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경영학 석사학위논문

**Effects of Managers' Depletion of
Emotional and Cognitive Resources on
Their Innovative Performance**

경영자의 감정, 인지 자원 소진이 혁신적 성과에
미치는 영향

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ABSTRACT

Effects of Managers' Depletion of Emotional and Cognitive Resources on Their Innovative Performance

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This research explored the mechanisms involved in emotional labor's hindrance of managers' innovative decision-making. One of main findings was that negative emotions led to cognitive and emotional exhaustion by making managers recall unfair experiences. The occurrence of intrusive thoughts resulted in cognitive closure, weakening radical innovation more than incremental innovation. This study also found that deep acting was a better emotion regulation strategy than surface acting in mitigating the negative effects of emotional labor on emotional and cognitive exhaustion. That was because deep acting involved efforts to change one's true feelings to the required emotions through reappraisal and positive refocusing. The results suggested that firms needed to monitor the extent of their managers' emotional labor to make the most of their innovative capabilities.

Keywords: emotional labor, deep acting, surface acting, radical innovation, incremental innovation, managerial cognition, managerial decision-making, information processing

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I . INTRODUCTION

The cognitive orientations of managers, CEOs, and the top management teams (TMT)'s play an important role in organizational innovation (Barr, 1998; Bobbitt & Ford, 1980; Ranson, Hinings, & Greenwood, 1980), which requires non-routine problem solving (Larkin, 1983; VanLehn, 1988) and the active search for solutions (Argyris, 1996). Administrators in dynamic environments need to make intentional and intensive efforts to acquire, interpret, and absorb new knowledge at work (Daft & Weick, 1984) and to apply new ideas, methods, or practices. Hence, managerial attention, understanding, and appraisal of new information are considered to be significant factors in the innovation decision process (Greve & Taylor, 2000). Henderson and Clark (1990) also suggested that a manager's perception plays an important role in executing innovation because cognition is responsible for attention, which is responsible for channeling stimuli (Simon, 2013).

In studying the relationship between a manager's cognition and innovation, a discussion on emotion is inevitable, because emotion greatly affects attention. Stimuli at work arouse managers' emotions by interacting with past experiences stored in their memory (Beike & Wirth-Beaumont, 2005). These emotions tend to interrupt managers' attention and bind their attention to the thoughts that evoked them (Simon, 2013: 91). Emotions thus impinge on how employees interpret new knowledge and change (Huy, 1999). Against this backdrop, Choi, Sung, Lee, and Cho (2011) found that both cognition and emotion are integral to innovation implementation, because human being's decisions and behavior are bound not only by

rational thinking, but also by emotional responses (Brief & Weiss, 2002; Huy, 2002).

Past research has failed to explicate the mechanism for the effects of emotional labor on performance (Halbesleben & Bowler, 2007). Sullivan and Bhagat (1992) pointed out that a more proximal antecedent of performance should mediate this relationship. Also, previous studies on innovation and emotion have remained abstract, lacking empirical evidence (Kark Smollan, 2006; Liu & Perrewé, 2005). To fill in this research gap, this paper aims to look into a manager's innovative performance as an antecedent. This paper aims to analyze the interplay of emotion and cognition at the individual level, because interaction, relationships, and connections among individuals across the organization are pivotal to innovation implementation (Subramaniam & Youndt, 2005).

II. THEORY AND HYPOTHESES

1. Conservation of Resource Theory

Existing research on emotional labor is grounded on the Conservation of Resource theory (COR). Hobfoll (1989) suggested that people have four kinds of resources: *energies, personal characteristics, conditions, and objects*. These resources are basic to coping strategies (Hobfoll & Shirom, 1993). When people are threatened with a loss of such resources, they feel stress and depletion of these resources, which leads to burnout and emotional exhaustion (Glomb, Kammeyer-Mueller, & Rotundo, 2004b; Glomb & Tews, 2004).

The conservation of resource theory suggests that resources play a critical role in preventing psychological strain outcomes (Hobfoll, 1989). This theory argues that human beings have a finite reservoir of psychological, emotional, and physical resources. Resources refers to “objects, personal characteristics, conditions, or energies that are valued by the individual or that serve as a means for the attainment of objects” (Hobfoll, 1989: 516). People make efforts to build and preserve their resources, such as physical health, self-efficacy, skills, and social assistance (Hobfoll, 1989). These resources are used to meet work demands and people experience exhaustion when they run out of resources (Hobfoll & Freedy, 1993). The model of conservation of resources is based on a stimulus-response process and thus predicts psychological strain like emotional exhaustion. Job demands, such as emotional labor, necessitate adaptive responses and consumes psychological and emotional resources (Wilk & Moynihan, 2005).

Managers find many occasions to feel negative emotions at work, because conflict of interests leads to disagreement (Katz & Kahn, 1978). The experience of dissension and strain not only evokes an emotional response, but also calls for cognitive resources to deal with the situation (Frone, 2000). Under negative emotions, worker’s cognitive resources cannot be properly channeled into tasks (Carnevale & Probst, 1998). For this reason, previous studies found that emotional strain at work hampers trust, organizational commitment, satisfaction, and identification (de Wit, Greer, & Jehn, 2012) by making group members waste time on issues unrelated to their tasks (Evan, 1965).

Existing research on conservation of resource theory is deeply rooted in affective resources (i.e., emotional exhaustion, burnout, psychological well-being, and stress), and also confined to experimental settings (Geng, Liu, Liu, & Feng, 2014; Heilman, Crişan, Houser, Miclea, & Miu, 2010). Scant research attention has been paid on the relationship between negative emotions and creative performance (Carnevale & Probst, 1998). Thus, to fill these research gaps, this paper aims to examine the relationship between emotional labor and innovative capability in the field.

Owing to the development of technology and mechanization, compared to workers in the nineteenth century, employees today are burdened less with physical work, but experience more cognitive and emotional demand in workplaces (Glomb, Kammeyer-Mueller, & Rotundo, 2004a). Since Hochschild (1983) coined the term *emotional labor* in her book *The Managed Heart*, several researchers have studied emotional labor (Ashforth & Humphrey, 1993; Diefendorff & Richard, 2003; Grandey, 2000; Guy, Newman, & Mastracci, 2014; Kruml & Geddes, 2000; Meier, Mastracci, & Wilson, 2006; Morris & Feldman, 1996), which is defined as “an act of displaying socially desirable emotions” (Ashforth & Humphrey, 1993) or “management of one’s feelings to create a publicly desirable facial and bodily display” (Hochschild, 1983).

Emotional labor is “the process of managing feelings and expressions to fulfill the emotional requirements of a job (Hochschild, 1983).” Employees need to fake, suppress, and manipulate their true feelings at work (Grandey, 2003). This *display rule* consists of a *positive display rule* and a *negative display rule* (Ekman & Friesen, 1982; Rafaeli & Sutton,

1987; Sutton & Rafaeli, 1988; Wharton & Erickson, 1995). *The positive display rule* denotes expectations to display positive emotions, while *the negative display rule* represents requirements to suppress negative feelings (Austin, Dore, & O'Donovan, 2008). The latter is also called *expressive suppression*, referring to suppressing emotional expression (Gross, Richards, & John, 2006). Emotional labor and negative affectivity are closely connected (Bono, Foldes, Vinson, & Muros, 2007; Bono & Vey, 2007).

Emotional labor makes employees perceive that they are estranged from their true self (Grandey, 2003). Even though employees feel angry or insulted from interpersonal interactions at work, in many cases, they are required not to vent their anger or pretend not to get hurt because the other party is their boss, client, or elder. This *emotional dissonance*, the discrepancy between expected and experienced feeling, can deepen *depersonalization* and lessen the motivation to achieve, thereby harming organizational performance (Hur, Moon, & Jung, 2015b). As such, emotional labor increases turnover, absenteeism, and work withdrawal, and decreases job performance, service quality, and customer satisfaction (Hur et al., 2015b; Kammeyer-Mueller, Rubenstein, Long, Odio, Buckman, Zhang et al., 2013; Medler-Liraz & Seger-Guttman, 2015; Nguyen, Groth, & Johnson, 2013; Rathi, 2014; Scott, Barnes, & Wagner, 2011; Yang & Guy, 2014).

Emotion regulation has a resource-depleting effect, since self-control involves the consumption of regulatory resources (Diestel & Schmidt, 2011) from a finite reserve. For this reason, emotional labor leads to emotional exhaustion and burnout (Glomb et al., 2004b; Glomb & Tews, 2004). It also leads to physical symptoms, such as problems with sleep and ill health

(Schaubroeck & Jones, 2000). To date, this display rule has been studied primarily in the service context (Ekman & Friesen, 1982; Rafaeli & Sutton, 1987; Sutton & Rafaeli, 1988; Wharton & Erickson, 1995). However, a growing amount of researches has shown that emotional work goes beyond low-paying or front-line service jobs (Akkawanitcha, Patterson, Buranapin, & Kantabutra, 2015; Glomb et al., 2004a). Professional service workers like lawyers, CEOs, and marketing advertising directors also encounter high degrees of both cognitive and psychological demands in their jobs (Burch, Humphrey, & Batchelor, 2013; Glomb et al., 2004a; Humphrey, 2012). Thus, employees face varying degrees of emotional labor at work, regardless of their ranks in organizations (Glomb et al., 2004a), by interacting with organization insiders, such as supervisors or coworkers, and outsiders, such as clients or customers (Hsieh, Yang, & Fu, 2012).

This study looks at emotional labor experienced by managers, an outcome not previously studied. This paper tries to extend previous research on emotional labor by showing that not only service workers, but also managers are subject to emotional labor. Studies in the past found that managers meet several people inside and outside of the organization (Mintzberg, 1997), and thus have many opportunities to get offended by others' acts in relation to task problems and mistakes (Kiefer, 2005). They are subject to emotional labor, because they cannot vent their anger, or express their true emotions to others, so as not to disappoint clients or to maintain a good relationship with subordinates.

