, 1991; Parkinson, 1995; Scherer, 1984). Emotions are the result of an individual's appraisal of the environment, based on societal rules. The emotions elicited indicate something is occurring that is important to the individual, and that personal goals are either being supported or threatened. Emotions are therefore important indicators of what individuals believe are salient and good or bad for themselves and others (Hartel & Zerbe, 2002).

While research on the nature of emotional experience suggests it is comprised of multiple dimensions such as pleasure/pleasantness, arousal/activation, control agency, and novelty (e.g., Russell, 1980), it is also clear

that the dimension of pleasure/pleasantness is the most central and crucial for distinguishing among discrete emotions (Fredrickson & Cohn, 2008; Smith & Ellsworth, 1985). As the core of emotional experience, pleasure is an affective, evaluative state reflecting the hedonistic, self-oriented value of a stimulus. Pleasure varies from feelings of high pleasure to high displeasure. Every discrete emotion can be described in terms of its degree of pleasure or hedonic tone (happy is more pleasurable than sad).

According to Lazarus (2001), emotions are in a continuous state of flux, in that the cognitions shaping emotional reactions are affected by the interactions between emotion-eliciting conditions and coping processes (Schorr, 2001). There are two major types of appraisal in Lazarus' theory: (a) *primary appraisal*, which evaluates the significance or meaning of the event to the individual and, (b) *secondary appraisal*, which evaluates the ability of the individual to cope with the consequences of the event (Lazarus, 1968, 2001; Lazarus, Averill, & Opton, 1970).

In primary appraisal, individuals assess if they have anything personal at stake relative to their goals, beliefs, and values (Lazarus, 2001). If not, additional consideration is not warranted. However, if individuals appraise a situation as personally goal incongruent, they will experience a negative emotion. Likewise, if the situation is evaluated as goal congruent, the emotion experienced will be positive. Roseman and Smith (2001) point out this assumption is found in all theories claiming that emotions are generated by appraisals of events as relevant to a person's motives, goals, or concerns (see e.g., Frijda, 1986; Ortony, Clore, & Collins, 1988; Roseman, 1979; Scherer, 1993; Smith & Ellsworth, 1987; Weiner, 1985).

If primary appraisal indicates personal implications, the secondary appraisal process focuses on how an individual can respond to the event (Lazarus, 2001). As the nature of a change becomes clearer during its implementation, Liu and Perrewé (2005) suggest that a secondary and more thorough cognitive appraisal of the personal implications of the change occurs. According to Liu and Perrewé (2005), this secondary cognitive appraisal of the change is framed around four issues that evaluate the personal benefits of the change: the congruence of the change with personal goals and desires for self and the organization (what's in it for me and the organization?), the potential success of the change (will it happen?), personal involvement and commitment to the prechange state of the organization (how invested am I in the current way of doing things?), and the level of emotional ties with colleagues that may be threatened (are important social relationships threatened?). Essentially, this secondary appraisal assesses whether the change facilitates or undermines what a person wants. If the

change is evaluated as favorable, pleasure is experienced; if it undermines what a person wants, displeasure is likely to occur (Lazarus, 1999).

Building off their work on creating readiness for change (Armenakis, Harris, & Mossholder, 1993), Armenakis, Harris, and Feild (1999) developed a framework for understanding change motivations, built around five key cognitive appraisals or sentiments: discrepancy, appropriateness, efficacy, principal support, and valence. Discrepancy refers to the degree that an individual believes a need for change exists. Appropriateness refers to the degree to which an individual perceives that the planned change will satisfactorily address the discrepancy. Efficacy refers to the belief that individuals and the organization are capable of successfully implementing the planned change. Principal support refers to the belief that key principals in the organization, including top executives and peer opinion leaders, support the change and will shepherd it through to realization. Valence refers to the degree of attractiveness of the personal intrinsic and extrinsic outcomes anticipated by the individual. A review of historic and contemporary change-related publications conducted by Armenakis, Bernerth, Pitts, and Walker (2007) provided evidence that each of the five change sentiments is recognized by practitioners and researchers as useful in planning and evaluating organizational change efforts.

An examination of Armenakis et al.'s (1999) sentiments indicates substantial overlap of at least three sentiments with the secondary appraisal criteria outlined by Liu and Perrewé (2005) and originally set forth in Lazarus' appraisal theory. Specifically, the appraisal factor of goal congruence refers to an assessment of whether or not an individual's goals are congruent with the goals of the planned change. One's goals can include personal and professional goals and goals held for the organization. The sentiment of *valence* corresponds closely to the emotional-cognitive model's concept of individual goals, while the sentiment of *appropriateness* aligns with organizational goals. Perceived potential success refers to the degree of confidence that one has for the future success of the proposed change. The sentiment of *efficacy* appears to mirror this appraisal criterion. The sentiment of efficacy assesses the degree to which the individual perceives sufficient personal and organizational capabilities exist to successfully implement the change.

Cognitive assessments of the change shape the positivity or negativity of hedonic tone experienced by change recipients. Indeed, the boundary between motive consistency (goal congruence) and motive inconsistency (goal incongruence) serves as a dividing line that determines whether a positive emotion or a negative emotion will be experienced (Roseman, 2001). Because valence, appropriateness, and efficacy all reflect on the

favorableness of the change and its outcomes, we expect a favorable cognitive assessment of each sentiment to positively correlate with pleasure.

Hypothesis 1. Merger valence, appropriateness, and efficacy will be positively related to the emotional reaction of pleasure toward the change.

Emotional Expression and Expressive Cues

Elfenbein (2007) suggests that the experience of emotion leads to emotional expression manifested in expressive cues in a process that is largely automatic and noncontrolled. Emotional expression becomes visible to others in the form of expressive cues (Elfenbein, 2007). This relationship suggests differences in participant emotional reactions to change should correspond with differences in emotional expression. Expressive cues can be nonverbal, such as facial expressions and body language, and verbal (Elfenbein, 2007). Although emotionally expressive cues can be nonverbal, cues begin with words (Elfenbein, 2007; Pennebaker, Mehl, & Niederhoffer, 2003). As such, the words that employees use when reflecting on change serve as expressive cues that map their underlying emotions. In the present study, employees were given the opportunity to provide written responses to the question: “What do you think are the key things that [the post-merger organization] must focus on to ensure your satisfaction and the organization’s success for the future?” In the context of our action-research project, this question offers employees both an opportunity to reflect and an opportunity to provide anonymous voice to encourage improvement. According to Liu and Perrewé (2005), voice is one expected outcome motivated by the emotions of change.

Voice was first described by Hirschman (1970) as a possible response to employee dissatisfaction with a product or process quality (Burris, Detert, & Chiaburu, 2008). Hirschman’s (1970) E-V-L typology described employee responses of exit, voice, and loyalty as potential responses to dissatisfaction. This was later expanded upon by others (Kolarska & Aldrich, 1980; Rusbult, Zembrodt, & Gunn, 1982) to include the concept of neglect (Farrell, 1983). Voice has been broadly defined as an attempt to change a situation rather than seek to escape it (Hirschman, 1970), and usually includes appeals to higher authorities inside or outside the organization, and may involve other actions or protests (Farrell, 1983). In the present study, our open-ended question gave respondents an opportunity to engage in anonymous voice.

Research on open-ended response items in employee surveys finds that written comments are generally negative (Macey, 1996; Poncheri, Lindberg,

Thompson, & Surface, 2008). Such findings have been attributed to the positive-negative asymmetry (PNA) effect, which suggests differences exist in the ways individuals process positively and negatively valued information (Lewicka, Czapinski, & Peeters, 1992; Peeters, 1971). A negativity effect occurs when individuals reflect on specific, familiar, and relevant stimuli (as opposed to novel, neutral stimuli). The inclination for respondents to focus on organizational problems is enhanced by the nature of many organizational surveys, the content of which frequently focuses on organizational change initiatives (Poncheri et al., 2008).

Despite the PNA effect, Elfenbein's model suggests that positive emotional experience should encourage consistent expression. Because emotional expression is primarily spontaneous unless conscious attempts are made to control it (Elfenbein, 2007; Elkman, 1972), employees' pleasure should positively correlate with the pleasantness expressed in their open-response text passages.

Hypothesis 2. The emotional experience of pleasure relative to a change will positively relate to the expression of pleasantness in written responses to a request for suggestions for improving satisfaction and organizational success.

In addition to what they write, how much employees write is also an expressive cue. Individuals experiencing an event negatively may be prompted to respond more strongly than those who experience the same event positively (Poncheri et al., 2008). Those experiencing displeasure will be more motivated to voice their concerns and ideas for improvement. Therefore, response length may reflect the strength of the response in the form of emotional expression. Because the negative emotional experience of displeasure signals that action needs to be taken (Schwartz, 1990; Taylor, 1991), individuals who experience an event negatively are likely to be able to identify more areas they believe need to be improved than individuals who experience the same event positively. Also, research suggests that negative affect may improve critical analysis (Seo, Barrett, & Bartunek, 2004). Consistent with the concept of voice, the opportunity for change recipients to provide anonymous comments regarding a change allows those experiencing displeasure an opportunity to voice concerns in the form of written comments. Those individuals who experience a negative emotion toward the merger would likely write a greater number of words regarding the concerns they have, since they are more profoundly felt. Individuals with a pleasurable emotional experience are anticipated to write less, or possibly

not be compelled to exercise their voice at all, since the negative emotions that would signal the need for action may be altogether absent.

Hypothesis 3. The emotional experience of pleasure relative to a change will relate negatively to expressive cue verbosity as represented in individuals' written suggestions for improving satisfaction and organizational success.

Postemotional Responses: Attitudes and Behaviors

In addition to motivating voice behaviors, [Liu and Perrewé \(2005\)](#) propose that change-induced emotions also motivate exit behaviors and organizational attitudes of neglect and loyalty. In short, the cognitive-emotional model suggests cognitive appraisals of the change shape the emotional reactions of individuals which, in turn, shape behaviors and attitudes that support or resist the change. [Elfenbein's \(2007\)](#) model also links emotional experience with postemotional responses including attitudes, behaviors, and cognitions. In contrast to emotional expression and cues, these responses to felt emotion are more controlled and regulated by the individual. In the present study, we focus on one attitude, job satisfaction, and one behavioral intention related to exit, turnover intention.

Job satisfaction is an attitude separate from affect and job beliefs but influenced by both ([Fisher, 2000](#); [Weiss, 2002](#)). [Weiss and Cropanzano's \(1996\)](#) AET recognizes that moods and emotions experienced at work contribute to the affective elements of job satisfaction ([Fisher, 2000](#)). In assessing research on mood and emotion as affective elements, there is evidence in the literature that mood states are related to overall job satisfaction (e.g., [Brief & Roberson, 1989](#); [Weiss, Nicholas, & Daus, 1999](#)). Because emotions, by definition, have a specific referent, they are likely to be triggered by actual events in the workplace ([Fisher, 2000](#)). As such, emotions should often be directly attributable to the job, and should be more easily recalled than diffuse moods that are experienced on the job, but not necessarily prompted by the job ([Fisher, 2000](#)). For such reasons, [Weiss and Cropanzano \(1996\)](#) suggest that emotions at work may be more relevant to job satisfaction than moods.

In the current study, the merger required employees, as change recipients, to gain new knowledge, learn new skills, engage in different behaviors, and follow different policies. The relative attractiveness of these changes as well as the process itself of adapting to the changes were likely to prompt a number of job-related affective experiences. If the merger resulted in work experiences that prompted employees to feel displeasure, lowered job

satisfaction is likely. In contrast, employees experiencing emotional pleasure attributable to the merger would likely experience higher job satisfaction.

Hypothesis 4. The emotional reaction of pleasure relative to a large-scale change will be positively related to job satisfaction.

Like job satisfaction, we would expect that turnover intention would be influenced by the emotional reactions to a large-scale change such as a merger. Along with voice, exit (turnover) is a prime reaction to dissatisfaction in organizations (Hirschman, 1970). Fishbein and Ajzen (1975) proposed a reasoned action model in which behavioral intention was identified as the best single indicator of individual behavior (Egan, Yang, & Bartlett, 2004). Subsequent research has supported turnover intention as the best single indicator of turnover (Abrams, Ando, & Hinkle, 1998; Lee & Mowday, 1987; Michaels & Spector, 1982).

Hypothesis 5. There will be a negative relationship between the emotional experience of pleasure relative to a large-scale change and the postemotional response of turnover intention.

METHOD

Participants and Sampling Procedures

We conducted our study in all 98 branches of a regional commercial banking division created from a recent corporate merger between two banks. The merged organization was appropriate for studying change because major planned changes such as mergers and acquisitions are generally experienced by most employees as personally relevant due to the immediate impact on their career, work environment, and work relationships (Liu & Perrewé, 2005). Over half (54%) of the bank branches originated with the acquired banking company. At the time of our study, bank branch consolidation and name changes to reflect the new parent had been fully completed. Standardization of goals, performance reporting criteria, and operations were in the process of being finalized. Interestingly, because the acquiring firm adopted many of the methods of the acquired bank, the changes were more fundamental for the branches of the acquiring firm (Vitale, 2008). While most planned changes had been implemented at the time of our study, some, such as integrating accounting systems, were still in progress.

We invited all branch managers and assistant managers ($n = 202$), customer service representatives ($n = 220$), and a subset of tellers ($n = 284$) to participate in a survey addressing the merger. District managers delivered the surveys to each of the branch managers reporting to them along with a set of instructions for distribution to employees. The branch managers distributed the surveys to each employee who was given time at work to complete the anonymous survey.

Of the 706 employees invited to complete the merger survey used here, we received 330 useable surveys for a response rate of 47%. Of the 98 branches, 83 (85%) had at least one survey returned. Average bank tenure regardless of previous bank affiliation was 7.42 years. Of returned surveys identifying their employing bank before the merger, 42% came from individuals who worked for the acquired bank while 46% came from the acquiring bank. The remainder came from individuals who previously worked for both banks. Our final sample ($N = 330$) by job was comprised of 107 (53% response rate) managers, 100 (45% response rate) customer service employees, and 116 (41% response rate) tellers; 7 respondents did not provide job information.

Measures

Merger Pleasure

Respondents' emotional reactions to the merger were assessed using the P (pleasure) portion of the Pleasure-Arousal-Dominance (PAD) semantic differential scale developed by Mehrabian and Russell (1974) to assess emotional reactions to one's environment (Bearden & Netemeyer, 1999; Mehrabian & Russell, 1974). Pleasure was assessed with six semantic pairs: happy/unhappy, displeased/pleased, satisfied/unsatisfied, discontented/contented, hopeful/despairing, and bored/relaxed. Each word in the semantic pair was separated by nine blank boxes. Respondents were asked to think about the mood the merger put them in and then rate their feelings by checking a box closest to the adjective best describing their feelings. Answers were coded 1–9 and reversed as necessary to have higher ratings be associated with higher pleasantness and then averaged. Coefficient alpha was 0.95.

Merger Sentiments

We assessed valence, efficacy, and appropriateness with items drawn from the organizational change recipient's belief scale developed by Armenakis et al. (2007). With the assistance of A. A. Armenakis (personal

communication, October 15, 2007), we modified the scale's items to fit a merger situation. Each item was assessed on a five-point scale (1 = strongly disagree; 5 = strongly agree). Five items assessed valence, the personal value placed on the merger ($\alpha = 0.89$). Sample items are "The merger will benefit me" and "With this merger, I will experience more self-fulfillment." Appropriateness, the degree to which an individual perceived the change to benefit the organization as a whole, was assessed with four items ($\alpha = 0.94$). Example items are "The merger will improve the performance of our organization" and "The merger was correct for our situation." Finally we assessed efficacy, that is, self-perceptions of the ability of the individual and organization to successfully enact the change, with six items ($\alpha = 0.92$). Sample items are "I believe we can successfully implement this merger" and "I can implement this merger in my job."

Expressive Cues in Written Responses

In considering the written word as one form of expressive cue, analytic methods are available to assess the expressive cues manifested in written text. The dictionary of affect in language (DAL; Duhamel & Whissell, 1998) is one such method; it evaluates words and text passages by analyzing text according to a number of criteria including the level of pleasure (called pleasantness in the DAL) expressed. The DAL contains a corpus of 8,742 words with pleasantness values assigned for each word. Pleasantness scores for each word in the DAL corpus range between 1.0 (low) and 3.0 (high). Low pleasantness scores indicate an expressive cue of unpleasantness and high scores indicate an expressive cue of high pleasantness. Researchers have used the DAL to evaluate emotion used in natural English such as that expressed in literary works, speeches, and biblical texts (Whissell, 2007, 2008; Whissell & Sigelman, 2001) as well as open-ended comments given on organizational surveys (e.g., Mossholder, Settoon, Harris, & Armenakis, 1995).

We employed the DAL to assess the pleasantness of narrative responses written by study participants to the open-ended survey question, "What do you think are the key things that [organization name] must focus on to ensure your satisfaction and the organization's success for the future?" For each individual respondent, we calculated an overall pleasantness score by averaging the pleasantness values for all words appearing in his/her written response. So as not to count words that would skew calculations of the emotional content of written responses, we excluded company-specific jargon (e.g., the name of one of the premerger banks was also a word with high emotional weighting) when computing the average pleasantness value of text passages.

Expressive Cue of Verbosity

The number of words in a participant's response to the open-ended survey question measured the expressive cue of verbosity. Participants who did not provide a response to the open-ended item received a "0" word count score.

Postemotional Response of Job Satisfaction

Three items from the Michigan Organizational Assessment Questionnaire (Cammann, Fichman, Jenkins, & Klesh, 1983) assessed job satisfaction ($\alpha = 0.85$). An example item is "All in all I am satisfied with my job." Each item was assessed on a five-point scale (1 = strongly disagree; 5 = strongly agree).

Postemotional Response of Turnover Intention

Turnover intention was assessed with four items, three of which were adapted from Kelloway, Gottlieb, and Barham (1999) ($\alpha = 0.92$). Example items included "I am thinking of leaving this organization" and "I have thought of resigning in the last 9 months." Each item was assessed on a five-point scale (1 = strongly disagree; 5 = strongly agree).

Control Variables

To account for differences in change perceptions attributable to the *prior bank* where one worked before the merger, we used a dummy variable to control for whether the respondent was an employee of the acquired bank = 1 or acquiring bank = 0 at the time of the merger. Finally, to control for differences in change perceptions stemming from one's hierarchical level in the organization, position titles were assigned ordinal codes of teller = 1, customer service representative = 2, and management = 3.

Research provides evidence that extraversion is correlated with positive affect (Diener & Lucas, 1999; Lucas & Fujita, 2000; Lucas, Le, & Dyrenforth, 2008; Watson & Clark, 1997) and that, in analysis of written text, extraversion is also correlated with the use of fewer negative emotion words and more positive emotion words (Pennebaker & King, 1999). In addition, extraverts tend to use more words in typed open responses (Gill & Oberlander, 2002). As such, *extraversion* was included as a control. *Extraversion* was measured using a four-item scale developed by Donnellan, Oswald, Baird, and Lucas (2006) ($\alpha = 0.76$). Sample items include "I don't talk a lot (reversed)" and "I am the life of the party."

Because core self-evaluation has been empirically associated with self-efficacy (Judge, Erez, Bono, & Thoresen, 2003) and is correlated with job satisfaction (Judge & Bono, 2001; Judge, Locke, Durham, & Kluger, 1998),

core self-evaluation was also included as a control. Judge et al.'s (2003) 12-item scale assessed core self-evaluation ($\alpha = 0.79$). Sample items include "Overall, I am satisfied with myself" and "I determine what will happen in my life."

RESULTS

Confirmatory Factor Analyses

The first tests conducted included a series of dimension-level confirmatory factor analyses (CFAs) incorporating the three merger sentiments (valence, appropriateness, and efficacy) as well as the emotional experience of pleasure to determine if these variables were distinct from one another. A lack of multivariate normality among the data was indicated by Mardia's (1970) multivariate kurtosis coefficient (Mardia's coefficient = 108.30; $z = 24.70$), which is common in many fields of study (Byrne, 2001; Micceri, 1989). To handle the nonnormal data, we utilized Bollen and Stine's (1992) bootstrapping technique to compute a new critical value of the chi-square test for overall model fit. Evaluations of Bollen and Stine's approach have shown reasonable performance compared to the values expected from statistical theory for the chi-square test statistic and the standard errors of direct and indirect effects under conditions of multivariate normality (West, Finch, & Curran, 1995).

Against our hypothesized model, we tested two alternative models: model 1 was a two-factor model in which the three merger sentiment variables (merger efficacy, appropriateness, and valence) were combined to form a single factor; and model 2 was a one-factor model in which all four factors were combined into one general response bias factor (cf. Barger & Grandey, 2006; Cole, Feild, Giles, & Harris, 2009). The fit indices supported the hypothesized four-factor model, and provided initial evidence of the distinctiveness of efficacy, appropriateness, personal valence, and pleasure. As shown in Table 1, the four-factor measurement model recognizing merger valence, appropriateness, efficacy, and pleasure as distinct dimensions provided a relatively good fit to the data [$\chi^2 = 512.21$, $df = 183$, normal-theory $p < 0.001$, Bollen–Stine bootstrapped, $p < 0.001$]; CFI = 0.95; SRMR = 0.04; RMSEA = 0.08]. The one-factor model had a poor fit with the data [$\chi^2 = 1625.21$, $df = 189$, normal-theory $p < 0.001$, Bollen–Stine bootstrapped, $p < 0.001$]; CFI = 0.77; SRMR = 0.08; RMSEA = 0.16], indicating that the observed relationships were not explained by common method variation (Podsakoff & Organ, 1986). The means, standard deviations, and intercorrelations among all study variables are shown in Table 2.

Table 1. Comparison of Measurement Models.

Model	Factors	χ^2 ($\Delta\chi^2$)	df (Δdf)	χ^2/df	BS _{boot} Mean	CFI	SRMR	RMSEA (90% Low, High)
Hypothesized Model Model 1	Four factors	512.21	183	2.80	223.49*	0.947	0.041	0.078 (0.070, 0.086)
	Two factors: Baseline model with valence, efficacy and appropriateness merged into one factor.	1095.72 (583.51*)	188 (5)	5.83	231.95*	0.855	0.068	0.128 (0.121, 0.135)
Model 2	One factor: All factors merged into one factor.	1625.21 (529.49*)	189 (1)	8.60	234.67*	0.770	0.078	0.160 (0.153, 0.168)

n = 296.
*p < 0.01.

Table 2. Correlations among Study Variables.

Variables	M	SD	1	2	3	4	5	6	7
Controls									
1. Previous bank ^a	0.58	0.51	—	—	—	—	—	—	—
2. Position level ^b	1.97	0.83	−0.02	—	—	—	—	—	—
3. Extraversion	3.42	0.77	0.09	0.07	(0.76)	—	—	—	—
4. Core self-evaluation	3.80	0.48	0.22***	0.04	0.34***	(0.79)	—	—	—
Merger sentiments									
5. Merger valence	2.84	0.90	0.28***	0.06	0.09	0.25***	(0.89)	—	—
6. Merger appropriateness	3.07	1.06	0.46***	0.02	0.14**	0.36***	0.74***	(0.94)	—
7. Merger efficacy	3.73	0.85	0.45***	−0.01	0.15**	0.39***	0.61***	0.71***	(0.92)
Emotional Experience									
8. Pleasure ^c	5.50	2.02	0.42***	0.03	0.06	0.41***	0.74***	0.78***	0.68***
Outcomes									
9. Pleasantness of comments	1.89	0.13	0.08	−0.06	0.01	0.11	0.15***	0.19**	0.18**
10. Verbosity of written comments	21.67	40.40	−0.12*	0.14**	0.07	−0.14**	−0.19**	−0.18**	−0.16**
11. Job satisfaction	3.83	0.86	0.28***	−0.01	0.03	0.32***	0.64***	0.63***	0.59***
12. Turnover intention	2.45	1.11	−0.24***	−0.06	0.03	−0.26***	−0.67***	−0.59***	−0.56***

Variables	M	SD	8	9	10	11	12
Emotional experience							
8. Pleasure ^a	5.50	2.02	(0.95)				
Outcomes							
9. Pleasantness of comments	1.89	0.13	0.22***	—			
10. Verbosity of written comments	21.67	40.40	−0.22***	−0.19***	—		
11. Job satisfaction	3.83	0.86	0.70***	0.09	−0.14*	(0.85)	
12. Turnover intention	2.45	1.11	−0.67***	−0.18**	0.17**	−0.77***	(0.92)

Note: *N* ranged from 206 to 327. Coefficient alphas are shown in parentheses.

**p* < 0.05.

***p* < 0.01.

****p* < 0.001 (two-tailed test).

^aPrevious bank was dummy coded where 0 = acquiring bank, 1 = acquired bank.

^bPosition level was coded where 1 = teller, 2 = customer service representative, 3 = management.

^cPleasure was scored on a nine-point semantic differential scale.

Table 3. Pleasure Regressed on Merger Sentiments.

Variable	β	R^2
Step 1		
Constant	-1.95***	
Previous bank ^a	0.31*	
Position level ^b	0.01	
Extraversion	-0.25**	
Core self-evaluation	0.68***	
ΔR^2 after step 1		0.29***
Step 2		
Merger valence	0.79***	
Merger appropriateness	0.64***	
Merger efficacy	0.35**	
ΔR^2 after step 2		0.42***
Overall R^2		0.72***
Adjusted R^2		0.71

Note: $N = 293$. The unstandardized regression coefficients are those derived in step 2 of the model.

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.

^a0 = acquiring bank, 1 = acquired bank.

^b1 = teller, 2 = customer service representative, 3 = management.

Hypothesis 1: Merger Sentiments and Pleasantness

Hypothesis 1 posited that merger valence, appropriateness, and efficacy will be positively related to the emotional dimension of pleasantness. To test Hypothesis 1, we conducted a hierarchical regression whose results are summarized in Table 3. The four control variables were entered in step 1 followed by the three merger sentiments in step 2. As hypothesized, the set of merger sentiments accounted for 42% ($\Delta R^2 = 0.42$, $p < 0.001$) of the variance in pleasure after controlling for previous bank, position level, extraversion, and core self-evaluation. As predicted, valence ($B = 0.79$, $p < 0.001$), appropriateness ($B = 0.64$, $p < 0.001$), and efficacy ($B = 0.35$, $p < 0.01$) were all positively associated with pleasantness.

Hypotheses 2, 3, 4, and 5: Emotional Experience and Expression

We employed four hierarchical regressions to test the hypothesized relationships between the emotional experience of pleasure and the expression

Table 4. Voice and Attitudinal Outcomes Regressed on Pleasure.

Variable	Pleasantness of Comments		Verbosity of Comments		Job Satisfaction		Turnover Intention	
	β	R^2	β	R^2	β	R^2	β	R^2
Step 1: Controls								
Constant	1.81***		42.86*		2.06***		4.28***	
Previous bank ^a	-0.01		-2.25		-0.04		0.10	
Position level ^b	-0.01		7.05*		-0.03		-0.06	
Extraversion	-0.00		5.67		-0.03		0.12	
Core self-evaluation	0.01		-8.81		0.09		-0.03	
ΔR^2 after step 1		0.02		0.06***		0.15***		0.12***
Step 2:								
Pleasure	0.01**		-3.58**		0.30***		-0.38***	
ΔR^2 after step 2		0.04**		0.02**		0.34***		0.33***
Overall R^2		0.05**		0.09**		0.49***		0.45***
Adjusted R^2		0.03		0.07		0.48		0.45

Note: For pleasantness of comments, $N = 205$; for verbosity, job satisfaction, and turnover intention, $N = 293$.

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.

^aBank is dummy coded with 0 = acquiring bank, 1 = acquired bank.

^b1 = teller, 2 = customer service representative, 3 = management.

of pleasure (Hypothesis 2), verbosity of expression (Hypothesis 3), job satisfaction (Hypothesis 4), and turnover intention (Hypothesis 5). In step 1 of all four regressions, the four controls were entered. In step 2, pleasure was entered. In step 3, the specific predictor was entered. The results of these hierarchical regressions are shown in Table 4.

Supporting Hypothesis 2, pleasure felt toward the merger was positively associated with the pleasantness reflected in written comments ($B = 0.01$, $p < 0.01$) and explained an additional 4% ($p < 0.01$) of the variance beyond the control variables in predicting the pleasantness of the written comments. Supporting Hypothesis 3, pleasure felt toward the merger was negatively associated with verbosity in respondents' open-ended response, ($B = -3.58$, $p < 0.01$) and explained an additional 2% of the variance in verbosity beyond the control variables. Hypotheses 4 and 5 were also both supported. The emotional reaction of pleasure felt toward the merger was positively associated with job satisfaction ($B = 0.30$, $p < 0.001$) and negatively associated with turnover intention ($B = -0.38$, $p < 0.001$). The inclusion of

pleasure explained an additional 34% of the variance beyond the control variables in predicting job satisfaction and an additional 33% when explaining turnover intention.

Overall Model Examination

While our hypotheses received support individually, we were interested in examining them simultaneously as part of an overall model connecting the merger sentiments to the outcomes via pleasure consistent with the models by [Elfenbein \(2007\)](#) and [Liu and Perrewé \(2005\)](#). As written, our hypotheses seem to imply that the influence of merger sentiments on attitudinal and behavioral outcomes will be fully mediated through the emotional reaction of pleasure. However, the sentiments' influence on attitudinal outcomes in particular may only be partially mediated through pleasure. Since attitudes have cognitive and affective components (e.g., [Breckler, 1984](#)), employees' cognitive appraisals of valence, appropriateness, and efficacy should have direct relationships with the cognitive aspects of their job satisfaction. To test this and expand our results beyond the test of the individual hypotheses, we used structural equation modeling (SEM) to test the partially mediated model shown in [Fig. 1](#).

While not shown in [Fig. 1](#), we included extraversion, core self-evaluation, position, and previous bank as controls in our SEM. In addition to allowing all the controls to correlate with the merger sentiments, we modeled several direct paths. Specifically, we modeled direct paths from extraversion to pleasure, pleasantness of written comments, and verbosity. We also included direct paths from core self-evaluation, position, and previous bank to the outcomes of pleasure, job satisfaction, and intentions to turnover. Finally, we included a direct path from job satisfaction to intention to turnover.

Parcels were developed for the latent constructs of core self-evaluation (four manifest indicators) and efficacy (three manifest indicators). Items were assigned to parcels utilizing the high-to-low loadings procedure described by [Little, Cunningham, Shahar, and Widaman \(2002\)](#). The use of item parcels rather than individual items as manifest indicators permitted us to preserve an adequate sample-size-to-parameter ratio ([Bentler & Chou, 1988](#); [Russell, Kahn, Spoth, & Altmaier, 1998](#)). For position and prior bank variables, we used single indicators. The measurement model provided acceptable fit to the data: normed $\chi^2 = 1.70$, $p < 0.001$; CFI = 0.94; RMSEA = 0.06; and SRMR = 0.06.

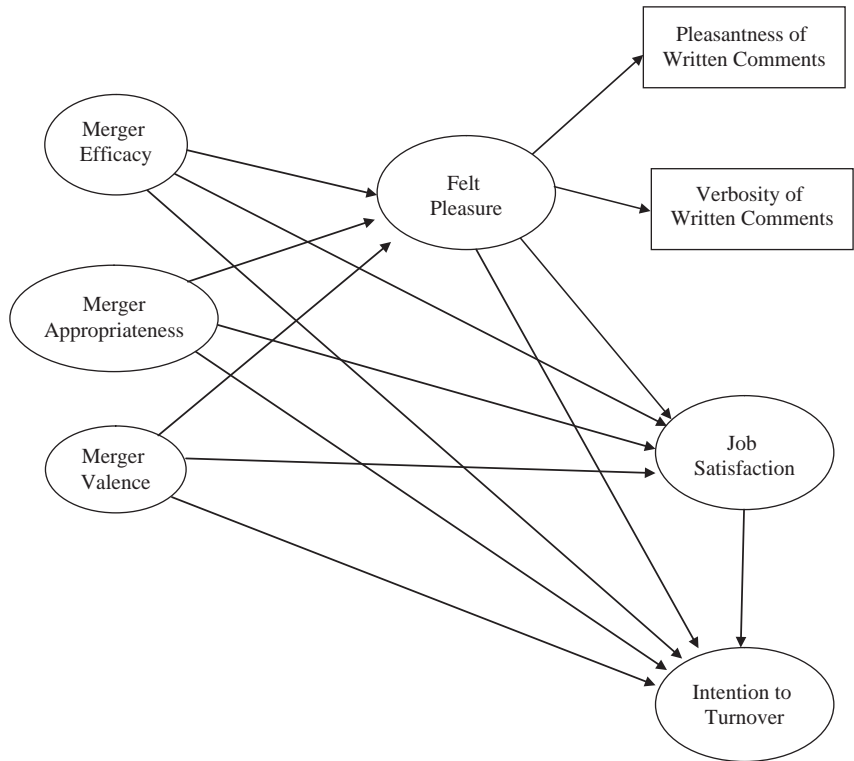


Fig. 1. Proposed Model. Controls Are Not Included.

The partially mediated model provided a good fit to the data: normed $\chi^2 = 1.69, p < 0.001$; CFI = 0.93; RMSEA = 0.06; and SRMR = 0.06. Fig. 2 provides the standardized path coefficients that were significant at the level of $p < 0.05$. The SEM results largely support our hypotheses. Consistent with hypotheses 2, 3, and 4, significant paths were found between felt pleasure and pleasantness ($B = 0.25, p < 0.001$) and verbosity ($B = -0.31, p < 0.001$) of written comments and job satisfaction ($B = 0.48, p < 0.001$). Contrary to Hypothesis 5, felt pleasure did not have a significant direct relationship with intention to turnover ($B = -0.22, p = 0.08$). However, the path between job satisfaction and intention to turnover was significant ($B = -0.55, p < 0.001$), suggesting felt pleasure's role may be mediated through job satisfaction.

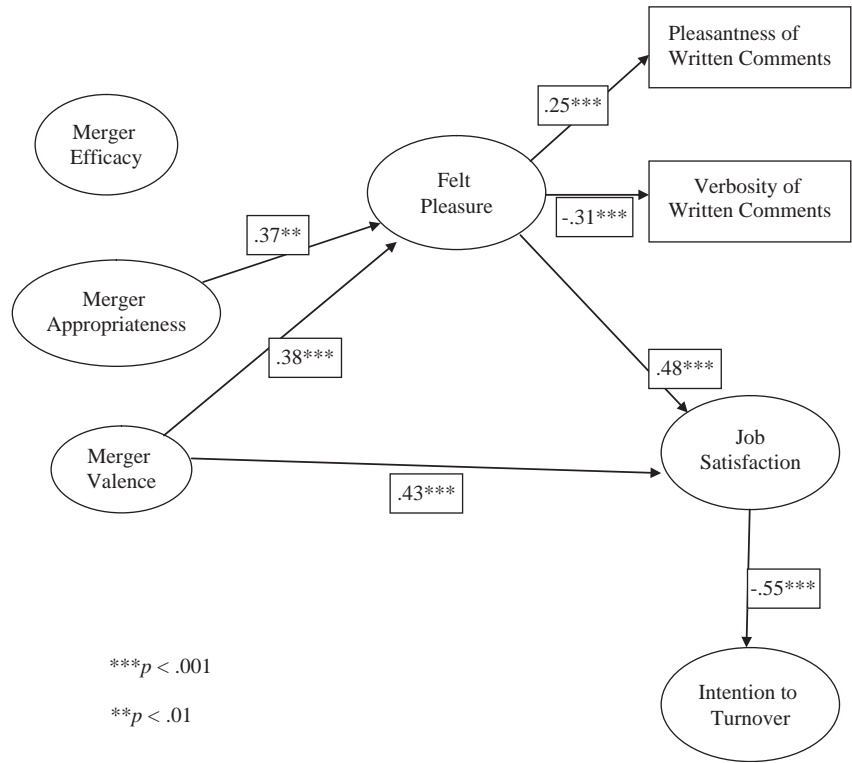


Fig. 2. Standardized Maximum Likelihood Estimates for Significant Paths. Controls are Not Included.

Our main goal in conducting the SEM was to further explore the relationships between the merger sentiments and the outcomes. As shown in Fig. 2 and consistent with Hypothesis 1, both merger appropriateness ($B = 0.37$, $p < 0.01$) and valence ($B = 0.38$, $p < 0.001$) had significant paths to felt pleasure. However, the path between merger efficacy and felt pleasure was not significant ($B = 0.12$, $p = 0.08$). Only merger valence had a significant direct relationship with either of the two attitudinal outcomes: merger valence → job satisfaction ($B = 0.43$, $p < 0.01$). (The relationship between merger efficacy and intention to turnover approached significance ($B = 0.16$, $p = 0.054$).) While not shown in Fig. 2, only one path involving our controls was significant, core self-evaluation → pleasure ($B = 0.13$, $p < 0.01$), and one, extraversion → pleasure approached significance ($B = -0.09$, $p = 0.053$).