Lazarus (1991) suggested that anyone feeling negative emotions and lacking enough resources to handle the challenge will view the current

situation as self-threatening (Smith, Haynes, Lazarus, & Pope, 1993). Facing difficult challenges, managers are likely to experience negative emotions. However, they cannot express inner feelings because of social expectations placed upon them. For example, leaders are required to appear amiable and good-tempered, even though they may actually feel disgusted. A manager also has to look calm while suppressing anger. A CEO should appear caring, while hiding their revulsion at a subordinate's betrayal. This self-control consumes affective resources and results in emotional exhaustion (Diestel & Schmidt, 2011).

2. Emotion Regulation Model

Emotion regulation strategies are cognitive activity, in that they involve how one appraises the environment, makes decisions about emotion regulation strategies, monitors displayed emotions, controls felt emotions, and changes facial and verbal expressions (Gross & Levenson, 1997; Groth, Hennig-Thurau, & Walsh, 2009; Richards & Gross, 2000).

Grandey (2000) introduced two emotion regulation strategies: *deep acting* and *surface acting*. *Deep acting* is an “antecedent-focused emotion regulation”, in which people adjust how they perceive circumstances through reappraisal or by recalling memories, before the emotion at hand is fully developed (Geng et al., 2014). *Deep acting* involves attempts at actually experiencing the required and expressed emotion by deliberately focusing on sanguine aspects of the situation. For example, when actors need to cry on stage, they try to think of something that makes them sad. For another example, a manager gets upset at the boss's demand to redo a report from

scratch. Under *surface acting*, even though the manager becomes seriously exasperated, the manager restrains anger and smiles in front of a boss. Under *deep acting*, the manager steps into the boss's shoes to understand why the boss gave such an order, referring to not only prior knowledge but also imagining another's perspective.

In contrast, *surface acting* is an "response-focused emotion regulation", where employees change their display of a particular emotion after feeling the naturally aroused emotion, rather than intentionally adjusting their perception of the situation (Geng et al., 2014). *Surface acting* refers to faking emotions that one does not actually feel and displaying required facial and verbal expressions without modifying internal feelings; it is a passive strategy of wearing a smiling mask to hide a frowning face. Previous research has viewed *surface acting* as inferior to *deep acting*, because it consumes cognitive resources by failing to address the discrepancy between desired and felt emotions (Gross & Levenson, 1997; Richards & Gross, 2000).

Emotional labor depletes not only emotional resources but also cognitive resources, since emotional labor generates *incompatibility* in one's mind, "discrepancy between what one wants to do and actions allowed by the environment" (Herzog, Hayes, Applin, & Weatherly, 2010). Emotional labor leads to a mismatch between what one wants to do and the activities allowed by a setting, which can cause *incompatibility* in a manager's mind (Herzog et al., 2010). Previous studies found that *incompatibility* leads to *intrusive thoughts, mind-wandering, task-unrelated thoughts, and a loss of executive control* (McVay & Kane, 2009, 2010; Seli, Cheyne, Xu, Purdon,

& Smilek, 2015). That is, managers often find themselves spontaneously ruminating about their emotional labor, since such experiences are not consistent with a higher-order schema and a person's expectations and beliefs regarding the world and themselves (i.e., "I deserve respect from others") (Janoff-Bullman, 1992). This can be construed as an inevitable process to cognitively adjust to negative events (Lepore, Silver, Wortman, & Wayment, 1996). Managers replay such events spontaneously and involuntarily in their minds until the *incompatibility* disappears (Berntsen & Hall, 2004; Watkins, Cruz, Holben, & Kolts, 2008). Such involuntary retrieval of past events consumes one's cognitive resources and involves a loss of *executive control*, preventing people from properly focusing on their tasks. Furthermore, previous studies have found that the degree of *incompatibility* has a positive relationship with cognitive exhaustion (Herzog et al., 2010).

Cognitive exhaustion was first introduced in attention restoration theory (Kaplan, 1995) and refers to the inability or diminished ability to focus attention voluntarily and clearly. It also refers to "an experience of tiredness, dislike of present activity, and unwillingness to continue" (Bartley, 1970), or "disinclination to continue performing the task at hand, a progressive withdrawal of attention from environmental requirements" (Brown, 1994).

An experience of emotional labor is stored in autobiographical memory. Beike and Wirth-Beaumont (2005) found that affective states, sparked simultaneously at the time of the experiences, are stored in autobiographical memory, like other types of details (e.g., sensory

experience, time, and place). Emotions aroused in interpersonal events are more likely to be stored in autobiographic memory than emotions aroused at individual events (Beike & Wirth-Beaumont, 2005).

Mood and memory are linked in an associated network such that the stimulation of memories can elicit a coinciding mood state (Bower, 1981). Highly emotional memories often arouse intense emotions when they reach consciousness (Singer, 1990; Singer & Salovey, 1993). This kind of memory, which elicits emotional arousal upon recall, is known as *open memory* (Beike & Wirth-Beaumont, 2005).

Autobiographic memory gives information that is important to the person who remembers, and subsequently influences present decisions and feelings, but when the recalled circumstance is incongruent with the present mood, the one who remembers may engage in dysfunctional behavior (Beike & Wirth-Beaumont, 2005). Previous studies found that autobiographic memory plays a significant role in motivation, personality, and adjustment (McAdams, 1996). Open memory is dysfunctional, invoking ruminative self-awareness and decreasing self-esteem (Beike, Kleinknecht, & Wirth-Beaumont, 2004).

Hypothesis 1a: Surface acting has a positive relationship with emotional exhaustion.

Hypothesis 1b: Deep acting has a negative relationship with emotional exhaustion.

Hypothesis 2a: Surface acting has a positive relationship with cognitive exhaustion.

Hypothesis 2b: Deep acting has a negative relationship with cognitive exhaustion.

3. Deep Acting vs. Surface Acting

Emotional labor is divided into two sub-categories : *surface acting* and *deep acting* (Grandey, 2003). *Surface acting* refers to “faking the necessary emotional display without changing one’s internal feelings”, while *deep acting* refers to “consciously changing how one feels in order to express the desired emotion, through such activities as reappraisal, positive refocusing or physiological modification” (Gross, 1998). *Surface acting* results in adverse outcomes because it leads to a sense of *emotional dissonance* and demands constant effort to maintain the required emotional display. Previous studies found that deep acting is generally not associated with negative consequences (Johnson & Spector, 2007).

The suppression of emotions, a main characteristic of emotional labor hinder an individuals’ cognitive performance (Grandey, 2000). *Surface acting* depletes more cognitive resources than *deep acting* (Gross & Levenson, 1997). For example, participants who performed memory tasks after *surface acting* scored significantly lower than those who did so after *deep acting* (Richards & Gross, 2000).

Surface acting occurs late in the emotion regulation process and does not reappraise the situation (Grandey, 2000). Hence, managers need to fake emotional display without adjusting their inner feelings about the situation (Grandey, Tam, & Brauburger, 2002). They need to keep monitoring their emotional expression to alter their displayed emotions to

conform to the display rule, repeating this regulatory process (Grandey, 2003). The monitoring and feigning of their external emotional display and suppression of actually felt emotions consumes a large amount of cognitive resources (Grandey, Dickter, & Sin, 2004). *Surface acting* consumes cognitive resources in the form of self-monitoring and self-correction (Richards & Gross, 2000).

However, *deep acting* demands less cognitive resources, because managers do not need ongoing regulation and monitoring of their emotional display (Grandey, Fisk, & Steiner, 2005). Since *deep acting* involves changes in one's inner feelings at the outset, a previous study found that employees adopting *deep acting* have enough intellectual resources to provide creative solutions to problems (Geng et al., 2014). In *deep acting*, workers are more likely to sympathize with others, and experience positive emotions, because the displayed positive emotions are in line with their actual feelings (Grandey, Chi, & Diamond, 2013).

Hypothesis 3a: Surface acting increases emotional exhaustion more than does deep acting.

Hypothesis 3b: Surface acting increases cognitive exhaustion more than does deep acting.

4. Cognitive Exhaustion and Innovation

For organizational renewal, managers should be able to discern the value of alternatives to justify why disengagement from the current task to take on a new one is necessary (Laureiro-Martínez et al., forthcoming), by calling into question underlying assumptions, inherent in current practices

(Argyris, 1982).

However, cognitive exhaustion is characterized by an impairment of executive control and the capability to allocate cognitive resources to novel and changing stimuli (Kane & Engle, 2002; van der Linden, Frese, & Meijman, 2003). As executive control is responsible for controlling our attention and updating working memory (Engle, Kane, & Tuholski, 1999; Miyake, Friedman, Emerson, Witzki, Howerter, & Wager, 2000), mentally fatigued managers are less capable of forming novel linkages between new and old information (Barr, 1998).

In addition, mentally-fatigued managers abstain from receiving additional information and become less analytical because the working memory of such people is already overloaded (Meijman, 2000; Robert & Hockey, 1997; Sanders & Sanders, 2013). Thus, instead of processing new information (exploration), they prefer to rely on their pre-existing schemas (Baddeley & Logie, 1999; Kimberg & Farah, 1993; Mathieu, Heffner, Goodwin, Salas, & Cannon-Bowers, 2000; Norman & Shallice, 1986). For example, after they make a judgment with initially provided information, they freeze on it and disregard additional information. Kruglanski (1996) refers to this tendency as *cognitive closure*, which biases a manager's problem-solving to center on what previously has proved useful (Martin & Mitchell, 1998), circumscribing the scope of alternative solutions to the problem at hand (Bateman & Zeithaml, 1989; Dutton, Fahey, & Narayanan, 1983). Consequently, mentally-fatigued administrators are biased and show prejudice towards existing information and against new information (Webster, Richter, & Kruglanski, 1996). The greater the cognitive exhaustion managers

experience, the more they are bound to old frameworks (Louis & Sutton, 1991). This hampers cognitive flexibility and leads to sub-optimal planning (van der Linden et al., 2003). Consequently, cognitive closure induced by cognitive exhaustion can curb innovation. In other words, rigidity and inflexibility in underlying values and fundamental assumptions make managers interpret new stimuli in the context of existing patterns (Dutton & Jackson, 1987), which impairs innovation (Argyris, 1976; Fiol & Lyles, 1985).

Moreover, when managers are mentally tired, their information processing style becomes self-centered, effortless, and automatic. They are left with few cognitive resources to think deeply about the situation and put themselves in another's shoes (Kuo & Sullivan, 2001). For this reason, cognitive exhaustion facilitates social conflict and irritability (Kaplan, 1987). This is all the more problematic, as today's organizations are marked by task dependence; knowledge is utilized not at the individual level but at the team level (Argote, 1999; Nemanich, Keller, Vera, & Chin, 2010). Thus, cooperation, communal decision-making and team-level problem solving (Knight, Pearce, Smith, Olian, Sims, Smith et al., 1999) are essential in innovation. Cognitive exhaustion exerts a negative influence on all these.

Hypothesis 4a: Cognitive exhaustion has a negative relationship with radical innovation.

Hypothesis 4b: Cognitive exhaustion has a negative relationship with incremental innovation.

5. Radical vs. Incremental Innovation

Incremental innovation refers to developments within an existing frame (i.e., “doing better what we already do”), but radical innovation demands a complete change of frame (i.e., “doing what we did not do before”) (Norman & Verganti, 2014). Hence, radical innovation requires more complex cycles of disconfirmation of a current interpretive scheme (Commons, 1951) and demands more of a manager’s cognitive resources than does incremental innovation.

Specifically, radical innovations involve substantial departures from current capabilities to develop wholly new products and services (Garcia & Calantone, 2002; Tushman & Anderson, 1986). Since radical innovations rarely depend on existing knowledge (Tushman & Anderson, 1986), active seeking of outside knowledge is a pre-condition for radical innovation; thus, externally-oriented managers provide novel insights to organizations (Laursen & Salter, 2006). In other words, new knowledge is essential for radical innovation (Zhou & Wu, 2010). However, cognitive exhaustion causes cognitive inertia, which constrains managers towards maintaining the status quo (Levinthal & March, 1993), which in return hampers managers’ ability to invent novel technologies (Christensen & Bower, 1996).

Since the return of radical innovation is distant and uncertain (March, 1991), managers should be able to come up with ample reasons to justify their changes to recognize the underlying value of new ideas, by putting themselves in the place of others (Anderson, De Dreu, & Nijstad, 2004; Unsworth, 2001; Van de Ven, 1986). However, conflicts and hesitation are more likely to arise in the discussion of business plans with

radical developments. This is not only because cognitive exhaustion makes the information-processing style aggressive, irritable, and self-centered, (Dodge & Crick, 1990; Kaplan, 1987; Kuo & Sullivan, 2001) but also because radical innovation requires genuinely different knowledge from external sources with which organizational insiders are unfamiliar.

Hypothesis 5: The effects of cognitive exhaustion are more negative on radical innovation than on incremental innovation.

6. Emotional Exhaustion and Innovation

Affective states affect creativity through social information processing (Clore, Schwarz, & Conway, 1994). Positive emotions have been found to boost inventive problem-solving (Isen, Daubman, & Nowicki, 1987). The depletion of emotional resources is caused by repetitive exposure to unpleasant emotional events (Bozionelos & Kiamou, 2008; Diestel & Schmidt, 2011; Greenbaum, Quade, Mawritz, Kim, & Crosby, 2014; Halbesleben & Bowler, 2007; Mulki, Jaramillo, & Locander, 2006; Pugh, Groth, & Hennig-Thurau, 2011) that negatively influence employee creativity (Amabile, Hadley, & Kramer, 2002).

Emotional exhaustion refers to feeling psychologically and emotionally “drained” (Wright & Cropanzano, 1998). When managers are emotionally exhausted, they become less motivated, energetic, and lively, can feel that their job is meaningless, and struggle to perform the tasks required of them (Santos, Mustafa, & Gwi, 2015). Emotional exhaustion leads to turnover intentions and poor work attitudes (Wolpin, Burke, & Greenglass, 1991), organizationally abnormal behaviors (Mulki et al., 2006), and

decreased job performance (Wright & Cropanzano, 1998). Managers under reduced personal accomplishment believe their efforts do not lead to success (Shih, Jiang, Klein, & Wang, 2013). As a result, they will be reluctant to invest their time and efforts in tasks often regarded as supplementary (Huhtala & Parzefall, 2007). Emotionally-exhausted workers are less involved in organizational citizenship behavior (Cropanzano, Rupp, & Byrne, 2003).

Innovation is marked by organizational citizenship behavior, in that it requires voluntary participation in complex and vague tasks that go beyond job descriptions (Wolfe, 1994). Hence, innovation involves a manager's readiness to bear the burden of extra tasks and increases in workload, both quantitatively and qualitatively (Janssen, 2004). However, as March (1991) pointed out, the outcomes of exploration and innovation are distant and uncertain. Managers cannot be quite sure about the success of innovation, and it is highly likely that they feel doubtful about whether time and resources invested would result in the intended outcome. Managers' fear of innovation is the greatest obstacle to creativity (Groth & Peters, 1999). Since they are eventually responsible for their innovative decision-making, managers need to weigh benefits against the risks and costs associated with change (Janssen, 2004). Since emotionally exhausted managers score low on confidence, their reduced personal accomplishment tends to prevent them from engaging in innovative tasks (Ghannadi, Mirabi, Shargh, & Zoben, 2015). Managers' emotional and psychological states thus play important roles in unlocking innovation (Huhtala & Parzefall, 2007).

Hypothesis 6a: Emotional exhaustion is negatively associated with radical innovation.

Hypothesis 6b: Emotional exhaustion is negatively associated with incremental innovation.

III. METHOD

1. Data and Sample

This study examined the negative effects of emotional labor on innovation in advertising firms in South Korea, to test hypotheses. Managers in advertising companies are known to experience emotional labor to win the contract. They also need to come up with creative ideas because of fierce competition with rival companies. In addition, Asian countries were deemed suitable for research settings as emotional labor was common under collectivism in Asian countries. In the name of face-saving, hiding one's true feelings was a social norm in Asian countries (Allen, Diefendorff, & Ma, 2014). Samples were limited to managers (team leaders), whose primary role was to make decisions.

A longitudinal design was adopted for data collection to minimize common method variance involving self-reports (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Independent, dependent, and control variables were collected separately. Information about control variables was gathered in August. Emotional labor was measured in early September, cognitive exhaustion was measured in late October, and radical and incremental innovation were measured in December.

2. Measures

Sex, age, education, team size, and tenure. These variables were controlled for because Korean culture was Confucian-influenced; people's treatment of others changed on the basis of sex, age, and the education levels that the others had achieved (Park & Cho, 1995). Of the subjects who responded, 38 % were female. A dummy variable was used and 1 was assigned to female team leaders and 2 was assigned to male team leaders. Average age of participants were 35.63 (SD= 7.32). Average tenure was 9.53 years (SD= 6.03). Education level of participants was high school (1.7%), university (80.6%), and graduate school (17.7%). Team size, which had been known to encumber innovation because of coordination and communication problems was also controlled for (Hackman & Katz, 2010; Harrison, Price, Gavin, & Florey, 2002).

Openness to Experience. The present study controlled for openness to experience because the team leader's own innovative propensity influenced the types of innovation he or she embarked on. Among the big five factors, this dimension of personality, openness to experience, was the most obviously linked associated with innovative actions and had been proven to be more effective than creative personality in predicting innovation (Hammond, Neff, Farr, Schwall, & Zhao, 2011). Organizational members, who were high on openness to experience, advanced intellectual curiosity, divergent thinking, and independence; this allowed for new experience and change (McCrae, 1987). Openness to experience was measured using six items from the Big Five Personality Scale. An illustrative item follows: "I am original, come up with new ideas," and "I am curious about many

different things.” 7 Likert scale was used and the Cronbach’s alpha was 0.8.

Charismatic Leadership. This present research controlled for charismatic leadership because supervisor/group leaders (team leaders’ boss) influenced managers’ (team leaders’) decisions to pursue exploratory or exploitative innovation. Charismatic leadership had a positive relationship with innovation as charismatic leaders inspired their followers to take risks by sharing visions (Strickland & Towler, 2011) and enhancing self-efficacy and intrinsic motivation (Tierney & Farmer, 2002). A previous study found that supportive leaders encouraged innovation, but controlling leaders deterred it (Zhou, 2003). The present study employed six items to measure charismatic leadership (Conger & Kanungo, 1998; Vlachos, Panagopoulos, & Rapp, 2013). An illustrative item follows: “My supervisor (team leader’s boss) has a vision that s/he tries to achieve with creative ideas,” “My supervisor (team leader’s boss) permanently creates new ideas to make our unit ready for the future,” and “My supervisor (team leader’s boss) is an entrepreneurial person and readily takes opportunities.” 7 Likert scale was used and the Cronbach’s alpha was 0.88.

Work and Family Conflict, Emotional Intelligence These variables were also controlled for to rule out other factors which might affect managers’ cognitive exhaustion. Managers’ sensitivity to emotional labor should have been controlled for. Measures of work and family conflict were taken from Netemeyer, Boles, and McMurrian (1996). An illustrative item follows: “The demands of my work interfere with my home and family life”, “My job produces strain that makes it difficult to fulfill family duties”, “The amount of time my job takes up makes it difficult to fulfill

family responsibilities” 7 Likert scale was used and the Cronbach’s alpha was 0.9. Measures of emotional intelligence were from Salovey and Mayer (1990). Sample items include “I usually know my feelings about people,” “I often think about my feelings,” and “I usually spend time thinking about my emotions.” 7 Likert scale was used and the Cronbach’s alpha was 0.9.