DISCUSSION

In the context of a large-scale merger, our results provide support for relationships between cognitive evaluations of the merger, emotional responses to the merger and subsequent emotional cues and postemotional responses as predicted in the models proposed by [Elfenbein \(2007\)](#) and [Liu and Perrewé \(2005\)](#). In particular, our SEM model results were consistent with these models; emotional reactions, felt pleasure in this case, largely mediated the relationships between cognitive appraisals of the situation and attitudinal and behavioral reactions. In addition to this broad support for these models of emotion, we would like to highlight several additional contributions made by our study.

Merger Sentiments

Our study provides additional insights into the applicability of [Armenakis et al.'s \(1999\)](#) framework of key change sentiments (reviewed in [Armenakis & Harris, 2009](#)) in understanding reactions to organizational changes. Because emotions are produced by patterns of appraisal ([Roseman, 2001](#)), most appraisal theories recognize that viewing an isolated appraisal criterion is insufficient to determine a specific resulting emotion. In this study, all three appraisal criteria were significantly related to the emotional dimensions of pleasure in our regression analyses. However, it appears that efficacy is the least central of the three sentiments we examined. In our SEM results, merger efficacy's relationship with felt pleasure was nonsignificant. Obviously, valence and appropriateness are consistent with concerns for the goal congruence of the change and are therefore central to emotions responding to that congruence. Efficacy, on the other hand, is concerned with the probability of success and seems to be much less influential in shaping felt pleasure.

With regard to the outcome of job satisfaction, merger valence had not only an indirect relationship through felt pleasure but also a strong direct relationship. As a result, merger valence accounted for 21% of the variance in job satisfaction, almost seven times as much as that accounted for by appropriateness. To date, little research has examined the relative importance of [Armenakis et al.'s \(1999\)](#) change sentiments in predicting employee reactions ([Armenakis & Harris, 2009](#)). Our data provide strong evidence that, with regard to job satisfaction, valence appears to be more important than the other two sentiments we included.

Testing the other two change sentiments included in the Armenakis et al. (1999) framework, discrepancy and principal support, is certainly in order. Discrepancy, one's evaluation of whether any type of change from the status quo is even necessary, is consistent with Liu and Perrewé's (2005) secondary appraisal factor termed involvement with current strategy, which includes one's personal investment in and faith in the current strategy. With regard to principal support, Lazarus (2001) did not specifically acknowledge that others' reactions influence one's own appraisal of an event. However, other appraisal theorists readily call attention to the influence of social appraisal, a process in which individuals appraise the reactions of others to an event, which, in turn influences one's own appraisal of the change (e.g., Manstead & Fischer, 2001).

Building a more complete knowledge of the relationships between change cognitions and emotional reactions, of which this chapter is one contributor, holds promise for both change scholars and agents. Because individuals can and do reappraise situations, a different emotion can be evoked later in time if a new meaning of a situation is constructed (Lazarus, 1991). As a result, individuals are capable of experiencing different emotions at different times toward the same situation (Roseman, 2001). Reappraisal can be a powerful form of cognitive coping to reduce negative emotions or transform a negative emotion into a positive emotion (Lazarus, 2001). Recognition that appraisals are ongoing and may change over time is important as it offers the opportunity to better manage emotion in the workplace during change. Given the tie between emotion and change support or resistance, understanding the change sentiment appraisals and emotional responses provides insight into the kind of activities and messages that can be used to increase support for an organizational change. For example, after assessing change recipient sentiment appraisals, change agents could develop appropriate communications targeted to influence change recipient sentiments (Armenakis & Harris, 2002) so as to adjust pleasure levels to encourage support for the change.

Employee Voice and Attitudes

As we hypothesized, employees' emotional reaction of pleasure is subsequently reflected in the emotional content and length of their comments (voice) offered when asked for suggestions for making things better for them and the organization. In addition, their pleasure with the merger is reflected in their job satisfaction and intentions to turnover. How employees feel

about a change seems to influence important reactions that may bear on the ultimate success of that change. Unfortunately, our study design makes it impossible to infer causality and suggests the need for future research using longitudinal methods.

Employees indicating that the merger made them feel pleasure tended to make suggestions that were more positive in tone and shorter. In contrast, those feeling displeasure expressed their suggestions using less pleasant words and with more verbosity. These findings are consistent with the concept of voice serving as a means to vocalize concerns. Individuals who experienced the change as pleasurable might perceive few, if any, important concerns to write about in their comments. In contrast, individuals unhappy with a change are more likely to be less pleasant and more comprehensive (verbose) in their ideas for improvement. This suggests that employees unhappy with a change may be particularly adept at playing the potentially useful role of critical reviewer. However, to be open to their critical reviews, change agents must be careful not to be biased against unhappy employees' suggestions which are likely to be conveyed using less pleasant language.

While the relationship between pleasure with the merger and pleasantness as expressed in the written comments was statistically significant, it was not as strong as expected, with pleasure explaining just 4% more variance beyond control variables in our regression and 6% in our SEM. This modest relationship could be partially attributable to the specifics of the DAL. Future research would benefit from the use of other available dictionaries. Such dictionaries include linguistic inquiry and word count (LIWC) (Pennebaker, Francis, & Booth, 2001), DICTION (Hart, 2000), and Affective norms for English words (ANEW) (Bradley & Lang, 1999). Also, display regulation may have attenuated the relationship significantly, with respondents providing expressive cues that were not consistent with their felt emotion, despite assurances of survey anonymity. Additionally, some participants may have not possessed writing skills that would have enabled them to accurately communicate their thoughts, resulting in word choices that did not precisely reflect their perceptions, thereby diminishing the strength of the relationship between felt emotion and expressive cues.

In the present study, we found little difference in our results between treating nonresponse to the open-ended question as a score of "0" on verbosity (as used in our analyses) or as "missing data." From a voice perspective, open-ended responses left blank may best be considered cues indicating no displeasure or formidable concerns to protest. Such a view contrasts with categorizing open-response items left without comment as nonresponses (Borg, 2005; Poncheri et al., 2008). Considering the

relationship found between pleasure felt toward the merger and verbosity, change agents may take heart that attempts to solicit employee reactions to a change which result in little employee feedback could be a sign that the change is not prompting negative emotional reactions.

Dispositions

Liu and Perrewé (2005) called for further research into dispositional influences on an individuals' reaction to change. This chapter provides further insights into the influence of dispositions by including extraversion and core self-evaluation as control variables in accounting for emotional responses to the merger. It is important to remember that dispositions imply certain needs and wants that are likely to be supported in some contexts and denied in others. Core self-evaluation was positively associated with emotional pleasure toward the merger. Since individuals with higher core self-evaluation tend to feel more successful and more positive in their outlook, this could help explain the positive relationship of core self-evaluation with pleasantness. Individuals with higher core self-evaluation seemed to view the changes more favorably. However, again it is impossible to determine whether this relationship is generalizable or simply that the merger represented a good opportunity for those with high core self-evaluation. Clearly, more research that explores how the context may moderate the influence of dispositions on emotional reactions to change is in order.

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CHAPTER 9

SERVICE ENCOUNTER NEEDS THEORY: A DYADIC, PSYCHOSOCIAL APPROACH TO UNDERSTANDING SERVICE ENCOUNTERS

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ABSTRACT

Interactions between customers and service providers are ubiquitous. Some of these encounters are routine, but many are characterized by conflict and intense emotions. This chapter introduces a new theory, service encounter needs theory (SENT) that aims to elucidate the mechanisms through which service encounter behaviors affect outcomes for customers and employees. Evidence is presented for the preeminence within these encounters of eight psychosocial needs, and propositions are advanced regarding likely antecedents to fulfillment and violation of these needs. Emotional experiences and displays are viewed as important consequences of need fulfillment and violation, as are numerous cognitive, behavioral, and health-related outcomes.

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INTRODUCTION

Service industries dominate modern economies. Virtually all people consume services, and about 75% of workers in developed nations are employed in service industries (Australian Bureau of Statistics, 2008; D'Agostino, Serafini, & Ward-Warmedinger, 2006). Central to the delivery of most services are the interactions that occur between employees and customers. As in any social interaction, these service encounters have both task and socioemotional dimensions (Wazlawik, Beavin, & Jackson, 1969). At a task level, customers expect to receive a desired service at an agreed price, while employees seek to provide the service to standards that at least meet, if not exceed, customer and organizational expectations. In addition to these functional needs, customers and frontline staff have a range of psychosocial needs that must be met for service encounters to be successful.

In this chapter, we propose a theory of service encounter needs (SENT). The centerpiece of this theory is a set of psychosocial needs that is common to *both* customers and service employees. While past research demonstrates the importance of these needs across multiple domains (Higgins & Pittman, 2008; Pittman & Zeigler, 2007), we examine their roles within the specific context of service interactions.

Our perspective resembles the approach of Jahoda (1981) to the meaning of work. Jahoda stated that, while people primarily engage in paid work to earn their living (the manifest function of employment), work also fulfills several latent functions such as the provision of time structure, social contact, collective purpose, social identity/status, and activity (Jahoda, 1981, p. 188). Jahoda (1984) argued that people “have deep seated needs for structuring their time use and perspective, for enlarging their social horizon, for participating in collective enterprises where they can feel useful, for knowing they have a recognized place in society, and for being active” (p. 298). Job loss leads to deprivation of both manifest and latent functions, but it is primarily the deprivation of the latent functions that causes distress. In a similar vein, service interactions not only fulfill the manifest function of economic transactions in general, namely, satisfying the parties' material/utilitarian needs, but, we propose, they also have latent functions, namely, meeting the psychosocial needs of employees and customers.

Our theory identifies actions and events that are likely to satisfy or violate these needs, and specifies likely cognitive, affective, behavioral, and health-related outcomes. Underpinning SENT is the notion that motivation,

cognition, and emotion are interdependent systems. All three are critical to the management of service interactions. While we acknowledge that the experience, expression, and control of emotion are important, and we recognize that emotions can be motivating (they energize and direct behavior), emotions can also be responses to the fulfillment or violation of needs. It is this latter role of emotions that is emphasized within SENT.

SERVICE ENCOUNTERS, SERVICE FAILURES, AND SERVICE RECOVERY

Four terms require brief definition. A *service provider* is a service firm employee who occupies a boundary-spanning role involving contact with customers. A *service encounter* is an interaction between a customer and a service provider. Service encounters can occur face to face or can be mediated by technical devices (e.g., by telephone). A *service failure* is an instance of service delivery that does not meet a customer's expectations. Service failures can be grouped into core and process failures. Finally, *service recovery* is an act performed by a service provider that returns the aggrieved customer to a satisfied state (Sparks & McColl-Kennedy, 2001). Attempts at service recovery vary in effectiveness. Sometimes they make things worse (an outcome known as a "double deviation"), while at other times they give rise to higher levels of customer satisfaction than would have been the case without the original service failure (known as the "service recovery paradox") (De Matos, Henrique, & Rossi, 2007).

Service encounters are "first and foremost social encounters" (McCallum & Harrison, 1985, p. 35). They involve processes of dialogue and reciprocal influence between interacting parties (Côté, 2005; Homburg & Stock, 2005). The focus of our theory is on the *mechanism* through which behaviors within service encounters affect the parties involved. We argue that the outcomes from service encounters occur in large part because of the impact of the participants' actions on the satisfaction or violation of their own and their service encounter "partner's" psychosocial needs. All service encounter acts, such as greetings, requests, explanations, apologies, and accusations, can affect psychosocial need fulfillment. Central to SENT is the proposition that the satisfaction or violation of these needs gives rise to a range of emotions (such as annoyance, anger, and rage through to contentment, joy, and delight). These, in turn, underpin participants' more global evaluations of the service encounter, and, subsequently, their in-role and extra-role behaviors.

THE DYADIC NATURE OF SERVICE ENCOUNTERS

All service encounters involve a service provider (employee) and a service receiver (customer, client, patron, or patient). As customers, we all occasionally experience poor service, and many of us get into heated exchanges with service firm employees (McColl-Kennedy, Patterson, Smith, & Brady, 2009). Service workers, meanwhile, may be exposed to conflict-ridden encounters with customers on a daily basis. The potential human and economic costs – in the form of psychological strain, stress-related illness, staff absenteeism and turnover, customer disloyalty and revenge, and lost productivity and profits – are enormous (Dollard, Dormann, Boyd, Winefield, & Winefield, 2003; Miller, 2003). Perhaps as a consequence, signs such as the following can be seen at many world airports:

Assault on Staff. Our aim is to care for passengers ... and we welcome feedback on the customer service we deliver. We must advise that we also care for and aim to protect our staff against verbal and physical abuse. (Notice, Heathrow airport, London)

Signs such as this demonstrate that service firms are recognizing the potential for adverse outcomes to the parties on both sides of the service desk, and are attempting to address *the needs of both parties* involved in service interactions.

Scholars have been interested in service work and the dynamics of service encounters for more than 20 years (Czepiel, Solomon, & Surprenant, 1985; Hochschild, 1983). Over this period, two large but quite separate literatures have emerged. First, there is a body of knowledge in the disciplines of work and organizational psychology, and (human resource) management that relates to service sector workers – their job satisfaction and performance, their job stress, morale, and commitment, and their health and well-being (e.g., Dollard et al., 2003; Grandey, Dickter, & Sin, 2004; Zapf, 2002). This literature sheds light on the demands and likely perils of service industry work, but largely ignores the issue of customer satisfaction.

Second, there is a body of knowledge in services marketing that relates to service quality, service encounters/failure/recovery, and customer satisfaction, trust, and loyalty (e.g., Davidow, 2003; Parasuraman, Zeithaml, & Berry, 1985; Smith, Bolton, & Wagner, 1999). This literature shows that service firm patronage and profitability depend on the quality of service delivery. Indeed, some marketing scholars (e.g., Vargo & Lusch, 2004) argue that, to prosper, organizations should adopt a “service-dominant logic” – an orientation that emphasizes “customer-centricity” in the delivery of all service(s). Studies within this tradition seldom examine the impact of service

encounter behaviors on employee outcomes. Consequently, the potential cost to service workers of the single-minded pursuit of service excellence is rarely addressed.

Delivering flawless service is difficult; delivering it consistently over long shifts (and long careers) is probably impossible. Research from the work psychology/management fields (e.g., Brotheridge & Grandey, 2002; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Dormann & Zapf, 2004; Grandey et al., 2004; Sprigg & Jackson, 2006; Zapf, 2002) shows that the effort, empathy, and emotional labor required of workers to deliver excellent service can result in high levels of strain, illness, absenteeism, and eventual turnover. It also shows that doing service can contribute to feelings of personal accomplishment and well-being (e.g., Zapf & Holz, 2006). Service firm profitability thus requires more than providing superior service on a sustained basis to customers. It also requires implementing systems that ensure high levels of employee well-being and commitment. These two goals are potentially competing, in that excellent service delivery is often draining on employees, while concern for worker well-being may detract from service performance.

Most past research has been undertaken from *either* the management of employees or the marketing to customers, perspective. For example, many studies collect satisfaction, loyalty, and similar data from customers only, and draw inferences regarding service quality, service improvement, and, possibly, company strategic direction, from this one-sided perspective (Svensson, 2006). Until recently, few studies – the work on the impact of service climate on employee performance and consequent customer satisfaction (e.g., Schneider, White, & Paul, 1998) is one major exception – have sought to integrate the two perspectives. Indeed, it is probable that many scholars working in one of the two traditions are largely ignorant of theoretical and empirical advances in the other. Not surprisingly, authors (e.g., Macintosh & Stevens, 2007) urge researchers to address the issue from *both* the customer and employee perspectives.

Rather than focusing on the interests of just one party, SENT adopts a dyadic approach. By identifying needs shared by customers and service employees and responses that are likely to be efficacious for both participants, we seek to balance the potentially conflicting interests of these two parties. Our approach to understanding the dynamics of service encounters addresses the question: What are the net (i.e., customer *plus* service provider) outcomes of service encounter actions? Given the complexity of the issues (e.g., Homburg & Stock, 2005), we also examine contextual and personal factors that moderate the relationships between service encounter actions and

outcomes. By defining service encounter success from both parties' perspectives, our dyadic psychosocial needs approach offers new, practical insights into the effective resolution of common service problems.

DIFFICULT SERVICE ENCOUNTERS AND STRESSORS

Due to the nature of services (their intangibility, variability, dependence on customer cooperation, etc.) and the interactive nature of service encounters, occasional failures in service delivery are probably inevitable (Sparks, 2001). Encounters that follow or involve a service failure frequently give rise to interpersonal tension and conflict. In contrast to transactions that proceed without mishap, these "difficult" service interactions are likely to generate high levels of felt, even if not always expressed, emotion (cf. McColl-Kennedy et al., 2009). They are made more complicated by the likely imposition of organizational constraints upon the actions of both parties. Not surprisingly, these encounters have been shown to be a major source of strain for frontline employees (Dormann & Zapf, 2004; Grandey et al., 2004; Rafaeli, 1989; Weatherly & Tansik, 1993) and customers (Kalamas, Larcohe, & Makdessian, 2008; McColl-Kennedy & Smith, 2006; Yi & Baumgartner, 2004). Both parties face uncertainty, conflict, and the possibility of escalating cycles of anger, rage, and abuse (Patterson, McColl-Kennedy, Smith, & Lu 2009). Both are often required to invest considerable time, effort, and other resources in the encounter such that resources may eventually be depleted and a range of stress-related problems ensue (Dollard et al., 2003).

In addition to the stressors encountered by customers in difficult service encounters, employees may experience strain due to at least four kinds of stressors (cf. Rafaeli, 1989). First, additional workload may be imposed on workers by a service failure. For example, when service is faulty, employees may have to devote considerable time to achieve recovery, they may fall behind in their work, queues may build up, the job may get more hectic, they may be required to work harder, and they may have to skip breaks or work late. Second, the encounter may entail abnormally high levels of complexity. Rather than routinely following scripted roles, service failure situations are often ambiguous and/or unique, and may require service workers to invest additional effort to improvise a solution appropriate to the particular problem. Third, encounters pertaining to service failures potentially involve considerable role conflict, as workers are placed in Bateson's

(1985) three-cornered contest, trying (often in vain) to simultaneously satisfy customer demands for personalized, empathic attention, and organizational expectations of impartiality and efficient “throughput” of customers. Fourth, service encounters typically require participants to engage in emotional labor (Hochschild, 1983; Zapf, 2002). In all service encounters, employees, more so than customers, are expected to regulate their emotional displays, often feigning interest in the customer and engaging in inauthentic displays of positive and/or negative affect. Beyond these requirements of routine service encounters, interactions that involve service failures impose additional emotional loads. The emotional labor involved in displaying culturally – and/or organizationally – appropriate emotions, particularly when these emotions are not genuinely felt (surface acting) and when customers are not constraining the expression of their emotions, can be a major source of employee strain (Brotheridge & Grandey, 2002; Dormann & Zapf, 2004; Rupp & Spencer, 2006; Zapf & Holz, 2006).

BEHAVIORS WITHIN DIFFICULT SERVICE ENCOUNTERS

While SENT may be applied to all service encounters, it particularly focuses on behaviors that occur within difficult and stressful service interactions. The behaviors can be described and categorized in many ways. Distinctions can, for example, be made between spontaneous and scripted service encounter behaviors, authentic and inauthentic behaviors, aggressive, assertive and passive behaviors, and so on. Weiss and Cropanzano (1996) distinguished between “affect-driven” (in the heat of the moment) behaviors and “judgment-driven” (considered, planned, enduring) behaviors. van Dolen, de Ruyter, and Lemmink (2004) made the additional useful distinction between behaviors that are controlled, produced, and performed by a single party to the interaction (what we may call “individual-induced” behaviors), and those that are coproduced through the reactive and reciprocal actions of both parties (“interaction-induced” behaviors).

In our analyses of the dynamics of difficult service encounters, three types of behaviors are of particular interest: (a) service provider actions aimed at service recovery, (b) customer responses to the problem (i.e., service failure) and proposed solution (i.e., recovery attempt), and (c) actions of both participants aimed at self-regulation and the management of service encounter-related stressors.

Service Provider Recovery Attempts

Past research (cf. Davidow, 2003; Sparks, 2001; McColl-Kennedy & Sparks 2003; McColl-Kennedy, Daus, & Sparks, 2003) has identified numerous service provider actions that may be performed to recover from service failure. These include: (a) statements acknowledging the harm or loss incurred, (b) responses that reflect empathy or caring, (c) apologies, (d) internal (mea culpa) or external (excuses) explanations for the failure, (e) justifications for the service provider's or firm's actions, (f) attempts to reframe the loss in favorable terms, (g) invitations for, and acceptance of, customer input into problem resolution, (h) displays of effort and initiative, (i) commitments to resolve the problem personally and/or immediately, and (j) offers of compensation.

Customer Reactions to Service Failure and Recovery Attempts

Customers are far from passive in service encounters (McColl-Kennedy et al., 2009; Wirtz & McColl-Kennedy, 2010). Their behavior influences the dynamics of, and the outcomes from, all service interactions, and also affects the roles played by service providers in such encounters (Rafaeli, 1989; Rupp & Spencer, 2006; van Dierendonck & Mevissen, 2002). Some studies (e.g., Dallimore, Sparks, & Butcher, 2007) have examined customer behavior following service failure and recovery attempts, but few have examined the impact of customer actions on employee behavior and other outcomes. Common customer behaviors can be ordered along a dimension that ranges from those that build mutuality and assist with problem resolution, at one extreme, to those that contribute to escalating "cycles of incivility" (Andersson & Pearson, 1999; Patterson et al., 2009) and a deepening of the problem, at the other. Specific behaviors of interest include statements that (a) show courtesy versus rudeness, (b) attribute the cause of the problem to self versus to the service provider or firm, (c) accept versus deny responsibility for problem resolution, (d) present legitimate and reasonable versus unreasonably high expectations and demands, and (e) express appreciation versus abuse.

Participant Self-Regulatory Behaviors

Several studies (e.g., Grandey et al., 2004; Harris & Ogbonna, 2002; Rafaeli, 1989; Reynolds & Harris, 2006; van Dierendonck & Mevissen, 2002;

Weatherly & Tansik, 1993) have investigated the strategies used to manage the stressors unique to “difficult” service interactions. Most of this research has examined self-regulation and stress management processes from the perspective of the employee only, although there are some exceptions (e.g., Yi & Baumgartner, 2004), and many of the insights gained can be applied to the customers involved in the same interactions. In addition to various pre- and post-incident tactics, service provider strategies used during service encounters include: (a) intrapsychological strategies such as reappraising, downplaying, and ignoring job demands (including demanding customers), (b) problem-focused verbal (“voice”) strategies (i.e., arguing, explaining, negotiating), (c) person-focused verbal strategies (e.g., ingratiating, belittling), (d) eliciting support and assistance from customers and/or colleagues, (e) psychological disengagement strategies (e.g., performing tasks in an automated or mindless manner), and (f) physical escape strategies (e.g., retiring to back-of-house, being slow to answer calls).

All service encounter behaviors – all customer responses to service failure, employee-initiated service recovery acts, customer reactions to the recovery attempts, the parties’ stressor- and self-management strategies, and indeed any act that occurs during the ensuing, often heated, interaction – have potential emotional, cognitive, behavioral, health, and economic consequences. The effect may be on the actor him/herself (a so-called “actor effect”) and/or on the other party within the interaction (a “partner-effect”). It may be immediate or delayed, positive or negative. The central premise of SENT is that a limited set of psychosocial needs mediate the various “actor” and “partner” effects of service encounter behaviors on a range of outcomes.

CONCEPTUAL FRAMEWORK

The conceptual framework underpinning our ideas is provided in Fig. 1. From left to right, the model presents: (a) a set of factors antecedent to a difficult encounter between a service provider and a customer (boxes 1–4), (b) the encounter itself (box 5), (c) the impact of the encounter on participants’ psychosocial needs (box 6), (d) the immediate affective, cognitive, and behavioral responses to need fulfillment or violation (box 7), and (e) the longer-term outcomes of the foregoing processes (boxes 8 and 9). Double-headed straight arrows connecting boxes 3, 4, and 5 indicate that aspects of the failure, the encounter, and the service provider’s job mutually influence each other. Solid lines connecting boxes 7 and 9, and boxes 8 and 10, represent actor effects; dashed lines connecting boxes 7–10 represent

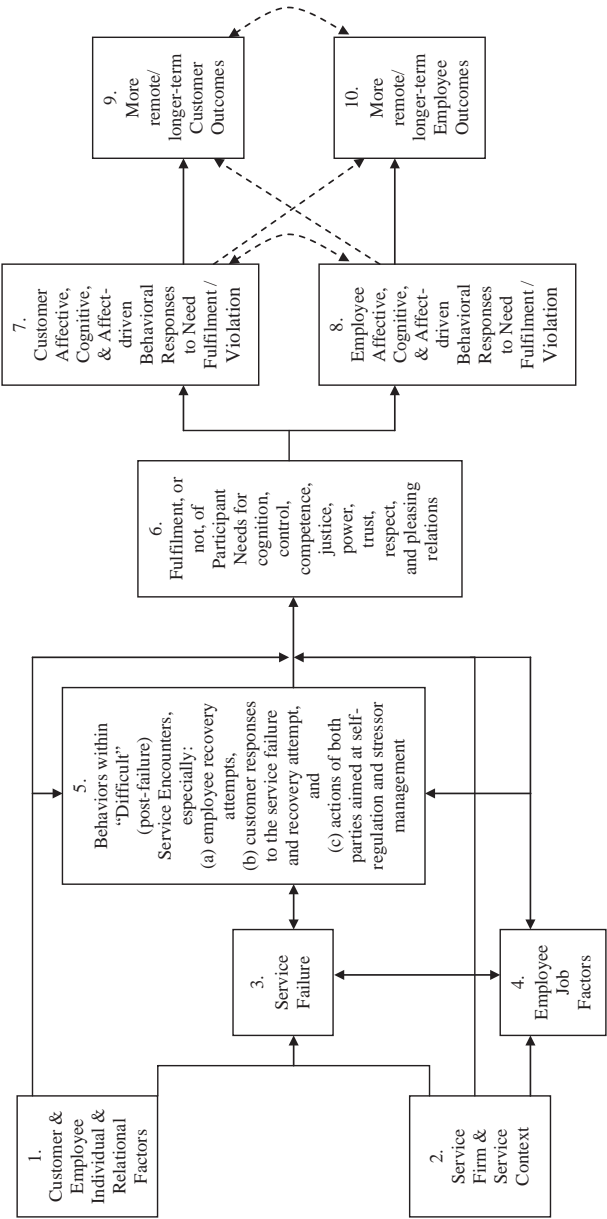


Fig. 1. Conceptual Framework Linking Service Delivery and Outcomes through Service Encounter Needs.

partner effects. The double-headed curved arrow connecting boxes 9 and 10 signifies the interdependence of customer and employee outcomes.

The framework is oversimplified in several ways. For example, it implies that motivational, cognitive, and affective processes postdate the service encounter when in fact these also occur before, during, and after most service interactions. Feedback loops from the immediate and longer-term outcomes to the service encounter and exogenous variables could also be added.

ASSUMPTIONS UNDERLYING THE THEORY OF SERVICE ENCOUNTER NEEDS

Many theories contribute to an understanding of service encounter processes and outcomes. Marketing research investigating service interactions has most often been guided by one of three theoretical perspectives: expectancy theory (e.g., [Oliver, 1980](#)), equity and justice theories (e.g., [Adams, 1965](#); [Bies & Moag, 1986](#); [Folger & Cropanzano, 1998](#); [Thibaut & Walker, 1975](#)), and attribution theory (e.g., [Weiner, 1986](#)). These three theoretical approaches identify distinctive variables as likely mediators of the relationships between service delivery and customer evaluations. For example, expectancy theorists focus on instances of confirmation or disconfirmation of expectations; justice theorists refer to the mediating role of perceptions of distributive (outcome), process (formal procedures) and/or interactional (interpersonal treatment) justice; attribution theorists use attributions of locus, stability, and controllability to explain these same mediation pathways.

Organizational/work psychologists and management scientists examining the same sorts of processes from the perspective of employees have proposed and tested a plethora of theories that seek to shed light on mediation pathways between organizational and work variables, on the one hand, and job strain and involvement, on the other. These theories include generic theories of stress and coping (e.g., cognitive appraisal/transactional theory ([Lazarus & Folkman, 1984](#)), conservation of resources theory ([Hobfoll, 1989](#))), as well as more specific job-stress theories (e.g., person-environment fit theory ([Edwards, Caplan, & Van Harrison, 2000](#)), demands-control-support theory ([Karasek & Theorell, 1990](#)), job demands-resources theory ([Demerouti et al., 2001](#)), effort-reward imbalance theory ([Siegrist, 1996](#)), emotional labor theory (e.g., [Grandey, 2000](#)), and vitamin theory ([Warr, 2007](#))). Mediation hypotheses derived from these theories most often link job factors to negative employee outcomes by reference to either cognitive

appraisals of harm or loss, inequity/injustice perceptions, affective states, self-regulatory attempts, incongruity/inconsistency perceptions, and/or depletion of coping resources (cf. Elovainio, Kivimäki, & Helkama, 2004; Weiss, Ashkanasy, & Beal, 2005).

While evidence exists to support the role of each of these variables, we propose a different explanation. According to SENT, the effects of service encounters on participants can be understood in terms of their impact on participants' psychosocial needs. Like justice and attribution theories, a strength of the proposed approach is that it can be applied simultaneously to both participants in the interaction, and is thus compatible with the dyadic nature of service encounters. Indeed, we argue that a needs-based approach is of wider applicability than either justice theories (which tend to have greater applicability in situations of injustice, than in situations that are justice neutral) and attribution theory (which tends to apply better to unusual and unexpected events than to everyday encounters).

The broad assumptions underpinning SENT are similar to those of Murray (1938), Maslow (1943, 1970), and other motivation theorists. These include that behavior is multidetermined, that one category of determinants is a set of inner needs, that humans have several such needs, that these needs differ in kind, and that individuals possess and act upon these needs to varying degrees. Based on the work of Murray (1938), Cohen, Stotland, and Wolfe (1955), and others, we define a need as a recurrent concern for a goal state, an inner force that "directs behavior towards a goal and causes tension when the goal is not satisfied" (Cohen et al., p. 291). People are not necessarily aware of the current state of their needs. As Murray (p. 75) notes, the realization of a state of need, "may simply be the experience of a vague 'lack' or 'pressure' giving rise to unrest, uneasiness or dissatisfaction." As opposed to physical needs, satisfaction of psychosocial needs is not necessary for immediate, individual survival, but their satisfaction is important for well-being and for psychological thriving (Deci & Ryan, 2000).

Most of these needs have a biological basis and some evolutionary significance, although they are also substantially shaped by social experience. Deprivation of these needs, or deviation from desired states pertaining to these needs, energizes and directs behaviors aimed at satisfying the need and returning the actor to his or her desired state (Pittman & Zeigler, 2007). Assumptions underpinning our approach to understanding the role of psychosocial needs within the context of service encounters are listed below.

1. The participants in service encounters not only have material/utilitarian needs. They also have psychosocial needs.

2. Particularly important to service encounter success is a core set of up to eight such needs, namely, the needs for cognition, competence, control, justice, power, trust, respect, and pleasing relations. These needs are shared by customers and employees alike.
3. Individuals differ in the strength of their needs. Need strength tends to be relatively stable over time; it is *trait*-like. However, the extent to which needs are fulfilled varies greatly over time; it is *state*-like. The focus in SENT is on these differences in need satisfaction, rather than in need strength (cf. Deci & Ryan, 2000).
4. Because participants in service encounters reciprocally influence each other, their verbal and nonverbal actions affect the extent to which their own and the other's needs are fulfilled. Because the service encounter is a dynamic process that unfolds over time, need satisfaction varies accordingly. A single service encounter act may affect multiple needs, and a single need may be affected by a range of actions. But not all acts are relevant to all needs (at least, certainly not equally so).
5. It is possible to identify specific verbal and nonverbal service encounter behaviors that are likely to satisfy or violate particular psychosocial needs. Other identifiable acts are likely to satisfy or block multiple needs.
6. Social interactions, in general, and service interactions, in particular, do not always go smoothly. All service encounters impinge upon participants' psychosocial needs, but conflict-ridden, stressful, and otherwise "difficult" interactions pose the greatest threats to these needs.
7. Satisfaction or violation of needs, and the cognitive processing of this occurrence give rise to a range of affective states. Need satisfaction/violation also leads (perhaps indirectly through affective and cognitive processes) to varying levels of participant satisfaction with the encounter. All these antecedent processes may, in turn, affect participant well-being, role-related behaviors (e.g., whether they act as "good customers" or "good employees"), and extra-role behaviors.
8. Knowledge of these contingencies between participant acts and the satisfaction or violation of needs can be used to develop interventions aimed at increasing the extent, frequency, and distribution of customer and employee need fulfillment.
9. Implementation of such interventions will indirectly (through effects on emotions, cognitions, and behavior) lead to enhanced participant satisfaction with, and other desired outcomes from, service encounters.

BASES FOR PSYCHOSOCIAL NEED SELECTION

To build the case for the set of psychosocial needs most relevant to service encounters, we drew on five broad sources of ideas and evidence. Our starting point was the classic theories of human motivation proposed in the middle years of the last century. We began with the work of Murray (1938) who distinguished between *viscerogenic* needs (i.e., biologically based needs such as those for air, water, food, sex, elimination, and avoidance of danger) and *psychogenic* needs (i.e., those that rather than having “localizable bodily origins” are concerned with “mental or emotional satisfactions” (p. 77)). Murray maintained that the needs are not necessarily conscious and may give rise to behavior even if the actor is not fully aware of their operation. He proposed more than 20 psychogenic needs organized into several groups, as follows: needs pertaining to social cognition (i.e., needs for cognizance and exposition), needs pertaining to ambition, prestige, and enhancement of the self (e.g., needs for superiority, achievement, recognition); needs pertaining to the defense of status and avoidance of humiliation (e.g., needs for inviolancy, counteraction); needs pertaining to the exercise or acceptance of power (e.g., needs for dominance, deference, autonomy); needs pertaining to affectionate relations with others (e.g., needs for affiliation, nurturance, succorance, play); needs pertaining to sado-masochistic tendencies (i.e., needs for aggression and self-abasement); needs pertaining to inanimate objects (e.g., needs for acquisition, construction, conservation, order); and a need pertaining to obedience and social conformity.

Another early motivation theorist was Maslow (1943, 1970) who, in the best known of his ideas, organized basic human needs and goals into a hierarchy comprising five levels (although, as Pittman & Zeigler, 2007 and others have noted, Maslow argued for a more nuanced division of needs than the five-level hierarchy implies). At the bottom level of the hierarchy is physiological needs, followed in ascending order, by needs for safety (e.g., security, stability, protection, freedom from fear), for belonging and love, for esteem (a set of needs that was subdivided into needs for achievement, mastery and competence on the one hand, and needs for reputation, recognition, prestige, respect, and esteem from other people, on the other), and finally, at the apex, the need for self-actualization. Maslow argued that these needs are satisfied in ascending order, such that behavior will not be directed toward satisfying a higher need until all lower needs have been at least reasonably satisfied. Maslow also proposed the existence of motivational tendencies, somewhat independent of his hierarchy, toward obtaining

knowledge and understanding, and toward appreciating aesthetic qualities (i.e., beauty, order, symmetry). In sum, seven major kinds of needs were distinguished. Maslow also specified the consequences of satisfaction and violation of the needs. For example, satisfaction of the esteem needs was said to lead to feelings of self-confidence, worth, strength, and capability, while violation of these needs leads to feelings of inferiority, weakness, and helplessness.

As the second source of ideas and evidence regarding the needs relevant to service encounter interactants, we examined several more contemporary, but still broad, models of motivation and the research that has tested and applied these theories. Perhaps the most influential of the contemporary motivation theories is Deci and Ryan's (1985, 2000) self-determination theory (SDT). This theory proposes the existence of three innate and universal psychological needs, namely, the needs for competence, autonomy, and relatedness. According to Deci and Ryan, all three of these needs must be satisfied for people to develop and function in healthy and optimal ways. The need for competence refers to the need to relate to one's intrapersonal and interpersonal environments in an effective, goal-directed manner. The need for autonomy refers to feelings of choice, integration, and freedom. The need for relatedness underlies the process of attachment during infancy and extends to the desire for close connections with others throughout life. When the need is threatened, people feel abandoned, lonely, and sad.

Fiske (2004) offered a different contemporary conceptualization of motivation. She argued that five fundamental motives have been identified repeatedly by personality and social psychologists over recent decades. The five "core motives in social psychology" are: the need to belong; the need for understanding, for shared meaning and predictability; the need to control, so that people feel competent and effective in dealing with their environment and themselves; the need to enhance the self, to feel special, to feel that one is basically worthy; and the need to trust, to feel good about other people, and to see the social world as a benevolent place. Fiske claimed that the need for belonging underpinned the other four needs. Of the others, the needs for understanding and controlling are relatively *cognitive* needs, while the needs to enhance the self and trust the world are more *affective*. Fiske acknowledged that needs could be deleted or added to her list, citing justice seeking as one need that could possibly be added.

Our third major source was a range of more circumscribed treatises on aspects of motivation. Foremost among these is the work of McClelland, Atkinson, and their colleagues (e.g., Atkinson & Birch, 1978; McClelland,

1961, 1975, 1985). These writers' major contributions were to the conceptualization, understanding, and measurement of three needs: need for achievement (a need to attain and surpass standards of excellence), need for affiliation (a concern for establishing and maintaining positive affectionate relations with other people), and need for power (a concern with controlling and influencing other people). McClelland, Atkinson, and colleagues proposed the existence of stable individual differences in these needs, and identified some of the developmental and contextual correlates of these differences. Also included in this third category of influences upon our ideas were the works of White (1959) on effectance motivation, DeCharms (1968) on agency and personal causation, Brehm and Brehm (1991) on reactance, Festinger (1957) on cognitive consistency, Bowlby (1969) and Ainsworth (1989) on attachment, Cacioppo and Petty (1982) on the need for cognition, Baumeister and Leary (1995) on the need to belong, Bandura (1997) on self-efficacy, and Skinner (1996) and Shapiro, Schwartz, and Astin (1996) on the need for control.

Fourth, we drew on recent theoretical and empirical literature that uses a "needs approach" to explain psychosocial events and outcomes. For example, in his needs-threat model of social ostracism, Williams (1997) proposes that ostracism is aversive to the extent that it prevents individuals fulfilling four fundamental, yet interdependent, needs, namely, the needs for belongingness (i.e., for frequent positive stable interactions with others), self-esteem (i.e., a need to believe one is a good and worthy person), sense of control (including a need for control over desired outcomes), and meaningful existence. As another example of a needs-based approach to social issues, Van Vugt's (2009) premised his analysis of environmental protection on the notion that human behavior is shaped by four core motives – the needs for understanding (people want information, certainty, predictability), belonging (people want to identify with and form attachments to others), trusting (people want to have confidence in the benevolence of individuals and institutions), and self-enhancement (people want rewards and want to avoid punishment). Van Vugt argued that knowledge of these motives can be used to design effective environmental protection strategies.

Research by Ohbuchi and Tedeschi (1997) also illustrates this approach. These researchers investigated the relationships between participants' goals and tactical behaviors in social conflict situations. After factor analysis, six goals were identified, with several of these (relationship goals, power-hostility goals, justice goals, identity goals) closely resembling the psychosocial needs identified by other writers. As a final illustration of this source of ideas, Shnabel and Nadler (2008) proposed and tested a needs-

based model of reconciliation following conflict. The model posits that being a victim represents a threat to one's status and power, whereas being a perpetrator threatens one's relatedness, one's image as moral and socially responsible. Reconciliation thus requires victims to restore their power and perpetrators to restore their public image. Shnabel and Nadler hypothesized and found that actions (e.g., offering an apology and granting forgiveness) that satisfy the different needs of perpetrators and victims (i.e., needs for relatedness/social acceptance and power/status, respectively) promote willingness to reconcile. Thus, the desired outcome (willingness to reconcile) was achieved through actions that met the other party's psychosocial needs.

Finally, we examined the services marketing and management literature for evidence of the roles played by psychosocial needs in the processes of service delivery and service encounter failure and recovery (e.g., [Bechwati & Morrin, 2004](#); [McColl-Kennedy et al., 2009](#); [Parasuraman et al., 1985](#); [Smith et al., 1999](#)). For example, [Chung-Herrera \(2005\)](#) used focus groups to identify four basic needs (needs for security, self-esteem, justice, and trust) that customers report in service encounters. Similarly, [Chiu and Lin \(2004\)](#) identified service quality properties corresponding to each of the seven needs in Maslow's expanded hierarchy of needs. For example, love and belongingness needs were thought to be met by service encounter acts that signal approval and empathy. In addition, [Harris and Ogbonna's \(2002\)](#) research into employee acts of "service sabotage" illustrates the operation of (unmet) needs in service workers. This study showed that the triggers for antiservice acts include workplace violations of employees' needs for fairness, status, power, and control, with some acts performed "almost as a demonstration against perceived subjugation by both management and customers" (p. 171).

As can be seen, there is reasonable consensus as to the existence of a finite set of core psychosocial needs. Theoretical works reviewed above enabled us to assess the robustness of these needs, while the applied research provided evidence of the particular relevance of a subset of these needs to service encounters. Together, this literature confirms that the eight selected needs are conceptually clear, that they comprise a nonredundant set, and that they have predictive utility in the service context. Although correlated, the needs are likely to have distinctive service encounter-related antecedents and consequences. Later, we discuss these relationships and we explore possible sources of synergistic and conflicting effects of the various needs. But, first, we define the needs and present a rationale for including each within our framework.

DEFINITIONS OF AND RATIONALE FOR THE NEEDS

In this section, we present arguments for the inclusion within SENT of eight needs pertinent to the parties within service interactions.

First, participants in service encounters have a need for *cognition*. Customers and employees need to know, understand, and make sense of their circumstances. They want information so that they are able to explain past occurrences, interpret ongoing events, predict future occurrences, and make plans to act accordingly. They want to minimize ambiguity and uncertainty. They do not want to feel ignorant, confused, or bewildered by what is going on in the service encounter. This need for cognition (or something that closely resembles it) is included in the needs identified by Murray (1938), Maslow (1943), Cacioppo and Petty (1982), Fiske (2004), van Vugt (2009) and others. Festinger's (1957) work on cognitive dissonance/consistency is also relevant. The operation of this need within service encounters is illustrated in our own research (e.g., McColl-Kennedy & Sparks, 2003) in which customers report strong desires to receive an explanation for service failures. Other researchers (e.g., Matilla, 2006) show that explanations given to customers tend to mitigate the ill-effects of service failures.

Second, the encounter must enable the parties to fulfill their need for a sense of their own *competence and self-efficacy*. They want to feel that they have been able to perform whatever behaviors are required in the particular encounter and that their actions have had the desired effect. They must feel able, useful, and efficacious. They do not want to act, feel, or look foolish. The need is represented in one component of Maslow's esteem needs, and is given prominence in SDT. It partially overlaps with the need for achievement described by Murray (1938) and McClelland (1961, 1985), and resembles White's (1959) idea of effectance motivation. Research into negotiation also points to the importance of this need. Rubin (1983), for example, notes that "the key to inducing conciliatory behavior is not coercion and intimidation but a set of moves that encourage the other negotiator to feel competent and effective" (p. 141). Only a few studies (e.g., Chung-Herrera, 2005; Harris & Ogbonna, 2002; Rafaeli, 1989) have discussed the role of this need in service encounters.

Third is the need to feel in *control*. The parties in service encounters want to feel that they can influence, manage, and master their environment and the events and outcomes that occur within it. They want a sense of their own agency or internal locus of control, that they are not being controlled by external or random forces. This need for control is readily distinguishable from the need for competence/self-efficacy in that the need for competence

relates to the efficacy of one's own *behavior*, whereas the need for control relates to mastery over one's *circumstances or environment*. As Bandura (1997, p. 20) observed, "[b]eliefs about whether one can produce certain actions (*perceived self-efficacy*) cannot be considered the same as whether actions affect outcomes (*locus of control*)". A need for control is recognized as a core motive in the work of Fiske (2004) and Shapiro et al. (1996). DeCharm's (1968) ideas about personal causation and agency, and STD's notion of autonomy, are also closely related. Theories of job strain (e.g., Karasek & Theorell, 1990) also place emphasis on the need for worker control. A large body of research has documented the importance of this need to both customers and workers (cf. Bateson, 1985; Rafaeli, 1989; Terry & Jimmieson, 1999; Yagil & Gal, 2002). Moreover, research (Chang, 2006) has shown that the provision of choice to customers is linked to an enhanced sense of control and hence to customers' affective responses to service.

The fourth is the need for *power*. This refers to a need to dominate, to be superior, to win a competitive game, to triumph over the other. As defined here, it is distinguishable from the need for control in that it relates specifically to the relative status of the two parties within the service encounter. The power need has a complement in the need for deference (or submissiveness) which, although less common, is evident in some service encounters. The needs for power and deference have a distinctly social connotation; at core, they are concerned with establishing and maintaining a personally (dis)advantageous place within the social hierarchy. Murray (1938) included needs for dominance and deference in his list of psychogenic needs. The need for power has also been described by McClelland (1975). Within the services field, Yagil (2006) has examined the effects of employee power needs, empowerment, and burnout on customer satisfaction, while Menon and Bansal (2007) have explored consumer experiences of social power during service consumption. Several authors (e.g., Yagil, 2008) have commented that the employee is at a power disadvantage within most service encounters – it is the customer's, not the employee's, needs that are the primary concern of service organizations – and this means that employees frequently resort to indirect and covert means to satisfy their needs for power (Weatherly & Tansik, 1993).

Fifth, the parties need to believe that *justice* has been (or is being) done. The emphasis here is on distributive and procedural justice (rather than on interactional justice). Parties to a service encounter must feel that fair processes have been followed, and just outcomes achieved. They must feel that they have given inputs to, and received outputs from, the encounter in

equal proportions. Equity (e.g., Adams, 1965) and justice theories (e.g., Folger & Cropanzano, 1998; Thibaut & Walker, 1975) provide the most compelling case for the importance of this need. It gains additional support from effort-reward imbalance theory (Siegrist, 1996). Indeed, justice is probably the dominant theoretical framework applied to service recovery (Wirtz & Mattila, 2004). Many studies have shown links between employee behaviors and customer perceptions of justice, and between customer-perceived justice and other service encounter outcomes. For example, Clemmer (1993) argued that fairness/justice considerations are particularly relevant to service situations, and conducted a survey that identified 16 principles of fairness used by customers. Tax, Brown, and Chandrashekar (1998) argued on the basis of findings from their survey of complaints that moderately high levels of justice are necessary for customer loyalty and commitment. Liao (2007) tested and supported a model in which service recovery strategies (apologies, courtesy, problem-solving, and promptness) affect customers' perceptions of justice, with in turn impact their satisfaction and loyalty. Complementing this research demonstrating the importance of employees treating customers in fair and just ways are other studies (e.g., Bakker, Schaufeli, Sixma, Bosveld, & van Dierendonck, 2000; Sideman Goldberg & Grandey, 2007; Rupp & Spencer, 2006) showing the negative impact of customer-initiated injustices on employee satisfaction, strain, and other outcomes. Indeed, Yagil (2008) argues that, in reality, employees seldom fulfill their need to receive something "in return" for the service they provide.

Our sixth need is the need to *trust*. Service encounter interactants need to feel that they can place trust in the other party's competence and ethical standards. Participants want to feel that the other is reliable, dependable, honest, and supportive, and hence that the service provided will be of a high standard and the service received will be appropriately recompensed. The need is particularly critical in encounters characterized by high levels of financial or other risk. Fiske (2004) included the need to be trusting as one of her five core psychosocial needs. The importance of this need in service exchanges was argued by Parasuraman et al. (1985), and has since been demonstrated in many studies. For example, Sirdeshmukh, Singh, and Sabol (2002) found that customer loyalty depended on customers having trust in the service organization and the service provider, and Bechwati and Morrin (2004) showed that violations of trust were a common cause of customer rage. Research on emotional labor has emphasized the importance for trusting relations of authentic, rather than fake, emotions (Ashforth & Humphrey, 1993). In these and most past studies, the emphasis is on

customers placing trust in employees, with few researchers taking a dyadic approach in also considering the needs of employees to trust the customer. Recent research into customer misbehavior, or “jaycustomers,” (e.g., Reynolds & Harris, 2006; Wirtz & McColl-Kennedy, 2010) makes clear that the trust employees place in customers is frequently violated.

Seventh is the need to be treated with *respect*. People want to feel that they are valued and held in high regard. They want to be recognized as unique and worthy individuals. They want to be treated with courtesy and dignity in accord with their status. The need to be respected was recognized by Maslow as one of the two components of the need for esteem. Others (e.g., Bies & Moag, 1986) have written persuasively about the role of interactional justice, a variable that is frequently operationalized in terms of displays of interpersonal respect. The importance of feeling respected by the other party is illustrated in many studies of customers (e.g., Johnston, 1995; Liao, 2007; Sparks & McColl-Kennedy, 2001; Patterson et al., 2009) and service workers (e.g., Dormann & Zapf, 2004; Rafaeli, 1989; Rupp & Spencer, 2006).

Eighth, the parties must feel they have established and maintained *pleasing relations* with the other. They must feel that their interactions are amicable and pleasant. Ideally, they also have some fun. At the least, they must be on good terms with one another when the interaction ends. This need bears some resemblance to Murray's (1938) needs for affiliation, nurturance, and play, Maslow's love and belongingness needs, McClelland's (1961) need for affiliation, Bowlby's (1969) attachment theory, SDT's relatedness need, and Fiske's (2004) belonging need, but it is more specific and less deeply felt than is implied by these other needs. As conceptualized here, it is a need for social synchrony and enjoyment, without the necessity for a deep or prolonged attachment. It is more likely to involve humor and shared joking, than intimacy and the exchange of personal secrets. Evidence of the importance of this need within service interactions comes from studies that demonstrate links between the social aspects of service encounters (rapport, personalization, friendliness, self-disclosure) and customer satisfaction (Gremler & Gwinner, 2008; Johnston, 1995; Söderlund & Rosengren, 2008; Worsfold, Worsfold, & Bradley, 2007). Other studies (e.g., Wegge, Vogt, & Wecking, 2007) have linked unfriendly customer behavior to increases in service provider strain and decreases in their job performance. Research into emotional contagion in service encounters (e.g., Dallimore et al., 2007; Tombs & McColl-Kennedy, 2003) shows that positive displays of emotion by one party can be “caught” by the other, leading to a spiral of increasingly positive emotions and enhanced mutual satisfaction with the encounter.

Notwithstanding this, there is also evidence (Goodwin & Smith, 1990) that perceptions of “over-friendliness” impact negatively on customer evaluations.

The need for self-esteem, or enhancement of the self (Baumeister, 1993; Crocker & Park, 2004), is not included in the set of service encounter needs because we view this as a *metaneed*. By this we mean that self-esteem is likely to be maintained and enhanced to the extent that the other needs are fulfilled. Thus, service encounter participants will view themselves in positive ways when they understand what is going on, when they have been treated fairly, when they regard the other party as benevolent, and when they believe that they are competent, in control, powerful, respected, and well-liked.

PROPOSITIONS REGARDING THE RELATIONSHIPS BETWEEN THE NEEDS

We now present propositions to be tested in future research. The eight needs within SENT may be roughly ordered along a dimension from, at one pole, those that relate more to task/utilitarian matters (needs for cognition, competence, justice, and control) to, at the other pole, those that have a more exclusively socioemotional focus (needs for power, respect, trust, and pleasing relations). The former have more to do with agency; the latter are more concerned with relatedness. It is also possible to identify relationships between subsets of needs. For example, satisfaction of the needs for cognition, competence, and power may enhance the likelihood that the need for control will also be satisfied (because we tend to feel more in control when we find the world understandable and predictable, when we are performing at our peak, and when we are not threatened by a social competitor (cf. Antonovsky's, 1991 sense of coherence). Similarly, satisfaction of the need for respect may be a prerequisite for satisfying the need for pleasing relations, in that it is difficult to enjoy pleasing relations with another in the absence of displays of politeness and respect. Conversely, the parties may treat each other respectfully, but still derive little pleasure from the interaction.

Five further propositions regarding the relationships between the needs can now be advanced. The first of these is that the importance of satisfying some needs varies between service encounter participants. For example, given that customers more often than employees are in unfamiliar surrounds when engaged in a service interaction, satisfying cognition needs may be more important to customers than to employees. Conversely, competence and control needs may be more important to providers, because these

people are performing a job, payment for which requires accuracy and efficiency of service delivery.

Second, the importance of satisfying the needs varies between types of services. In personal or experiential services, for example, where customer–employee contact is close and prolonged, pleasing relations needs are likely to be particularly critical to service encounter success. In contrast, in nonpersonal services, where the service may be performed at a time and place remote from the customer, or in credence services, where quality is difficult to evaluate, customers are likely to place priority on fulfillment of trust needs, while employees, expecting little personal contact during performance of the service, may be mainly concerned with fulfilling the more utilitarian needs (e.g., for cognition and competence).

A third proposal is that the importance of satisfying these needs varies between outcomes. For example, while violations of respect and justice needs may be equally predictive of dissatisfaction, justice violations may be more highly predictive of third party complaining behaviors. The rationale here is that violations of respect (or interactional justice) needs, although keenly felt, may be less objectively demonstrable than are violation of (procedural and distributive) justice needs. Fourth, a distinction can be made between conjunctive and disjunctive service encounter acts. Conjunctive acts work toward the satisfaction of both participants' needs: a shared joke, for example, may simultaneously contribute to the fulfillment of employee and customer needs for pleasing relations. But service encounters are typically "mixed motive" situations in that the needs and interests of the parties do not perfectly coincide. Thus, some acts may work in a disjunctive manner, that is, by satisfying one's party's needs at the expense of the other's. Power-coercive influence strategies, and tactics that demean the other party, are examples. Finally, additive or interactive combinations of these needs may be necessary to produce particular outcomes. For example, minimal levels of fulfillment of cognitive, justice, and respect needs may be necessary to ensure the encounter is judged to be satisfactory. Beyond this, any of a number of needs may contribute further to participants' evaluations.

PROPOSITIONS REGARDING THE ANTECEDENTS TO NEED FULFILLMENT AND VIOLATION

As already noted, acts and omissions occurring during service encounters can affect the eight psychosocial needs. The act may be verbal (what is said, or

not said), vocal (i.e., how it is said – pace, tone, volume), or nonverbal (i.e., actions, rather than words). Some acts (e.g., empathic responses, apologies) may affect several needs. The triggering event may be a single act, or a sequence of acts. It may be performed by the person him/herself (an actor effect), the person with whom he/she is interacting (a partner effect), or a colleague, fellow customer, or supervisor (i.e., a “third party” effect). Often the act is something that causes, exacerbates, or helps resolve a conflict or service failure.

To illustrate, we propose a number of specific service encounter acts and omissions that when performed by one party are likely to have effects on the other’s needs. Examples of behaviors that may have such partner effects are given in Table 1. The proposed need-facilitating and need-hindering effects of these behaviors are derived from a range of literatures. In addition to the theory and research into the service encounter and work stress partially reviewed above, sources include literature in fields of social interaction/communication processes (e.g., Bolton, 1987; Goffman, 1959; Kowalski, 1997) and conflict management (e.g., De Dreu & Gelfand, 2008; Deutsch, 1973; Koza & Dant, 2007; Ohbuchi & Tedeschi, 1997; Pruitt & Rubin, 1986; Ren & Gray, 2009). These literatures help pinpoint communication qualities (e.g., reciprocity, mutuality, flexibility) that are likely to satisfy both parties’ needs and hence yield joint gain (“win-win”) outcomes from service. Drawing on the conflict resolution literature, for example, most entries in the middle column of Table 1 refer to behaviors that are indicative of “integrative” or “cooperative” strategies, whereas the right column reflects “forcing,” “individualistic,” and “competitive” approaches.

PROPOSITIONS REGARDING THE CONSEQUENCES OF NEED FULFILLMENT AND VIOLATION

There are many potential consequences of the fulfillment or violation of the needs of service encounter participants. For ease of exposition, these consequences are divided into immediate (proximate) and longer-term (remote) outcomes. Importantly, these outcomes relate to both customers and employees. Most of the proximate outcomes are affective and/or cognitive, although “affect-driven” behaviors (Weiss & Cropanzano, 1996) are also included. Longer-term consequences include “judgment-driven” (more considered, planned, and enduring) behaviors and health-related outcomes.

Table 1. Proposed Service Encounter Behaviors that Facilitate and Hinder the Eight Psychosocial Needs.

Psychosocial Needs Pertaining to ...	Examples of Service Encounter Acts Proposed to Facilitate Other's Need Satisfaction	Examples of Service Encounter Acts Proposed to Hinder Other's Need Satisfaction
1. <i>Cognition</i> (understanding, making sense, predictability)	Adherence to standard scripts. Provision of complete, credible, clear explanations, and feedback. Summarizing statements. Statements that specify clear and manageable expectations. Acts that structure the other's tasks in ways that facilitate successful performance.	Suppression, filtering, and distortion of information. Unexplained deviations from role expectations. Inarticulate and incomplete statements.
2. <i>Competence</i> (self-efficacy, mastery, accomplishment)	Statements by another that exonerate oneself from blame, and accept one's proposals for action or problem resolution.	Use of technical/specialist terms. "Faultering," that is, statements that one has done poorly; statements that dismiss one's suggestions and solutions to problem. Inefficient and inaccurate mode of expression that interferes with role performance. Help-rejecting behaviors.
3. <i>Control</i> (over processes, outcomes, and the environment)	Adherence to behavioral scripts. "Voice" procedures. Vertical referral.	Suppression and filtering of information. Restriction of choice. "Stage-hogging," too much talk; too few questions. Overadherence to policy/rules.
4. <i>Power</i> (dominance over the other party)	Submissive and deferential behaviors and forms of address. Statements that invite the other to voice opinions, take the lead, lay down ground rules, and in other ways assert themselves.	Coercive social influence strategies, for example, giving orders, interrupting, belittling, bluffing, threatening, and intimidating. Inflexible positional statements.

Table 1. (Continued)

Psychosocial Needs Pertaining to ...	Examples of Service Encounter Acts Proposed to Facilitate Other's Need Satisfaction	Examples of Service Encounter Acts Proposed to Hinder Other's Need Satisfaction
5. <i>Justice</i> (fairness, equity)	Statements reflecting reasonable and legitimate expectations. Offers of fair compensation. Giving before trying to take. Honoring the process.	Unrealistically high demands Unfair/excessive complaints. Unwarranted criticisms. Unreciprocated concessions. Deceitful and cheating behaviors.
6. <i>Trust</i> (faith in the other's competence and benevolence)	Nonverbal indicators of honesty, for example, eye contact and open postures. Statements of understanding. Taking responsibility/"owning the problem."	Nonverbal indicators of deceit, for example, avoidance of gaze. Suppression/distortion of information. Violation of promises. Inauthentic displays of emotions. Deceitful and cheating behaviors.
7. <i>Respect</i> (dignity, esteem, status)	Acknowledging other's presence, status and individual needs. Provision of opportunities to "voice" problems and suggestions. Active listening. Personalising information and solutions.	Rudeness and impoliteness (e.g., in direction of gaze, use of time, vocal qualities, modes of address). Impervious or interrupting responses. Appearing to not listen. "Hollow" expressions of concern.
8. <i>Pleasant</i> relations (rapport, liking, supportiveness)	Appropriately personal forms of address. Smiling, joke sharing. Finding common ground. Statements of appreciation, compliments.	Accusations, insults, name calling, and other instances of hostility, incivility, and abuse.

Whenever needs are engaged, there are affective concomitants. These emotions vary in hedonic tone (pleasant vs. unpleasant), intensity (e.g., annoyance vs. anger vs. rage), and complexity (e.g., fear vs. embarrassment). They have physiological correlates including altered patterns of blood flow, respiration, perspiration, muscle tension, and gastrointestinal activity. They are expressed in facial expressions, gesture, posture, nonverbal utterances, verbalizations, and reflex behaviors. Their expression may conform to, vary, or violate culturally – or organizationally – prescribed display rules. Thus, service encounter participants may mask (i.e., hide), modulate (i.e., minimize or enhance), or simulate the expression of emotions in response to the satisfaction or thwarting of their needs (cf. Lord, Klimowski, & Kanfer, 2002).

Fulfillment of the needs is likely to lead to positive emotions that range from contentment through to happiness and delight, depending on the intensity of the need, prior expectations of need fulfillment, and other personal and contextual factors. Violation of the needs is likely to lead to one or more negatively toned, basic emotions. Drawing on the emotions literature (e.g., Lazarus, 1999; Plutchik, 2001; Weiss & Cropanzano, 1996) and the application of this literature to service contexts (e.g., McColl-Kennedy & Smith, 2006; Menon & Dube, 2004; van Dolen et al., 2004), some propositions can be advanced regarding the likely basic emotional responses to violation of each need. These are illustrated in the middle column of Table 2. As shown, violation of the more task-oriented needs is proposed to be particularly associated with anxiety and shame, whereas violation of relatedness needs is expected to be associated with

Table 2. Examples of Proposed Affective Consequences of Violation of the Eight Psychosocial Needs.

Psychosocial Needs Pertaining to ...	Basic Emotions Evoked by Need Violation ^a	Cognitive-Affective Response to Need Violation
1. Cognition	Anxiety, apprehension	Feelings of bewilderment
2. Competence	Guilt, shame, embarrassment	Feelings of uselessness
3. Control	Anxiety, anger	Feelings of helplessness
4. Power	Anger, fear, hostility	Feelings of impotence
5. Justice	Anger, indignation, envy/guilt	Feelings of being cheated
6. Trust	Anger, suspicion, disappointment	Feelings of being betrayed
7. Respect	Anger, resentment, loathing, contempt	Feelings of being devalued
8. Pleasing relations	Sadness, boredom, jealousy	Feelings of alienation

^aThe set of basic emotions was taken from a range of sources including models proposed by Plutchik (2001) and Warr (2007).

anger and/or sadness. Violation of different groups of needs is likely to be expressed in nonverbally distinctive ways (McColl-Kennedy et al., 2009). Thus, for example, blocking of cognitive, competence, and pleasing relations needs is likely to elicit a more subdued nonverbal response than is violation of justice and respect needs; blood flow (e.g., to the face) may be more apparent following violation of respect needs than following blocking of power needs.

In addition to these basic emotions, a more complex set of responses to need fulfillment/violation may be evoked. These responses are shaped by cognitive appraisals and infused with affective qualities, such that they often include a mix of difficult-to-separate cognitive and affective components. Examples of responses to need *fulfillment* may range from a sense of clarity and certainty (when cognition needs are met) to feelings of mastery (when competency needs are met) and feelings of connectedness (when pleasing relations needs are met). Examples of responses to need *violation* are given in the far right column of Table 2. As can be seen, a distinctive cognitive-affective outcome results from the violation of each need. Each of these cognitive-affective responses, in turn, is likely to give rise to distinctive behavioral expressions (the body language of, e.g., feelings of confusion and uncertainty are very different from those associated with feelings of being cheated). Responses also vary in systematic ways between customers and employees, with the latter's behavior more tightly regulated by organizational display rules. Nonetheless, under the accumulated strain of multiple difficult service encounters, the emotional regulation of even the most able employees may be tested. Rupp and Spencer (2006), for example, found that unfair (vs. fair) treatment by customers was associated with increased emotional labor on the part of employees and with greater difficulty in complying with display rules.

Overarching these specific cognitively mediated responses is the more global cognitive-affective response of satisfaction (Homburg, Koschate, & Hoyer, 2008). Service encounter participants may be satisfied (or not) with a range of targets, including the other party, the encounter itself, their job (in the case of employees), and the service organization as a whole. We propose that the extent to which the eight needs are met within a service encounter has a strong causal effect on satisfaction with that encounter.

Many of these cognitive-affective outcomes require participants to consider not only their own circumstances but also those of other people, that is, to engage in a process of social comparison. Bandura (1997), for example, observed that a situation in which "[p]eople perceive themselves as ineffectual but see others like them enjoying the benefits of successful effort

is likely to give rise to self-disparagement and depression” (p. 21). Similarly, when two customers experience identical service failures but receive different recovery responses, social comparison may lead to anger associated with violation of justice needs (Chung-Herrera, 2005). Other research (cf. McColl-Kennedy & Sparks, 2003) suggests that responses are affected by participants’ counterfactual thinking, that is, their consideration of what *could* and *should* have been, and how they *would* have felt if things had been different. Thus, while customers might be thinking “how rude! they *could* have apologized for keeping us waiting,” employees may be muttering “how rude! They *should* have known we are busy, and had the courtesy to wait quietly.” Both parties may thus feel disrespected and devalued.

Behavioral consequences of need satisfaction/violation comprise two broad types: approach and avoidance. *Customer approach* behaviors include tipping, repatronage, and positive word-of-mouth; customer *avoidance* behaviors include a range of retaliatory responses including negative word-of-mouth behaviors, abuse of service staff, damage to or theft of service firm property, some types of formal complaints, and exiting/firm-switching behaviors (McColl-Kennedy et al., 2009; Wirtz & McColl-Kennedy, 2010). *Employee approach* behaviors include greater engagement at work, job commitment, customer orientation, and extra-role behaviors; employee *avoidance* behaviors include cynicism, service sabotage, avoidance of customers, tardiness, absenteeism, and other withdrawal behaviors (Davidow, 2003; Sparks, 2001). Importantly, therefore, the extent to which service encounter needs are fulfilled may greatly affect the job performance and job tenure of customer contact staff, with clear financial implications for the employing firm.

Health and well-being outcomes are likely to range from states of alertness, energy, and vigor when needs are met and challenging encounters are successfully negotiated, through to states of lethargy, exhaustion, or malaise when needs are blocked and conflict escalates or becomes intractable. Repeated experience of need violation may give rise to severe stress and eventually lead to illness outcomes (Spector & Bruk-Lee, 2008).

For expository purposes, these consequences have been presented in a serial manner, from basic emotions, to more complex affective-cognitive responses, to approach and avoidance behaviors, and finally health-related outcomes. This organization is not intended to imply a linear or unidirectional process. Rather, the outcomes are likely to overlap in time, and are likely to occur in different orders and in different combinations depending on a myriad of personal and contextual factors. The unfolding of any set of consequences is dynamic, interactive, and highly variable (Côté, 2005).

PROPOSITIONS TO ENHANCE SERVICE ENCOUNTER OUTCOMES

The dyadic psychosocial needs approach introduced in this chapter has many potential applications. The aim of all interventions based on SENT is to encourage and enable service encounter behaviors that satisfy the parties' psychosocial needs. Behaviors that achieve this goal are likely to be characterized by mutuality (vs. self-focus), assertiveness (vs. nonassertion or aggression), bilateral (vs. unilateral) communication, active listening (vs. poor listening or not listening at all), acceptance (vs. denial) of responsibility, collaboration (vs. competition), and joint problem-solving (vs. avoidant and domineering) conflict resolution strategies (Koza & Dant, 2007). Behaviors of these kinds create the conditions under which integrative interpersonal climates are established, and the possibilities for "win-win" outcomes for customers and employees are maximized (De Dreu & Gelfand, 2008).

Interventions can be applied at several levels including modification of servicescapes to facilitate participant need fulfillment, educating customers regarding the psychosocial needs of employees, supporting employees threatened by need violation, empowering employees to deliver on customer psychosocial needs, and creating organizational climates that value psychosocial need fulfillment. Most importantly, perhaps, training can focus on educating employees as to the psychosocial needs that operate in service encounters, and specific behaviors that facilitate or hinder need fulfillment. Following Pruitt and Rubin's (1986) dual concern model of conflict management, and consistent with the current dyadic approach, employees can be trained in discourse strategies that involve a high concern for self *and* a high concern for the customer. Staff may especially benefit from training in actions to be taken when need violation is threatened in themselves or in their customers. By learning to decode the early (especially, nonverbal) signs of felt need violation, employees will be well-placed to take actions that prevent the escalation of conflict. Training should focus on addressing the needs underlying behavior, rather than just focusing on the customer's (or their own) overt complaint or stated position. As research in conflict management shows, joint gains are most likely to be achieved when both parties have skills in interaction process management, display interpersonal sensitivity, and are willing to disclose their underlying needs (De Dreu & Gelfand, 2008; Koza & Dant, 2007). Service employees can be trained through dyadic instruction, case material and role-plays to develop these skills and dispositions.

PROPOSED RESEARCH DIRECTIONS

Research opportunities relating to SENT are many. Qualitative studies are required to further elucidate the number and nature of service encounter needs in different cultural settings. Experimental and field research can assess service encounter need fulfillment under varying conditions. Experiments that manipulate participant behaviors and other key variables within simulated service encounters will enable testing of hypotheses regarding the role of psychosocial needs in mediating relationships between service encounter events and outcomes. Diary studies that take repeated measures from customers and employees will enable assessment of within-person variation in events, need fulfillment, emotions, and behaviors. Finally, intervention studies can be conducted to evaluate the impact of programs that train staff to be aware of, and responsive to, service encounter needs.

A number of propositions for testing in future research based on SENT have been presented and include the following:

P1. The importance attached to satisfying each of the eight psychosocial needs (see [Table 1](#)) varies with (a) the role – customer or provider – played in the service encounter, (b) the type of service provided, and (c) the outcome or criterion under consideration.

P2. Satisfaction or violation of the needs is determined by what happens within service encounters, especially by the behaviors performed by the actor and by the other party. As illustrated in [Table 1](#), specific and identifiable behaviors satisfy different needs.

P3. The eight needs are not satisfied/violated in isolation from each other. Rather, conjunctive, disjunctive, additive, and interactive relationships exist between the needs.

P4. Need satisfaction/violation has affective, cognitive, behavioral, relational, economic, and health-related consequences that vary in observability, duration, and severity.

P5. Both customers and employees can better meet their own and the other party's service encounters needs by becoming more sensitive to early signs of need violation and more skilled in interaction strategies that facilitate joint need satisfaction.

P6. Planned interventions that focus on these aspects of need fulfillment lead to more satisfied and loyal customers, as well as more satisfied and loyal service employees.

CONCLUSIONS

The contributions of this chapter are fourfold. First, we drew on and integrated a diverse set of literatures. Second, we proposed a new theory, service encounter needs theory (SENT), and presented evidence from the literature demonstrating its contribution to understanding the mechanisms through which behaviors within service encounters influence the outcomes from these encounters. Third, we put forward for testing in future research several propositions based on the theory regarding the relationships between the needs and regarding the antecedents and consequences of need fulfillment and violation. Fourth, we proposed some ways in which the theory may be applied to enhance service encounter processes and outcomes.

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CHAPTER 10

A LAUGH A DAY IS SURE TO KEEP THE BLUES AWAY: MANAGERS' USE OF HUMOR AND THE CONSTRUCTION AND DESTRUCTION OF EMPLOYEES' RESILIENCE

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ABSTRACT

Humor is an abundant and valuable, yet unfortunately underutilized, resource in organizations. When effectively wielded, humor has been proposed as a “managerial tool” that can be used to achieve positive organizational outcomes. Using Affective Events Theory and the Broaden and Build Theory of Positive Emotions as a theoretical base, the authors attempt to test this proposition of humor being used as a managerial tool by conceptualizing a link between manager’s use of humor and the consequent build up of resilience in employees in the long run.

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INTRODUCTION

In an article published in 1980 in the *Academy of Management Review*, Malone contended that humor is a valuable but undeveloped resource existing within every manager's reach and that it can be used as *a tool* by managers to increase workers' satisfaction and achieve organizational outcomes. He further argued that it is the lack of knowledge and understanding of the nature and functions of humor that has resulted in the abuse or non-use of it as a tool in the workplace. "The tool [humor] has been around for quite a while, but it is used as a toy because no one has ever developed a set of instructions" (Malone, 1980, p. 360). Malone (1980) presented potential future research areas in the form of five questions: (1) Can humor be used as a tool to enhance the managerial process; (2) Can humor be used by most managers or by only those who are naturally funny; (3) Under what conditions can humor be most effectively used; (4) What type of people respond most readily to humor; and (5) What types of humor are most effective. In his concluding remarks, he called for more advanced, thorough research on the use of humor in the work setting.

Taking up this challenge, in this chapter, we attempt to answer the first question posed by Malone (1980) on whether humor is a possible managerial tool, by examining the impact of managers' humor on the psychological resilience levels of employees. Our aim is to portray humor as a tool that can fortify employees' psychological resilience through its ability to positively influence the emotions of employees. As Malone (1980) stated, we believe this is the most important question, out of the five, to tackle first and foremost, as it is from the affirmation of this first question that the next four will be worth considering. A positive answer to this question would lead to the validity of the next questions. Thus in our attempt to tackle it, we are hinting at a possible link between managers' use of humor and employees' emotions and resilience levels, which ultimately will affect job burnout. Our argument is that the use of humor by managers has the effect of creating short-term specific emotional states in the minds of employees, which in the long run translates into the build up (or destruction) of psychological resilience. The benefit for the organization in fortifying employees with psychological resilience is that it reduces work stress and burnout. The relationship between managers' use of humor and employees' emotions and resilience levels represents a significant gap in the literature, as it has not been an area that has been investigated before. This chapter attempts to address this gap in the literature and uncover the influence that humor has on emotions and employees' resilience.

The chapter is organized in the following manner. First we review the existing literature and briefly outline the history, definition, and benefits of humor in the workplace along with a section on the negative side of humor. Subsequently, we give a brief overview of the main arguments and the theoretical framework we develop. The latter sections present these arguments in detail from which our propositions flow. The chapter concludes with a discussion of the contributions of the framework and future research directions.