Independent Variable

Surface Acting. Surface acting was measured using a four-item scale from Allen et al. (2014). An illustrative item follows: “I put on an act in order to deal with subordinates, colleagues, or supervisors in an appropriate way,” “I just pretend to have the emotions I need to display for my job,” “I put on a mask in order to display the emotions I need for the job,” “I show feelings to others that are divergent from what I feel inside.” 7 Likert scale was used and the Cronbach’s alpha was 0.86.

Deep Acting. Deep acting was measured using a four-item scale from Allen et al. (2014). An illustrative item follows: “I try to actually experience the emotions that I must show to others,” “I make an effort to actually feel the emotions that I need to display toward others,” “I work hard to feel the emotions that I need to show to others,” and “I work at developing the feelings inside of me that I need to show to others.” 7 Likert scale was used and the Cronbach’s alpha was 0.81.

Emotional Exhaustion Emotional Exhaustion was measured using a four-item scale from Moore (2000). The items had 7 Likert-type response options, ranging from "1 = Never," "2 = A few times a year or less, almost never," "3 = Once a month or less, rarely ," "4 = A few times a

month, sometimes," "5 = Once a week, rather often," "6= A few times a week, nearly all the time," "7 = Daily." Cronbach's alpha for this scale was 0.86.

Cognitive Exhaustion. Cognitive exhaustion was measured using a four-item scale from Chalder, Berelowitz, Pawlikowska, Watts, Wessely, Wright et al. (1993), Beurskens, Bültmann, Kant, Vercoulen, Bleijenberg, and Swaen (2000) and Michielsen, De Vries, and Van Heck (2003). An illustrative item follows: "My thoughts easily wander," "Mentally, I feel exhausted," "I have problems thinking clearly," and "I have difficulty in concentrating." 7 Likert scale was used and the Cronbach's alpha was 0.89.

Dependent Variable

Radical Innovation. Radical innovation was measured using a four-item scale from Jansen, Van Den Bosch, and Volberda (2006). An illustrative item follows: "I frequently utilize new opportunities in new markets," "I regularly search for and approach new clients in new markets," "I accept demand that go beyond existing products and services," "I experiment with new products and services to serve our customers," 7 Likert scale was used and the Cronbach's alpha was 0.8.

Incremental Innovation. Incremental innovation was measured using a four-item scale from Jansen et al. (2006). An illustrative item follows: "I improve our provision's efficiency of products and services," "I introduce improved, but existing products and services for our customers," "I regularly implement small adaptations to existing products and services," and "I frequently refine the provision of existing products and services." 7 Likert

scale was used and the Cronbach's alpha was 0.85.

3. Analytic Process

This study conducted confirmatory factor analysis using AMOS 7.0 to ensure that each of six variables (deep acting, surface acting, cognitive exhaustion, emotional exhaustion, radical innovation, and incremental innovation) measured the distinctive construct. According to the results, a six-factor model was a good fit for the data ($\chi^2(237)=365.14$, RMSEA=.04 TLI=.95 CFI=.95). All items were loaded on the latent constructs with factor loadings above 0.5, which was taken as a reasonable criterion where the sample was greater than 100 (Kline, 2014). Alternative models (a five-factor model that combined deep acting and surface acting; a four factor model that, additionally, combined cognitive and emotional exhaustion; and a one-factor model) were examined in table 4, but were a poorer fit than the original model with a χ^2 change of 425.46, 575.33, 285.13, and 506.06 each. This result demonstrated that the theorized model was a good fit for the data and there was enough covariance among the latent constructs.

TABLE 1
Scale Validation : Comparison of Factor Structure

Models	Factors	χ^2	df	$\Delta\chi^2$	RMSEA	TLI	CFI
Baseline Model1	6 factors Deep Acting Surface Acting Cognitive Exhaustion Emotional Exhaustion Radical Innovation Incremental Innovation	365.14***	237		0.04	0.95	0.95
Model2	5 factors Deep Acting and Surface Acting merged Cognitive Exhaustion Emotional Exhaustion Radical Innovation Incremental Innovation merged	790.6***	242	$\Delta 425.46$	0.09	0.80	0.83
Model3	4 factors Deep Acting, Surface Acting merged Cognitive Exhaustion, Emotional Exhaustion merged Radical Innovation Incremental Innovation merged	1,365.93***	246	$\Delta 575.33$	0.14	0.61	0.65
Model4	3 factors Deep Acting, Surface Acting merged Cognitive Exhaustion, Emotional Exhaustion merged Radical Innovation, Incremental Innovation merged	1,651.06***	249	$\Delta 285.13$	0.15	0.52	0.56
Model5	1 factor Emotional Labor, Cognitive Exhaustion, Emotional Exhaustion, Radical Innovation, and Incremental Innovation merged	2,157.12***	252	$\Delta 506.06$	0.18	0.35	0.41

Note: N=232 Each model is compared to the model preceding it. Model 1 is preferred as the best model. ***Significant at $p < .001$ **Significant at $p < .01$ *Significant at $p < .05$

IV. RESULTS

1. Hypothesis Testing

Table 1 shows descriptive statistics and correlations for variables with standard deviations, and means for variables. The standardized regression weights were all above 0.5. However, since some variables showed high correlations, the present study calculated *the square root of average variance extracted* (AVE) in order to test the validity of the constructs. All the numbers showed that the validity of the construct was satisfied by surpassing 0.5.

The results of the hierarchical linear regression show that it was a good fit. Hypothesis 1a, which stated that the surface acting of emotional labor had a positive relationship with emotional exhaustion, was supported ($\beta=0.19$, $p<.001$). Hypothesis 1b, which stated that the deep acting of emotional labor had a negative relationship with emotional exhaustion, was supported ($\beta= -0.13$, $p<.05$).

Moreover, hypothesis 2a, which suggested that the surface acting of emotional labor had a positive relationship with cognitive exhaustion, was also supported ($\beta=0.28$, $p<.001$). In addition, hypothesis 2b, which suggested that the deep acting of emotional labor had a negative relationship with cognitive exhaustion, was supported ($\beta= -0.17$, $p<.05$).

Hypothesis 3a and hypothesis 3b, which predicted that surface acting ($\beta=0.19$, $p<.001$, $\beta=0.28$, $p<.001$) had a stronger relationship with emotional and cognitive exhaustion than deep acting ($\beta= -0.13$, $p<.05$, $\beta= -0.17$, $p<.001$) did was supported.

TABLE 2
Means, Standard Deviations, and Correlations of Variables

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Work–Family Conflict	4.12	1.58	—														
2. Emotional Intelligence	4.8	1.14	-.18**	—													
3. Charismatic Leadership	4.85	.89	-.01	.15*	—												
4. Openness to Experience	4.55	.85	-.36**	.21**	.17**	—											
5. Surface Acting	4.25	1.24	.30**	-.12	-.01	-.25**	—										
6. Cognitive Exhaustion	3.67	1.41	.35**	-.11	-.14*	-.29**	.33**	—									
7. Deep Acting	5.11	.96	-.20**	.18**	.26**	.23**	-.10**	-.29**	—								
8. Emotional Exhaustion	3.85	.93	.19**	-.12	-.04	-.27**	.22**	.23**	-.20**	—							
9. Radical Innovation	4.58	.88	-.18**	.25**	.24**	.28**	-.02	-.16**	.17**	-.19**	—						
10. Incremental Innovation	4.25	.95	-.22**	.36**	.09**	.37**	-.07	-.13**	.21**	-.21**	.32*	—					
11. Gender	1.62	.49	-.23**	.10	-.03	.08	-.07	-.08	.09	.01	.06	.28**	—				
12. Age	35.63	7.32	-.22**	.21**	.12	.23**	-.15	-.26**	.28**	-.21**	.17*	.37**	.30*	—			
13. Education	2.16	.41	.03	.06	-.03	.01	-.01	.03	-.03	.13	.07	.11	.06	.06	—		
14. Team Size	4.38	2.54	-.15*	.06	-.01	.08	-.05	-.08	.02	-.01	.01	-.16**	-.09	-.03	.07	—	
15. Tenure	9.59	6.03	-.03	.04	.09	.02	-.02	-.03	.02	-.04	.03	.03	.04	.43*	-.07	-.08	—

Note : n=232. † p < .10, * p < .05, **p < .01, ***p < .001.

TABLE 3
Results of Regression Analysis: Standardized Path Coefficients

Variables	Outcome : Emotional Exhaustion				Outcome : Cognitive Exhaustion			
	Model1		Model2		Model3		Model4	
Step 1 : Controls	β	t-value	β	t-value	β	t-value	β	t-value
Gender	.07	1.11	.07	1.13	.06	.90	.05	.95
Age	-.22***	-2.96	-.18*	-2.38	-.25***	-3.61	-.19***	-2.86
Education	.07	1.20	.07	1.21	.04	.74	.04	.79
Team Size	.06	.96	.07	1.10	-.01	-.19	.00	-.01
Tenure	.08	1.18	.06	.94	.09	1.34	.06	1.03
Work–Family Conflict	.13†	1.87	.07	.97	.27***	4.29	.18***	2.98
Emotional Intelligence	-.15†	-1.70	-.15†	-1.75	.00	.00	.00	.00
Charismatic Leadership	.06	.63	.09	.89	-.21*	-2.22	-.18*	-1.97
Openness to Experience	-.24***	-2.93	-.20**	-2.56	-.08	-1.12	-.04	-.51
Step 2 : Main Effects								
Surface Acting			.19***	3.01			.28***	5.01
Deep Acting			-.13*	-2.00			-.17***	-2.98
p-value	0		0		0		0	
F	9.95		11.34		11.11		13.34	
R square	0.28		.24		.31		.40	
Adjusted R square	0.26		.20		.28		.37	

Note : n=232. † p < .10, * p < .05, **p < .01, ***p < .001.