HUMOR IN THE WORKPLACE: A BRIEF OVERVIEW

It is not surprising that [Malone \(1980\)](#) advanced his thesis as a challenge to managers as humor and serious work are usually considered mutually exclusive activities ([Duncan, Smeltzer, & Leap, 1990](#); [Gibson, 1994](#); [Meisiek & Yao, 2005](#); [Morreall, 1991](#)). However, humor is part and parcel of organizational life ([Consalvo, 1989](#); [Cooper, 2008](#); [Duncan, 1982](#); [Meisiek & Yao, 2005](#)) as much as it is a part of all aspects of human interaction. Indeed, the few studies on the use of humor in the workplace confirm this view and uncover significant relationships and mutual benefits between the two ([Cooper, 2008](#); [Duncan, 1982](#)). Nonetheless, although humor has been studied extensively in other disciplinary areas ([Decker & Rotondo, 2001](#)), such as psychology, philosophy, and communication studies, the systematic examination of the use of humor in organizational settings is still in its infancy. “The use of humor in organizational relations is unfolding as an important but under-researched managerial topic” ([Decker & Rotondo, 2001, p. 450](#)). Yet emerging evidence and support from the limited research so far show that the purposes and functions humor plays has direct relevance to organizations and management ([Duncan, 1982](#)). Thus it is to the advantage of both employers and employees alike, to understand the effects, functions, and roles humor plays within the organizational setting.

The definition of humor varies among researchers as no general consensus exists in academic circles as to its exact meaning ([Cooper, 2008](#); [Lyttle, 2007](#)). Humor is both multidimensional and dynamic ([Romero & Cruthirds, 2006](#)). Accordingly, different definitions capture its different aspects and styles. In ancient Greece, changes in human bodily fluids or “humors” as they were called, and later temperament was used to explain the term humor ([Lyttle, 2007](#); [Meisiek & Yao, 2005](#)). In a much broader sense Martin views humor as comprising cognitive, emotional, behavioral, social, and psychophysiological facets (Martin, 2000, cited in [Meisiek & Yao, 2005](#)). [Chapman and Foot’s](#)

(1976) definition of humor as “a process initiated by a humorous stimulus, such as a joke or cartoon, and terminating with some response indicative of experienced pleasure, such as laughter” (p. 117) highlights the stimulus–response relationship of humor. Lyttle (2007) states that humor involves a process of enjoyment or making someone feel good. Martineau looked at the communicative aspect of humor, defining humor as “any communicative instance which is perceived as humorous” (Martineau, 1972, cited in Romero & Cruthirds, 2006, p. 59).

Humor, as we know of it in everyday usage, pertains to something that is viewed as funny or something that makes us laugh and is expressed in numerous ways through words, symbols, stories, or by the use of pranks, play acting, tricks, hoaxes, etc. The ability to laugh in all its complex forms is understood to be a unique feat of human beings (Malone, 1980). Humor is more often connected with positive emotions such as laughter, mirth, happiness, and pleasure than with negative emotions although certain forms of humor can and do arouse negativity in people. A good sense of humor is seen as a desirable trait to possess as human beings appear to be drawn toward people who make them feel happy by eliciting humor and hilarity in social settings.

Adapting these definitions to the organizational level, Romero and Cruthirds (2006) define workplace humor as “amusing communications that produce positive emotions and cognitions in the individual, group or organization” (p. 59). This definition with its reference to humor’s ability to impact emotions will be used by us in drawing up our conceptual framework.

Research on humor reveals the many physical (e.g., greater health) (Lee & Kleiner, 2005), psychological (e.g., release of tensions) (Lee & Kleiner, 2005; Spickerman, 2005), social (e.g., increasing social networks), and cognitive (e.g., problem solving) benefits it brings (Lyttle, 2007). Within the workplace, humor has been found to boost group cohesiveness (Duncan, 1982), stimulate individual and group creativity (Csikszentmihalyi, 1996, cited in Avolio, Howell, Sosik & 1999), and increase motivation (Crawford, 1994; Dienstbier, 1995; Lippitt, 1982 cited in Avolio et al., 1999). Romero and Pescosolido (2008) assert that humor occurring in groups facilitates the efficient and effective establishment of social processes and bonds due to its ability to generate positive affect. Morreall (1991) discusses humor’s beneficial effects in promoting employees’ physical and mental health and mental flexibility, and its role in acting as a social lubricant by facilitating social interaction. Duncan (1982) discusses the role humor plays in work groups from increasing group cohesiveness to being a medium of expressing frustrations and problems. Thus the importance of humor as part of the

work environment seems to stem from the ability of humor to affect mood at work and improve communication channels between group members (Decker & Rotondo, 2001).

THE NEGATIVE SIDE OF HUMOR

Although humor is advocated as beneficial to life and limb there is a darker side to it as well, for it has the capacity to harm people. Therefore, all that is funny may not be to everyone's liking. Within the workplace humor may be used as a form of ridiculing a minority group, sexual or ethnic jokes may be used to discriminate against employees based on gender, ethnicity, and sexual orientation, and humor may be used as a way of establishing a manager's authority or power over subordinates, etc. Such instances lead to feelings of frustration, anger, fear, marginalization, unfair treatment, and disloyalty to the organization, and can have an impact on work performance and outcomes. "Negative" humor, characterized by humor that offends or is inappropriate, can degrade the relationship between a manager and employee (Decker & Rotondo, 2001). While the use of positive humor by leaders was directly associated with increased levels of task and relationship behavior among employees, Decker and Rotondo (2001) observed the opposite for the use of negative humor by managers. Duncan et al. (1990) discuss how joking behavior perceived as employee harassment has led to a number of court cases and how "courts and arbitrators continue to wrestle with the question of what constitutes illegal harassment [where humor is used on employees]" (p. 269). Humor in the form of "horseplay" can inflict bodily harm or damage to property (Duncan et al., 1990) and some forms of joking behavior and tomfoolery at work can act as a distraction to serious work (Lytle, 2007). It is for this reason that Duncan (1982) called for the responsible and appropriate use of humor in the workplace by first creating trust among employees and allowing them the freedom to respond to humor and avoid instances of negative humor. Within such a context the pitfalls of humor can be avoided and its benefits can be used to the organization's advantage (Kalliny, Cruthirds, & Minor, 2006).

THEORETICAL FRAMEWORK

Given the prevalence of humor in the workplace, it is surprising that researchers have been slow to awake to the value of studying,

understanding, and using it. Humor is a phenomenon that occurs in organizations on a daily basis and is used by people to serve numerous functions, including the one focused on in this analysis, namely, humor's ability to influence emotions and act as an emotion-focused coping strategy.

Work environments are places that pose threats and stressors, most of which are beyond the control of the employees. As Farrell (1998) notes, "It [workplace] is a place where much time is spent in tedium, in conflict, in challenge, in fear and in accomplishment" (p. 3) and survival depends on how well employees cope and adapt to such environments. Lazarus and Folkman (1984) define coping as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (p. 141). They further state that people when faced with a taxing situation, use problem-focused coping strategies aimed at defining the problem and finding solutions to it and emotion-focused coping strategies, aimed at changing one's own emotional reactions to the problem as a means of solving it (Lazarus & Folkman, 1984). Within a workplace where the majority of stressors are unpredictable, uncontrollable, and taxing to employees' self-efficacy, problem-focused coping strategies may not be an effective form of dealing with them. In such instances emotion-focused coping strategies are more useful.

Humor can be used as a type of emotion-focused coping strategy (Lefcourt, 2002). This function of humor can be better explained by analyzing two theories of humor, arousal theory and superiority theory. Arousal theory take the view that certain hilarious events or experiences by the individual causes the release of tension and negative emotions that have been built up over a period of time (Francis, 1994; Meisiek & Yao, 2005). They emphasize the ability of humor to provide relief from painful bottled up feelings (Lyttle, 2007). Superiority theory define humor as arising from the feelings of superiority one has over the lesser quality of others or of one's own self in the past (Meisiek & Yao, 2005). Superiority theory state that we find laughter when we perceive ourselves as comparatively at a better state of affairs than others. Both theories view humor as a way of helping people deal with the unpleasant truths in their lives, both in terms of their own perceived shortcomings and the difficulties of the environment that they must somehow live and work in. Humor can be used to reappraise or reframe a dangerous situation into a harmless, funny one so that the threat appears less harmful or in a sarcastic manner to control hostile opponents without having to fight them. It helps to assert one's own power and superiority over others by making fun of their weaknesses and exaggerating one's own strengths. It can be used as a harmless outlet to voice malice, jealousy, or aggression without

inviting direct hostility from the other party and jeopardizing relationships. Therefore, humor represents an ideal resource to help us adjust our emotions to problems. Humor can also be used to enhance emotions of the self and others. Francis (1994) highlights this point by examining humor as a social phenomenon that aids interaction and concludes that humor is “interpersonal emotion management, whose purpose is to manage the emotions of others as well as of the self” (p. 147).

We do not aim to argue for or against the above notion of humor being an emotion-focused coping strategy. Nor do we aim to appraise how effective it is. We are concerned with investigating whether the occurrences of humor in the workplace (in the above form or in any other forms) and the resultant short-term emotional changes will translate in the long run into increases or decreases in employees' resilience levels. The benefit to the organization in changes in employees' resilience levels is that it affects employees' job burnout. For this purpose, our analysis focuses on any verbal humor occurring face-to-face between manager and employees where the manager is the initiator of the humor and the employees are the target. The theoretical foundation for our analysis is based on Affective Events Theory (AET) (Weiss & Cropanzano, 1996) and the Broaden and Build Theory of Positive Emotions (Fredrickson, 2001). Fig. 1 shows the proposed relationship, based on the AET (Weiss & Cropanzano, 1996) perspective, between managers' use of humor and employee's emotions and resilience levels and resultant job burnout levels.

We situate our analysis in work settings, which are characterized by high levels of stressors and setbacks where employees are in danger of experiencing job burnout. Such volatile environments create instances of emotional ups and downs, from elation when work situations are perceived favorable to dejection when such situations suddenly change for the worse. Such an environment would also call for greater reserves of psychological resilience to face changing circumstances and thus any tool that can contribute and build this reserve will certainly be most welcome to the organization in such a setting. For this reason, in this scenario we propose that managers' humor acts as a moderator on employees' emotions. Depending on whether managers' humor is seen as constructive or destructive, there will be affective reactions from employees in the form of either positive emotions or negative emotions. These reactions affect work stress in the short term. In the long run, however, we propose that emotional reactions will help or hinder the buildup of psychological resilience, thereby affecting employees' job burnout. However, before we proceed with our analysis, we must introduce a number of boundary conditions. First of all, our discussion assumes that the manager

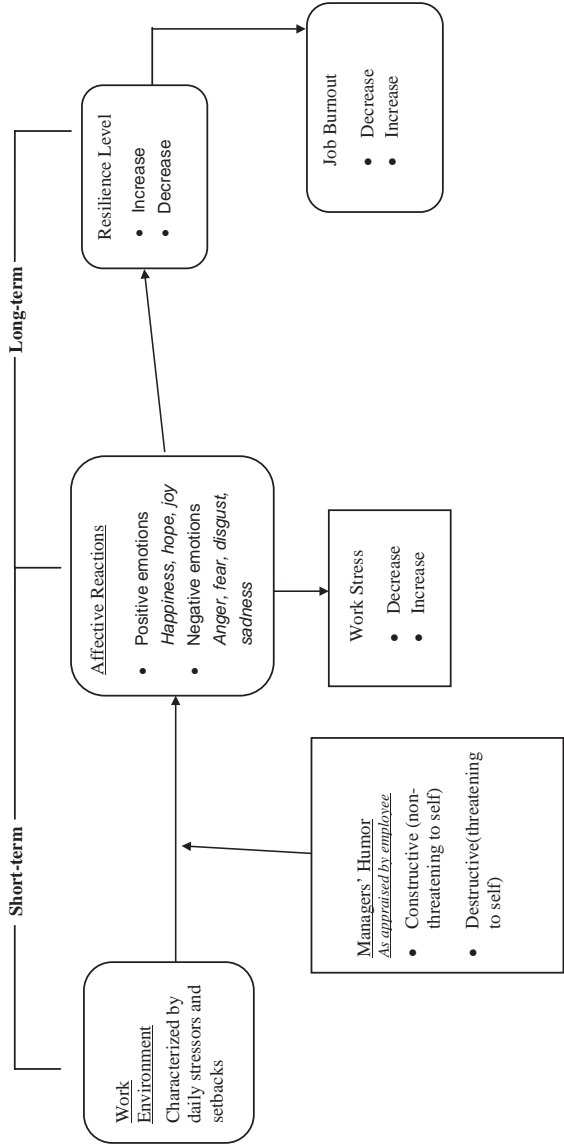


Fig. 1. An Affective Events Theory-Based Perspective of Managers' Use of Humor and Its Impact on Employee's Emotions and Resilience. Source: Adapted from Weiss and Cropanzano (1996).

and his/her employees work in close proximity to each other so that there is face-to-face interaction between them during, if not the whole then at least the greater part of, each workday. Close proximity would allow employees to be exposed to their manager's humor, which is an essential condition for the manager's humor to be an event causing affective reactions. A manager, absent from the work team will make no impact on employees' emotions no matter how funny she or he may be elsewhere. Second, as mentioned above, we assume an environment that has high levels of frequent, unexpected and uncontrollable stressors that necessitate the use of some form of coping mechanism on the part of those exposed to protect themselves from the stressors' damaging effects and effectively carry out their work. However, we exclude those stressors associated with dire conditions that demand complete and urgent attention because they pose a threat to the survival of the employees or the organization. Humor used in such instances would not only act as a distraction to taking urgent remedial action but also have catastrophic consequences. Third, the timing of a manager's humor is an important aspect of our analysis, which we expect to occur just after the occurrence of a stressful incidence so that the humor acts as a moderator to the employees' initial emotional reaction to the stressor. Fourth, since both the manager and the employee will be present when the stressors occur, the manager is also assumed to be exposed to and be aware of the stressor. [Fig. 1](#) in conjunction with the discussion that follows explains our main arguments in detail.

EMOTIONS IN THE WORKPLACE

Emotions have been the focus of study in psychology for a long time ([Brockner & Higgins, 2001](#); [Weiss & Cropanzano, 1996](#)). Interest in emotions in the workplace, however, arose during the 1930s when a number of classic studies emerged on the subject that were both conceptually and methodologically diverse (for a detailed explanation of the historical evolution of research on affect in the workplace see [Brief & Weiss, 2002](#); [Weiss & Brief, 2001](#)). However, this excitement and desire for innovation in studies of affect at work did not spill over into the next five decades, which saw only a limited number of studies done in the area ([Brief & Weiss, 2002](#)). This stance changed during the decades following the mid-1980s when researchers rediscovered moods and emotions in the work setting ([Ashkanasy, Härtel, & Daus, 2002](#); [Lord & Kanfer, 2002](#); [Brief & Weiss, 2002](#); [Weiss, 2002](#)) in all their discrete and muted forms and the emergence of the notion that affective reactions have the ability to influence workers'

behavior for the better or for the worse. Today it is safe to say that the study of affect at work “is not new and emerging as it once was” (Briner & Keifer, 2005, p. 282). Larsen, Diener, and Lucas (2002) discuss the importance of understanding emotions in the workplace as they are linked to both individual outcomes such as creativity, learning, and coping and organizational outcomes such as productivity.

The important role and functions emotions play in our daily lives is beyond dispute, and yet ironically many disputes exist as to the precise definition of an emotion (Gray & Watson, 2001; Stanley & Burrows, 2001; Weiss & Cropanzano, 1996). Notwithstanding this, most definitions of emotions depict an emotion as “an internal feeling state involving thoughts, physiological changes, behavioral tendencies and expression” (Briner & Keifer, 2005, p. 282). Put succinctly, emotions are “affective responses to what happens in the environment” (Frijda & Mesquita, 1994 cited in Härtel & Ganegoda, 2008) and involve the activation of many components (Briner & Keifer, 2005; Fredrickson, 2002; Izard, 1993; Stanley & Burrows, 2001). “Emotions are short-lived experiences that produce coordinated changes in people’s thoughts, actions and physiological responses” (Fredrickson & Branigan, 2005, p. 313). Frijda (1986) explains emotions in terms of “action tendencies” when he states that “emotions, then, can be defined as modes of relational action readiness, either in the form of tendencies to establish, maintain or disrupt a relationship with the environment or in the form of mode of relational readiness as such” (p. 71).

“Emotions are best conceptualized as multicomponent response tendencies that unfold over relatively short time spans” (Fredrickson, 2004, p. 146). The starting point for an emotion is the conscious or unconscious appraisal of an antecedent event by the individual, which gives rise to a series of response tendencies in the form of facial expressions, physiological changes, subjective experiences, etc. (Fredrickson, 2002). Thus emotions are stimuli dependent, i.e., they occur as a result of some external or internal event. This specific characteristic of an emotion has direct relevance to our framework as our argument is based on humor as a possible stimulus that affects employees’ emotions.

THE LINK BETWEEN HUMOR AND EMOTIONS

Within the workplace emotions play a multitude of roles in that they may serve to enhance, stimulate, guide, or even disrupt behavior (Stanley & Burrows, 2001). Brief and Weiss (2002) contend that the relationship

between people's emotions and the organization they work in is a two-way process, i.e., organizational events affect employees' emotions and actions, and in turn, employees' emotions and actions affect organizational events. Changes that occur in employees' emotions and subsequent behavior as a result of changes in organizational events can be explained by using "AET" (Weiss & Cropanzano, 1996).

AET is currently regarded as a seminal work on explaining the structure, causes, and consequences of affective encounters at work (Ashton-James & Ashkanasy, 2005). This theory states that work events are the proximal causes of employees' affective reactions at work and these affective reactions give rise to affect-driven behaviors and job attitudes (Weiss & Cropanzano, 1996). The "work event," which is at the crux of the theory, is any change that occurs in circumstances (Weiss & Cropanzano, 1996). This includes managerial decisions, stressful conditions at work, leaders, work group characteristics, physical settings, and organizational rewards and punishments (Brief & Weiss, 2002). Although AET originally conceptualized only events internal to the organization, later researchers (Ashton-James & Ashkanasy, 2008) extended these events to include external events as well. These work events elicit positive or negative affective reactions from those exposed to them based on the perception of the events as being either hassles or uplifts (Weiss & Cropanzano, 1996; Ashton-James & Ashkanasy, 2008). Thus, according to AET, incidences occurring within the work environment impact on the emotions of employees who are exposed to them (Härtel, 2008; Kimberley & Härtel, 2007; Pizer & Härtel, 2005). Such affective experiences, in turn, interrupt employees' present behaviors and bring about attitudinal and cognitive changes as well as specific action tendencies (Ashton-James & Ashkanasy, 2008; Härtel & Ganegoda, 2008; Härtel, Gough, & Härtel, 2006).

Leaders and managers, being in control of the internal environmental features of an organization, are in a position to exercise considerable influence over work events that can have affective consequences for employees (Härtel & Ganegoda, 2008). Effective leaders influence their employees not only toward organizational goal achievement but also in areas such as personal and emotional development, self-discovery, and moral conduct. One of the most influential areas leaders have over employees and one that is central to our analysis is the impact their behavior has on employees' emotions. Leaders' own affective displays in the workplace can impact followers, with discrete emotions (e.g., anger, joy) crossing over from followers to leaders (Härtel & Page, 2009). Leaders and managers are responsible, among other things, for creating an environment in which

employees can feel predominantly positive emotions. Research has discovered that the leaders' affect has a positive relationship with the followers' affect. For example, Erez, Johnson, Misangyi, LePine, and Halverson (2008) showed in two studies that leaders who expressed positive emotions positively influenced the affect of followers and such followers were also found to possess decreased levels of negative affect.

We propose that workplace humor is one such work event, which elicits affective reactions in employees. In addition to managerial decisions, rules/regulations, internal workplace environment, etc., humor is proposed as an affective event responsible in eliciting specific emotional states in employees. Decker and Rotondo (2001) assert that managers can, in their role of guiding employees, use humor among other techniques in motivating employees' toward goal achievement. We propose that managers can use humor in affecting employees' emotions as well so that such affective experiences will impact on organizational outcomes.

Empirical studies in the area of leadership and the use of humor reveal the beneficial outcome humor has on both leaders' and followers' performances. For example, Malone (1980) spoke of humor's power to boost managerial processes and performance. Decker found that subordinates of supervisors whom they rated as having a good sense of humor showed higher job satisfaction as well as rating other supervisor qualities more positively (Decker, 1987, cited in Decker & Rotondo, 2001). Therefore, along with these organizational outcomes, humor is also expected to generate emotional reactions in employees. As Goleman, Boyatzis, and McKee (2002) state, "the most effective leaders, then, use humor more freely, even when things are tense sending positive messages that shift the underlying emotional tone of the interaction" (p. 35). Thus humor has the ability to create positive emotional states in employees.

However, it must be borne in mind that managers' use of humor is not the only event that elicits emotional reactions from employees. Organizations are settings filled with a myriad of events with affective consequences, and it can be safely argued that managers' humor interacts with these events. Consequently, we propose in our framework that managers' use of humor acts as a moderator to the emotional reactions shown by employees to other events.

It is also noteworthy to consider that, as was mentioned in an earlier section, humor can be used constructively as well as destructively. The latter method would involve the use of humor to control, punish, or humiliate employees. Malone (1980) warned managers against this type of humor when he labeled humor as a "double-edged sword." What is humorous to one

person may be harmful to another. The type of emotional reaction felt will be determined by the constructive or destructive nature of the humor used.

A number of factors can determine the constructive and destructive nature of humor such as the intentions of the initiator of the humor, different styles of humor, the content of the humor, etc. For our purposes, however, we will look at the appraisals given by the employees exposed to a manager's humor, on whether humor is constructive or destructive to their well-being. If an employee assesses their manager's humor as being non-threatening to his/her well-being then it will be considered as constructive humor whereas if the employee assesses their manager's humor as threatening to his/her well-being then it will be considered as destructive humor.

We believe that determining the constructive/destructive nature of a manager's use of humor based on the personal meaning attached to it by employees has greater validity in this case than the other measures mentioned above, because the very definition of an emotion entails an appraisal of some antecedent event. In the context of our analysis, and consistent with the tenets of AET, humor is that antecedent event, which is personally evaluated by each employee exposed to it as being threatening or non-threatening to one's well-being, eliciting congruent emotional reactions. We further assert that when managers' use of humor functions to distract or reappraise or relieve tension after a stressful event it will most likely be appraised by employees as non-threatening to their well-being. On the other hand, humor that functions to humiliate, insult, or oppress employees and further aggravate the stressor will be appraised by employees as a threat to their well-being.

Depending on whether the manager's humor is appraised as constructive or destructive, the nature of the affective reactions will change so that constructive humor will bring about positive emotions and destructive humor will bring about negative emotions as shown below:

1. Constructive humor —————→ positive emotions
2. Destructive humor —————→ negative emotions

Based on the above discussion we propose the following:

Proposition 1. Managers' use of constructive humor increases the occurrence of positive emotions in employees.

Proposition 2. Managers' use of destructive humor increases the occurrence of negative emotions in employees.

In accordance with the tenets of AET, the humor–emotion response is a short-term process, which can occur continuously on a daily basis over a period of time. Our investigation is now extended to the longer term to consider the possible impact such short-term, continuous emotional reactions have on employees’ resilience levels.

POSITIVE EMOTIONS AND THE BUILDUP OF EMPLOYEES’ PSYCHOLOGICAL RESILIENCE

The business world today is characterized by competition and constant change. Organizations are places where stressors and setbacks occur on a daily basis. Financial crises, job losses, mergers and takeovers, contracting out, and job redesign seem to be the order of the day. Within organizations, employees must face deadlines, restructuring, work demands, customer complaints, etc., all of which are constant sources of stress. Factors such as globalization, increased competition, and workplace diversity have rendered the current business atmosphere a stressful place (Romero & Cruthirds, 2006). Such turbulence inevitably gives rise to work stress and burnout among employees and the costs involved run in the billions of dollars in terms of health expenses and lost profits. Therefore, it is a huge advantage for organizations to have a workforce that is psychologically resilient in facing such stressors (Luthans, Volgelgesang, & Lester, 2006).

Resilience, according to positive psychology, is the ability to cope positively and adapt when faced with significant risk and adversity (Masten, 2001; Masten & Reed, 2002). “Applied to the workplace, resilience is defined as the positive psychological capacity to rebound, to ‘bounce back’ from adversity, uncertainty, conflict, failure or even positive change, progress and increased responsibility” (Luthans, 2002, cited in Luthans, Avolio, Avey, & Norman, 2007, p. 546). Although resilience is traditionally portrayed as a trait that one is born with, there is growing empirical evidence that it can be developed later on in life and one such method of building resilience is the use of positive emotions (Luthans et al., 2006). This relationship between positive emotions and peoples’ ability to build up resilience is explained by Fredrickson’s Broaden and Build Theory of Positive Emotions (2001). This theory states that positive emotions – such as joy, interest, contentment, and love – have the ability to broaden people’s momentary thought–action repertoires, which, in the long run, build their enduring personal resources, ranging from physical and intellectual resources to social and psychological

resources (Fredrickson, 2001; Fredrickson & Branigan, 2005; Tugade & Fredrickson, 2004). Thus being exposed to positive emotions expands an individual's thought–action repertoires and thus, apart from the immediate benefits of feeling uplifted, positive emotions have enduring benefits to the individual in the form of ultimately building lasting personal resources, one of which is fortifying the individual with resilience. Negative emotions have the opposite effect of narrowing down an individual's thought–action repertoire. This is to enable the individual to take immediate action at the moment of feeling the emotion and unlike with positive emotions, the effects of such actions are not accumulated for future benefits. For example the negative emotion of fear would elicit the thought–action repertoire of “avoidance” and nothing else whereas the positive emotion of “happiness” would bring forth the actions of “wanting to play,” “socialize,” “be creative,” “explore,” etc.

Studies of positive emotions have already established a link between positive emotions and people's coping abilities. Some examples of such findings are that generating positive emotions during times of chronic stress helps people to cope better (Folkman, 1997; Folkman & Moskowitz, 2000; Lazarus, Kanner & Folkman, 1980, cited in Fredrickson, 2001); positive affect facilitates attention to negative, self relevant information (Reed & Aspinwall, 1998; Trope & Neter, 1994; Trope & Pomerantz, 1998, cited in Fredrickson, 2001); and positive affect and positive beliefs serve as resources for people coping with adversity (Aspinwall, 2001, cited in Fredrickson, 2001). Thus according to the Broaden and Build Theory of Positive Emotions experiencing more positive emotions over time could translate into building greater ability for demonstrating resilience.

Drawing on this line of research, it can be argued that if constructive humor leads to the occurrence of positive emotions in employees, eventually these positive emotions will widen the thought–action repertoires of employees and as a result build up their resilience levels. The following propositions explain this argument:

Proposition 3. The continuous occurrence of positive emotions will in the long run increase psychological resilience in employees.

Proposition 4. The continuous occurrence of negative emotions will in the long run decrease psychological resilience in employees.

Since resilience levels have a direct relationship with job burnout the following propositions are proposed:

Proposition 5. An increase in psychological resilience will decrease job burnout in employees.

Proposition 6. A decrease in psychological resilience will increase job burnout in employees.

CONCLUSION

In this chapter, we examined the possible impact humor can have on long-term resilience levels of employees. Humor was proposed as a tool that can be used to fortify employees with psychological resilience. We situated our analysis in the context of a stressful work environment in which employees need some form of coping mechanism to survive and effectively complete their tasks. Managers' humor was proposed as a moderator that helps employees manage their emotions in the short run. Based on the appraisal of a manager's humor as being constructive or destructive to one's own personal well-being, employees will experience affective reactions. We proposed that when humor is appraised by employees as being constructive it will bring about positive emotional reactions whereas when humor is appraised by employees as being destructive it will bring about negative emotional reactions. This short-term process, occurring on a frequent daily basis, is expected to lead over time to the development or destruction of psychological resilience in employees through humor's ability to influence the emotions of employees.

The theoretical model advanced in this chapter has several important implications for managers and organizations. First of all, stressors and conflicts are inevitable in the world of business. Thus, it is both essential and a competitive advantage to have a workforce that is psychologically strong and emotionally well equipped to meet the problems that occur in the workplace. Having a resilient workforce therefore represents a valuable asset to the organization. The empirical evidence considered in this chapter clearly identifies the role of positive emotions in increasing psychological resilience. Second, if humor does indeed strengthen employees against obstacles, then it can be developed as a tool by managers to buffer employees against the trauma of work stress and the associated job burnout. Thus, the strategic use of humor would symbolize a resource in the hands of managers. Third, if humor can be used as a managerial tool then further research could investigate whether it can be wielded to achieve other organizational outcomes as well, thereby making it a multi-functional tool.

The notion of the link between humor and resilience is still at the conceptual level. The argument and theoretical model developed in this chapter, however, provides compelling reason and a firm basis for undertaking research to empirically test this argument within an actual work setting. Initial studies of the humor–resilience link may adopt an experimental design, allowing clear causal linkages between the absence of humor during work tasks and the presence of constructive humor. In-depth observational studies or diary studies in actual work settings are also desirable, providing rich, longitudinal and real-time data, which can be analyzed either using techniques associated with qualitative or quantitative (e.g., experience sampling method) methodologies. If humor is shown to be an effective managerial tool then further research can investigate whether it can be wielded to achieve other positive organizational outcomes, thereby making it a multi-functional tool.

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CHAPTER 11

CREATIVITY AS MOOD REGULATION

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ABSTRACT

In this chapter, we seek to resolve the long-running controversy as to whether moods foster or inhibit creativity. We base our arguments on a new theory, which we refer to as “creativity-as-mood-regulation,” where employees experiencing moods are envisaged to engage in creative behavior in the hope of regulating their moods. We further suggest that employees with different goal orientations will have different likelihoods of choosing creative activities to regulate their moods. Finally, we identify the specific goal-orientation conditions under which positive and negative moods may facilitate or depress creativity, and develop and discuss six related propositions.

INTRODUCTION

The road from mood to creativity is far more crooked and full of twists and turns, often where we least expect them.

– (Kaufmann, 2003, p. 220)

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Mood reflects and affects people's perception of the sufficiency of their status quo (Martin, Ward, Achee, & Wyer, 1993; Schwarz & Clore, 1983, 2003). Creativity – the generation of ideas or solutions that are both novel and useful (Amabile, Barsade, Mueller, & Staw, 2005; George & Zhou, 2002) – is thus a strategy whereby people might make changes in order to remedy or improve their status quo. While decades of research inquiry has revealed that mood is one of the key predictors of creativity, researchers such as Amabile et al. (2005), George and Zhou (2002), and Kaufmann (2003) continue to debate the mechanisms by which mood can influence creativity, however. This debate has resulted in conflicting perspectives on when and how moods foster or inhibit employees' creativity at work (see George, 2007 for a review). In the present chapter, we posit a new perspective to explain additional variance in the relationship between mood and creativity with a view to contributing constructively to this debate.

The earlier dominant perspectives in research on mood–creativity relationships tended to assume that preexisting moods automatically lead to subsequent creative behaviors by modifying cognitive flexibility or information-processing style (e.g., Isen, 1999a, 1999b; Schwarz & Clore, 1983; see also Kaufmann, 2003, for a review). This assumption, however, neglects the possibility that people can also anticipate how they would feel following the activities they intend to perform (Bagozzi, Baumgartner, & Pieters, 1998; Perugini & Bagozzi, 2004). Consistent with this view, Hirt, Devers, and McCrea (2008) found that people are concerned about the affective consequences of being creative, and, in turn, choose whether to engage in creative activities (see also Wegener & Petty, 1994). If an individual's expected mood states following creative behavior also influence creativity, this then suggests that the mood–creativity link may also be governed by volitional mechanisms in the service of hedonic (affective) needs (Abele, 1992; Gendolla, 2000).

To develop this possibility further, in this chapter we set out a new perspective to explain the mood–creativity link, which we call “creativity-as-mood-regulation.” We theorize that this process is contingent upon the individuals' goal orientation. In this respect, a major theme emerging from the mood-regulation literature is that individuals in positive moods undertake strategies to sustain their moods, whereas individuals in negative moods try to relieve their negative moods (e.g., Larsen, 2000; Morris & Reilly, 1987). Provided people are also motivated to regulate their moods at work, we argue that employees can choose to engage in creative behaviors in the hope of relieving negative moods or prolonging positive moods (Abele, 1992; Hirt et al., 2008). Put differently, without the expectation that her or

his subsequent mood state will be regulated through creative behaviors, an employee experiencing positive or negative moods is going to be less likely to be creative at work.

The above argument suggests that people might engage in creative behaviors for the purpose of mood regulation. Being creative, however, is not likely to be a successful mood-regulatory strategy for everyone. Engaging in creative behavior at work may expose an individual to unfamiliar, unsuccessful, and risky tasks, which can be mood aversive to some. Certain employees may therefore choose to avoid creative activities so as to preserve their current moods, or to prevent them from getting worse. In other words, individual differences may influence the likelihood that employees will choose to engage in creative behaviors for the purpose of mood regulation. We suggest that the critical individual difference variable here is *goal orientation*.

Recent organizational research (e.g., Hirst, Van Knippenberg, & Zhou, 2009; Janssen & Van Yperen, 2004) suggests that dispositional differences in goal orientations (i.e., learning goal orientation versus performance goal orientation) can lead employees to seek out or to avoid opportunities for learning and creativity/innovation at work. On the one hand, individuals with a *learning goal* primarily seek to develop competence through expanding their abilities by mastering challenging situations. Individuals with a *performance goal*, on the other hand, seek to validate their competence by seeking favorable judgments from the others (*prove orientation*), or to validate their competence by avoiding negative judgments from the others (*avoid orientation*, see VandeWalle, 1997).

Drawing on the goal-orientation literature (e.g., Dweck & Leggett, 1988; Elliot & Dweck, 1988; VandeWalle, 1997), we propose therefore that whether an employee chooses to engage in creativity as mood regulation is contingent upon the individual's goal orientation. In putting forward this creativity-as-mood-regulation perspective, we propose that employees with different goal orientations may (1) have different interpretations of their current mood state; and (2) have different expectations about the affective consequence of creativity. As will be explained in more detail later, these affective interpretations and expectations within different goal orientations may determine whether an employee engages in creative behaviors as a means of mood regulation. It is our hope that our proposals will contribute to reconciliation of the controversy surrounding the mood-creativity link by identifying the specific goal-orientation conditions under which positive and negative moods may facilitate or inhibit the choice whether to engage in creative behavior at work.

This chapter is organized as follows. First, we review competing perspectives on the mechanisms underlying the mood–creativity relationship. Second, drawing on the review, we propose an additional perspective on the relationship between mood and creativity, i.e., creativity-as-mood-regulation. Third, we formulate specific propositions regarding how goal orientation may moderate the mood–creativity link. Finally, we discuss the implications for future research.

CURRENT PERSPECTIVES ON THE MOOD–CREATIVITY LINK

The Mood-Congruent Retrieval Perspective

The idea that mood-congruent retrieval effects facilitate creativity is grounded in Isen’s laboratory research (e.g., 1999a, 1999b). Isen, Johnson, Mertz, and Robinson (1985) found that positive materials are more extensive and diverse than other materials in memory. Positive mood that primes people to access these extensive and complex materials can promote cognitive flexibility and hence creativity. Negative mood, which does not prime access to these materials, is less likely to foster creativity. Consistent with these notions, Fredrickson’s (1998, 2001) broaden-and-build theory also suggests that positive mood promotes creativity by broadening people’s cognitive variation. In particular, positive mood increases the number of cognitive elements available for creative association, the scope and breadth of cognition related to problems, and the cognitive flexibility associating the available elements (see also Amabile et al., 2005). It is expected that these processes together foster creativity, which particularly requires divergent thinking and unusual associations between concepts. These ideas have been supported in laboratory evidence (e.g., Hirt, Melton, & McDonald, 1996; Isen et al., 1985) that indicates that individuals in positive mood states perform better in creativity-related tasks such as alternative exploration, ingenuity problem-solving tasks, and unusual word associations; and they also show greater cognitive divergence, fluency of idea production, and categorization flexibility.

The Cognitive Tuning Perspective

Schwartz’s and Clore’s (1983, 2003) mood-as-information model offers another explanation for the positive relationship between positive mood and

creativity. These authors found that affective states inform people as to whether their current situation is problematic or not. People's thought processes are *tuned* to meet the affective signals posed by the situation, resulting in different cognitive processing styles (Schwartz & Clore, 1983). For instance, negative moods signaling a problematic environment tune people to a systematic, analytical, bottom-up, and detail-oriented processing style, while positive moods signaling an unproblematic environment tune people to a top-down, playful, effortless, and creative processing style.

Supporting a positive mood–creativity link, [Amabile and her associates \(2005\)](#) found in an experience-sampling study that employees' daily positive, but not negative, mood states fostered creativity. Specifically, lagged analyses showed that self-rated positive mood (on Day 1) significantly predicted creative thoughts both the same and next day (Day 2).