TABLE 4
Results of Regression Analysis: Standardized Path Coefficients

Variables	Outcome : Radical Innovation				Outcome : Incremental Exhaustion			
	Model5		Model6		Model7		Model8	
Step 1 : Controls	β	t-value	β	t-value	β	t-value	β	t-value
Gender	-.03	-.51	-.01	.01	.13**	2.5	.15***	2.95
Age	.11	1.61	.04	.64	.17***	2.84	.12*	2.07
Education	.08	1.38	.09	1.66	.06	1.18	.07	1.48
Team Size	-.03	-.53	-.03	-.63	-.18***	-3.71	-.18***	-3.91
Tenure	-.03	-.49	-.02	-.32	-.08	-1.52	-.08	-1.45
Work–Family Conflict	-.07	-1.15	.01	.14	.03	.56	.08	1.37
Emotional Intelligence	.17*	2.12	.11	1.44	.35***	5.15	.29***	4.38
Charismatic Leadership	.25**	2.68	.22**	2.43	.15*	1.94	.15†	1.89
Openness to Experience	.17*	2.32	.1	1.31	.19***	2.97	.12†	1.82
Step 2 : Main Effects								
Cognitive Exhaustion			-.23***	-3.41			-.12*	-2.01
Emotional Exhaustion			-.15*	-2.36			-.17***	-3.01
p-value	0		0		0		0	
F	12.54		13.48		25.11		23.72	
R square	.33		.40		.5		.54	
Adjusted R square	.31		.37		.48		.52	

Note : n=232. † p < .10, * p < .05, **p < .01, ***p < .001.

Hypothesis 4a stated that cognitive exhaustion had a negative relationship with radical innovation, and hypothesis 4b stated that cognitive exhaustion had a negative relationship with incremental innovation. The results supported hypothesis 4a ($\beta=-0.23$, $p<.001$), and hypothesis 4b ($\beta=-0.12$, $p<.05$). Hypothesis 5 suggested that the effects of cognitive exhaustion on radical innovation ($\beta=-0.23$, $p<.001$) were more negative than those on incremental innovation ($\beta=-0.12$, $p<.05$), and the results showed support for this hypothesis. Furthermore, hypothesis 6a proposed that emotional exhaustion had a negative relationship with radical innovation, and hypothesis 6b stated that emotional exhaustion had a negative relationship with incremental innovation. The results supported hypothesis 6a ($\beta=-0.15$, $p<.05$), and hypothesis 6b ($\beta=-0.17$, $p<.001$).

2. Tests of Mediation

This research posited that the relationship of surface acting and deep acting with each of two outcomes (incremental innovation and radical innovation) would be mediated by cognitive and emotional exhaustion. Even though the steps-approach proposed by Baron and Kenny (1986) is generally known method for assessing mediation, its deficiencies have been reported in the case of multiple mediators. Since indirect effects are not normally distributed, a bootstrapping method was used to derive the coefficients and standard errors of the indirect effects and the bias corrected 95 percent confidence intervals around the effects (Preacher & Hayes, 2008). 2,000 bootstrap samples were estimated, in which the independent variables were surface acting and deep acting, the mediators were cognitive and emotional

exhaustion, and the dependent variable were radical and incremental innovation.

The indirect relationship between surface acting and radical innovation was significant via cognitive exhaustion (indirect effect= -0.07, CI= -0.13 to -0.03) and emotional exhaustion (indirect effect = -0.1, CI= -0.17 to -0.05). In contrast, the bootstrapping did not empirically supported the indirect effects of deep acting on radical innovation through cognitive exhaustion (indirect effect = 0.01, CI= -0.02 to 0.06) and emotional exhaustion (indirect effect = 0.02, CI= -0.01 to 0.08). Deep acting also did not significantly relate to incremental innovation via either exhaustion (cognitive exhaustion: indirect effect=0.02, CI= -0.03 to 0.08; emotional exhaustion: indirect effect=0.02, CI= -0.01 to 0.07). However, the indirect effect from surface acting to incremental innovation was significant when cognitive exhaustion was the mediator (indirect effect= -0.11, CI= -0.18 to -0.06) and emotional exhaustion was the mediator (indirect effect= -0.09, CI= -0.16 to -0.04).

TABLE 5
Results of Mediation Analysis

	Mediator	Indirect Effect	95% CI	p-value
(1) Surface Acting → Radical Innovation				
	Cognitive Exhaustion	-0.07***	[-0.13, -0.03]	0.00
	Emotional Exhaustion	-0.10***	[-0.17, -0.05]	0.00
(2) Deep Acting → Radical Innovation				
	Cognitive Exhaustion	0.01	[-0.02, 0.06]	0.38
	Emotional Exhaustion	0.02	[-0.01, 0.08]	0.11
(3) Surface Acting → Incremental Innovation				
	Cognitive Exhaustion	-0.11***	[-0.18, -0.06]	0.00
	Emotional Exhaustion	-0.09***	[-0.16, -0.04]	0.00
(4) Deep Acting → Incremental Innovation				
	Cognitive Exhaustion	0.02	[-0.03, 0.08]	0.42
	Emotional Exhaustion	0.02	[-0.01, 0.07]	0.11

Note : n=232. Bias corrected percentile method and two-tailed significance were used.

V. DISCUSSION

1. Summary of Major Findings

Based on the conservation of resource theory, this research examines the relationship between managers' experience of emotional labor and their involvement with radical and incremental innovation. This research revealed that managers' emotional labor leads to cognitive and emotional exhaustion. Cognitive exhaustion was found to have a stronger relationship with *surface acting* than with *deep acting*. Cognitive exhaustion decreases managers' willingness and ability to evaluate, assimilate, and apply new information, preventing them from pursuing both radical and incremental innovation. Results show that cognitive exhaustion weakens radical innovation more than incremental innovation. This paper suggests that firms need to keep an eye on the degree of managers' emotional labor to make the most of their innovative capabilities.

2. Study Limitations

The conservation of resources theory lists four types of resources: "objects, stress-mediating conditions, personal characteristics, and resource generating energy" (Hobfoll & Freedy, 1993). This implies the possibility that each individual has a different amounts and types of resources. However, this paper could not control for all factors that might affect the speed and timing of the depletion of a manager's resources.

This paper proposes that emotional labor hinders innovation. However, the opposite reaction is also likely. Innovation disrupts existing

orders and established arrangements, provoking confusion, insecurity, and resistance to change (Kiefer, 2005). People have different opinions about change and the increased workload caused by innovation can create conflicts (Janssen, 2003). Managers need to push subordinates to bear the additional burdens, both quantitative and qualitative, of extra and complex tasks to embark on change (Janssen, 2004). Uncertainty regarding one's roles and conflicting approaches to problem solving resulting from the push for innovation (Tomkovick & Miller, 2000) may cause emotional labor.

3. Theoretical Contribution

First, this paper contributes to the conservation of resource theory by finding that emotional labor not only consumes emotional resources but also depletes cognitive resources. This paper sheds light on how emotional labor leads to cognitive exhaustion. This study views *incompatibility*, (Herzog et al., 2010) defined as “discrepancy between what one wants to do and actions allowed by the environment,” as an important characteristic of emotional labor.

Second, this paper contributes to the literature on emotional labor by proving that *surface acting* leads more to cognitive exhaustion than does *deep acting*. This confirms the previous finding that *deep acting* is a better emotion regulation strategy than *surface acting* (Grandey, 2003). Previous studies have emphasized the deleterious effects of *surface acting* owing to its stronger relationship with *burnout* (Santos et al., 2015) , vis-à-vis the effects of *deep acting*. *Deep acting* involves efforts at changing how one actually feels, to feel the required emotion through reappraisal, physiological

modification, and positive refocusing (Grandey, 2000). Because *deep acting* succeeds in overcoming the discrepancy between actually felt and desired emotions, it consumes less mental resources than *surface acting*.

Third, this paper provides insights on emotional labor and innovation. Previous research implied that causes of innovation usually consist of two components. Cultural factors include values and languages such as perceived organizational support (Hur, Han, Yoo, & Moon, 2015a) that facilitate effective communication and risk-taking among organizational members. Human factors include an individual's innovative characteristics, such as openness to experience (Baer & Oldham, 2006) and proactive personality (Chen, Farh, Campbell-Bush, Wu, & Wu, 2013). This research demonstrates that emotional labor can be part of the human factors that deter innovation.

Fourth, this paper tries to break down the prejudice that only service workers and lower ranking employees suffer from emotional labor. Because of the social expectation that leaders should be confident and impartial under any circumstance, they are also deprived of free expression of emotions like other workers. The results of this research show that emotional labor experienced by managers can consume their cognitive resources and hinder innovative decision-making.

Lastly, by applying the conservation of resource theory and including emotional and cognitive antecedents, this study contributes to *contextual ambidexterity*, which has been studied primarily in relation to shared vision (Bartlett & Ghoshal), job enrichment, and trust (Adler, Goldoftas, & Levine, 1999). The results of this research are congruous with

the findings of Laureiro-Martínez, Brusoni, Canessa, and Zollo (2015), that the decision between exploration and exploitation is a cognitive activity. They asserted that exploration and exploitation activate different parts of the brain. In line with this research finding, our results also suggest that managers' cognitive system can be one of the most significant factors predicting organizational ambidexterity.

4. Practical Implications

As the agency theory suggests, it makes more sense for CEOs to pursue incremental innovation rather than radical innovation, since their performance is evaluated on a short-term basis (e.g., stock price increases through stock repurchase). March (1991) also pointed out that “returns of *exploitation* are more proximate, predictable, and positive and returns of *exploration* are uncertain and distant.” If organizations rely exclusively on existing competency, it will lead to structural inertia and the firm's capability to adapt to new environmental change will atrophy (Hannan & Freeman, 1984). Our research suggests that one way to gear firms toward radical innovation is the lessening of emotional labor on the part of the CEO and TMT. Since prior studies on the relationship between CEOs and innovation revolved around the pay level (Francis, Hasan, & Sharma, 2011), this paper suggests that it is worthwhile to approach organizational ambidexterity in the context of the cognitive exhaustion of CEOs and TMTs.