In sum, the above information-processing perspectives share a view that positive moods foster creativity because they promote flexible, divergent thinking and enhanced access to mental content that can facilitate the generation of new and useful ideas. These approaches assume that the cognitive changes accompanying positive moods automatically facilitate creative behavior, regardless of what moods may mean to those experiencing them. Mood states signaling different information to people can engender different behavioral responses, however. Advocating this view, [Martin and his colleagues' \(1993\)](#) mood-as-input perspective suggests a different explanation of the mood–creativity link.

The Mood-as-Input Perspective

In the mood-as-input perspective, moods provide people with information (see [Martin et al., 1993](#); [Schwarz & Clore, 1983, 2003](#)). The model emphasizes that the informational implications of mood state are not universal but are relative to the objectives sought by the perceiver. [Martin and Stoner \(1996\)](#) extended the stop-rule principle ([Martin et al., 1993](#)) to demonstrate an alternative mood–creativity pattern in their experiments. In the Martin and Stoner study, after the participants finished their initial response in a creativity-related task, they were given the chance to generate a second response if they desired. The researchers hypothesized that participants in an induced positive mood who are given the “Can I come up with a better response?” rule would be more likely to generate a second response than those in an induced sad mood. This is because the happy participants should be more optimistic or confident they might

generate a more creative response. In contrast, participants in an induced positive mood who are given the “Is my initial response a good one?” rule are going to be less likely to generate a second response. This is because their happy mood would lead them to assess their initial response more favorably. Using the same reasoning, Martin and Stoner also predicted that the participants in a sad mood would tend to assess their initial response less favorably and thus would be more likely to generate a second response. These predictions were confirmed.

In more recent research, also based on the mood-as-input model, [George and Zhou \(2002\)](#) theorized conditions under which negative moods can promote creativity while positive moods might actually reduce creativity in the workplace. [George and Zhou \(2002\)](#) hypothesized that, when perceived recognition and rewards for creativity are high, the problem signal elicited by negative mood can push individuals to strive harder to come up with more creative ideas or solutions (when they are clear about their feelings). Under the same conditions, positive moods signaling an unproblematic status quo might discourage individuals from striving further for creativity. They may eventually come up with less creative outcomes. Using a cross-sectional research design, [George and Zhou \(2002\)](#) found field evidence to support these hypotheses.

It is reasonable therefore to suggest that the studies rooted in the mood-as-input perspective offer a key implication for creativity research. This is that the cognitive changes accompanying moods need not always result in more creativity. Instead, the interpretations cued by the mood state may do so. How an individual interprets the meaning of his or her mood state may therefore engender different behavioral responses. For example, a positive mood may inform one individual that her or his status quo is unproblematic, so it is safe to try something new and challenging. The same positive mood, however, might inform another individual that, because the status quo is unproblematic, creative changes that may threaten this satisfactory state of affairs should be avoided. Similarly, a negative mood signaling a problematic status quo might lead an individual to seek creative solutions. Yet such a signal might lead another individual to play it safe and to avoid taking risks that might make the situation worse. Moreover, considering how individuals interpret moods differently may complement the mood-as-input model. As will be discussed in detail later in this chapter, our creativity-as-mood-regulation perspective suggests that goal orientation will influence these affective interpretations.

Further, the mood-congruent retrieval and mood-as-input perspectives presume that preexisting mood states lead to subsequent creativity.

This ignores the possibility that individuals might anticipate the affective outcomes of their actions and make behavioral choices to achieve desired future affective states (Bagozzi et al, 1998; Perugini & Bagozzi, 2004). Consistent with this view, a new line of research on the mood–creativity link has emerged (Hirt, Lervine, McDonald, Melton, & Martin, 1997; Hirt et al., 2008; Wegener & Petty, 1994). This new line is called the *hedonic contingency perspective* (Wegener & Petty, 1994), and proposes that anticipated mood states following creativity may also influence an individual's choice to engage in creative behaviors. We discuss this idea next.

The Hedonic Contingency Perspective

Wegener and Petty's (1994) hedonic contingency perspective holds that people are concerned about the affective consequences of the behaviors they contemplate performing. Based on this perspective, Hirt et al. (1997) proposed an alternative mechanism that explains the mood–creativity link. According to this theory, happy individuals are interested in sustaining their positive mood state, whereas sad individuals are interested in mood repair (Cialdini & Kenrick, 1976). The central idea of the model is that happy individuals must be more vigilant about the hedonic qualities of tasks they intend to perform than sad individuals (Wegener & Petty, 1994). In other words, individuals in positive moods will be especially careful to select tasks that they believe will be pleasant and will maintain their moods. Specifically, Wegener and Petty (2001) assert that:

If, consistent with our hedonic contingency perspective, happy people are more spontaneously concerned with feelings good during and after the task, they might be more likely to engage in the task in a manner that makes the task more enjoyable. Thus, it could be that happy people generate more creative responses (in part) as an attempt to enjoy the task more. (p. 197)

On the basis of the hedonic contingency perspective, Hirt et al. (2008) found that, compared to individuals in neutral or negative moods, those in positive moods had greater preferences for tasks that allowed them to be creative. Hirt and his colleagues (2008) further showed that this effect was likely to flow from mood maintenance motives. They proposed that individuals in positive moods would display the usual positive mood to creativity effect only when they expected that being creative would sustain or enhance their positive mood (see also Hirt et al., 1997). Participants in a positive mood, who were lead to believe that their positive mood would

endure no matter whether they perform creatively, did not display enhanced creative performance. [Hirt et al. \(2008\)](#) concluded that individuals in a positive mood are not motivated to utilize their enhanced cognitive resources for creativity unless they expect that doing so will maintain or enhance their positive mood.

Nevertheless, additional theoretical perspectives are needed to extend the research by Hirt and his colleagues and explain why experiencing moods may lead some individuals, but not others, to be creative at work. We suggest there are three perspectives that might apply here.

First, in the workplace, seeking truly novel and useful ideas or solutions may be relatively effortful and challenging. Engaging in creativity may also expose people to unfamiliar or potentially unsuccessful task episodes, which may be damaging to mood. As such, not every employee will anticipate desirable affective consequences from her or his efforts to be creative. Some individuals may actively avoid creative behaviors to preserve their moods. Therefore, additional research is needed to explain why employees in positive moods may choose to engage in or avoid creative behaviors at work.

Second, [Hirt and his associates' \(2008\)](#) research focused primarily on why individuals in positive moods choose to be creative. They also induced neutral and negative moods, but found no evidence that mood management motives might affect creativity in individuals experiencing neutral or negative moods. Hirt and colleagues used simple laboratory creative tasks such as generating a list of as many modes of transport as possible. Perhaps performing well on this task was not considered important enough to be likely to remedy a negative mood. In this respect, preliminary laboratory evidence suggests that individuals in negative moods expand their effort toward a creative task when performance on the task facilitates mood repair ([Abele, 1992](#); see also [Gendolla, 2000](#)). Perhaps, being successfully creative in the workplace might be seen as more likely to improve mood. For example, [Zhou and George \(2001\)](#) found that dissatisfied employees were likely to engage in creativity as a form of voice mechanism if they were employed in a supportive organization. This seems to suggest that employees may engage in creativity as a form of problem solving for mood-repair motives.

Third, as previously mentioned, goal orientation may lead people to interpret their current mood state differently and can engender different behavioral responses to creativity. Clearly, these three issues need to be further explored. In order to further explore these unresolved questions, therefore, we propose an alternative perspective: creativity-as-mood-regulation. In the following section, we theorize why experiencing moods

can lead to creativity at work. We then formulate specific testable propositions to predict how goal-orientation dispositions influence whether employees choose to engage in creativity as mood regulation.

THE CREATIVITY-AS-MOOD-REGULATION PERSPECTIVE

The main variables of the new model relate to creativity episodes, mood regulation, and goal orientation. In the following sections, we define each of these terms, and discuss the relationships between them.

Creativity Episodes

Creativity is generally defined as the generation or production of ideas or solutions that are both novel and useful (Amabile, 1996, 1998; George, 2007). It is reasonable to suggest that work-related creativity is seldom achieved by single performance events. Instead, seeking creativity usually entails a series of performance episodes at work. For example, an employee may come up with novel ideas in an initial performance episode, and then assesses the usefulness of the ideas. Some of the ideas may be kept while some of them may be proven to be useless. Next, the employee continues to fine-tune the ideas or to search for new perspectives in subsequent performance episodes. These ongoing creative attempts (e.g., fine-tuning or searching for new ideas) and creative outcomes (inspirations or discoveries of new insights) are conceived as creative episodes provided they are organized around an overall theme: to come up with new and potentially useful ideas or solutions to a problem. An employee's creative performance is thus the accumulative outcome over his or her creativity episodes. For example, Amabile et al. (2005) found that employees' daily creative thoughts and activities are significantly related to monthly peer-rated assessments of their creative performance. A higher level of engagement in creativity episodes therefore seems to facilitate an employee coming up with more creative ideas or solutions over time.

Attempting to be creative is by no means an assurance of success, however; seeking novel and useful solutions is risky and may fail. Even feasible creative ideas often attract ridicule and rejection from others.

Mood Regulation

A major theme emerging from the mood-regulation literature is that people who feel bad undertake strategies to remedy their negative moods (e.g., Larsen, 2000; Morris & Reilly, 1987; Parkinson & Totterdell, 1999). People also regulate positive moods (Morris & Reilly, 1987; Hirt & McCrea, 2000) in the sense of acting to preserve or enhance them (Clark & Isen, 1982; Hirt & McCrea, 2000; Hirt et al., 2008; Wegener & Petty, 1994). Laboratory research confirms that people in happy moods avoid engaging in activities that may reduce their good moods (Isen & Levin, 1972; Mischel, Ebbesen, & Zeiss, 1973). Wegener and Petty (1994) share this view in their hedonic contingency perspective. These authors contend that people in positive moods are more cautious about the affective consequences of an action than people in other affective states. That is, motivated to sustain their positive moods, happy people tend to choose behaviors carefully because there are potentially more mood-sabotaging activities. In sum, the notion of mood regulation is rooted in the hedonistic principle that people are motivated to sustain positive feelings and to avoid negative feelings (Larsen, 2000).

Goal Orientation

Dweck and her colleagues define two major classes of goal orientation in achievement situations (see Dweck & Leggett, 1988; Elliot & Dweck, 1988). *Learning goal orientation* involves working to develop competence through expanding an individual's abilities by mastering challenging situations, whereas *performance goal orientation* is working to validate competence by seeking favorable judgments or avoiding negative judgments from others.

Importantly, learning goal orientation and performance goal orientation are associated with different attributions about the causes of competence (Dweck & Leggett, 1988; Elliot & Dweck, 1988; VandeWalle, Cron, & Slocum, 2001). Learning goal orientation is associated with an incremental theory of competence, where ability is a malleable attribute that can be developed. Since ability is perceived as malleable, individuals with a learning orientation believe that effort is a means to enhance task performance and is a determinant of success. They tend to persist in the face of setbacks, view negative feedback as useful for eventual success, and choose to work on challenge tasks. A learning goal orientation therefore often facilitates performance.

A performance goal orientation, on the other hand, is associated with an entity theory of competence, where ability is a fixed, innate attribute that is difficult to develop (Dweck & Leggett, 1988). Individuals with a performance orientation choose tasks on which they are more certain of success so that they can demonstrate their competence and avoid being seen as incompetent.

To clarify the predictive effects of performance goal orientation, Elliot and his associates (e.g., Elliot & McGregor, 2001; Elliot & Church, 1997) further divide performance goal orientation into a *prove orientation* and an *avoid orientation* (cf. VandeWalle, 1997). According to VandeWalle (1997, p. 1000), a prove orientation is “a focus on demonstrating one’s competence and the gaining of favorable judgment from others;” and an avoid orientation is “a focus on avoiding negation of one’s competence and the avoiding of negative judgment from others.” Research evidence suggests that, like a learning goal orientation, a performance-prove orientation can lead to superior performance (e.g., Barron & Harackiewicz, 2000; Elliot & Church, 1997). In fact, individuals with a strong performance-avoid orientation may be more likely to withdraw after encountering setbacks and negative feedback (Barron & Harackiewicz, 2000; Elliot, 1999).

A MODEL OF CREATIVITY-AS-MOOD-REGULATION AND DEVELOPMENT OF PROPOSITIONS

The creativity-as-mood-regulation perspective builds on the hedonic contingency view that people are concerned about the affective consequence of the behaviors they intend to perform. In putting forward the creativity-as-mood-regulation perspective, we propose that employees engage in creative episodes when they expect that doing so will remedy negative moods or sustain positive moods. Put differently, without the expectancy that subsequent mood states will be modified toward a desired state following creative activities, an employee experiencing positive or negative moods will be less likely to choose to engage in creativity episodes. Therefore, the employee is ultimately less likely to come up with novel and useful ideas or solutions over time.

When the expectation is present that attempting to be creative will be successful and will elevate or maintain mood, we predict that both positive and negative moods will increase the occurrence of creativity episodes. This model is illustrated in Fig. 1. In the following sections, we discuss

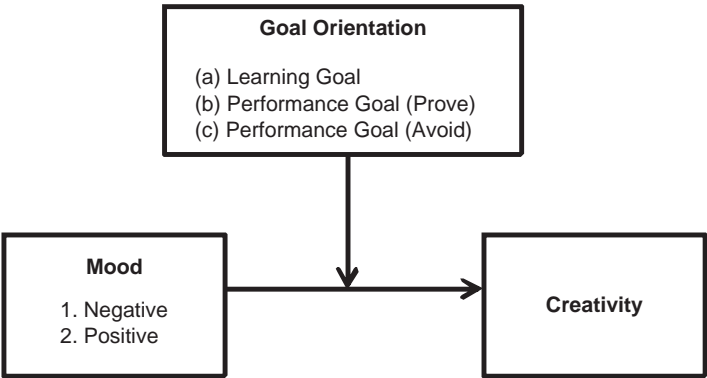


Fig. 1. Proposed Model.

why negative and positive moods can lead to engagement in creativity episodes, and propose how goal orientation can moderate the relationship.

Negative Mood

We draw on the mood-regulation literature to explain why negative mood might lead to engagement in creativity in the workplace. According to the mood-regulation literature (see Catanzaro & Mearns, 1990; Erber & Tesser, 1992; Larsen, 2000; Morris & Reilly, 1987; Parkinson & Totterdell, 1999), typical strategies people use to remedy negative moods entail problem coping (e.g., engaging in increased effort to deal with the situation that elicits negative feelings) and attentional engagement (e.g., directing attention to something engrossing). We propose that merely attempting creativity episodes at work can invoke these two mood-regulatory elements. Successfully engaging in creativity episodes can further engender positive mood as explained in self-regulatory theories (Carver & Scheier, 1990). In the following text, we outline three basic reasons regarding this.

First, there is evidence that a negative affective experience can trigger creative behavior (e.g., George & Zhou, 2002; Zhou & George, 2001). As previously mentioned, George and Zhou (2002) suggest that negative mood signaling an insufficient status quo motivates an employee (who is clear about her or his feelings) to strive harder for creative ideas or solutions to make change when creativity is the employee’s overall job objective. Zhou and George (2001) also found that dissatisfied employees were likely to engage in creativity as a form of voice mechanism if they were embedded

in a supportive organizational context. In these studies, the behavior of an upset employee striving harder for creative solutions is primarily problem coping. According to mood-regulation research (Morris & Reilly, 1987; Larsen, 2000), problem coping is a mood-regulation strategy that people seek to modify their circumstance so as to alter its affective impact. In other words, individuals in real life experiencing a negative mood may actually engage in creativity as a form of problem coping in the hope of remedying both the mood and the surrounding environment that caused the initial negative mood.

Second, we propose that cognitive engagement in creative activities can also remedy negative moods. De Dreu, Baas, and Nijstad (2008) recently found that negative moods can foster creativity through enhancing an individual's cognitive persistence and perseverance, which manifests a higher number of ideas and insights within a relatively low number of cognitive categories, prolonged effort, and relatively long time on task. For example, an upset individual may deploy longer, deeper, and more specific cognitive effort in the service of creative activities. Consequently, the individual may come up with more creative problem-solving insights, which subsequently improve mood.

Third, negative affect can lead to rumination. Rumination refers to the repetitive self-focused attention related to negative affect (Nolen-Hoeksema & Morrow, 1991). Research evidence shows that people who ruminate experience higher levels of negative emotion (Segerstrom, Tsao, Alden, & Craske, 2000), less control over intrusive thoughts (Watkins, 2004), and an increase in the occurrence of depressive episodes (Nolen-Hoeksema, 2000). To end ruminative thoughts, therefore, people need a cognitive occupation to divert attention. We propose that creative tasks can be such occupying activities. Research, theorizing, and evidence indicate that a task, which requires greater amounts of cognitive resources, can 'absorb' moods by preventing further preoccupation with mood-related thoughts (Erber & Tesser, 1992; Morrow & Nolen-Hoeksema, 1990). Creative activities such as searching, fine-tuning, and reframing relatively novel and complex ideas often require of the bulk of an individual's attentional resources. When an employee's focal attention is continuously directed to creativity episodes, this may prevent an employee from becoming engrossed by ruminative thoughts. As such, cognitive engagement in creativity episodes may ease repetitive negative mood-related thoughts and thus improve negative moods or prevent them from getting worse.

Taken together, we propose that negative mood can lead to engagement in creativity episodes, provided an employee seeks to bury attention in

creative tasks as a form of problem coping. In other words, experiencing negative moods can lead to a higher level of engagement in creativity as a strategy of mood regulation. When the upset individual engages more deeply in creativity, s/he is more likely to come up with more truly novel and useful insights over the task episodes. Importantly, the foregoing argument does not suggest that negative mood will always lead to engagement in creativity. Rather, the effect takes place only when the employee expects that engaging in creativity episodes will regulate her or his negative mood. This suggests that contingent variables can moderate the mood–creativity relationship.

The Moderating Effects of Goal Orientation on the Negative Mood–Creativity Relationship

Engaging in creativity episodes is unlikely to be an effective strategy to remedy negative mood for every individual, however. This is because seeking creativity at work may sometimes expose an employee to unproven or risky task episodes, which may be mood aversive to some individuals. Thus, employees in negative moods may choose to engage in other coping strategies rather than in creativity to remedy moods. In this case, negative mood would not lead to any increase in engagement in creativity. Perhaps some employees experiencing negative moods might even shy away from creative activities to prevent their moods from getting worse. For these individuals, negative mood would decrease engagement in creativity.

As foreshadowed, we propose in this chapter that whether negative mood is to increase or to decrease engagement in creativity is subject to individual differences. Recent organizational research such as that of [Hirst et al. \(2009\)](#) and [Janssen and Van Yperen \(2004\)](#) suggests that dispositional differences in goal orientation (i.e., learning goal orientation versus performance goal orientation) can lead employees to seek out or to avoid opportunities for learning and creativity/innovation at work. Drawing on these studies, we propose that goal orientation moderates the relationship between negative mood and engagement in creativity episodes. Specifically, we propose that employees with different goal orientations may (1) interpret the information signaled by their current mood differently, and (2) expect different affective consequences following efforts to be creative. These, in turn, determine whether an employee in a negative mood will choose to seek out or to avoid engagement in creativity episodes.

Learning Goal Orientation

We propose that a negative mood among individuals high on learning goal orientation will lead to a higher level of engagement in creativity episodes. The primary concern of a learning-oriented individual is to develop competence through expanding abilities by mastering challenging situations (Dweck & Leggett, 1988). Generally speaking, negative mood signals inadequacy of task efforts or a lack of progress toward a goal (e.g., George & Zhou, 2002). To a learning-oriented individual this may mean that additional skill development is needed (see Cron, Slocum, VandeWalle, & Fu, 2005; VandeWalle et al., 2001). In other words, negative mood within a learning orientation should be more likely to cue a sense of challenge, calling for learning and mastery behaviors to develop new competence or skills.

To cope with these mood cues, a learning-oriented employee may be more likely to engage in creativity episodes as a form of problem coping. Creativity concerns the development and generation of something new for which the requisite strategies often have yet to be learned (Hirst et al., 2009; Janssen & Van Yperen, 2004). A learning-oriented employee may therefore be more likely to perceive attempts or even failures at creativity episodes as learning events that are beneficial to competence growth and the development of domain-related skills. Thus, instead of viewing the creativity-related setbacks as permanent signs of low ability, the individual may instead view these as useful diagnostic cues about her or his progress, or as a source of problem-solving insights to make improvements. As such, exerting effort to seek new and useful solutions can become a satisfying mastery experience. Therefore, an employee driven by a strong learning goal orientation is more likely to perceive engaging in creativity episodes as an effective form of problem-coping behavior so as to remedy negative moods.

Furthermore, with a strong learning goal orientation, an employee may be more likely to perceive that deployment of attention to creative activities can be mood regulating. Learning orientation focuses attention on the elaboration and development of deep-processing strategies leading to effectiveness in handling complex and unfamiliar tasks (Fisher & Ford, 1998; Steele-Johnson, Beauregard, Hoover, & Schmidt, 2000). Thus, the employee should be more effective in absorbing attention in creative tasks that often entail more complex cognitive loads. Instead of being annoyed or irritated, the employee may actually feel better by burying attention in creativity episodes. This is because a higher cognitive engagement in these attention-absorptive activities can ease ruminative thoughts and thus improve negative moods.

Considering these arguments, we propose that a learning-oriented employee is more likely to expect that engaging in creativity episodes can remedy negative moods. While experiencing negative moods, the employee is therefore more likely to seek to engage in creativity as a form of problem coping. When the employee experiencing negative moods engages deeper, longer cognitive effort in creativity episodes, s/he may come up with more truly novel and useful solutions and so enhance her or his mood. Thus:

Proposition 1a. The relation between negative mood and engagement in creativity episodes will be moderated by goal orientation, such that negative mood becomes *positively* related to creativity episodes for individuals high on learning goal orientation.

Performance-Prove Goal Orientation

We next propose that negative mood within a strong performance goal orientation will not facilitate or may even decrease engagement in creativity episodes. An employee with a performance orientation seeks to validate their competence by others' judgments about her or his task performance. As such, experiencing task setbacks or negative feedback tends to warn of a low ability perceived by others and poses a threat to the individual's self-esteem, engendering negative mood states (Cron et al., 2005; Dweck & Leggett, 1988). In other words, negative moods within a performance goal may be more likely to signal a sense of threat, cueing an insufficient performance/ability situation as judged by others.

To cope with these mood cues, a performance-prove-oriented employee would tend to approach the task to demonstrate superior or outstanding performance. The employee may be less likely than a performance-avoid-orientation person to be engrossed by off-task ruminative thoughts surrounding the emotional experiences. Nevertheless, while the employee may direct more attentional resources to on-task problem coping, a prove orientation may lead him or her to focus attention on tasks on which successful demonstration of competence is certain; for instance, by repeatedly practicing familiar task components until they become automatic or efficient (Elliot & McGregor, 2001; Fisher & Ford, 1998; Steele-Johnson et al., 2000). Such a rehearsal of relatively proven or familiar task strategies can lead to efficiency in performing task components. Therefore, engaging in task rehearsal should be a more effective problem-coping strategy for a prove-oriented individual to repair negative moods by demonstrating competence.

Consequently, an individual high on performance-prove orientation is less likely to engage in creativity as problem coping. Moreover, seeking novel but often-unproven ideas or solutions can often expose an employee to mixed feedback and failures. With a focal concern of ability demonstration (Dweck & Leggett, 1988), a prove-oriented employee while experiencing negative mood (signaling threats) is more likely to perceive these creativity-related setbacks as a warning of a low ability perceived by others. As such, it is less likely that the employee will perceive engagement in creativity episodes as a mood-remedying strategy. Without the expectancy that he or she will feel better following creative activities, the prove-oriented employee experiencing negative moods should therefore be less likely to choose to engage in creativity episodes.

It is not argued that an employee with a performance-prove orientation would never engage in creative attempts when experiencing negative moods, however. Nonetheless, in a prove orientation, engagement in creativity would not normally be expected to offer sustainable affective rewards. Unless creativity is extrinsically required or promoted, a prove-oriented employee in a negative mood is likely to choose the safer route of rehearsal of known competencies rather than the risky route of attempted creativity. Thus:

Proposition 1b. The relation between negative mood and engagement in creativity episodes will be moderated by goal orientation, such that negative mood becomes *negatively* related to creativity episodes for performance-prove goal-orientation individuals.

Performance-Avoid Goal Orientation

Finally in respect of negative mood, we propose that, for individuals high on performance-avoid goal orientation, the above reasoning will strengthen further. Avoid-oriented individuals primarily focus attention on avoiding unfavorable evaluations from others. Pekrun, Elliot, and Maier (2006) contend that a performance-avoid goal, which is assumed to focus attention on the possibility of failure, lack of controllability, and the negative value of failure, leads to negative affect becoming linked to negative achievement outcomes. These individuals are more likely to intensify negative affect following negative feedback (Cron et al., 2005). They may suffer more from ruminative thoughts surrounding negative affective experiences, which may interfere with their on-task attentional resources. Negative moods can lead them toward pessimistic and gloomy evaluations about how unlikely it is that they can achieve success in future task episodes. They thus tend to have a higher tendency to pursue a maladaptive response pattern of effort

disengagement (VandeWalle et al., 2001). That is, within an avoid orientation, engaging in creativity to seek relatively unproven, unfamiliar task strategies may be expected to be even more mood threatening than it would be under a performance-prove orientation. So it is unlikely that an avoid-oriented employee will seek to engage in creativity to cope with task setbacks so as to alleviate negative moods. Instead, such an employee experiencing negative moods is more likely to avoid engaging in creative activities altogether to prevent their moods from getting worse. Therefore, within an avoid-orientation, experiencing negative moods should tend to decrease engagement in creativity episodes because the employee is motivated to avoid potential risks and failures that may make him or her look even more incompetent. Thus:

Proposition 1c. The relation between negative mood and engagement in creativity episodes will be moderated by goal orientation, such that negative mood becomes *strongly negatively* related to creativity episodes for individuals who have a performance-avoid goal orientation.

Positive Mood

Researchers such as Amabile et al. (2005), Fredrickson (1998, 2001), and Isen (1999a, 1999b) contend that positive moods can foster creativity by promoting flexible, divergent thinking that can facilitate the generation of new and useful ideas. The researchers suggest that positive moods can lead people to access more extensive and complex materials in memory, and thus foster their cognitive flexibility. This, in turn, will increase the kind of creativity that requires unusual associations between ideas. This line of reasoning suggests a positive relationship between positive mood and creativity, and such an effect is often but not universally found. Yet, this main effect is not hypothesized here for the reasons discussed next.

As mentioned previously, Hirt and associates's (2008) recent research suggests that positive mood may not have a direct effect on creativity as previously believed. According to Hirt and his colleagues, the cognitive changes that accompany positive moods do not lead to better creative performances by themselves. Instead, the positive mood-creativity relationship exists only when an individual in a positive mood is motivated to engage her or his cognitive resources (enhanced by positive moods) in creative performance. More specifically, this engagement in creativity takes place only when a happy individual expects that being creative will sustain

her or his positive mood. Without that expectation, the individual will not be motivated to engage in creative behavior (see the review in section three). Drawing on the Hirt and colleagues' work, we do not presume that positive mood will automatically have main effects on engagement in creativity. Instead, the relationship will also be subject to individual differences, which condition the likelihood of creative effort being seen as an effective mood-regulation strategy.

The Moderating Effects of Goal Orientation on the Positive Mood–Creativity Relationship

Drawing on the recent research on goal orientation and creativity (e.g., Hirst et al., 2009; Janssen & Van Yperen, 2004), we propose that whether positive mood fosters or inhibits creativity is, like negative mood, also contingent upon an individual's goal orientation. Again we propose that employees with different goal orientations may (1) interpret the information signaled by their current mood differently, and (2) expect different affective consequences following creativity episodes. These different affective signals and expected affective consequences may, in turn, determine whether an employee chooses to seek out or avoid engaging in creativity episodes.

Learning Goal Orientation

We propose that positive moods in individuals with a learning goal orientation will increase engagement in creativity episodes. Generally speaking, positive mood informs people that they have achieved their task goals or are making good progress toward their task goals (Carver & Scheier, 1990; George & Zhou, 2002). A learning-goal-oriented individual seeks to expand competence through mastering challenging tasks. A learning goal generally reflects a desire to engage in challenging activities, an eagerness to improve, the belief that improvement is possible, and a tendency to evaluate performance relative to past episodes (Button, Mathieu, & Zajac, 1996). A learning orientation also focuses attention on ongoing mastery of activity, controllability of available competencies, and the positive value of the activity itself (Pekrun et al., 2006). Thus, as a signal of goal attainment, positive mood within a learning goal orientation may be more likely to signal a sense of personal growth, cueing favorable progress in task mastery.

We posit that, in order to prolong these mastery-related positive moods, a learning-orientated employee is more likely to engage in creativity episodes. For example, seeking novel ideas and then mastering relevant domain-related skills to bring these ideas into reality can be more satisfying for a learning-oriented employee. This is because the individual enjoys and

anticipates experiencing competence development by undertaking creative tasks that entail relatively complex or difficult activities. Nonetheless, although creative attempts unavoidably entail unsuccessful trials and require persistent effort, with a focal concern of learning and mastery, these setbacks may be perceived as temporary cues for increased effort for long-term improvement.

In this regard, an employee with a learning goal orientation is more likely to expect that engaging in creativity episodes can prolong the experience of positive affect. Thus, the employee experiencing positive moods may be more likely to engage in creative efforts as a mood-sustaining strategy. When the employee devotes the additional cognitive resources created by positive moods to creativity episodes, s/he is therefore likely to come up with more novel and useful ideas and solutions. Thus:

Proposition 2a. The relation between positive mood and engagement in creativity episodes will be moderated by goal orientation, such that positive mood becomes *positively* related to creativity episodes for individuals high on learning-goal orientation.

Performance-Prove Goal Orientation

Performance-prove orientation focuses on the situational cues relevant to an individual's decision whether to engage in creative activities (Hirst et al., 2009). As we mentioned previously, a performance-prove goal orientation focuses attention on the possibility of attaining positive achievement outcomes, the controllability of these outcomes, and the positive value of these outcomes (Pekrun et al., 2006). Therefore, to a prove-oriented person, the choice of whether to engage in creativity episodes will depend on an expectancy as to how likely it is that creative processes will lead to successful outcomes and rewards, how attractive these possible outcomes will be, and how likely potential failures will punish reputation (by making the individual look incompetent).

In this respect, a considerable body of research theorizing and evidence has indicated that pleasant feelings can lead to a higher expectancy of possible outcomes, and increase the perceived attractiveness of outcomes (see Forgas, 1995 for a review). Also, positive moods inform people that their environment is safe for novelty (George & Zhou, 2007; Schwarz & Clore, 2003). Taken together, positive mood makes people expect that possible creative outcomes are more certain, and that the environment is safe for creativity. Thus, positive moods within a strong performance-prove

orientation are more likely to signal a sense of superiority, cueing a favorable situation for attaining achievement.

Success in attaining creative outcomes can therefore reward individuals with greater future performance, who can then continue to demonstrate their achievement and thus sustain positive mood. In an expectation that being creative can bring rewarding consequences, a strong performance-prove orientation should lead employees to engage in creativity episodes. In line with this reasoning, preliminary experimental evidence has also suggested that happy individuals use a more creative or playful manner to transform a mood-threatening task into a positive one (e.g., in the service of maintaining their positive moods, see [Hirt & McCrea, 2000](#)). This type of mood-regulation effort may be viewed as indicative of a promotion focus, characterized by creativity and flexibility. Taken together, an employee with a strong performance-prove goal orientation should therefore be more likely to anticipate that engaging in creativity episodes will sustain her or his positive affect. Thus, when the happy employee chooses to engage more cognitive resources (broadened by positive moods) in the task, s/he is more likely to come up with more novel and useful ideas, or:

Proposition 2b. The relation between positive mood and engagement in creativity episodes will be moderated by goal orientation, such that positive mood becomes *positively* related to creativity episodes for individuals with a high performance-prove goal orientation.

Performance-Avoid Goal Orientation

In contrast to the learning or performance-prove orientation situations, positive mood within a performance-avoid orientation tends to decrease engagement in creativity episodes. Here, positive mood signaling an unproblematic state of environment ([Schwarz & Clore, 1983, 2003](#)) may signal a comfort zone, where an avoid-oriented individual becomes reluctant to leave the safety of the status quo. In this respect, a line of experimental research has indicated that individuals in a positive mood may avoid engaging in task activities or materials that threaten to reduce this mood state (e.g., [Isen & Levin, 1972](#); [Mischel et al., 1973](#); [Wegener & Petty, 1994](#)). We posit that these mood-preservation behaviors are more likely to occur in a performance-avoid orientation. By comparison with a prove-orientation individual, an avoid-orientation individual can be expected to have stronger entity beliefs (ability is difficult to develop) and pessimism. In addition, performance-avoid orientation is negatively related to self-efficacy and subsequent goal setting ([VandeWalle et al., 2001](#)). Similarly, and as we

already noted, Pekrun and his colleagues (2006) contend that performance-avoid goal individuals tend to pay more attention to the possibility of failure. Such an avoidance or prevention focus (see also Brockner & Higgins, 2001; Higgins, 1998) may lead the employee to feel unwilling to risk creative efforts. In this sense, the more effective strategy to sustain positive mood is to keep the status quo. In this regard, within a performance-avoid orientation, engagement in creativity episodes should turn out to be mood aversive rather than mood sustaining.

In other words, within a performance-avoid orientation, engaging in creativity is less likely to be perceived as an effective strategy to prolong positive mood. Perhaps, the happier the employee feels, the more s/he will be satisfied with the current comfort zone. The employee may be more likely to avoid engaging in creativity, which is expected to reduce rather than to sustain positive moods. Thus, positive mood discourages engagement in creativity, so that:

Proposition 2c. The relation between positive mood and engagement in creativity episodes will be moderated by goal orientation, such that positive mood becomes *negatively* related to creativity episodes for individuals with a performance-avoid goal orientation.

DISCUSSION AND IMPLICATIONS FOR FUTURE RESEARCH

In putting forward the creativity-as-mood-regulation perspective, we propose that employees with different goal orientations may engage in or shy away from creativity episodes as a form of mood regulation. We provide an additional viewpoint to reconcile the conflicting findings as to whether positive or negative mood fosters or inhibits creativity (e.g., George & Zhou, 2002; Isen, 1999a, 1999b; Kaufmann, 2003; Martin & Stoner, 1996). In particular, we explain the seeming controversy by identifying the specific goal-orientation conditions under which positive and negative mood may facilitate or inhibit creativity. The mechanisms suggested may help to untangle the puzzles surrounding the mood-creativity relationship, opening a number of potential avenues for future research.

Higher-Level Interactions Involving Context

Creativity has been recognized as a function of the interaction among personal and contextual characteristics (Amabile, 1996; Woodman,

Sawyer, & Griffin, 1993). In the present chapter, we have made specific propositions regarding how transient moods interact with goal-orientation traits (personal characteristics) to influence creativity. These provide a framework for future research to consider how situational characteristics at work might play further roles in moderating the relationship. For example, some contextual characteristics such as time pressure and person-task mismatch could also decrease learning-oriented employees' creativity. The reason is that such contexts might reduce these employees' expectancy of creativity-as-mood-regulation. This is because the learning or mastery efforts associated with creativity could be perceived as less satisfying and less certain of success, and thus less mood regulating. In work contexts, where creative achievements are recognized, employees with a stronger performance-prove goal might engage more in creativity in a hope of prolonging their pride. To avoid-oriented employees, a context with higher psychological safety (e.g., coworkers are supportive) could increase their engagement in creativity because the perceived risk associated with creative attempts might be seen to be less mood aversive. This idea is in line with goal-orientation research by Button et al. (1996) and Dweck and Leggett (1988), suggesting that situational factors can alter how controlling an individual's dispositional goal orientations are. Clearly, there is a need for more empirical evidence to examine how the three-way interaction of affect, goal orientation, and context might foster or prevent creativity at work.

Experience Sampling Research

Consistent with Fisher (2008), we also call for time-sampling research designs to investigate the momentary relationship between mood states and creativity episodes. Much of the existing affect-performance research has been based on a between-individual research design and has tended to presume stability within an individual, regardless of the potential for systemic within-person variances. Recent research has indicated that within-person variability in both performance and affect is substantial and meaningful (e.g., Beal, Weiss, Barros, & MacDermid, 2005; Fisher & Noble, 2004). Thus, to investigate how naturally occurring affective experiences in the flow of employees' work lives influence their creativity (see Amabile et al., 2005 for details), the existing cross-sectional or between-person research may not be valid.

To track the momentary changes of mood states and engagement in creativity episodes at work, the Experience Sampling Methodology (ESM) developed by Csikszentmihalyi and Larson (1987) looks like the most

appropriate research approach. In this method, researchers use within-subject time-series analyses using lagged autoregressive components to analyze the influence of a mood state at time (T) on a creativity episode at time ($T+1$), and to examine how a subsequent mood state at time ($T+2$) following the creativity episode at time ($T+1$) may be regulated. In addition, a multilevel analysis with fixed and random effect models using hierarchical linear models (e.g., Amabile et al., 2005; Larsen, 2000) can be used to examine how the mood–creativity relationship (at a within-person level) is moderated by between-person variables such as goal orientation.