Firms should formulate strategies to prevent their employees from undergoing emotional and cognitive exhaustion. As the conservation of resources suggests, resources are basic to coping strategies (Hobfoll &

Freedy, 1993). Organizations should provide employees with comfortable places to take a rest, counseling, and pecuniary rewards to enable them to better deal with stress. Since personality type is related to an employee's ability to handle stress, a firm's hiring decisions should consider potential employees' personality to enhance a firm's performance (Oh, Kim, & Van Iddekinge, 2015).

5. Suggestions for Future Studies

Results show that emotional labor precedes cognitive exhaustion. Nevertheless, given the reciprocal relationship between emotion and cognition (Huy, 2002), an alternative case is likely; there is another possibility that cognitive exhaustion and emotional labor constitute parallel mechanisms (Izard, 1984). Thus, more research attention should be directed toward the causal relationship between emotion and cognition.

In addition, this research model can be extended to antecedents of emotional labor. Given its adverse effects on innovation, researchers need to focus on diverse aspects of managers' experiences of emotional labor. To take one example, violations of organizational justice (e.g., interactional and informational justice) predict emotional labor, (Spencer & Rupp, 2009) as they make individuals feel an instinctively strong and irate response to perceived unfairness. Verbal aggression at work (Hamilton, 2011; Hamilton & Tafoya, 2011) can be another source of emotional labor. The consequence of verbal aggression is not only limited to the victim. According to third-party justice effects (Colquitt, 2004), people feel violations of justice even when they witness others treated unfairly. This inconsistent justice

climate suggests that being unfair to just one co-worker can exert as much negative effect as being unfair to all group members (Spencer & Rupp, 2009). Hence, the examination of the relationship between witnessing aggression and emotional labor is meaningful because of its contagious effects on the organization in general.

More comprehensive understanding of the sources of leaders' emotional labor is necessary. This approach is important in that leaders' moods play important roles in determining employees' emotions through frequent interaction (Ashkanasy, Härtel, & Zerbe, 2000). To allow leaders to make good decisions, organizations should take into account their experiences of emotional labor, because leaders' decision making is affected by emotional and psychological factors (Simon, 2013).

More studies need to be conducted to investigate ways to reduce the deleterious effects of emotional labor. Beike and Wirth-Beaumont (2005) suggested that after going through emotional labor, people suffer from unwanted retrieval of past events. Such intrusive thoughts make people experience exactly the same negative feelings they had during the emotional labor (Wells & Roussis, 2014). Generally, as time goes by, people's memory of negative events becomes faint (Beike, Lampinen, & Behrend, 2004). However, the memory of emotional labor at work may rarely fade away because of its repetitiveness. Based on this research's finding that emotional labor hinders managers' innovative performance, more practical solutions should be discussed to minimize the adverse effects of emotional labor; mindfulness practice is one possible solution (Rosenstreich, 2016). This paper presents mindfulness meditation as a solution to mind-wandering.

Previous studies found that *mindfulness practice* can allow individuals to allocate their attention efficiently (Tang, Ma, Wang, Fan, Feng, Lu et al., 2007), disregard unnecessary stimuli (Jha, Krompinger, & Baime, 2007), boost memory (Jha, Stanley, Kiyonaga, Wong, & Gelfand, 2010), and advance retrieval from memory (Alberts & Thewissen, 2011) in terms of both amount (Lykins, Baer, & Gottlob, 2012) and specificity (Heeren, Van Broeck, & Philippot, 2009). Organizations, in which managers go through high levels of emotional labor should introduce mindfulness meditation to make the most of their cognitive resources.

This research demonstrates that *deep acting* is superior to *surface acting* (Geng et al., 2014) because *deep acting* solves the problem of cognitive dissonance and consumes less cognitive resources. However, little is known about what influences the choice between *deep acting* and *surface acting*. People use different kinds of strategies, like *upward or counterfactual thinking and affective heuristics*, for *deep acting*. More research needs to be conducted to find different pathways to *deep acting* and the contextual factors affecting the choice between *deep acting* and *surface acting*.

As Kahneman and Tversky (2013) pointed out, our decision making is not always logical and is primarily determined by emotions and psychological factors (Kahneman, Knetsch, & Thaler, 1991). Based on our finding that managers' emotional labor hinders their innovative decision-making, more research attention needs be paid to better understand the unexplored boundary conditions and the moderating process of these effects from divergent viewpoints in diverse organizational and cultural

settings as emotion regulation changes are also affected by cultural context (Butler, Lee, & Gross, 2007).

REFERENCES

- Adler, P. S., Goldoftas, B., & Levine, D. I. 1999. Flexibility versus efficiency? A case study of model changeovers in the Toyota production system. *Organization science*, 10(1): 43-68.
- Akkawanitcha, C., Patterson, P., Buranapin, S., & Kantabutra, S. 2015. Frontline employees' cognitive appraisals and well-being in the face of customer aggression in an Eastern, collectivist culture. *Journal of Services Marketing*, 29(4): 268-279.
- Alberts, H. J. & Thewissen, R. 2011. The effect of a brief mindfulness intervention on memory for positively and negatively valenced stimuli. *Mindfulness*, 2(2): 73-77.
- Allen, J. A., Diefendorff, J. M., & Ma, Y. 2014. Differences in emotional labor across cultures: A comparison of Chinese and US service workers. *Journal of Business and Psychology*, 29(1): 21-35.
- Amabile, T. M., Hadley, C. N., & Kramer, S. J. 2002. Creativity under the gun. *Harvard business review*, 80: 52-63.
- Anderson, N., De Dreu, C. K., & Nijstad, B. A. 2004. The routinization of innovation research: A constructively critical review of the state-of-the-science. *Journal of organizational Behavior*, 25(2): 147-173.
- Argote, L. 1999. Organizational learning: Creating, retaining, and transferring knowledge. Kluwer. *Dordrecht, Netherlands*.

- Argyris, C. 1976. Single-loop and double-loop models in research on decision making. *Administrative science quarterly*: 363-375.
- Argyris, C. 1982. *Reasoning, learning, and action: Individual and organizational*: Jossey-Bass.
- Argyris, C. 1996. Actionable knowledge: Design causality in the service of consequential theory. *The Journal of Applied Behavioral Science*, 32(4): 390-406.
- Ashforth, B. E. & Humphrey, R. H. 1993. Emotional labor in service roles: The influence of identity. *Academy of management review*, 18(1): 88-115.
- Ashkanasy, N. M., Härtel, C. E., & Zerbe, W. J. 2000. *Emotions in the workplace: Research, theory, and practice*: Greenwood Publishing Group.
- Austin, E. J., Dore, T. C., & O'Donovan, K. M. 2008. Associations of personality and emotional intelligence with display rule perceptions and emotional labour. *Personality and Individual Differences*, 44(3): 679-688.
- Baddeley, A. & Logie, R. 1999. Working memory: The multiple-component model. In, A. Miyake, & P. Shah (Eds.), *Models of working memory: Mechanisms of active maintenance and executive control* (pp. 28-61): Cambridge: Cambridge University Press.
- Baer, M. & Oldham, G. R. 2006. The curvilinear relation between

experienced creative time pressure and creativity: moderating effects of openness to experience and support for creativity. *Journal of Applied Psychology*, 91(4): 963.

Baron, R. M. & Kenny, D. A. 1986. The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, 51(6): 1173.

Barr, P. S. 1998. Adapting to unfamiliar environmental events: A look at the evolution of interpretation and its role in strategic change. *Organization Science*, 9(6): 644-669.

Bartlett, C. G. & Ghoshal, S. S.[1989]: Managing Across Borders: The Transnational Solution. *Harvard Business School Press, Boston, MA*.

Bartley, S. H. 1970. The homeostatic and comfort perceptual systems. *The Journal of Psychology*, 75(2): 157-162.

Bateman, T. S. & Zeithaml, C. P. 1989. The psychological context of strategic decisions: A model and convergent experimental findings. *Strategic Management Journal*, 10(1): 59-74.

Beike, D. & Wirth-Beaumont, E. 2005. Psychological closure as a memory phenomenon. *Memory*, 13(6): 574-593.

Beike, D. R., Kleinknecht, E., & Wirth-Beaumont, E. T. 2004. How emotional and nonemotional memories define the self. *The self and memory*: 141-159.