A further issue is that field studies of mood using cross-sectional designs often ask participants to recall their moods and to report an average mood score over a period. The resulting potential memory problems are particularly detrimental to research on mood. The longer the time lag between affective experiences and affective recalls is, the more likely respondents report their moods based on their belief about their mood instead of the real experiences of their mood (Robinson & Clore, 2002). In ESM, respondents are asked to report their momentary moods in real time throughout the survey period, which should reduce the memory problems and thus tap more episodic mood experiences (Robinson & Clore, 2002).

CONCLUSIONS

Following decades of research inquiry, it has become clear that mood is often associated with creativity. Nonetheless, controversy remains as to why moods may lead to creativity, and there are conflicting perspectives as to whether positive and negative moods foster or inhibit creativity. In this chapter, we have argued that the relationship between positive and negative mood states and creativity is more complex than previously envisaged. We propose, in particular, that goal orientation, an individual difference variable, is a critical determinant of the direction and strength of the mood–creativity link in work settings.

In particular, following a review of the mood–creativity literature, we propose the *creativity-as-mood-regulation* perspective, where creativity is seen to be a means employees use to regulate their mood states. We developed six propositions, where the direction and strength of the mood–creativity link depends on the employees' goal orientation. In Table 1, we provide a summary representation of our propositions. In brief, we propose that negative mood will be positively related to increased creativity for learning-goal employees and negatively related to creativity for

Table 1. The Effect of Performance-Goal Orientation on the Mood–Creativity Relationship.

Mood	Learning-Goal Orientation	Performance-Goal Orientation	
		Performance prove	Performance avoid
Negative (P1a-c)	↑	↓	↓↓
Positive (P2a-c)	↑	↑	↓

Note: ↑ = Stronger relationship; ↓ = Weaker relationship; ↓↓ = Weakest relationship.

performance-goal-orientation individuals, especially when they have a performance-avoid goal orientation. In the case of positive mood, we propose the mood–creativity link will be positive for those with a learning or performance-prove goal orientation, but negative for employees who have a performance-avoid orientation.

Finally, we call for research into creativity that takes account of the dynamic nature of the phenomenon, where creativity is likely to vary momentarily through the working day. In this regard, we advocate a multi-level experience-sampling methodology, where performance orientation is a between-person variable, and creativity episodes are measures as momentary within-person occurrences.

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CHAPTER 12

AFFECTIVE CLIMATE, ORGANIZATIONAL CREATIVITY, AND KNOWLEDGE CREATION: CASE STUDY OF AN AUTOMOTIVE COMPANY

Fabrizio Maimone and Marta Sinclair

ABSTRACT

This exploratory study investigates the relationship between affective climate and creativity as contributing factors to knowledge creation in organizations. Organizational creativity represents a source of new task-related ideas, implemented in the form of innovation. We argue that creativity is inherently linked to the process of knowledge creation embedded in the organizational context and related to social interaction. Our study identified several affective conditions that appear to be present when the professional environment supports creativity. These findings suggest that affective climate does influence the organizational setting, fostering or inhibiting organizational creativity.

INTRODUCTION

This exploratory study investigates the relationship between affective climate and creativity in the Italian branch of the financial services division of a German automotive company. Organizational creativity represents a source of new task-related ideas, which can be implemented in the form of innovation (Amabile, 1997). In this respect, creativity is inherently linked to the process of knowledge creation (Fischer, 2000; Weick & Roberts, 1993; Wierzbicki & Nakamori, 2005). Such process, however, does not happen in a vacuum. According to Nonaka and Takeuchi (1995), it is embedded in the organizational context and related to social interaction which occurs in the “space” of knowledge called *ba* (Nonaka, von Krogh, & Voelpel, 2006). This Japanese concept is one of the key concepts of the discourse on knowledge creation. *Ba* can be a physical, virtual, mental, or affective (emotional) space, characterized by the emergence of embedded and situated bodies of knowledge (Nonaka et al., 2006). We found that affective climate is a critical factor that influences the preconditions for organizational creativity and, consequently, knowledge creation (Weick & Roberts, 1993). In accordance with previous research, we view organizational space (Latane & Liu, 1996) not as an empty space, but a psychological-social domain (Maimone, 2007) in which affective climate may foster or inhibit creativity, thus impacting degree and quality of the created knowledge. The goal of this research is to identify which affect-related conditions permeate this space when creativity is valued *and* encouraged in an organization.

THEORETICAL FRAMEWORK

Knowledge is the key factor of post-industrial economy (Bell, 1973; Machlup, 1980). Kogut and Zander (1996) proposed “that a firm can be understood as a social community specializing in the speed and efficiency in the creation and transfer of knowledge” (p. 503). Therefore, knowledge-based organizations need to foster their ability to produce new ideas and knowledge in order to win the competition in the so-called knowledge economy. Creativity is one of the critical factors in the knowledge creation process (Fischer, 2000; Weick & Roberts, 1993; Wierzbicki & Nakamori, 2005). It was found to be influenced by a number of individual and organizational factors (Amabile, 1988; Andriopoulos, 2001; Fagan, 2004). We argue that affective climate (the affective dimension of organizational

climate) is an underestimated factor that has a profound effect on appreciation and cultivation of creativity at workplace.

Knowledge Creation

Knowledge creation is critical for the development of intellectual capital. But knowledge is much more than a fashionable word.

The idea of intellectual capital in organizational contexts is directly connected to the assumption that to prosper, companies will have to draw on all their resources including those of a more 'intellectual' kind such as language abilities, numerical and logical skills, knowledge of organizational culture as well as technical know-how. (Garrrick & Usher, 2000, p. 2)

The so-called era of access (Rifkin, 2000) and the progressive dematerialization of economy (Rullani, 2002), fostered by globalization and technology revolution, made intellectual capital the emerging critical factor of new economy. The technological, social, and economic change brought about the evolution "of most economically advanced countries into knowledge societies" (McPhee & Poole, 2001, p. 516).

The emergence of knowledge as a critical factor of production is also the consequence of some relevant changes in the organizational environment: the rise of post-industrial society (De Masi, 1985), the ascent of postfordism (Rullani & Romano, 1998), and the emergence of new organizational forms (Butera, 2000; Child & Bate, 1987; MCPhee & Poole, 2001). Moreover, the emerging organizational configurations, characterized by the massive use of outsourcing, offshoring, alliances, and interfirm networks, foster the focalization of core business into high-intensity intellectual capital activities (De Masi, 1985; Rifkin, 2000; Rullani & Romano, 1998). In the knowledge-based economy, knowledge is at the same time the main productive factor and the main product of industrial processes (Rullani, 2002).

Moreover, many scholars pointed out that knowledge is the real intangible asset of multinational corporations (Bierly & Chakrabarti, 1996). There is less consensus on how to categorize knowledge, however. According to Polanyi (1966), there are two types of knowledge: personal and explicit knowledge. Personal knowledge, or tacit knowledge, is embodied in human beings, strictly connected to mental schemas, experiences, and practices. Explicit knowledge is the codified knowledge, conceptualized and represented in texts such as documents, diagrams, workflows, or multimedia

objects (Polanyi, 1966). Tacit and explicit knowledge can be viewed as the yin and yang of organizational knowledge.

The well-known taxonomy proposed by Polanyi (1966) was reconceptualized and integrated by Blackler (1995) who distinguishes among four types of knowledge: (1) embedded knowledge that is the result of the reification of organizational wisdom in technologies, rules, and procedures; (2) embodied knowledge that “walks” with persons, their abilities, and key competences; (3) encultured knowledge, objectified in social processes that are the product *and* production of organizational culture; and (4) embrained knowledge that is the codified, or explicit, knowledge. In Polanyi’s and Blackler’s view, knowledge is an accumulated asset.

Many scholars argue that organizational knowledge is the result of learning processes, which are situated and embedded in organizational processes (Gherardi & Nicolini, 2004; Lave & Wenger, 1991; Nonaka et al., 2006). Moreover, they assume that “knowledge is embodied, particular, history-dependent and oriented towards problem definition at the outset” (Nonaka et al., 2006, p. 1210). According to Gherardi and Nicolini (2004), the process of organizational learning is embedded in social communities and exchanged through social relationships. Thus, organizational learning is fundamentally a social process entrenched in a social context. Therefore, knowledge can be seen as a process rather than a stock. The neologism “knowing” (Gherardi & Nicolini, 2004) was coined to underline the dynamic and processing nature of knowledge creation.

Similarly, Nonaka and Takeuchi (1995) view the cycle of knowledge as a process, which is embedded in the organizational context and related to social interaction that transpires within its boundaries. They call this delineated space *ba* (Nonaka et al., 2006), which could be translated into English as “space” of knowledge. *Ba* has become one of the key concepts of the discourse on knowledge management. It could be a physical, virtual, mental, or affective (emotional) space, characterized by the emerging of embedded and situated bodies of knowledge. Nonaka et al. (2006) made a distinction among different types of *ba*. Their taxonomy shed light on the role of organizational relationships and communication in the processes of organizational knowledge. According to the authors, there are four distinct categories (Nonaka et al., 2006): (1) The originating *ba* where “individuals meet face-to-face, share emotions and feelings, experiences and mental model.” (2) The interacting *ba* that supports externalization (the conversion from tacit to explicit knowledge) and enables individuals to work with peers. “Through dialogue, their mental model and skills are probed, analyzed and converted into common terms and concepts.” (3) The cyber *ba* that

facilitates the combining of knowledge (integration of different sources of explicit knowledge). (4) The exercising *ba* that facilitates the individual internalization of explicit knowledge (p. 1185).

Nonaka and his colleagues (2006) suggest that creation and sharing of knowledge occur inside each type of *ba* through interpersonal relationships. Building on their work, we argue that *ba* is not an empty space, but an organizational space, characterized by a specific set of values, culture, experiences, emotions, climate, practices, behaviors, and relationships (Maimone, 2007). One of the key assumptions of our research is that individual and social factors affecting knowledge spaces have a strong influence on the organizational processes of knowledge creation (Bock, Zmund, Kim, & Lee, 2005; Quigley, Tesluk, Locke, & Bartol, 2007; Wilkesmann & Wilkesmann, 2006). These two groups of factors are intrinsically linked since most individuals predisposed to generate and share knowledge may not engage in such activities unless favorable personal relationships and group dynamics are in place (Bartol & Sristava, 2002; Hansen, Mors, & Lovas, 2005). Quigley et al. (2007), for example, found that conditions for a successful knowledge transfer include heightened motivation, openness, and willingness to seek out and integrate new knowledge. According to Malizia (1998, 2003), learning and knowing are also embedded in a specific organizational culture, the so-called “cultural milieu.” In this view, organizational culture is not only unique, e.g., each organization coins its own culture, but also acts as interface between macro-social systems (the social world) and micro-social systems (micro-social interaction). We propose that the interaction of these factors takes on a specific configuration in a space that nurtures creativity, and that affective climate is an important dimension of this space.

Organizational Creativity

Most factors affecting knowledge creation processes are prerequisites for a working environment favorable to creativity as well. According to Amabile (1997), creativity is “the production of novel appropriate ideas in any realm of human activity” (p. 39). It is a prerequisite for innovation, represented by “the successful implementation of these novel appropriate ideas.” In organizational context, creativity has a profound effect on running a business, through an improved product, a new approach to a process or other innovative changes (Amabile, 1988). Creativity tends to be stimulated by challenging (or empowering) work, free-flowing interaction, freedom

to experiment (and to fail), organizational and supervisory encouragement, resource availability, and work group support (Amabile, Conti, Coon, Lazenby, & Herron, 1996; Andriopoulos, 2001; Fagan, 2004; Feurer, Chaharbaghi, & Wargin, 1996). Woodman, Sawyer, and Griffin (1993) argued that

Individual creativity is a function of antecedent conditions (e.g., past reinforcement history, biographical variables), cognitive style and ability (e.g., divergent thinking, ideational fluency), personality factors (e.g., self-esteem, locus of control), relevant knowledge, motivation, social influences (e.g., social facilitation, social rewards), and contextual influences (e.g., physical environment, task and time constraints). (p. 294)

These factors demonstrate the interwoven nature of individual and organizational influences. On individual level, creativity can be examined from four complementary perspectives, related to (1) the person, (2) the surrounding environment, (3) the actual creative process, and (4) the creative outcome (Fagan, 2004). All of these are embedded in, and therefore affected by, organizational space. The importance of organizational environment becomes even more profound on group and collective levels where individual creativity infuses the knowledge space as it is channeled into organizational outcomes. Amabile (1988), for example, proposed three organizational factors that are supposed to influence organizational creativity: organizational motivation to innovate, resources, and management practices; while Kanter (1988) highlighted the role of structural and cultural elements, teamwork, and diversity. Using different methodologies, both researchers concluded that different aspects of these factors may act independently as creativity stimulants or impediments. Other reports abound but it is challenging to reconcile them. Borghini (2005) cautions about analyzing creativity “simply as individual or group creativity that takes place at work” (p. 20) and points out that complex relationships among factors influencing organizational creative processes need to be approached differently based on the level of analysis. In this respect, Andriopoulos’ (2001) review of the determinants of organizational creativity offers help. In his categorization, there are five broad areas that appear to have a major effect on individual *and* organizational creativity: (1) organizational structure and systems; (2) resources and skills; (3) leadership style; (4) organizational culture; and (5) organizational climate. Each of these categories encompasses a number of lower-level aspects, all of which appear to elicit affective responses that permeate organizational space.

We argue that employees’ affective perceptions of work environment are an integral part of the context that influences organizational creativity.

De Rivera (1992) describes this phenomenon in terms of “how people of a society” (i.e., organization) “emotionally relate to one another” (p. 198). In other words, we assume that the psychological atmosphere can foster or inhibit creativity in the workplace. There is consensus that such atmosphere cannot be nurtured unless there is mutual trust, encouraged by effective leadership (Becerra & Gupta, 2003; Simons, 2002). As a result, the affective climate of an organization has a profound effect on appreciation and cultivation of creativity at workplace. Empirical research has found that social interaction is indeed positively related to cooperative climate (encouraging positive affect as a result of trust) *and* innovative climate (encouraging creativity) (Chen & Huang, 2007). Our investigation focuses on the nature of this relationship.

Affective Climate and Creativity

Organizational climate is another key factor affecting creativity at workplace. The concept of social climate or social atmosphere was coined by Lewin, Lippitt, and White (1939) to describe the attitudes, feelings, and social processes of groups of boys at an American summer camp (Ashkanasy, Wilderom, & Peterson, 2000). Organizational climate “constitutes the collective mood of organizational members toward their jobs, the organization, and management” (Ashkanasy, 2003, p. 38). It provides an insight into how employees view the organization (Davidson, 2003) and, as a result, whether they feel free or impeded to participate in the process of knowledge creation. Climate, however, is a multifaceted concept that is usually construed as an amalgam of specific task-related areas. In context of knowledge creation, a special attention deserve climate for service and climate for innovation, reinforced by a strategic focus on a congruent climate for human resources (HR) (Davidson, 2003; Schneider, Gunnarson, & Niles-Jolly, 1994). A favorable climate for service ensures that employees exhibit the right attitude, while a conducive climate for innovation gives them space to reengineer their work continuously (Davidson, 2003). The prerequisite for both is to recruit and cultivate the right kind of staff, hence the importance of HR (Sinclair & Sinclair, 2009). Moreover, we argue that the affective dimension of all these climates represents a climate in its own right that has a profound effect on all task-based relationships.

Overall, empirical research suggests that employee perceptions of work environment are influenced by its affective (emotional) climate, which, in turn, tends to affect work satisfaction (Schnake, 1983). Affective climate is

defined by De Rivera (1992) as “an objective group phenomenon that can be palpably sensed – as when one enters a party or a city and feels an attitude of gaiety or depression, openness or fear” (p. 197). We argue that a climate of fear will foster mistrust that, in turn, might hamper employee motivation, and thus negatively impact knowledge creation. Negative mood and emotions are also known to impede access to intuition (Sinclair & Ashkanasy, 2005), which might slow down the processing of large amounts of data critical for complex knowledge sharing. Conversely, a positive affective climate has been found to encourage creative problem solving in team processes that rely on mutual trust and knowledge sharing (Hamilton, Sinclair, & Woods, 2006). Maintenance of a positively charged affective climate therefore requires a leader who is emotionally attuned to minute changes and can adjust his/her style accordingly (Goleman, 2002). Vera and Crossan (2005) identified the interaction of cognitive factors (sharing a mental model as a means to enhance coordination) and affective factors (trust, respect and mutual support as a means to increase risk tolerance) as a prerequisite for creative improvisation leading to successful innovation.

Affective climate is the aspect of organizational climate where shared emotions or feelings are used as a point of reference for social interaction (Brown & Brooks, 2002; Rime, 2007). It has a profound influence on organizational dynamics, including idea generation and creativity (Tran, 1998). Although views on what constitutes affective climate vary, the most frequently cited dimensions include: (1) structure (feelings about constraints and procedure); (2) responsibility (feeling of empowerment); (3) warmth (friendly atmosphere); (4) identity (feeling that different opinions are heard); (5) rewards (feeling appreciated and valued), and (6) vulnerability and fear (feeling confident and secure) (Brown & Brooks, 2002). Creativity research suggests that positive feelings about these factors put team members into a positive mood that enhances creative performance (Amabile, Barsade, Mueller, & Staw, 2005; Madjar, Oldham, & Pratt, 2002). We argue that shared individual feelings of team members also work on the collective level by increasing positivity/negativity of the affective climate, which, in turn, impacts the quality of task-specific climates.

In terms of service climate, it has to be assessed twofold: internally (among employees) and externally (between the organization and its clients). Internally, there is a need for interdepartmental cooperation and teamwork, which requires a cross-functional service orientation and willingness to cooperate. A prerequisite for such positive attitude is mutual trust, respect, and free-flowing communication (Atkins & Gilbert, 2003). We propose that presence or absence of any of these factors will influence

the nature of affective climate in the organizational space, which will, in turn, affect the degree of knowledge creation. Research indicates that trust, for example, has a positive effect on knowledge sharing and utilization, especially among interdependent team members (Dirks & Ferrin, 2001; Moreland & Myaskovsky, 2000; Rau, 2005; Szulanski, Cappetta, & Jensen, 2004).

The link between a positive climate for innovation and knowledge creation is quite pronounced. Innovation (as a result of successfully implemented creative ideas) is driven by a continuous search for new approaches to products and processes, which thrives in an environment that supports empowerment and tolerates competent mistakes (Davidson, 2003; Vera & Crossan, 2004). Since innovation in large companies requires processing huge amounts of information, it is influenced by a number of individual factors that affect the efficiency of knowledge creation, including commitment, improvisation, use of intuition, and creativity (Amabile, 1997; Nonaka & Holden, 2007; Sinclair, Ashkanasy, Chattopadhyay, & Boyle, 2002; Vera & Crossan, 2005). Similar to service climate, this cannot occur without trust and encouragement that will “color” the affective climate.

Moreover, in order for these task-specific climates to flourish, they need to be supported by compatible organizational structure, systems, and management practices (Brown & Brooks, 2002; McLean, 2005). We propose that the degree of alignment or misalignment of these components will further impact the affective climate in the organization, and thus affect knowledge creation through encouraging or stifling organizational creativity.

CASE STUDY

The presented research is based on outcomes of a case study, utilizing an exploratory research design (Di Franco, 2001). The goals of the study were to identify new relationships among organizational phenomena, to define post-hypotheses and suggest drivers for further research (Guala, 2000). The organization studied is the Italian branch of the financial services division of a German automotive company. The company provides financial services to external clients and supports selling and postselling activities. The subsidiary has a traditional functional structure and employs mainly Italian workers.

Procedure

The field research began with open-ended interviews with HR, training, and education managers. These were used to get a general understanding of the

organizational context and to build a preliminary set of hypotheses. Then various organizational documents were collected and analyzed, in order to draw the organizational structure, the functions, and the basic processes.

In the next step, three group interviews (10 people per group) were conducted. The aim of the interviews was to find out the main topics for the next step of the research and to compile a list of most important personal and professional values. Participants in each sample group were chosen on the basis of three main criteria: (1) department, (2) job seniority, and (3) job level. They were asked to indicate (1) their 10 most important personal values and (2) the most important 10 important values (related to work experience). The interviewees were also asked two questions:

1. "In your opinion, do organizational behaviors and practices in your organization match with your personal values?"
2. "And with your professional values?"

The answers obtained by different groups were consistent and the interviewees agreed on the relevance and appropriateness of the topics stressed during the interviews.

The results of the group interviews were then used to develop a survey aimed at obtaining information concerning the main values, including attitude to creativity, as well as the organizational and affective climate in the studied organization (see [Guala, 2000](#)). First, we compared the results of each group session and built the final grids of personal and professional values that were used to construct the variables concerning personal and professional values. Variables related to the importance of personal and professional values were measured on a 10-point scale (1 = not important at all, 10 = very important). For variables related to the degree of match between values, organizational behaviors, and practices, including the level of organizational emphasis on creativity, we used also a 10-point scale (1 = no match, 10 = complete match). A one-item creativity assessment was used successfully in other qualitative field studies (e.g., [Einstein & Hwang, 2007](#); [Ramus & Steger, 2000](#); [Troy, Szymanski, & Rajan, 2001](#)).

Other sections of the survey explored issues related to organizational and affective climate. We used other topics that emerged from group interviews to build the general structure (conceptual structure) and the sets of variables of other sections of the questionnaire, following qualitative research and validation methods used in previous studies (see [Ramus & Steger, 2000](#)). To build the sets of variables related to organizational and affective climate, we used topics that emerged from group interviews and adapted several items from other relevant empirical studies ([Churchill, 1979](#)). These were

measured on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree). In order to reduce common method variance (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), the organizational climate variables were reported in the questionnaire in a random order.

A personal information section was included at the beginning of the questionnaire.

Participants

The questionnaire was distributed to all 200 employees of the branch. The analysis could make use of 190 returned questionnaires, which represents 95% response rate. For confidentiality reasons, we had access to personal data only about department affiliation, job level, and job seniority. The useable sample represented staff from eight departments with the majority of respondents being from Portfolio Management (45%) and Finance Department (19%). The respondents consisted of 27 managers (5 department managers and 22 middle managers) and 163 employees (86% of staff). Of the respondents, 21% worked for the company for more than 12 years, 13% were with the firm between 7 and 12 years, 27% between 2 and 6 years, and 39% for less than 2 years.

RESULTS

First we obtained our dependent variable, the level of organizational emphasis on creativity, assessing how much respondents' perceptions of organizational behaviors/practices match with the professional value of creativity, which indicates the degree of encouragement and support of organizational creativity; the mean score was 5.7 ($SD = 2.16$). We noted that this value was lower than the importance attributed to the professional value of creativity by respondents (mean = 8.7, $SD = 1.33$).

In the next step, we identified significant factors of organizational and affective climate. We performed an exploratory factor analysis (principal component analysis, Varimax method with Kaiser-normalization components) in order to reduce the number of variables related to organizational climate and to facilitate the definition of climate components. According to the adopted theoretical approach, the set of variables also included variables related to affective climate. We found five components (factors) of organizational climate with a KMO-value of 0.88, a stated variety of 73%, and sufficient internal consistency (see Table 1): (1) contentment with

Table 1. Factor Analysis: Factors of Organizational Climate^a.

1. Contentment with structural efficacy ($\alpha = 0.91$)	
Effective resources management	0.65
Satisfaction with the quality of work	0.64
Responsibility	0.59
Satisfaction with the quality of organization	0.53
Correctness and loyalty in work relationships	0.49
Level of professional correctness	0.49
Job roles are well designed	0.48
People take care of internal client	0.47
Individual contribution to goal achievement	0.45
People talk with others, not about others	0.42
Focus on problem solving	0.42
2. Management focus on people welfare ($\alpha = 0.90$)	
Top management takes care of employees' needs	0.71
Top management sustains and supports our work	0.68
Top management communicates effectively mission and vision	0.62
Top management behaves coherently	0.61
Effective and equitable (fair) distribution of job tasks	0.53
Employee receives enough information	0.51
Career and economic rewards	0.46
Goals are clear and well defined	0.46
Commitment to goal achievement	0.46
Satisfaction with incentives	0.44
People are involved in change processes	0.42
Company has proactive attitude toward internal changes	0.41
3. Psychological comfort ($\alpha = 0.74$)	
People are free to express their emotions and moods	0.71
People are free to express their personality	0.59
Pleasant and safe physical environment	0.55
4. Quality of internal relationships ($\alpha = 0.71$)	
Satisfactory relationships with coworkers	0.70
Satisfactory relationships among departments	0.59
Diffusion of positive climate	0.51
5. Satisfaction with compensation/benefits and internal services ($\alpha = 0.78$)	
Satisfaction with communication tools	0.64
Satisfaction with training and developments tools	0.64
Satisfaction with rewards and benefits	0.63
Satisfaction with incentives	0.42

Note: Principal Components Analysis, Varimax with Kaiser normalization, KMO = 0.88.

^aOnly factors with sufficient internal consistency listed.

Table 2. Descriptive Statistics: Means, Standard Deviations, Internal Consistencies, and Correlations.

Variable	Mean	SD	1	2	3	4	5
1. Creativity	5.60	2.23	n/a				
2. Contentment with structural efficacy	2.74	0.79	0.53**	(0.91)			
3. Management focus on people welfare	2.64	0.82	0.49**	0.77**	(0.90)		
4. Psychological comfort	3.23	0.96	0.40**	0.55**	0.55**	(0.74)	
5. Satisfaction with compensation/benefits and internal services	3.24	0.94	0.42**	0.62**	0.55**	0.53**	(0.71)

* $p < .05$.

** $p < .01$.

$n = 190$.

Note: Internal consistency of factors is given in parentheses on the diagonal.

structural efficacy ($\alpha = 0.91$); (2) management focus on people welfare ($\alpha = 0.90$); (3) psychological comfort ($\alpha = 0.74$); (4) quality of internal relationships ($\alpha = 0.71$); and (5) satisfaction with compensation/benefits and internal services ($\alpha = 0.78$).

A closer examination of the table reveals that the identified factors cover five dimensions of affective climate listed by Brown and Brooks (2002): (1) structure (represented in our analysis by contentment with structural efficacy); (2) responsibility (represented by management focus on people welfare, identification with own work, goal achievement, and individual focus on self improvement); (3) vulnerability and fear (represented by psychological comfort, perception of the future); (4) warmth (represented by quality of internal relationships and positive climate, satisfaction with people, information, and company events); and (5) rewards (represented by satisfaction with compensation, informal rewards, fairness in work relationships). The factors include also several aspects mentioned in creativity research, such as leadership style, focus on employee welfare, external client orientation, communication, and teamwork. The descriptive statistics for the identified factors and the level of creativity are summarized in Table 2.

Finally, in order to explore the nature of the relationship between organizational climate and the level of organizational emphasis on creativity, we conducted a multiple regression of the identified five factors of organizational climate on the dependent variable: the level of organizational emphasis on creativity (the degree of match between organizational behaviors/practices and the professional value of creativity).

As can be seen in Table 3, all five factors that had a significant relationship with the level of creativity: (1) contentment with structural

Table 3. Regression Results: Factors of Organizational Climate Related to Creativity^a.

Factor	<i>R</i>	β
Contentment with structural efficacy	0.34	0.75**
Management focus on people welfare	0.20	0.44**
Psychological comfort	0.17	0.38*
Quality of internal relationships	0.17	0.39*
Satisfaction with compensation/benefits and internal services	0.19	0.42**
Multiple <i>R</i>	0.50	
Squared multiple <i>R</i>	0.25	
ΔR^2	0.23**	

**p* < .05.
***p* < .01.
n = 190.
^aDependent variable “level of creativity” assessed as degree of match between organizational behaviors/practices and the professional value of creativity; mean = 5.7, SD = 2.16.

efficacy ($\beta = 0.75$); (2) management focus on people welfare ($\beta = 0.44$); (3) psychological comfort ($\beta = 0.38$); (4) quality of internal relationships ($\beta = 0.39$); and (5) satisfaction with compensation/benefits and internal services ($\beta = 0.42$). According to included items, all factors were related to affective climate through a sense of satisfaction. One of them was also linked through an implied trust (quality of internal relationships). One factor, psychological comfort, was explicitly associated with affect. It consisted of three affective variables: (1) people are free to express their emotions and moods; (2) people are free to express their personality (thus minimizing anguish and stress); and (3) pleasant and safe physical environment (eliciting positive feelings).

DISCUSSION AND CONCLUSIONS

The results of our study indicate that creativity is indeed viewed as an important organizational asset. Surprisingly, although the respondents tended to believe that the professional value of creativity is very important, they did not show a higher level of satisfaction with the organizational emphasis on this value. This means that, in spite of the importance attributed by respondents to creativity, according to their perceptions, the organization does not seem to place the necessary emphasis on it. It also

appears that the organization does not assure conditions conducive to the development of creativity in terms of organizational policies, structure, and managerial behaviors.

Nevertheless, our analysis confirmed that there is a positive relationship between some aspects of organizational climate and the level of emphasis on creativity. In this context, our study identified several affective conditions that appear to be present when the professional environment values and encourages creativity. These conditions are consistent with the characteristics of affective climate identified by other researchers. The results of our study suggest that the relationship between affective climate and the precondition of creativity is context dependent or, in other words, situated and embedded in a specific organizational setting. Therefore, the effect of different variables of the affective climate is dependent on the context, shaped by organizational space. This is an unexpected outcome of the research that could provide new insight into the development of knowledge on the dynamics of organizational creativity. The picture emerging from the statistical analysis seems to highlight a collective, and therefore social dimension of affective life in organizational settings. This supports our view that the social dimension of affective life is an integral part of the conditions that encourage creativity in organizations.

Previous research has found that social interaction is positively related to cooperative climate (encouraging positive affect as a result of trust) and innovative climate (encouraging creativity) (Chen & Huang, 2007). Consistent with these conclusions, our results indicate that the level of satisfaction with internal relationships and the diffusion of a positive climate are also positively correlated with the level of emphasis on creativity. Therefore, it appears that the quality of internal relationships indeed contributes to the makeup of the affective climate as it pertains to creativity.

Moreover, we detected a significant positive relationship between emphasis on creativity and feelings of psychological comfort stemming from freedom to express one's emotions and personality in the workplace as well as perceptions of a pleasant and safe environment. The aesthetic dimension (Strati, 2001) of the organizational experience, linked to the perception of a pleasant environment, is an emerging component of the affective conditions that foster organizational creativity. The findings support previous conclusions that psychological and physical space may infuse organizational climate with emotions that facilitate or inhibit creativity (Kristensen, 2004). As suggested by Kristensen, such space can enable or restrict sensory experiences, triggering cognitive processes that, in turn, elicit affective

responses. The affective charge then infuses the space, which becomes more or less receptive to creativity.

Another result, consistent with previous research, suggests that valued professional creativity is linked to a positive affective climate resulting from management focus on employees' contentment with structural efficacy (Amabile et al., 1996; Feurer et al., 1996). The highly valued aspects were feelings of contentment with effective resource management, satisfaction with the quality of work, and sense of responsibility. This concurs with Kanter's (1988) conclusion that organizational creativity is more likely to occur in a structurally integrated environment with "collective pride and faith in people's talents" (p. 383). Therefore, it is reasonable to assume that the degree of empowerment has an effect on the affective climate in terms of creativity encouragement.

We also found that management focus on people welfare is positively correlated with the level of emphasis on creativity. Among the most significant variables of management focus, we identified needs fulfillment, adequate work support, clearly communicated vision and mission, and coherent behavior. This finding could explain the role played by the affective relationship between managers and employees in fostering or inhibiting creativity in the organizational setting. According to our data analysis, the presence of leadership inclined to support and nurture the boss-employee relationship contributes to the establishment of preconditions for creativity in the organizational space. Supervisory encouragement, defined along similar lines, has been linked to organizational creativity by other researchers (Amabile et al., 1996; McLean, 2005). What has been underestimated so far is the effect of the affective dimension on this aspect. As a matter of fact, management focus on people welfare also relates to affective variables, such as affective leadership or emotional scaffolding.

Not surprisingly, creativity was enhanced by the sense of satisfaction with relationships and communication. This supports our previous conclusions about the role of social interaction (Chen & Huang, 2007). The quality of internal communication has been highlighted by a number of researchers. For example, Amabile et al. (1996) discuss the importance of a collaborative idea flow while Kanter (1988) stresses the need for multiple structural linkages that allow horizontal communication. We argue that all of these require a high level of trust, which can be nurtured in the appropriate affective climate. Less discussed seem to be the value of communication with outside sources, which is important for the studied organization (focus on external client) because of its financial service orientation. This attitude is consistent with the external aspect of climate for service (Davidson, 2003)

that, one would assume, will require even higher levels of trust than internal communication.

By and large, the findings support our conclusion that affective climate does influence the preconditions for organizational creativity and, consequently, knowledge creation. In accordance with the theoretical framework, organizational space seems to be indeed a psychological-social space in which affective climate may foster or inhibit creativity and knowledge creation. The results of our exploratory research shed some light on the “dark side” of *ba*, the affective dimension of organizational creativity and knowledge creation. As we know, Nonaka and his colleagues (2006) focus their attention on the conceptual definition of the original *ba*, the space of knowledge creation. Our findings could contribute to the description of the construct, in terms of components and sociopsychological dynamics. While the literature tends to approach the concept by exploring what constitutes *ba*, we tried to go one step further and answer the next set of questions: What are the main components of *ba*? How can we describe the phenomenon? What is the relationship between *ba* and the more general organizational setting?

Practical Implications

Based on our research findings, we argue that the management of affective climate is a critical factor for the development of organizational creativity and knowledge creation in organizational settings. Managerial behaviors and skills, training and education practices, performance appraisal system, recruitment policies, internal communication processes and activities should contribute to the development of a positive affective atmosphere. The management of affective climate should be a must for knowledge-based organizations that need to foster their ability to produce new knowledge. We argue that creativity, as an emerging phenomenon, cannot be planned. Nevertheless, it may be nurtured. As a result, organizations could set up the right conditions for creativity growth, although it is very difficult to predict how many new ideas and knowledge are produced and when. Innovation oriented and knowledge-based firms should therefore focus on managerial strategies and practices that develop best conditions for organizational space, which enable it to become a real creative space.

The significant positive relationship between emphasis on creativity and feelings of psychological comfort in terms of perceptions of a pleasant and

safe environment highlights the importance of spatial dimensions of the organizational space. If responses to physical space elicit indeed strong affective responses (Kristensen, 2004), then organizations need to pay more attention to physical conditions in the work environment. The organizational design may influence preconditions of organizational creativity in terms of layout, ergonomics, and quality of the physical setting. Effects of physical space may warrant future investigation.

We argue that the significant positive relationship between emphasis on creativity and feelings of psychological comfort, stemming from freedom to express one's emotions and personality in the workplace, questions the dogma of corporate culture. If employees are encouraged to be creative when they feel free to express themselves, a strong corporate culture risks to inhibit organizational creativity, prescribing standard behaviors and values to all employees (Maimone, 2005). For the same reasons, we assume that behavioral norms, especially those concerned with "emotional labor" (Hochschild, 1983; Rafaeli & Sutton, 1989), could be counterproductive for creativity. More research is needed about effects of constrained behaviors on creativity.

Knowledge-based and flexible organizations that need higher rates of internal variety (Ashby, 1962) and intellectual capital (Kogut & Zander, 1996), in order to manage external complexity (Mitleton-Kelly, 2003) and meet the continuous change of their environment (Shek & Sia, 2001), should develop an intersubjective and bottom-up approach to culture management.

According to our research findings, the level of emphasis on organizational creativity is correlated with a positive affective climate resulting from management focus on employees' contentment with structural efficacy and leadership style. Consistently with the theoretical framework adopted in this chapter, organizational policies, processes and procedures, and management practices also influence the affective climate and can contribute positively or negatively to the preconditions for organizational creativity.

It appears that the positive relationship between the quality of internal relationships and the organizational emphasis on creativity highlight the role of organizational communication and internal relationship management in fostering the level of organizational creativity. It is therefore reasonable to assume that communication processes and internal relationship management are critical factors for the development of the level of creativity and knowledge creation in the organizational setting. It seems to affect the preconditions for creativity threefold: in terms of information sharing, knowledge transfer, and knowledge creation.

LIMITATIONS AND CONCLUSION

Since the conducted study was of exploratory nature, limited to one specific organization, it will be necessary to conduct further field research before drawing general conclusions. More testing is needed in different industry/service sectors, in order to find out similarities and differences across different business settings. Additionally, although most of the factors (analyzed in this chapter) that may influence the preconditions for organizational creativity seem to be universal, it would be prudent to investigate whether their degree of importance was influenced by organizational culture (corporate and local level) and cultural specifics of the Italian employees. Thus, we propose to study samples of managers and employees of different nationalities in order to test the influence of cultural differences that could explain, for example, the effect of leadership on the emphasis on creativity among Italian employees (Hofstede, 2001).

Other potential limitations of our study are possible effects of common method variance (Podsakoff et al., 2003) since all data were collected at the same time, the use of self-evaluation (auto-perception), and the absence of a longitudinal analysis (repeated measures), in order to explore the evolution of the phenomenon over time.

Nevertheless, the picture emerging from the statistical analysis documents the existence of an overall positive relationship between some components of the affective climate and the preconditions for organizational creativity. Affective climate seems indeed to influence the organizational setting, fostering or inhibiting organizational creativity, together with other organizational climate components.

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CHAPTER 13

CREATIVE CONFLICT IN DIGITAL IMAGING COMMUNITIES

Esther Maier and Oana Branzei

ABSTRACT

This chapter presents a Dewey-inspired analysis of the role of dissent in the creative process. We extend and complement received knowledge on the role of positive affect on creativity by discussing the tensions between negative and positive affect. Using a netnography of three online communities, which bring together animators and visual special effect artists, we develop a grounded typology of creative conflict practices. By cross-referencing the creative status with creative objectives, we define four distinct types of creative conflict practices: invoke, evoke, poke, and provoke. Our qualitative findings further show how creatives adeptly manage tensions between positive and negative affects.

INTRODUCTION

In the cultural sector, where projects revolve around creativity, stories of conflict are legendary. During their tenure at Disney, Bob and Harvey Weinstein were notoriously argumentative and difficult to work with, yet their Miramax projects garnered 249 Academy Award Nominations and three best picture Oscars (Segal, 2009). Director Guillermo de Toro

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(Pan's Labyrinth) was known to argue fiercely with his collaborators; he took pride in being "sincerely brutal about each other's work" (Hirschberg, 2007). Similarly, John Wells, producer of television's *West Wing* and *ER* recalls that during meetings with his writing staff, "everybody's ox gets gored. But [conflict] leads to a really open conversation, where we're honest about each other's work" (Dannenbaum, Hodge, & Mayer, 2003, p. 15).

Feedback has a powerful feedback on individuals' creative performance (Zhou, 2008): it facilitates the acquisition of creativity-relevant skills and strategies (Zhou, 2003), promotes the social construction of standards for judging whether a project is or is not creative (Zhou, 1998), and sustains creative tension within collaborative teams (Paulus, 2008). Feedback promotes engagement; however, "feedback, especially if it is very positive or very negative, tends to invoke strong affective reactions" (Zhou, 2008, p. 140). Much of the received knowledge thus far has focused on positive feedback – which can have beneficial long-lasting effects on creativity but takes time and patience. Negative feedback "sticks out." It creates dissonance, discomfort and, on occasion, may trigger "quick fixes."

We are interested in the paradoxical juxtaposition of brutal conflict and sharp creativity. We seek to understand creative conflict – taking a Dewey-inspired closer look to the mundane practices that help (re)generate individual creativity. Because we subscribe to the view that creativity is socially constructed, or at least socially facilitated (Hargadon & Bechky, 2006), we analyze individual practices in a community-of-practice context: we look at that feedback-giving and feedback-receiving social interactions to gain new insights on the incidence, interpretation and influence of conflict on creativity.

Our interest in the role of conflict in creativity has deep roots: Dewey (1934, p. 339) poignantly noted almost a century ago that "Resistance and conflict have always been factors in generating art." The artist cultivates moments of resistance and tension as opportunities for deeper awareness and reflection; both are critical to the creative process (Dewey, 1934). Giving consideration to diverging and opposing views creates conflict – but at the same time engenders creativity (Hodge, 2009). For example, dissent, i.e. situations where a person is confronted with one or more other persons' opinions, which are different from his or her own, can stimulate creativity (De Dreu & West, 2001). Dissent can also facilitate memory performance (Nemeth, Mayseless, Sherman, & Brown, 1990) and resistance against conformity pressures (Nemeth & Chiles, 1988). This creativity enhancing effect is particularly true for "constructive controversy": open debate and constructive criticism enable more accurate understanding of the situation

by taking someone else's perspective. Contradictory opinions may also intensify information processing, by enabling individuals to allocate attention and scarce cognitive resources to search for more information on a specific issue. Within groups, dissent increases information exchange (Parks & Nelson, 1999), generates greater scrutiny of the situation (Smith, Tindale, & Dugoni, 1996), and encourages repeat exchanges, which can lead to superior solutions (Schulz-Hardt, Brodbeck, Mojzisch, Kerschreiter, & Frey, 2006). Yet despite the positive consequences of dissent, "conflict has a negative connotation: Conflict indicates that a 'normal' harmonious state is disturbed [...]. Consequently, conflict is something that has to be avoided, that has to be resolved, or, at best, has to be managed" (Schulz-Hardt, Mojzisch, & Veghelgesang, 2008, p. 149).

We seek to extend the systematic inquiry of whether, when, or how conflict may translate into creativity (Nemeth, Personnaz, Personnaz, & Goncalo, 2004) by delving deeper into the mundane production of creativity. We take Dewey's view that creativity depends on "the everyday events, doings and sufferings that are universally recognized to constitute experience" (Dewey, 1934, p. 3). We approach creativity as a product of human experience, and explore the "ordinary forces and conditions of experience" and daily interactions (Dewey, 1934, p. 4). This close connection between art and daily life draws explicit attention to social interactions and the emotions they generate – simply put, creative outcomes can be (better) understood by untangling the raw emotions that punctuate and advance the creative process.

CREATIVE CONFLICT

We take a grounded theory-building approach to understand the incidence of creative conflict in the daily course of social interactions. For us, creative conflict reflects incidents of explicit dissent between one's own and social others' view of creativity outcomes and processes. Such incidents can be (in)voluntarily sought and/or harnessed to question, stretch, and validate one's artistic prowess and proficiency, or they may arouse spontaneously in the course of daily interactions.

There are two basic obstacles to explaining whether, when and how conflict can enhance creativity. First, creativity is inherently an individual level construct, defined as the production of novel and useful ideas, products or processes (Amabile, Conti, Coon, Lazenby, & Herron, 1996; Ford, 1996; Mumford, 2003; Oldham & Cummings, 1996). However, creativity is not

simply a by-product of individual traits (e.g. Barron & Harrington, 1981 for a review), it varies with contextual influences (e.g. Amabile, 1983, 1988; Amabile et al., 1996) including tasks, organizing structures, and work procedures (George, 2007; Perry-Smith & Shalley, 2003). Furthermore, creativity is socially constituted: formal and informal interactions within and outside the work environment often influence one's creative work (Mumford, 2003), as do social and professional networks (e.g. Madjar, Oldham, & Pratt, 2002; Perry-Smith, 2006; Perry-Smith & Shalley, 2003), and communities of practice where members "think, talk, reflect, act, interact, emote, embellish and politicize" (Jarzabkowski, 2005, p. 3). Ideas are often induced, internalized, and fed back through iterative sequences of social interactions. Thus, understanding the (re)genesis of individual creativity requires explicit attention to social exchanges, which both contextualize and provide ongoing feedback on one's creative outcomes and processes (Zhou, 2008). To do so, we look for a frame-by-frame view into individual creativity, which helps us disentangle individual reflections on their own creative journey from the stream of social interactions that provide input, direction, and judgment along the way. We focus on creative discourse because it presents, contextualizes, and makes sense of the progression of creative artifacts, and offers opportunities for real-time individual reflection on the creative outcome and process as it unfolds.

Second, social interactions are emotionally complex (Collins, 1998, p. 21). Prior studies have documented how positive emotions influence creativity (e.g. George, 2007; Shalley, Zhou, & Oldham, 2004; Zhou & Shalley, 2003); however, the effects of negative emotions on creativity remain comparatively under researched. We (still) know preciously little about how negative feedback shapes one's creative journey (Zhou, 2008) despite clear evidence that individuals and groups often explicitly seek dissenting opinion (Schulz-Hardt et al., 2008) and deliberately cultivate conflict to fend off conformity (Schulz-Hardt et al., 2008), encourage reflexivity (West, 1996), and stimulate innovation (De Dreu, 2002). Negative feedback and negative emotions more generally are more difficult to observe. They are sensitive topics (Sieber & Stanley, 1988) and thus require a non-reactive method and close proximity to subjects' normal interactions. We rely on netnography to develop a thick description of conflict as it unfolds in emotionally complex social interactions (Kozinets, 1998, 2002, 2006; Langer & Beckman, 2005). This approach affords rich longitudinal data on multiple instantiations of conflict and thus allows us to observe whether, when, and how conflict may influence creative outcomes or processes. It also enables systematic observation of the influence of conflict on each individual's creative journey

and careful comparisons of differences in creative conflict among individuals, both within and across online communities.

Online communities provide an unusually rich view of sensitive phenomena unfolding over time and across individuals (Kozinets, 1998; Langer & Beckman, 2005). Online, individuals can be “intimately familiar with and completely anonymous to each other at the same time” (Zhou, 2006, p. 472). Because online communities enable “anonymous intimacy” or “intimate anonymity,” individuals can interact without the social constraints or biases, which may color their in-person encounters (Kozinets, 1998). Because informants interact voluntarily and naturally in online communities, observing their online interactions helps avoid the typical difficulties in informant recruitment, disclosure, or rapport with the researcher in face-to-face in-depth interviews, especially for sensitive topics (Langer & Beckman, 2005).

CREATIVE CONFLICT IN DIGITAL IMAGING COMMUNITIES

We chose to study creative conflict in digital imaging. We observed several online communities focused on the production of digital visual effects, a highly creative domain. Visual effects were initially legitimized in 1939 with the establishment of an Academy Award category that included nominees like “Gone with the Wind” and “The Wizard of Oz.” In 2003, the Academy established its own Science and Technology Council in recognition of the major technological innovations that digital techniques were bringing to the industry. Many online digital imaging communities were created with the explicit goal of disseminating technical knowledge to both established and aspiring artists; in effect, democratizing innovation in computer generated graphics (Von Hippel, 2005). These sites attract and develop aspiring digital imaging professionals (Hienerth, 2006) by offering a community of practice that encourages experimentation (Jeppesen & Molin, 2003). Online communities offer “endless things to discover, multiple views to draw upon, various viewpoints to learn from and adapt to, strong social status motivations and stimulating surroundings that stimulate new thoughts and connections” (Kozinets, Hemetsberger, & Schau, 2008, p. 343).

Although online communities are frequently referred to as “virtual communities” (Rheingold, 1993), the word “virtual” can be misleading. As Kozinets (1998, p. 366) notes, “these social groups have a ‘real’ existence

for their participants, and thus have consequential effects on many aspects of behavior ...” Resembling both brand communities, which offer members a network of relationships (Fuller, Matzler, & Hoppe, 2008), and communities of practice where people are informally bound together through a shared passion (Wenger & Snyder, 2000), these online communities provide individuals with the opportunity to build their artistic and technical skills through interactions with others (Wenger, 2000).

Digital imaging communities deliberately nurture creativity largely through feedback-seeking and feedback-giving (Hemetsberger & Reinhardt, 2006). Such practices have been shown to encourage individual creativity (Hargadon & Bechky, 2006) and gradually develop creative talent (Zhou, 2008). Creativity is one of the key motivations to join online digital imaging communities: members seek to gain “pure enjoyment” not available in their “real” jobs or professional lives (Bonaccorsi & Rossi, 2003).

Conflict stands out in online digital imaging communities studied. Community members that differ in tenure, status, and aspiration routinely seek out dissenting opinions, engage negative feedback givers (often directly and at times vehemently), and openly admit that their creative outcomes and process benefit in return. For the most part, community members encourage comments and critiques from a variety of sources and display great tolerance, even appetite, for opposing viewpoints. Many disagreements are openly exchanged in public discussion threads and, according to both individual creatives and many (heterogeneous and often neutral) observers, some of these disagreements do yield traceable changes in artistic and/or creative skills. This observations pit the received wisdom that creativity develops best when creatives are free from criticism (e.g. Amabile & Gryskiewicz, 1989) squarely against more recent arguments that dissent is not only beneficial to creativity (De Dreu & West, 2001) but often deliberately sought (Schulz-Hardt et al., 2008).

The relevance of conflict for creativity is not limited to online digital imaging communities. It also applies more broadly to film and television production (Segal, 2009). Conflict can stimulate creativity for seasoned professionals (Hirschberg, 2007) or novices (Maier & Branzei, 2009). It can yield individual returns as well as enhance collective creativity. Yet in online communities members have a clear expectation for creativity inducing feedback. Individuals expect that feedback will improve their work and help them advance their creative skills while the community expects that feedback-giving and -receiving will help attract and develop talent, (re)fueling everyone’s passion and inspiration.

METHOD

We use a multi-stage netnography to understand creative conflict as it unfolds in online digital imaging communities. We ask whether, when, and how conflict engenders better creative outcomes or processes. We chose to rely on a multi-stage netnography because our research question requires an intimate appreciation of the connections between conflict and creativity as the creative outcome evolves and the creative process unfolds. Netnography offers us an opportunity to unobtrusively study interactions between community members as they evolve over time. We can track and analyze individual interpretations of creativity shortcomings and gains; especially the connections between changes in their creative outcomes or processes triggered by conflict, in its real-life manifestations (e.g. dissent, critique, negative feedback, etc.). Initially developed as a systematic approach to study the attitudes, perceptions, imagery, and feelings displayed in online communications (Kozinets, 2002), netnography is considered particularly well suited for tackling sensitive research questions like ours (Langer & Beckman, 2005). It proves especially useful when participants may have difficulty recalling, disclosing, or interpreting sensitive information or when one can expect reactance (e.g. to the research question or to the researcher).

Direct observation is particularly beneficial for creativity research because it can complement and extend lab-based research questions and findings (Simonton, 2004). Observing the interplay between conflict and creativity in real-world interactions helps triangulate the wealth of results obtained in the lab and generate new insight (Simonton, 2000). Because both conflict and creativity are context dependent, we sampled online digital imaging communities that differed in longevity, number of members, and frequency of interactions seeking theoretical replication across online communities (Yin, 2003).

We were particularly attracted to communities where we could observe the artifacts evolving (Kozinets, 2002) because these artifacts offer deep insights on the gradual progression of creative outcomes and creative processes. We were also interested in communities, which provided lively discussion fora for their members – often in addition to a variety of professional and industry related services (e.g. industry news, product reviews, and career services). However, we purposely excluded communities sponsored by specific software developers or manufacturers because members often have mixed motives to join such communities, and because sponsors' own agenda may systematically distort the relationship between conflict and creativity in ways that cannot easily be teased apart in our

observations or analyses. Three communities were included in our study: Animation World Network, CG Society, and VFX Talk. In addition to our theoretical sampling criteria (longevity, membership, and interaction), these three communities differed in their creative focus, each serving a specialized niche within the field of animation and special effects. Details about these communities are shown in [Table 1](#).

Data

The netnographic data collection and analysis spanned a period of 30 months, including 6 months of daily presence online by the first author (from January to June, 2007) and two waves of purposive sampling of discussion threads. These initial observations helped the first author familiarize herself with the artifacts posted and reposted by online community members, understand the nature, pace, and focus on exchanges as they unfolded in real time, and develop a sense of the personal and professional identities of some of the most active members. The first author was authorized by each community's founders to be a silent observer: she would shadow creatives and posts, but would not engage in direct online exchanges with the community members. Although the first author was able to conduct several surveys of community founders and members, reported elsewhere ([Maier & Branzei, 2009](#)), this study focuses exclusively on insights gained through direct online participation and analysis of sampled discussion threads.

Our analyses rely on data available to the general public. Because anyone can view these postings, and anyone willing to register and obtain a name and password can post in the fora, the discussion threads are considered public domain information ([Langer & Beckman, 2005](#)). All the discussion threads are time-stamped, and the identities of the posters are known. To protect their confidentiality, we do not disclose the screen names (or real names) of community members nor the exact time of the postings. Despite the abundance of data in our study, we use direct quotations sparingly, in part because it is theoretically possible to identify the respondents by elaborate online searches using these direct quotations and in part because our primary interest lies in mapping the patterns of relationships between conflict and creativity, rather than to single out specific instances of either. Due to reactivity concerns and the very large number of posters engaged in each discussion thread, and based on consultation with the community founders, we decided against contacting all posters to obtain their explicit

Table 1. Description of Digital Imaging Communities.

	Community Overview	Activities	Age	Members	Threads
CG Society, www.cgsociety.org	CG Society is part of Australia-based Ballistic Media Pty Ltd. The community showcases a high volume of artwork; requisite storage capacity is funded using advertising and sponsorship dollars from some of the industries' prominent hardware and software providers. It has a prestigious 30-member advisory panel which includes LucasFilm, CORE Digital, and Dreamworks executives.	The CG Society offers workshops for its members and the online forums have the highest traffic of any of the visual effects sites encountered; some threads have over 400,000 posts. The community is broader than most in that it targets both 2D and 3D artists and offers a variety of "sub" forums covering a wide range of software applications. Site administrators are active in hosting creative contests that allow artists to refine their skills in an environment where feedback is encouraged.	5	275,538	430,338
Animation World Network, www.awn.com	Animation World Network (AWN) and its companion site Visual Effects World (VFX) are run by a for-profit organization with funding primarily from advertising revenues. The community publishes an online industry magazine that is of the same caliber as other high profile "trades" such as <i>Hollywood Reporter</i> and <i>Variety</i> .	Career services figure prominently in this community. AWN/VFX publishes electronically searchable industry databases and a detailed guide to animation schools. There are career listings for graduates and experienced hires. The community is primarily targeted to 2D artists and animators and attracts a large number of "traditional" animators as members.	11	15,095	7,333

Table 1. (Continued)

Community Overview		Activities	Age	Members	Threads
VFXTalk, www.vfxtalk.com	As part of the Computer Graphic News Network, VFXTalk is a leading provider of online content for the professional digital compositing industry. With the support of partner eyeon software, VFXTalk and companion sites, CG News, plug-in.com, and Sputnik7, community members have access to a full range of services including: cutting edge industry news, software tutorials, monthly VFX challenges and product reviews.	VFXTalk appeals to digital compositing (i.e. visual effects) specialists interesting in keeping abreast of the latest technological advances. The community offers programming tutorials to a varied membership (i.e. industry professionals, students, and enthusiasts) and gives members access to hosted galleries where they can upload their own artwork and view work posted by others. The site actively solicits advertising but offers tutorials on a wide variety of programs (not restricted to the advertisers).	6	19,639	15,897

permission to look at their (publicly available) postings. However, we agreed to share our research insights with the community founders and leave it to their discretion as to whether or how they may choose to disseminate these insights more broadly within their community.

Observation

During the first 6 months of online observation, the first author explored the range and instantiations of conflict in the three digital imaging communities including in our study (Table 1), spending 12–20 hours a week across these three communities. She noted that conflict occurred across a broad spectrum of issues, ranging from specific genres (e.g. 2D versus 3D animation) to debates over the superiority of specific software applications. These observations guided a preliminary review of the literature on conflict and creativity and helped us decide to focus on creative conflict.

Conflict Coding

Guided by our research question – whether, when, and how conflict may enhance creativity – the first author began random sampling of discussion threads within each community. Threads varied greatly in length, pacing, and intensity, averaging about 20–30 exchanges, revolving around either a specific creative or a specific artifact. For each community, we started with 10 threads focused on specific creatives (e.g. their request for advice or direction to refine their creative skills and/or professional prospects) and 10 threads focused on specific artifacts (where the art itself was in the spotlight). The first author then organized these discussion threads in NVivo by community. Within each community, the data were organized by the creative who initiated the thread (typically soliciting feedback on one or several artifacts); when a thread referenced more than a single (albeit changing) artifact, we branched the data into multiple sub-threads. Because most creatives initiated multiple threads within their community, this data structure enabled us to extend the data over time (i.e. by appending earlier and/or later threads initiated by the same creative and gain a sense of how their creativity evolved over time). To protect the confidentiality of the respondents, we were asked to disguise both the screen name of the posters (in some cases these screen names or subsequent exchanges may reveal the true identity of the creative) and the thread sampled (which again may

identify sensitive information that reveal posters' or respondents' true identities). We use two identifiers in our data structure: the first one disguising the respondent, the second disguising the thread.

In the first wave of data analysis (July 2007 to June 2008), the first author coded and characterized instances of conflict, looking for consistencies and inconsistencies within and across respondents. We noted that conflict took a different focus depending on whether the poster initiating the thread was a hobbyist (i.e. self-identified newbie, including newcomers without any experience in the artistic and technical domain of the community, as well as members in the early stages of creative development) or a master (i.e. someone with a level of mastery in artistic expression and technical proficiency, including established professionals with a track record in the industry).

We noticed a clear separation between a hobbyist and a master – the latter (but not the former) giving sustained attention and consistent effort to hone the technical proficiency and artistic expression required to establish a clear creative identity. Even the most enthusiastic hobbyist had not (or at least not yet) devoted sufficient time to reach the level of skills demonstrated by the master. The difference in creative status was explicitly noted in each case: the audience qualified the level of proficiency of the poster. Hobbyists (but not masters) often self-declared their level and the gaps as they saw them. Masters often qualified their status later in the discussion thread, only after the audience had remarked on their displayed mastery. This was true even when masters were well-known, active posters in their community.

To tease apart these differences, we used tabular displays, which contrasted conflict manifestations for each of the four theoretically possible combinations of feedback givers and feedback receivers. Table 2 illustrates a representative exchange between hobbyists and masters for each of the three communities. Masters often respond to hobbyists' posts and they explicitly address the area of developmental concern flagged by the hobbyists in their initial post. When the initial question is unclear, they often reply with a request for clarification:

I think maybe you need to let us know what you want to achieve with this. It'll make it easier for us to criticize. That said, I agree with the other posters. Andrew Loomis "drawing the head and hands" is available here for free download: <http://www.fineart.sk> that will help you with proportions and such. (CG)

Once the question is clearly understood, the masters comment on "the biggest problem" as they see it. Different masters typically converge on the same issue, the most common ones being proportion and the

Table 2. Creative Conflict Examples by the Creative Status of the Feedback-Giver and -Receiver.

	Hobbyist (Giver)		Master (Giver)	
	Hobbyist (Receiver)	Master (Receiver)	Hobbyist (Receiver)	Master (Receiver)
VFXTalk	<p>“Hey guys – not an expert here or anything, but I think the biggest problem I see is he jumps straight up, but at the top he is going forward over the railing. Should have been more of an arc from the stairs to the top. Just my .02.”</p>	<p>“Excellent work. It might be a little to long ... My opinion: drop the countdown and simplify the slate(s) maybe one hole edit without slates ... those noise fights in Hellboy with the acoustic guitar music crazy!... I like it! You guys remember how good the audi fx were on those shots... top quality level ... congrats.”</p>	<p>[Critique directed at a newbie (not) following a training DVD] “So my main question is if you watched the DVD why did you abandon the first step? I am not trying to be argumentative nor rude just trying to understand. Matte painting is a very analog work flow, as its namesake says it’s a painting”</p>	<p>Comments that posted work has been used in a pitch for a TV show “Really nice work on this. The only part that caught my eye was the falling glob of hot embers. That didn’t seem as integrated as everything else.”</p>
CG Society	<p>“I must say, you’re texturing looks good to my amateur eye, but work on your proportions first.”</p> <p>“Looks good for your first attempt! Biggest issue for me is the neck that is far too thin. Second as mentioned the nose and third the area around the eyes. Perhaps you should check some references.”</p>	<p>“Whoa! Great stuff! Excellent mood, lighting and emotion in the scene. Like others mention, the only thing I don’t like is hair which is too symmetrical. A tad off on one side would make a world of difference, as it is so close to the main focus point [the eyes]. Excellent setting. The Addams Family meets Edward Scissorhands meets Alice in Wonderland meets The Matrix”</p>	<p>[Response to a newbie’s confession “I did not use any reference”] “this is the first mistake, always use some type of reference, whether it is hand drawn or photos from Google, having something to pull from really helps. The face of this character is lacking the anatomy of a real human, a good example of where ref’s could have helped.”</p>	<p>“That looks absolutely stunning. I like the ethereal light, as well as both of the characters ...The only thing I’m not too sure about is the light obstruction created by the butterfly. That might be a little too strong an effect, because butterflies generally are more semi-transparent when shone upon with light. If that makes any sense. Great work.”</p>

Table 2. (Continued)

Hobbyist (Giver)		Master (Giver)	
Hobbyist (Receiver)	Master (Receiver)	Hobbyist (Receiver)	Master (Receiver)
AWN “Um, what I’m noticing is that there doesn’t seem to be anticipation pose which would then propel the sitting character upwards. (keep the 12 principles in mind.)” “p.s. posting mov files are helpful because I can check the animation frame by frame, whereas I can’t do this with an avi file easily.”	“You mad genius, you.” “It’s simple and expressive ... well in sync with the music. Luv it. 😊” “simplicity!!! yup ... the hardest thing to achieve!!”	Response to an animation sequence posted by a newbie, “Thumbnails, really small drawings, are a great way to plan your animation. Smaller drawings allow for more exaggeration because we don’t have as much invested in them and aren’t afraid to try different options.”	“Haha, you’re giving me way too much credit! 😊 But I won’t ask for much ... Just your first born child, a strand of Walt Disney’s hair, and a leprechaun. Better yet, make that 2 leprechauns!”

rush/sloppiness due to lack of attention to advice, models, samples, downloads designed to coach newcomers and ease them into the tools of the trade and the technical and artistic standards of the community.

Hobbyists often lead with affected praise, often commending multiple aspects of the work before they identify one minor thing that may be “a tad off” as though it takes them a while to see through the perfection. In some cases, the small flaw they notice may make “a world of difference” as the CG hobbyist we quote in [Table 2](#) points out in his note to a well-established master’s great post, as the master later confirms:

Wow, thanx for your replies guys, I’ve just updated the hair and that’s better 😊. (CG)

Masters also start with praise, but they are sharply focused on what the posting means to them. Comments on technical execution or even artistic proficiency are rare: most praise addresses the post holistically and speaks to the integration of technique and art, and its impact on the audience. They also point out the one or two things that catch their eye and could be done a little differently, although they are often not sure the change would make a positive difference. Their critiques speak more to what they might have done differently without the expectation that the feedback recipient would execute on this advice.

This same pattern is present when hobbyists give feedback to other hobbyists. They comment on what looks off to them, and venture a guess or two as to how the problems might be fixed, but leave it up to the poster to figure out whether or how they may change their artifact or creative process, as [Table 2](#) shows:

I think the biggest problem I see is he jumps straight up, but at the top he is going forward over the railing. Should have been more of an arc from the stairs to the top. Just my .02. (VF)

Biggest issue for me is the neck that is far to thin. Second as mentioned the nose and third the area around the eyes. Perhaps you should check some references. (CG)

We found the same pattern across the three communities included in the study, with one interesting insight. As the gap in professional development between hobbyists and masters grew wider, feedback given by masters to hobbyists changes to a more explicit teaching/coaching tone, often pointers to principles or reminders of steps skipped in the creative process. Feedback given by hobbyists to masters took a more explicit adulation tone, listing things “so hard to achieve” that come out compellingly in their posts.

Take, for example, the following praise eloquently “sung” by a hobbyist to a master on AWN:

If I smoked, which I most certainly do not, right now I would be turning out all the lights, pulling out the lighter I don't have, and waving the flame around in triumph. The songs in your animation are the stuff getting stuck in your head forever is made of. [...] A fine addition to an already stellar body of work. Or is it an ‘oeuvre?’ (AWN)

In the quotes presented in [Table 2](#), this difference is evident is particularly vivid for AWN exchanges.

Creative Conflict Narratives

In the second wave of data analysis (July 2008 to June 2009), the first author purposefully sampled discussion threads for two hobbyists and two masters for each community over time. For hobbyists we included all the posts they had initiated since joining the community; for masters we included several rich posts at different points in time, going back as far as each community's online archives allowed. The first author then developed a creative conflict narrative, one for each of the 12 creatives. These narratives sought to identify specific instances of conflict and link them to changes in creative outcomes or processes. As suggested by [Maitlis \(2005\)](#) and [Riessman \(1993\)](#), the first author relied on the reflections of the creative himself (herself) as well as the suggestions, observations, and reflections by the social others partaking in each set of exchanges.

In most cases, each posting generated feedback from multiple hobbyists and multiple masters allowing the first author to triangulate their reactions and check for (in)consistencies in their opinions about what (if anything) the artifact or the artist has gained through that specific exchange. This process also relied on hunches developed during the 6-month observation and the first stage of conflict sampling and coding. The second author reversed the process for half of the narratives (one hobbyist and one master from each community). She first read the narratives, then iteratively went through the original discussion threads to determine if the narratives were complete (i.e. if they included all instances of conflict and all the reflections on whether, when and how conflict encouraged creativity). Since the second author was seeing these threads for the first time, she asked probing questions that helped articulate and capture some of the implicit understanding of the first author. We then used this insight in our third wave of analyses.

Creative Conflict Typology

The two authors then separately analyzed the 12 narratives to identify patterns of relationships between conflict and creativity. Each of the authors reified the importance of creative status: the patterns of creative conflict were distinct for *Hobbyists* and *Masters* and these differences were largely consistent across the three communities. We thus contrasted all narratives on the *Creative Status* dimension. Each of the authors focused on the type of engagement between the poster and his/her audience. In some cases, the poster identified where they thought their artifact or skills was different from the expectations of the audience. In other cases, the poster looked for a common reaction among the audience; whom they hoped would like and respond positively to the artifact or the technique, and thus would validate poster's initial creative intentions. In the former case, exchanges focused on reconciling the differences between the poster and his/her audience and in the latter, exchanges focused on validating their commonalities. The type of engagement was sometimes explicitly spelled out in the initial post and in all cases the poster's responses helped us confirm the type of engagement they had initially hoped for. Based on discussion between the two authors, we converged on *Creative Objective* as the second dimension of our typology, distinguishing *Connect* from *Disconnect* between the poster and his/her audience. Table 3 has the resulting typology.

To confirm the validity of the theoretical contrasts used in the typology, we went back to the communities for a third wave of purposive sampling. We looked for one additional information-rich discussion thread that we felt spoke to each combination of *Creative Status* and *Creative Objective*. The four threads we sampled included intense exchanges, punctuated by changes in both the artifact (i.e. the creative output) and creative's approach (i.e. the creative process). Often these four threads included multiple exchanges between the poster with one (and often several) feedback-givers. Further, several feedback-givers chimed in at each creative iteration, providing multiple instances of conflict. The original poster responded to some, but not others, and often clearly linked specific critique with the resulting changes. The four threads we used to validate our typology included, respectively, 13, 72, 73, and 315 separate posts, ranging from 14 to 168 pages of text per discussion thread (for a total of 245 pages). We analyzed these four discussion threads independently. We then discussed the key insights until we reached full agreement.

Table 3. A typology of Creative Conflict.

Creative Status	Creative Objective	
	Connect	Disconnect
	Hobbyist	Master
Hobbyist	Invoke	Poke
	<ul style="list-style-type: none">Artifacts are complete and competently executed; the creative takes pride in work well done and are interested in the audience's reaction to the artifactwhether it invokes "the right" emotional response. Creatives refine the artifact to make their work more impactful to the audience.	<ul style="list-style-type: none">Artifacts that demonstrate creative's early steps are unveiled to generate critique; artifacts are often incomplete and the creative draws attention to specific shortcomings and solicits detailed feedback on what's (still) missing and on how they may improve their creative outcome and/or process.
Master	Evoke	Provoke
	<ul style="list-style-type: none">Artifacts trigger vivid emotional responses, often involving multiple senses (not just visual and musical, but also touch, smell, taste). Although the work is never "finished," the creative is stimulated by the palette of emotional responses to the artifact. They often sort through – accept or reject specific feedback – to better connect the audience to an underlying story (the essence of the art).	<ul style="list-style-type: none">Artifacts polarize the emotional reactions of the audience; the heated debate drives members into two distinct camps: those who attack the image and those who defend it on its technical and/or artistic merits. Creativity is redefined by the warring factions of the community, through vivid analogies to other artists and forms of art. Creativity grows through (refueled) controversy.

FINDINGS

During each wave of data sampling and analysis, we iterated between our insights, reviews of creativity studies (e.g. Amabile et al., 1996; Ford, 1996; George, 2007; Mumford, 2003; Oldham & Cummings, 1996; Shalley et al., 2004; Unsworth, 2001), and arguments concerning the (still controversial) role of conflict for creativity (Chen, 2006; Kurtzberg & Amabile, 2000). We also reviewed discussions of conflict and/or creativity in similar settings (e.g. DeFillippi, Grabher, & Jones, 2007; Gelade, 1997; Lampel, Lant, & Shamsie, 2000). Our typology of creative conflict, shown in Table 3, extends prior discussion on creative status and creative objective. We briefly link our dimensions with prior arguments and findings. Table 4 introduces and illustrates the four types of creative conflict that emerged from our multi-stage netnography.

Creative Status and Creative Objective

Members of the online communities range from “enthusiastic hobbyists” to well-established professionals. Their creative status influences whether, when, and how they seek out conflict. Furthermore, the effects of conflict on creativity are not homogeneous among hobbyists or masters. Instead, they are contingent on each member’s (dis)connect with the community. Newcomers’ early exchanges focus on specific shortcomings they think they need help addressing: they “poke” the community asking for guidance on how they can best fix these shortcomings. As their craft improves, hobbyists are more interested in how the community connects to their work and whether their creativity “invokes” the right emotional response. Masters are also interested in the connection of the audience with their work, but are more concerned about the variety of emotional responses their work “evokes.” Masters seek dissent, critiques, and perspectives that help them forge a deeper connection with their audience by increasing the vividness of emotional responses and/or covering a broader palette of emotional responses, for example. On some occasions, masters “provoke” extreme reactions – polarizing the emotional reactions of the audience. The heated debate between community members who attack the post or the creative and those who defend him or her on technical and/or artistic merits punctuates the disconnect between the individual and the collective. This conflict draws attention to the strengths and weaknesses of the creative and helps contextualize the value of his/her work.

Table 4. Creative Conflict Examples.

	AWN	VFX Talk	CG Society
Poke	“Pretty good coloring of the wood and the buildings are good looking models from a geometry stand point. You really need to concentrate on your bump and specular highlights. There are too many repetitious things going on in your trees too, they don’t mesh well with the other subjects stylistically”	“It seems [like] good work ... can you attach some wireframe or clay render with a symmetry mod applied? I see at the base of rear wheel some imperfection of the mesh ... is it? Let’s try to clean the mesh, shading is the next step ...”	“When you try to introduce something new, it should have a certain harmony to it, hope you know what I mean. [I] must agree, keep human proportions, the head and pectoral area is superb and the arms too, but the lower end of the torso is too small.”
Invoke	“I think you’ve come to the point where you should start thinking about dramatization, meaning not reproducing real life, but ENHANCING it to make the emotions you want the viewer to feel more prominent”	“Like it, it’s beautiful, from a comp perspective. I think desaturate and add more ‘film grain’. Also if the light outside is so ‘hot’ i would imagine the inside would have more contrast in the shadows. Perhaps a darker feel. Really nice tho!”	“I was expecting more bite from your image ... [...]. It’s not like I want to be hard on you but it’s ... Reach deeper and push harder for *your* work ... because that is the *real* representative of you ...”
Evoke	“So now, not only is life good, but your reel is as well! True the tunes were a bit loud, but that’s my only crit! Not only was the story laugh-out-loud funny (The kids and I did!) but the animations were incredible!”	“Hey friend ... it’s looking really cool ... it gives a feeling of moistured fresh chilling air with fragrance of wet grass.”	“Remarkable work, lots of emotion to decipher (or leave alone). I think that the blurred paper ashes are a nice touch, and slow down the image what with all of the combustible music sheets fluttering around. I also like the toes ... very nice, dirty and crooked toes.”
	“Bravo! Never seen [name of TV Show]. Your reel makes me want to see the rest.”	“Beautiful ... I Love your work man. Smooth, Clean, and always brings emotion. Thanks for the post. Keep it Up.”	

Provoke	<p>“Your artwork is very good, even the anime, but you are majorly twisted regarding North American animation, to the point that you must be evil, and I’m [character name] for chrissake. That’s all I have to say about this. Like it or explode.”</p>	<p>“It looks real WEIRD and fake. Sorry it just seems like things just don’t fit right looks too noticeable. Stuff like that is best when you can’t tell any VFX were used.</p>	<p>“The problem that I have with your submitted works is they’re too abstract and have no meaning. I don’t understand how the titles of your pieces relate to the pieces themselves. Sure, this comp is about computer generated, but this doesn’t mean submissions should only be interpreted as a mathematical algorithm; rather it should represent or mean something, as shown in other’s submissions.”</p>
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Poke

In the early phases of creative development, as the aspiring creative follows specific exercises to master both the traditional (i.e. artistic elements) and the technical aspects of the craft, he/she seeks feedback from community members on any gaps between his/her creative objectives and the expectations of the community. Newcomers often self-define in their early posts as newbies or hobbyists. They display their current level of artistic and technical proficiency and clearly qualify their developmental needs as they see them. Interactions with more established members help newcomers advance their own technical and artistic skills (Barley & Kunda, 2001) to the level of expected by potential employers (Barley, 1996). Interactions with less experienced others (Anand, Gardner, & Morris, 2007) give the creatives a sense of their own progression in the chosen field. Social exchanges also foster expectations of generalized reciprocity (Wenger, 2000) by modeling help-seeking and help-giving norms (Hargadon & Bechky, 2006).