- Beike, D. R., Lampinen, J. M., & Behrend, D. A. 2004. *The self and memory*: Psychology Press.
- Berntsen, D. & Hall, N. M. 2004. The episodic nature of involuntary autobiographical memories. *Memory & Cognition*, 32(5): 789-803.
- Beurskens, A. J., Bültmann, U., Kant, I., Vercoulen, J. H., Bleijenberg, G., & Swaen, G. M. 2000. Fatigue among working people: validity of a questionnaire measure. *Occupational and environmental medicine*, 57(5): 353-357.
- Bobbitt, H. R. & Ford, J. D. 1980. Decision-maker choice as a determinant of organizational structure. *Academy of Management Review*, 5(1): 13-23.
- Bono, J. E., Foldes, H. J., Vinson, G., & Muros, J. P. 2007. Workplace emotions: the role of supervision and leadership. *Journal of Applied Psychology*, 92(5): 1357.
- Bono, J. E. & Vey, M. A. 2007. Personality and emotional performance: Extraversion, neuroticism, and self-monitoring. *Journal of occupational health psychology*, 12(2): 177.
- Bower, G. H. 1981. Mood and memory. *American psychologist*, 36(2): 129.
- Bozionelos, N. & Kiamou, K. 2008. Emotion work in the Hellenic frontline services environment: how it relates to emotional exhaustion and work attitudes. *The International Journal of*

- Human Resource Management*, 19(6): 1108-1130.
- Brief, A. P. & Weiss, H. M. 2002. Organizational behavior: Affect in the workplace. *Annual review of psychology*, 53(1): 279-307.
- Brown, I. D. 1994. Driver fatigue. *Human factors*, 36(2): 298-314.
- Burch, G. F., Humphrey, R. H., & Batchelor, J. H. 2013. How great leaders use emotional labor: Insights from seven corporate executives. *Organizational Dynamics*, 2(42): 119-125.
- Butler, E. A., Lee, T. L., & Gross, J. J. 2007. Emotion regulation and culture: are the social consequences of emotion suppression culture-specific? *Emotion*, 7(1): 30.
- Carnevale, P. J. & Probst, T. M. 1998. Social values and social conflict in creative problem solving and categorization. *Journal of personality and social psychology*, 74(5): 1300.
- Chalder, T., Berelowitz, G., Pawlikowska, T., Watts, L., Wessely, S., Wright, D., & Wallace, E. 1993. Development of a fatigue scale. *Journal of psychosomatic research*, 37(2): 147-153.
- Chen, G., Farh, J.-L., Campbell-Bush, E. M., Wu, Z., & Wu, X. 2013. Teams as innovative systems: Multilevel motivational antecedents of innovation in R&D teams. *Journal of Applied Psychology*, 98(6): 1018.
- Choi, J. N., Sung, S. Y., Lee, K., & Cho, D. S. 2011. Balancing cognition and emotion: Innovation implementation as a function of cognitive appraisal and emotional reactions toward

- innovation. *Journal of Organizational Behavior*, 32(1): 107-124.
- Christensen, C. M. & Bower, J. L. 1996. Customer power, strategic investment, and the failure of leading firms. *Strategic management journal*: 197-218.
- Clore, G. L., Schwarz, N., & Conway, M. 1994. Affective causes and consequences of social information processing. *Handbook of social cognition*, 1: 323-417.
- Colquitt, J. A. 2004. Does the justice of the one interact with the justice of the many? Reactions to procedural justice in teams. *Journal of Applied Psychology*, 89(4): 633.
- Commons, J. R. 1951. The economics of collective action: JSTOR.
- Conger, J. A. & Kanungo, R. N. 1998. *Charismatic leadership in organizations*: Sage Publications.
- Cropanzano, R., Rupp, D. E., & Byrne, Z. S. 2003. The relationship of emotional exhaustion to work attitudes, job performance, and organizational citizenship behaviors. *Journal of Applied psychology*, 88(1): 160.
- Daft, R. L. & Weick, K. E. 1984. Toward a model of organizations as interpretation systems. *Academy of management review*, 9(2): 284-295.
- de Wit, F. R., Greer, L. L., & Jehn, K. A. 2012. The paradox of intragroup conflict: a meta-analysis. *Journal of Applied Psychology*, 97(2): 360.

- Diefendorff, J. M. & Richard, E. M. 2003. Antecedents and consequences of emotional display rule perceptions. *Journal of Applied Psychology*, 88(2): 284-294.
- Diestel, S. & Schmidt, K. H. 2011. Costs of simultaneous coping with emotional dissonance and self-control demands at work: results from two German samples. *J Appl Psychol*, 96(3): 643-653.
- Dodge, K. A. & Crick, N. R. 1990. Social information-processing bases of aggressive behavior in children. *Personality and social psychology bulletin*, 16(1): 8-22.
- Dutton, J. E., Fahey, L., & Narayanan, V. K. 1983. Toward understanding strategic issue diagnosis. *Strategic Management Journal*, 4(4): 307-323.
- Dutton, J. E. & Jackson, S. E. 1987. Categorizing strategic issues: Links to organizational action. *Academy of management review*, 12(1): 76-90.
- Ekman, P. & Friesen, W. V. 1982. Felt, false, and miserable smiles. *Journal of nonverbal behavior*, 6(4): 238-252.
- Engle, R. W., Kane, M. J., & Tuholski, S. W. 1999. Individual differences in working memory capacity and what they tell us about controlled attention, general fluid intelligence, and functions of the prefrontal cortex. *Models of working memory: Mechanisms of active maintenance and executive control*:

102-134.

- Evan, W. M. 1965. Conflict and performance in R & D organizations. *IMR; Industrial Management Review (pre-1986)*, 7(1): 35.
- Fiol, C. M. & Lyles, M. A. 1985. Organizational learning. *Academy of management review*, 10(4): 803-813.
- Frone, M. R. 2000. Interpersonal conflict at work and psychological outcomes: testing a model among young workers. *Journal of occupational health psychology*, 5(2): 246.
- Garcia, R. & Calantone, R. 2002. A critical look at technological innovation typology and innovativeness terminology: a literature review. *Journal of product innovation management*, 19(2): 110-132.
- Geng, Z., Liu, C., Liu, X., & Feng, J. 2014. The effects of emotional labor on frontline employee creativity. *International Journal of Contemporary Hospitality Management*, 26(7): 1046-1064.
- Ghannadi, A. A., Mirabi, V. R., Shargh, F. N., & Zoben, P. 2015. Evaluation the impact of job burnout, on innovation in organization among staff of Asphalt Tous. *Jurnal UMP Social Sciences and Technology Management Vol*, 3(3).
- Glomb, T. M., Kammeyer-Mueller, J. D., & Rotundo, M. 2004a. Emotional labor demands and compensating wage differentials. *J Appl Psychol*, 89(4): 700-714.

- Glomb, T. M., Kammeyer-Mueller, J. D., & Rotundo, M. 2004b. Emotional labor demands and compensating wage differentials. *Journal of Applied Psychology*, 89(4): 700.
- Glomb, T. M. & Tews, M. J. 2004. Emotional labor: A conceptualization and scale development. *Journal of Vocational Behavior*, 64(1): 1-23.
- Grandey, A. A. 2000. Emotional regulation in the workplace: A new way to conceptualize emotional labor. *Journal of occupational health psychology*, 5(1): 95.
- Grandey, A. A., Tam, A. P., & Brauburger, A. L. 2002. Affective states and traits in the workplace: Diary and survey data from young workers. *Motivation and emotion*, 26(1): 31-55.
- Grandey, A. A. 2003. When "the show must go on": Surface acting and deep acting as determinants of emotional exhaustion and peer-rated service delivery. *Academy of management Journal*, 46(1): 86-96.
- Grandey, A. A., Dickter, D. N., & Sin, H. P. 2004. The customer is not always right: Customer aggression and emotion regulation of service employees. *Journal of Organizational Behavior*, 25(3): 397-418.
- Grandey, A. A., Fisk, G. M., & Steiner, D. D. 2005. Must "service with a smile" be stressful? The moderating role of personal control for American and French employees. *Journal of Applied*

Psychology, 90(5): 893.

Grandey, A. A., Chi, N.-W., & Diamond, J. A. 2013. Show me The Money! do Financial Rewards for Performance Enhance or Undermine The Satisfaction from Emotional Labor? *Personnel Psychology*, 66(3): 569-612.

Greenbaum, R. L., Quade, M. J., Mawritz, M. B., Kim, J., & Crosby, D. 2014. When the customer is unethical: the explanatory role of employee emotional exhaustion onto work-family conflict, relationship conflict with coworkers, and job neglect. *J Appl Psychol*, 99(6): 1188-1203.

Greve, H. R. & Taylor, A. 2000. Innovations as catalysts for organizational change: Shifts in organizational cognition and search. *Administrative Science Quarterly*, 45(1): 54-80.

Gross, J. J. & Levenson, R. W. 1997. Hiding feelings: the acute effects of inhibiting negative and positive emotion. *Journal of abnormal psychology*, 106(1): 95.

Gross, J. J. 1998. The emerging field of emotion regulation: an integrative review. *Review of general psychology*, 2(3): 271.

Gross, J. J., Richards, J. M., & John, O. P. 2006. Emotion regulation in everyday life. *Emotion regulation in families: Pathways to dysfunction and health*: 13-35.

Groth, J. & Peters, J. 1999. What blocks Creativity? A managerial perspective. *Creativity and Innovation management*, 8(3):

179-187.

- Groth, M., Hennig-Thurau, T., & Walsh, G. 2009. Customer reactions to emotional labor: The roles of employee acting strategies and customer detection accuracy. *Academy of Management Journal*, 52(5): 958-974.
- Guy, M. E., Newman, M. A., & Mastracci, S. H. 2014. *Emotional labor: Putting the service in public service*: Routledge.
- Hackman, J. R. & Katz, N. 2010. Group behavior and performance. *Handbook of social psychology*.
- Halbesleben, J. R. & Bowler, W. M. 2007. Emotional exhaustion and job performance: the mediating role of motivation. *Journal of applied psychology*, 92(1): 93.
- Hamilton, M. A. 2011. Verbal Aggression: Understanding the Psychological Antecedents and Social Consequences. *Journal of Language and Social Psychology*, 31(1): 5-12.
- Hamilton, M. A. & Tafoya, M. A. 2011. Toward a Collective Framework on Verbal Aggression: Hierarchical and Antagonistic Processes. *Journal of Language and Social Psychology*, 31(1): 112-130.
- Hammond, M. M., Neff, N. L., Farr, J. L., Schwall, A. R., & Zhao, X. 2011. Predictors of individual-level innovation at work: A meta-analysis. *Psychology of Aesthetics, Creativity, and the Arts*, 5(1): 90.