Community members respond precisely to these developmental needs – often addressing them in sequence. At the same time, they often add feedback to highlight what they think the biggest gaps are. Critiques often focus on the scale, proportion, perspective, and the harmony of the image or animated movement: the basic elements required to master the craft. More experienced members push and prod hobbyists to further “study the nuances” and chide them for departing from “lessons” available within the community. They also encourage newcomers to “play” with different approaches and techniques. Although the creative gains offered may be “no big deal” for established professionals, they mark significant steps for the novice. Often times, the aspiring creatives keep (re)posting multiple iterations of the same artifact in response to specific critiques. This punctuates a rapid creative progression, and speaks to the function of conflict in the early steps of one’s creative journey in online digital imaging communities.

Hobbyists also explicitly welcome honest feedback on the work posted, and openly and enthusiastically express gratitude for the feedback received from community members – irrespective of the creative status of the feedback-giver: “Wow, some genuine feedback! Thank you both very much for taking a moment to post your respective comments” (AWN). Feedback is welcome even when the critique gets harsh, as a different hobbyist explains: “As I’ve stated before, I do not get upset at any remarks. I believe we are all constantly learning from one another” (AWN). As the original poster takes in this feedback, he or she often updates the posted work and articulates gratitude to the community for taking the time to make a

contribution to his or her creative development. Mistakes are openly acknowledged by the original posters in subsequent exchanges, who often directly address each specific critique and at times openly acknowledge, “this type of feedback will make my work better” (VF). Even when they do not yet have the skills to execute on the advice, the critique can be highly developmental and even inspirational:

I understand exactly what you mean and it would have been awesome if I did that. I guess it's because I didn't put as much thinking into the sequence as I should have done and as a result it looks kind of robotic. (AWN)

Invoke

Creatives showing promise are encouraged to move beyond simple exercises and mere reproductions to work that conveys a specific emotion, engaging the viewer in the experience of the artifact. Experienced members frequently emphasize that capturing and conveying emotions in an image or an animation is an essential feature of compelling work, as well as a step toward becoming a successful professional:

If you can do a purely mimed-out bit that makes someone laugh out loud, then you have a winner. If your work can move someone emotionally, then you'll be hired. (AWN)

Hobbyists that try to connect with their audience often seek feedback on the emotional reaction their posted artifact elicits from both experienced and novice viewers – they ask how they can craft the right feel in their work. Then they update the post, and ask again. Each piece of work can go through several iterations as the original poster attempts to understand and execute on the feedback. While each update may still fall short of its desired intent, the accumulation of feedback gradually illuminates the poster's understanding of how he/she can hone his/her technical and artistic competence to get the “feel” right.

Hobbyists seeking to emotionally engage the viewers seek detailed, comprehensive feedback. Replies request additional work, often soliciting renders of the object from a variety of angles and/or decomposition into the basic building blocks (e.g. wireframes in the case of a 3D model, or a video link that allows for a frame-by-frame analysis of an animation sequence). Examining the building blocks behind the work provides a learning opportunity for less experienced members (Franke & Shah, 2003; Hienerth, 2006). This additional background also provides further insight into the making of the image, and enables community members to offer

comprehensive, multi-layered critiques; these critiques are not only directly relevant to the creative outcome and the creative process, but they are also often explicitly linked with how the viewers connect to the image. These exchanges also increase the level of transparency and meaningfulness of the feedback received, helping the reader understand what was initially missing or identify a detail that should be changed because it “detracts from the impact of your message...so that when it arrives it doesn’t have much emotional influence” (CG).

Evoke

Creative work is never truly “finished” (Mace, 1997). There are many possible ways to enhance creative outputs or processes. As a creative improves his/her artistic and technical mastery, feedback offers a panoply of suggested “fixes.” Some of these changes may be minor; others outright distracting:

Everybody seems to have a different take on so many aspect of this painting – lighting, butterfly, nose, drool, atmosphere, etc. Take a step back and listen to what this picture tells you. I can’t get over how evocative this piece is. (CG)

Unlike hobbyists, well-accomplished creatives are not particularly interested in nitpicking. This is something they can do well on their own: a phenomenon so widespread that it is commonly referred to as “tweaker fever.” Furthermore, because they have already mastered the tools of the trade, they often go beyond convention, seeking to capture something from their imagination and communicate it visually. Masters typically post objects that they have worked on in their spare time. The inherent freedom in “non-client” work gives them an inspiration boost – and a chance to create images not bound by the constraints imposed by commercial work. Thus they often – deliberately – color outside the lines. Yet they are keenly preoccupied with how viewers connect to the essence of their work. Do they resonate with the key message? Does the atmosphere, mood, story come through eloquently?

The feedback sought revolves around the ability of the artifact (image, animation) to tell– or begin to tell – a story. Many posters comment on the atmosphere, mood – even bodily sensations – conveyed in the image. They explain how they were moved by what it represents. Most feedback is overwhelmingly positive, but in some cases posters single out specific details that interfere with the story, or may unintentionally undermine the overall

impact of the image. While a hobbyist might easily discard such details, they matter to the master. They would not change everything, but they will change those details that get in the way of the story as they envision it for the viewer. Perhaps because masters are so invested in their vision, experienced feedback givers are careful to downplay the relevance and importance of their feedback: they point out one thing they would have done a little different. At the same time, they go to great lengths to explain their different perspective. In contrast to the superlative praise provided by hobbyists, other masters often toy with the masterpiece. They frequently use a “paint-over critique” to communicate (more specifically illustrate) intricate artistic and/or technical changes. For example, they may overlay their changes to the original work. Perhaps to minimize the risk of offending the original poster, they often downplay interferences as offering “simply another view” (CG). In the majority of cases, such tinkering is genuinely appreciated by the poster because it points out which detail of the work needs attention, and why it may be important to address it:

Special thanks to [community member] for his paint-over, it finally made me see what everyone was talking about regarding the faintly ridiculous look of my first monster. (CG)

Provoke

Some masters go one step further to not only amaze but also provoke the viewer. They surface deep mental structures – which can be uncomfortable for the viewer (cf. Bourdieu, 2000). Such works may not be appreciated or easily understood. They typically trigger strong emotional reactions: some love the image, others hate it. Online communities acknowledge the importance of this type of polarization:

Most of the people who roam these forums are saddled with artistic desire for a reason, and that being to make the world a better place. To make others who don't have that ability stop and think, ponder new views and see the world from another perspective, or perhaps be provided with a short reprieve from the general [crappiness] mankind created for ourselves. (CG)

For the most part, commercially commissioned work does not offer opportunities for pushing these boundaries. Even within online communities there are specific lines that should not be crossed. For example, discussion forum guidelines explicitly prevent the posting of objects with religious or political undertones. However, controversial work is often posted in the communities' galleries, at times unwittingly, other times with the intention of sparking (heated) debates.

Such controversial posts often stand out by their exquisite quality. These are often displayed by well-established (and well-respected) professionals, widely known in the community and frequently recognized for their masterpieces. Many such masters see controversy as one (often necessary) way to advance the field:

It takes a bit of character to do something different ... and accept that with certain subjects and certain types of work that people will be ignorant to your efforts ... and try and marginalize the creation as false or prefab ... but if you are really into the work the creator of the work must continue to make it better ... and maybe there is evolution on both sides. (CG)

Most critiques target not so much the work, but the emotional responses of the viewers to the work. Some of the more frequent examples included the depiction of women in a way that some perceived to cross the boundary into pornography, or the technical production of art (e.g. the use of fractals to create abstract art). Creatives posting controversial work were clearly interested in viewers' reactions to the post. They also engaged one of the camps, typically the camp that vehemently (and at times personally) attacked their work. Exchanges were vivid, mostly passionate, but at times openly adverse to the artist and his/her work. As other community members "piled on" (i.e. engaged in personal attacks) the most vociferous critics, the original posters often rallied behind the poster, "But don't sell [...] short, he's a tremendous sculptor in his own right, self-taught too ... so I don't really think it's jealousy in his case" (CG).

The posters stand firmly behind their work. If anything, controversy appears to strengthen their resolve. They repeatedly emphasize that the interpretation of an image remains the purview of the viewer. If an image elicits an unwelcome or uncomfortable (emotional) response, then the onus is on the viewer to explore these reactions rather than fault the image. The original poster (and others) often reminded the viewers that many now well-respected masterpieces had seen their share of controversy. Analogies to such masterpieces emphasize the path-breaking nature of the work by implicitly recognizing its unusual creativity.

FROM DUAL EMOTIONS TO CREATIVE TENSION

In our study, conflict was generally welcome. However, engaging dissent, critique, and discordant opinions flushed out a mix of positive and negative reactions to one's own work and creative ability. Negative feedback

simultaneously encouraged and discouraged future effort. Our analyses also uncovered a paradoxical juxtaposition of positive and negative affect: creatives carefully explained how they manage and leverage the right tension between positive and negative affect in response to others' feedback.

Dewey (1934) spoke about the function of conflict in maintaining the so-called "creative tension." More recently, views of creativity as an "affectively charged event ... in which complex cognitive processes are shaped by, co-occur with, and shape emotional experience" (Amabile, Barsade, Mueller, & Staw, 2005, p. 367) drew greater attention to the impact of emotions. Significant research confirms that positive emotions are generally beneficial to creativity: they broaden an individual's capacity for cognitive associations beyond that which is familiar (Isen, Daubman, & Nowicki, 1987), increase flexible problem solving abilities (Isen & Daubman, 1984), and leverage contextual factors (Madjar et al., 2002). However, this is not always so. When positive emotions reflect contentment with the status quo or lack of critical thinking or perspective taking, they may inhibit creativity through a lack of impetus for change (Hirt, McDonald, Melton, & Harackiewicz, 1996). Similarly, negative feedback can be discouraging – but it can also be highly developmental, especially when it is couched with positive feedback (Zhou, 1998). Group norms against conflict tend to narrow receptivity to broader ideas (Ford, 1996). Conflict management techniques, which create harmonious environments may actually stifle creativity as these situations tend to thwart independent thinking (De Dreu, 2006).

George and Zhou (2002) explore situations where positive affect may have a detrimental effect on creativity while negative affect can enhance creativity. For example, they argue that negative moods are positively associated with creativity when perceived recognition and rewards for creativity are high. Other researchers (e.g. Martin & Stoner, 1996) indicate that negative moods can be a signal that the current situation is lacking in some respects and serve as a call for action (Kaufmann & Vosburg, 1997). Martin and colleagues (e.g. Martin, Abend, Sedikides, & Green, 1997; Martin, Ward, Achée, & Wyer, 1993) further suggest that the effects of a particular mood state are context dependent: both positive and negative affect may enhance or inhibit creativity (George, 2007; George & Zhou, 2002; Perry-Smith & Shalley, 2003).

Our findings suggest that the meaning and function of conflict depend on the individual creative. We have shown how creative status and creative objective influence the specific type of conflict sought by members of online digital imaging communities. We therefore took a closer look at creative

conflict (instances of conflict encouraging creativity) to better understand the interplay of opposite emotions (George, 2007) when creatives poke, invoke, evoke, and provoke. We examine each in turn.

Poke

Many hobbyists lurk around for some time before they muster the courage to open a discussion thread. Their first posts are often half-apologetic (they are new, young, inexperienced) and half-hopeful (they are excited about what they are, *finally*, able to share):

Hi, this is my first time posting on this site... I'm a 17 year old high schooler looking for some feedback on the animations I have done. Most of them are just experiments or exercises. [...] Oh and I also have a drawing section. [...] at the bottom I have a few pages from a sketchbook. Thanks for the look 😊. (AWN)

After several encouraging notes that “your stuff shows promise” and a couple of promising tips (e.g. improve the download speed), the hobbyist posts two follow-ups. These get the viewers interested:

It's interesting to see oldest to newest on your site. You start out looking like you'd never heard of spacing before in your life. By the time you get to the last animation, things are zipping around and doing moving holds, etc. This was done over how much time? (AWN Reply, Post#8)

Several viewers comment on the improvement, and the difference between the best and worst posts:

Looks good! However the difference between your best ones and your worst is huge. Your newer ones are starting to show a lot of sophistication with timing, spacing, and arcs. My biggest suggestion would be to remove the old and not so good ones, they just bring down the gems. Try and be harsh on yourself when selecting which ones to remove, it'll be good practice when it's time to put your reel together... always always quality over quantity, and you got some good stuff going there. Keep it up. (AWN Reply, Post #17)

This encourages the creative to post additional follow-ups, but he also confesses that he “wasn't really happy with any.” This “unbalance” gets quickly redressed by friendly advice to “Have Fun. Be happy about your progression.” The creative posts again. This time viewers' reaction is enthusiastic:

Can't wait for more. MORE! (Please?) And only a senior? Wow. I wish I had your talent back when I was in school (heck, I'd like some of it now!). I'm sure I won't be the only one trying to keep track of your career. (AWN Reply, Post #23)

The positive cycle accelerates; better work gets posted, ever more quickly; posts are urged on by notes like “Seriously, very nice work. I am very impressed (and all before most of the forum saw the original)” (AWN, Post #27) and “that’s a kick in the butt for everyone else out here” (AWN, Post #39). Then one of the champions recommends: “go in and do the extra work now. The hard stuff’s worth it” (AWN, Post #41). The hobbyist takes some time to work. Then returns 2 days later, with a humble re-opening, “Sorry I haven’t updated in a while. (been doing more drawing than animating lately)” (Original Poster, #45) and quickly initiates another cycle. The same sequence happens again: “Haven’t posted in a really long time, I’m sorry. I have been doing mostly drawing lately but I still have a lot animations to show you” (Original Poster, #72).

In this example, the hobbyist depends on the viewers for initiating and accelerating the positive cycle; but he also contributes by returning back with more and better artifacts each time.

Invoke

When newbies or newcomers ask for feedback, they often explain upfront their lack of experience, or at least ask for help in evaluating their own creativity (their talent, performance, job prospects):

I’ve been told a lot in uni[versity] and by other people that I’m very talented at 2d animation but for a long while I haven’t been sure if I’m even close to what studios are looking for. I mean I probably have the skills required for a studio but I certainly don’t have the experience required (e.g. internships etc) at current all I have is 3 freelance jobs (two of which I applied for, 1 came to me). Would the fact that a person applying for an animation job with very high quality work but no experience in an animation field put an employer off entirely from employing them? [...] I mean, how far do you guys think I am from a professional standard from these pieces? (AWN)

This framing makes salient positive affect (I am very talented; I am very close) and negative affect (but I certainly don’t have the experience required). It also juxtaposes them by asking whether talent may compensate for lack of experience, more specifically how much better would the quality of the work need to get to relax the lack of experience constraint. This emotional duality repeats throughout his post:

I’m probably torn on this because on one side I have people saying “you’ll have no trouble at all” and on the other side I hear “GETTING INTO THE INDUSTRY IS AS HARD AS WINNING THE LOTTERY, YOU ALL HAVE NO HOPE.” (AWN)

Notice how this balance is echoed by different replies:

Based on what I have seen in the two walk cycles, your animation skills are solid, but I don't think your drawing ability is where it needs to be based solely on those two samples [...] Based on your samples You are not quite there yet, but are pretty close. (First Reply, AWN)

Your two demos look good ... I would say put a demo reel and portfolio together of your best work and send it in to the studios. What's the worst they can say, "no?" If that's the answer then, you know you have to work harder. But if they like your work and you have the talent you are looking for, then they'll most likely hire you. (Third Reply, AWN)

The poster "responds" to these replies by moving beyond the initial duality to explicitly articulate how positive and negative affects come together to sustain much needed creative tension for his development:

I know I have to up my level of work in order to impress potential employers so getting comfortable with my current quality of my work would probably stop me ever feeling the need to improve. Plus your reply gives me an interesting insight to what employers will be looking for in my work so with any luck I can go out and hit the right notes in my show reel. I was a bit inspired to make another walk cycle just to see if I could make it walk different and less mechanical way. (AWN)

Evoke

Well-established creatives also contextualize the post; however, the details they offer speak directly to the creative outcome and the creative process they had followed. Notice how delicately and painstakingly a creative describes her Photoshop painting posted on CGsociety:

There's so much I could say about this piece. I feel like it has a rich story, but I want to see more of what's beyond that fence. I tend to think of my non-client-driven work as vignettes based on a certain mood more than illustrative representations of an event, but I think this one is both. My husband is responsible for some of the symbolism – he saw what I was working on at the start when it was just a lass and an amorphous instrument, and would send me excited emails as it developed detailing the life and times of our red-haired protagonist – "... she's an only child, no older brother to take over the farm when her dad dies, or to keep the family name. She's been trying to adapt for so long, and in this moment she's wandered off to have a moment to herself, in her nice dress instead of her daily farm clothes."

Technically I think this one is worth a look. I took much longer to consider certain elements than I normally do, and switched up references a couple times. For example, I had a photo reference of a friend I was using for the dress and body posture, but the hands looked stiff, and a lot like mittens, so I had to change that and referenced my

hands instead. I'm really trying to get better about making conscious decisions instead of taking something that doesn't work and beating it to death. It's especially easy to let a reference photo make bad decisions for you if you're not mindful.

I'm also getting better at combining referenced areas with imagined stuff, which is so important for consistency. The head/neck were both from imagination, but the hair was behaving the same way as the hands, stiff stiff stiff, so I reworked it until it looked right, (which in total was about 12 times).

I will stop talking now, but feel free to ask if you have questions! Enjoy. (CG)

Taking a closer look at this description, one notices the lingering juxtaposition of positive affect (I feel, I want, I tend to think) and negative emotions (I took much longer to consider certain elements than I normally do, and switched up references a couple times; I'm really trying to get better). An even more attentive read identifies the connection between the two, the many "buts" that transition the creative from a hurdle to a silver lining: "The head/neck were both from imagination, but the hair was behaving the same way as the hands, stiff stiff stiff, so I reworked it until it looked right (which in total was about 12 times)."

After numerous and highly positive replies, several viewers pick up on a tiny detail – the fences – then they look closer at how the model is sitting on the fence, her dress details, her balance, finally her anatomy:

I'm with you on the fence; I didn't want it to take away from the vines or the dress, but maybe some more texture would have popped it, and made it a bit more consistent with the level of detail elsewhere. As far as the legs go, she's sitting, so it should be foreshortened, but maybe some additional highlights/shadows on the dress would have made that more clear? What do you think would improve that area? (CG)

Another viewer does a paint-over. He notes, "It's not of humongous importance, but [...] correcting these could boost a great piece to a godly piece." (CG). The creative hears the critique – then she harnesses positive emotions to overcome the negative feedback.

Actually your paintover shows that you have a very GOOD grasp of anatomy![...] I'm still thinking it's a matter of definition in the dress-it looks from the paintover it might be unclear where her butt is, and that it's resting on the fence, because of how the dress is flouncing. In your drawing, we're also assuming that the butt isn't conforming to the shape of the fence beam, but it's sitting on top flat like a chair. If it had a bit more "smoosh" to it, we might see the knees raise up a bit, lengthening the shins, but I know that's a really really nitpicky detail, and I appreciate the time you took to illustrate your point. It's something I'll keep in mind the next time I work under a poofy dress 😊. (CG)

Provoke

When creatives post provocative pieces they often say little upfront. The momentum builds gradually, with viewers commenting first on the quality of the technical execution. Then the attention turns to the character. For example, in a CGsociety post of a fictitious portrait, some viewers see it as a real person, and personalize her looks, feelings, minute details. After a couple of dozens of commendations, a viewer challenges the image, somewhat tentatively: “Even when containing nudity even I have to say this is really something” (CG). After a few more dozens of exchanges, a viewer jokingly notes: “That’s a bit saucy for you [name of poster]!” (CG). The creative replies, “there’s no hint of sexuality.” The back and forth continues, with some viewers discussing *her* age, even attitudes while other comment on the “crazy good” quality of the technical rendering of a fictitious character.

What caught our eye was the emotional reaction of the creative to the increasingly discordant feedback. At first, his reactions are subdued. As the conflict escalates, viewers encourage stronger reactions:

That’s the best work I’ve seen from you so far ... really great stuff. Did you just start with a simple, posed base Mesh? I like the forms you portrayed here, you didn’t go for the stereotype kinda shit that you usually see, but this quirky, little lady – she’s still beautiful, though. Good stuff and great exercise. And no matter how many people you pissed off, this should be frontpage, cause it’s inspiring. (CG)

As criticism grows, the creative tries to restore the balance. For example, when a viewer notes, “The rendering and anatomy are superb!!” and asks, “How old is she? She looks about 12,” the creative responds simply: “She’s two weeks old. That’s how long it took me to make her” (CG). This triggers another bay of positive feedback.

As dissent escalates, he again starts to rebalance the argument, throwing more and more heat as the discussion becomes more personal. This again restores attention to the art; it buys more time. However, a viewer ends up explicitly accusing the creative:

While I can appreciate the technical ability required to create this image, the subject matter bothers me. Not the nudity in itself per se, but the fact that she is naked AND looks about 14 years old is a problem, I think. (CG)

This stirs up strong negative emotions. The original poster again attempts to restore a balance, by emphasizing reasons why he and

other viewers should not feed negative emotions and instead focus on the positive:

For everyone complaining that she looks 'too young' (which means different things in different countries anyway, for example in the UK it's perfectly legal for a 16 year old girl to display her breasts in a national newspaper in a clearly sexual context, while in other countries it's illegal for women to be seen at all).

All I can say is take a look in the Louvre some time. You'll see plenty of paintings and sculptures depicting naked children and adolescents.

I don't see much point in me giving the girl in the image some arbitrary age to satisfy certain morally confused people. I could say any age and you'd have to accept it. There's clearly no sexual connotation here, so it's not an issue for me. (CG)

DISCUSSION

Creativity is often rife with tension and paradoxes (Schulz-Hardt et al., 2008). It benefits from positive feedback as well as from dissent and critique (Zhou, 2008). Observers of cultural industries comment on the beneficial effects of conflict on creativity (Dannenbaum et al., 2003; Hirschberg, 2007; Segal, 2009). However, our understanding on the explicit links between conflict and creativity in this context remain limited (DeFillippi et al., 2007; Gelade, 1997; Lampel et al., 2000). More broadly, the mainstream literature on creativity still lacks systematic attention to conflict (George, 2007; Shalley et al., 2004; Unsworth, 2001).

Our findings reiterate the importance of conflict in creativity: in online digital imaging communities, conflict is sought after, explicitly engaged, and often leveraged into improved creative outcomes or processes. We begin to explain how conflict influences creativity by explaining how the links between conflict and creativity are qualitatively different for hobbyists and masters. While conflict often has immediate benefits for both hobbyists and masters, in that even small changes in their artifacts (i.e. creative output) can make their work much more impactful, conflict often revolves around "the biggest problem" for the hobbyist and around "one small thing" for the masters. We also observed that conflict is laced with praise – not to dull the edge of the critique, but rather to single out the bad from the good. As mastery increases, the praise focuses more holistically on what the work conveys, pointing out the excellent in order to protect it from tampering. Put differently, creative conflict shifts from what really needs to change to

what ought not to – while seeking to push everyone else one step further in their craft.

We also speak to the importance of the *Creative Objective*. We draw attention to creatives' ability to either disconnect from or connect with a specific audience. Both disconnect and connect can enhance creativity; they redirect creative energy by (re)focusing critique toward specific aspects of the creative outcome and/or process. This insight dovetails with prior arguments that creatives may deliberately seek out or nurture dissent (see Schulz-Hardt et al., 2008 for a review). It also suggests that these efforts are often carefully calibrated to serve the specific objectives of each creative, at a given stage of their creative journey.

The most important implication of this chapter concerns the tension between positive and negative affect. Negative feedback is often carefully reframed by the recipient to help him/her act on the advice of other community members. The members do not simply seek positive or negative feedback. Rather they seek to strike just the right balance between disappointment in the prior interaction and anticipation of the next iteration. Feedback is important, but only a starting point. Our findings draw explicit attention to the agency of individual creatives in guiding the feedback they receive to increase its relevance to the recipient. Our analyses also suggest that dissent, critique, and divergent perspectives – even heated disagreements – are not unambiguously positive or negative to the feedback receiver. Often, the individual sorts through, reframes and interprets negative impact positively, or vice versa. The functionality of conflict for individual creativity is not simply a by-product of social exchanges. Conflict is part and parcel of creativity. Despite some qualitative differences in creative status and creative objective, individuals consistently adjust their search and their processing of negative feedback to get at creative conflict: conflict that helps them advance along their own creative journey.

Theoretical Implications

Our findings extend the literature on creativity by fleshing out the role of conflict and emphasizing the interconnections between individual creativity and social interactions. We also highlight the overlap and close interplay between creative outcome and process in real-life interactions. We revisit each of these in turn.

Our primary contribution speaks to whether, when, and how conflict translates into creativity. Prior studies found mixed creativity effects for

both positive and negative feedback (Ford, 1996; Zhou, 2008). They also found that a combination of positive and negative affect can enhance creativity in specific settings and circumstances (George & Zhou, 2002; Martin et al., 1997; Martin et al., 1993). We help reconcile prior evidence that negative feedback, and negative affect can be a call to action (Kaufmann & Vosburg, 1997; Martin & Stoner, 1996) – but may also inhibit creativity (George, 2007; George & Zhou, 2002; Perry-Smith & Shalley, 2003) – by showing how individual agency in seeking and processing feedback makes it more likely that negative feedback will stimulate creativity. Even when negative feedback triggers negative affect, we observe that individuals deliberately reframe the feedback to strike a balance between negative and positive affect. This balance maintains “creative tension” by simultaneously signaling the need for change and enabling positive anticipation of future efforts.

A secondary contribution speaks to the interplay between individual and collective creativity. Some studies have considered group creativity as analogous to, or the aggregate of, individual creativity (Drazin, Glynn, & Kazanjian, 1999; Gilson & Shalley, 2004; Pirola-Merlo & Mann 2004). Others emphasize the enabling (Hargadon & Bechky, 2006) or hindering (Mumford, 2003; Woodman, Sawyer, & Griffin, 1993) effects of collectives on individual creativity. But while the jury is still out on the empirical relationship between individual and collective creativity (e.g. Oldham & Cummings, 1996; Shalley & Oldham, 1997), there is increased agreement that creativity is, at least in part, socially constituted: social interactions generate new insights (Drazin et al., 1999; Sutton & Hargadon, 1996); these insights evolve through repeated interactions (Hargadon & Bechky, 2006); and, at times, collectives reach solutions out of reach for individuals (Fuller et al., 2008; Von Hippel & Von Krogh, 2003). The beneficial effect of social interactions has been documented within professional communities (e.g. O’Mahoney, 2003), where practices of actively soliciting the advice of others (help-seeking) and spontaneously assisting others who are in need of guidance (help-giving) can surface novel insights (Hargadon & Bechky, 2006; Wenger, 2000).

Our study suggests mutual causality between individual and collective creativity, with a quick feedback loop. Individual creatives tap into collective creativity; they poke, invoke, evoke, and provoke. Social exchanges help them gather relevant and timely feedback, which they can leverage to further their own creative outcomes and hone their creative skills. As a result, subsequent interactions get more narrowly targeted, elicit more precise feedback, and thus help individual creative achieve greater benefits. This agency is not complete: individual creatives are vulnerable to harsh,

damaging, or misguided feedback. In our study, multiple social exchanges mitigate to some extent against such effects. Take, for example, the following sequence of replies posted by two different community members:

Forget what these jerks are telling you bud ... your walk cycle has good movement. This is what a potential employer wants to see ... this is what the Richard Williams of the world are trying to teach us. [...] Forget the over-lords on this board trying to discourage you ... ask them ... ask them to show you their great drawing skills [...] Breaking into one of the big studios can be hard ... but you either have the talent or you don't ... and from what I've seen you do have talent. But these over-lords in this forum will try to hold you down ... hold you back and try to tell ... wait till you're 50 by then you will have paid your dues!! [...] In fact I encourage you to ignore them ... because they are likely to lead you down the same path ... everyone takes ... destroying your creativity and ensuring that your work will look like the 1,000's these employers see everyday!!! (First Reply, AWN)

[First respondent] is someone who is not in the business, has never worked or taught as a professional animator or ever hired anyone in the animation business. I have done all those things. Take the advice given based on that. (Second Reply, AWN)

Notice how the exchange helps the newbie take “the right” advice to improve his creativity:

I found the information you gave me very, very useful [second respondent], I know I have to up my level of work in order to impress potential employers so getting comfortable with my current quality of my work would probably stop me ever feeling the need to improve. Plus your reply gives me an interesting insight to what employers will be looking for in my work so with any luck I can go out and hit the right notes in my showreel. I was a bit inspired to make another walk cycle just to see if I could make it walk different and less mechanical way. [...] again thanks for the reply [...].

[First respondent]: some of the points you made make sense, [but ...] I feel listening and taking onboard the information I get from professional artists who have made it into the industry almost priceless in molding myself into what the employer wants. Sure It would be great if I tried to apply for a job right now but I know that my work doesn't quite cut it especially from all the shear talent I've seen around the internet but seeing that kind of quality doesn't make me want to give up at all. It inspires me to continue.

A third theoretical implication concerns the (in)separability between outcome and process. *Amabile's* (1988) initial definition of creativity encompassed both an outcome as well as a process. However, creativity research has shed more insights on the antecedents and contingencies of creative outcomes (*George, 2007*). Creative processes have been comparatively under-researched (*Shalley et al., 2004*). Extant views of creativity as a process draw on *Csikszentmihalyi's* (1988, 1997) systems view of creativity, which has three interrelated subsystems – the individual, the

field (i.e. the individuals that both populate and effect the structure of a domain), and the domain (i.e. rules, language and norms of a recognized area of action). Our study underscores that the creative outcome of an individual are hard to disentangle from the cognitive, behavioral, and emotional engagement that motivates the creative act (Drazin et al., 1999; Ford, 1996; Kahn, 1990). Yet by paying close attention to social interactions, we glean some preliminary insight into the interconnections between creative outcome and creative process. In our study, creative outcomes often represent an occasion for reflection on creative process, much like artifacts can offer occasions to engage in sensemaking processes (Bechky, 2003). These reflections help revise and refine the creative outcomes – typically by addressing underlying (in)abilities. While our study does not speak directly to the micro-interactions between creative outcomes and process, it suggests that future research on creativity may tackle this thorny question head on. Online communities can offer a great starting point due to the richness and detail of social exchanges.

Practical Implications

The inherent tension and disequilibrium in the creative process (Runco, 1994) has been discussed by many researchers studying the cultural industries (e.g. Lampel et al., 2000; Lampel, Lant, & Shamsie, 2006; DeFillippi et al., 2007; Tschang, 2007) but the mechanisms and processes that creative professionals use to navigate these tensions remains largely unexplored. Our findings speak directly to how individuals deliberately manage their creative journeys within online communities: first by poking, invoking, evoking, or provoking reactions and second by carefully reframing the feedback obtained from the community to achieve the right “creative tension” (Dewey, 1934). Our findings suggest that both hobbyists and masters do not simply seek conflict, as some prior anecdotes may suggest (Dannenbaum et al., 2003). Rather they seek a balance of positive and negative affective reactions. By juxtaposing disappointment in prior iterations with anticipation of future iterations, they can maintain creative momentum while taking an active role in (re)crafting their own creative journeys.

Indirectly, our findings offer some insight into the creative tension experienced by creatives in other settings (Rank, 1945) such as when creatives complete commissioned work within the constraints of the market (Gelade, 1997). Prior studies suggest that creatives seek both positive and negative feedback from peers when they try to get their work accepted

commercially (Hackley & Kover, 2007). Our findings suggest that organizations that employ creatives or outsource creative tasks may be able to increase the creative output and process of their employees/contractors by facilitating balanced and timely feedback.

Creative tensions are not unique to commercial creatives or the cultural industries. Employees in other organizational setting also experience the tensions between operating within existing control systems and standardized routines on the one hand, and the desire to come up with new and better ways of doing things on the other (Zhou & George, 2003). Our study pushes the debate on the type and consequences of feedback one step further, by drawing attention away from the valence of feedback (Zhou, 2008) and focusing more closely on the (re)framing and (re)interpretation of feedback by individual creatives. Our findings also suggest that individuals play an active role in shaping their own creative journey – emphasizing their agency may encourage them to more openly seek and engage conflict, in ways that better leverage the inputs obtained through social interactions or collective “aha’s.”

Limitations and Extensions

Our study is subject to the typical limitations of netnography. Through the adaptation of ethnographic methods, such as making an entrée into the community, gathering and analyzing data, and ensuring trustworthy interpretation to the computer-mediated environment (see Kozinets, 2002, 2006), we were able to observe and document aspects of creativity unfolding in real-life that were previously accessible by chance, i.e. being in “the right place at the right time” (Langer & Beckman, 2005). However, due to the sensitivity of the topic and the reactivity of respondents, our ability to triangulate our observations and analyses of online discourses with the hidden motives of the participants or their creativity in other settings remains limited. But the robustness of our insights to both random and deliberate sampling of community members that differ in creative status suggests that heterogeneity in undisclosed motivations does not systematically affect our reported findings. Nonetheless, future research may delve deeper into the differences between online discourses and the hidden motives of the community members, especially to understand whether and when their on-stage presentation may differ from their off-stage creative motives.

Additional research on the differences between immediate and long-term gain is also a welcome extension of our work – our data and analyses are

focused on creative conflict, i.e. on critical exchanges that trigger specific changes in creative outputs and processes. However, discussion threads can also offer rich insights into the progression of creative identities along their creative journeys (Maier & Branzei, 2009). Creativity may not proceed in a linear fashion but rather in chaotic bursts sparked by issues or problems that arise (Drazin et al., 1999; Klein, Dansereau, & Hall, 1994; Peterson, 1998). We still know little about how individual search for and interpretation of negative feedback may vary within broader opportunities and constraints for agency. Future studies may take a structuration approach (Giddens, 1994) or a practice-based perspective (Jarzabkowski, 2005) to take a closer look at how individual creatives may respond or influence social interactions within more (or less) constrained setting. Finally, we need to better understand the connection between creativity in online communities and creatives' professional lives. For example, we still know little about how their creative focus, process, and outcomes may differ in these two settings. We also need a better understanding of any trade-offs or synergies between the time spent on serious play in online communities and their inspiration and productivity on commissioned work. Future research designs can pursue these worthwhile directions by observing community members online, off-line, and in commercial settings/tasks. Future research can focus on members that are similar in some respects (e.g. creative status and creative objectives) but differ in their off-line and work assignments.

Another limitation of our study, common in qualitative studies, is the limited generalizability of our findings. Our data represent a very small fraction of all the exchanges happening in discussion forums. Although we sampled both randomly and purposefully, and were mindful to create opportunities to validate or invalidate our findings at each stage of our data analyses, errors of omission are possible. We may have missed specific types of conflict that were not evident in the threads we sampled. As technique changes, and artistic standards evolve, new types of conflict might emerge. These omissions offer fruitful avenues for future research.

CONCLUSION

This study explores that creativity grows through social interactions, specifically how conflict in its various forms (dissent, critique, debate, disagreement, divergent perspectives) enhances creativity outcomes and processes in online digital imaging communities. We examine real, longitudinal sequences of the exchanges around artifacts and the artistic and

technical skills displayed by online community members to explain the paradoxical observation that online community members often seek out and deliberately engage conflict to stimulate their creativity. We contribute to the literature on affect and creativity by showing that conflict arouses dual emotions to both challenge and protect each member's unique contribution while urging hom/her along his/her creative journeys. This affective tension is present in four qualitatively distinct types of creative conflict – each depending on the creative status and the creative objectives of each community members. We leverage the initial insight that online exchanges reflect somewhat varying combinations of positive and negative feedback (i.e. praise and critique), to probe further in the role of feedback (Zhou, 2008) and dissent (Schulz-Hardt et al., 2008).

Our analyses bring to the fore the “right” combinations of conflict and creativity, explaining how these differ for hobbyists versus masters and based on each member's motivation and ability to creatively connect with or disconnect from the community. Taken together, our findings suggest that conflict provides an opportunity to reconcile the growing rift between creativity as an individual construct and creativity as a product of social interaction. Our multi-stage netnography shows how social interactions help surface, qualify, and calibrate conflict to encourage individual creativity. Furthermore, we observe that social interactions are not deterministic. Rather, members signal and guide social interactions toward aspects of the creative outcome and process that are more important to them. They do so both by initially seeking conflict and later engaging conflict – emphasizing or de-emphasizing it – to maintain an optimal level of emotional tension. These insights complement and extend prior field findings on the function of collectives in providing positive feedback (Hargadon & Bechky, 2006) and prior lab findings on the constructive role of dissent (Schulz-Hardt et al., 2008) and draw greater attention to the non-obvious but critical role of affect in creative endeavors.

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