- Harrison, D. A., Price, K. H., Gavin, J. H., & Florey, A. T. 2002. Time, teams, and task performance: Changing effects of surface-and deep-level diversity on group functioning. *Academy of management journal*, 45(5): 1029-1045.
- Heeren, A., Van Broeck, N., & Philippot, P. 2009. The effects of mindfulness on executive processes and autobiographical memory specificity. *Behaviour research and therapy*, 47(5): 403-409.
- Heilman, R. M., Crişan, L. G., Houser, D., Miclea, M., & Miu, A. C. 2010. Emotion regulation and decision making under risk and uncertainty. *Emotion*, 10(2): 257.
- Henderson, R. M. & Clark, K. B. 1990. Architectural innovation: The reconfiguration of existing product technologies and the failure of established firms. *Administrative science quarterly*: 9-30.
- Herzog, T. R., Hayes, L. J., Applin, R. C., & Weatherly, A. M. 2010. Incompatibility and mental fatigue. *Environment and Behavior*.
- Hobfoll, S. E. 1989. Conservation of resources: A new attempt at conceptualizing stress. *American psychologist*, 44(3): 513.
- Hobfoll, S. E. & Freedy, J. 1993. Conservation of resources: A general stress theory applied to burnout.
- Hobfoll, S. E. & Shirom, A. 1993. Stress and burnout in the workplace: Conservation of resources. *Handbook of*

organizational behavior, 1: 41-61.

- Hochschild, A. 1983. R.(1983): The Managed Heart: Commercialization of Human Feeling: Berkeley: University of California Press.
- Hsieh, C. W., Yang, K., & Fu, K. J. 2012. Motivational bases and emotional labor: Assessing the impact of public service motivation. *Public Administration Review*, 72(2): 241-251.
- Huhtala, H. & Parzefall, M. R. 2007. A review of employee well-being and innovativeness: An opportunity for a mutual benefit. *Creativity and Innovation Management*, 16(3): 299-306.
- Humphrey, R. H. 2012. How do leaders use emotional labor? *Journal of Organizational Behavior*, 33(5): 740-744.
- Hur, W.-M., Han, S.-J., Yoo, J.-J., & Moon, T. W. 2015a. The moderating role of perceived organizational support on the relationship between emotional labor and job-related outcomes. *Management Decision*, 53(3): 605-624.
- Hur, W.-M., Moon, T.-W., & Jung, Y. S. 2015b. Customer response to employee emotional labor: the structural relationship between emotional labor, job satisfaction, and customer satisfaction. *Journal of Services Marketing*, 29(1): 71-80.
- Huy, Q. N. 1999. Emotional capability, emotional intelligence, and radical change. *Academy of Management review*, 24(2): 325-345.

- Huy, Q. N. 2002. Emotional balancing of organizational continuity and radical change: The contribution of middle managers. *Administrative science quarterly*, 47(1): 31-69.
- Isen, A. M., Daubman, K. A., & Nowicki, G. P. 1987. Positive affect facilitates creative problem solving. *Journal of personality and social psychology*, 52(6): 1122.
- Izard, C. E. 1984. Emotion-cognition relationships and human development. *Emotions, cognition, and behavior*: 17-37.
- Janoff-Bullman, B. 1992. Shattered assumptions: Towards a new psychology of trauma: New York Free Press.
- Jansen, J. J., Van Den Bosch, F. A., & Volberda, H. W. 2006. Exploratory innovation, exploitative innovation, and performance: Effects of organizational antecedents and environmental moderators. *Management science*, 52(11): 1661-1674.
- Janssen, O. 2003. Innovative behaviour and job involvement at the price of conflict and less satisfactory relations with co-workers. *Journal of occupational and organizational psychology*, 76(3): 347-364.
- Janssen, O. 2004. How fairness perceptions make innovative behavior more or less stressful. *Journal of Organizational Behavior*, 25(2): 201-215.
- Jha, A. P., Krompinger, J., & Baime, M. J. 2007. Mindfulness

- training modifies subsystems of attention. *Cognitive, Affective, & Behavioral Neuroscience*, 7(2): 109-119.
- Jha, A. P., Stanley, E. A., Kiyonaga, A., Wong, L., & Gelfand, L. 2010. Examining the protective effects of mindfulness training on working memory capacity and affective experience. *Emotion*, 10(1): 54.
- Johnson, H.-A. M. & Spector, P. E. 2007. Service with a smile: Do emotional intelligence, gender, and autonomy moderate the emotional labor process? *Journal of occupational health psychology*, 12(4): 319.
- Kahneman, D., Knetsch, J. L., & Thaler, R. H. 1991. Anomalies: The endowment effect, loss aversion, and status quo bias. *The journal of economic perspectives*, 5(1): 193-206.
- Kahneman, D. & Tversky, A. 2013. Prospect theory: An analysis of decision under risk, *HANDBOOK OF THE FUNDAMENTALS OF FINANCIAL DECISION MAKING: Part I*: 99-127: World Scientific.
- Kammeyer-Mueller, J. D., Rubenstein, A. L., Long, D. M., Odio, M. A., Buckman, B. R., Zhang, Y., & Halvorsen-Ganepola, M. D. K. 2013. A Meta-Analytic Structural Model of Dispositional Affectivity and Emotional Labor. *Personnel Psychology*, 66(1): 47-90.
- Kane, M. & Engle, R. 2002. The role of prefrontal cortex in

- working-memory capacity, executive attention, and general fluid intelligence: An individual-differences perspective. *Psychonomic Bulletin & Review*, 9(4): 637-671.
- Kaplan, S. 1987. Mental fatigue and the designed environment. *Public environments*: 55-60.
- Kaplan, S. 1995. The restorative benefits of nature: Toward an integrative framework. *Journal of environmental psychology*, 15(3): 169-182.
- Kark Smollan, R. 2006. Minds, hearts and deeds: Cognitive, affective and behavioural responses to change. *Journal of Change Management*, 6(2): 143-158.
- Katz, D. & Kahn, R. L. 1978. The social psychology of organizations.
- Kiefer, T. 2005. Feeling bad: Antecedents and consequences of negative emotions in ongoing change. *Journal of Organizational Behavior*, 26(8): 875-897.
- Kimberg, D. Y. & Farah, M. J. 1993. A unified account of cognitive impairments following frontal lobe damage: the role of working memory in complex, organized behavior. *Journal of Experimental Psychology: General*, 122(4): 411.
- Kline, P. 2014. *An easy guide to factor analysis*: Routledge.
- Knight, D., Pearce, C. L., Smith, K. G., Olian, J. D., Sims, H. P., Smith, K. A., & Flood, P. 1999. Top management team

- diversity, group process, and strategic consensus. *Strategic Management Journal*, 20(5): 445-465.
- Kruglanski, A. W. 1996. A motivated gatekeeper of our minds: Need-for-closure effects on interpersonal and group processes.
- Kruml, S. M. & Geddes, D. 2000. Catching fire without burning out: Is there an ideal way to perform emotion labor?, *Emotions in the workplace: Theory, research and practice*: 177-188.
- Kuo, F. E. & Sullivan, W. C. 2001. Aggression and violence in the inner city effects of environment via mental fatigue. *Environment and behavior*, 33(4): 543-571.
- Larkin, J. H. 1983. The role of problem representation in physics. *Mental models*: 75-98.
- Laureiro-Martínez, D., Brusoni, S., Canessa, N., & Zollo, M. 2015. Understanding the exploration–exploitation dilemma: An fMRI study of attention control and decision-making performance. *Strategic Management Journal*, 36(3): 319-338.
- Laursen, K. & Salter, A. 2006. Open for innovation: the role of openness in explaining innovation performance among UK manufacturing firms. *Strategic management journal*, 27(2): 131-150.
- Lazarus, R. S. 1991. *Emotion and adaptation*: Oxford University Press on Demand.
- Lepore, S. J., Silver, R. C., Wortman, C. B., & Wayment, H. A.

1996. Social constraints, intrusive thoughts, and depressive symptoms among bereaved mothers. *Journal of personality and social psychology*, 70(2): 271.
- Levinthal, D. A. & March, J. G. 1993. The myopia of learning. *Strategic management journal*, 14(S2): 95-112.
- Liu, Y. & Perrewe, P. L. 2005. Another look at the role of emotion in the organizational change: A process model. *Human Resource Management Review*, 15(4): 263-280.
- Louis, M. R. & Sutton, R. I. 1991. Switching cognitive gears: From habits of mind to active thinking. *Human relations*, 44(1): 55-76.
- Lykins, E. L., Baer, R. A., & Gottlob, L. R. 2012. Performance-based tests of attention and memory in long-term mindfulness meditators and demographically matched nonmeditators. *Cognitive therapy and research*, 36(1): 103-114.
- March, J. G. 1991. Exploration and exploitation in organizational learning. *Organization science*, 2(1): 71-87.
- Martin, X. & Mitchell, W. 1998. The influence of local search and performance heuristics on new design introduction in a new product market. *Research Policy*, 26(7): 753-771.
- Mathieu, J. E., Heffner, T. S., Goodwin, G. F., Salas, E., & Cannon-Bowers, J. A. 2000. The influence of shared mental models on team process and performance. *Journal of applied*

psychology, 85(2): 273.

- McAdams, D. P. 1996. Personality, modernity, and the storied self: A contemporary framework for studying persons. *Psychological inquiry*, 7(4): 295-321.
- McCrae, R. R. 1987. Creativity, divergent thinking, and openness to experience. *Journal of personality and social psychology*, 52(6): 1258.
- McVay, J. C. & Kane, M. J. 2009. Conducting the train of thought: working memory capacity, goal neglect, and mind wandering in an executive-control task. *J Exp Psychol Learn Mem Cogn*, 35(1): 196-204.
- McVay, J. C. & Kane, M. J. 2010. Does mind wandering reflect executive function or executive failure? Comment on Smallwood and Schooler (2006) and Watkins (2008). *Psychol Bull*, 136(2): 188-197; discussion 198-207.
- Medler-Liraz, H. & Seger-Guttman, T. 2015. The Relationship Between Emotional Labor Strategies, Service Provider Hostility, and Service Quality. *Services Marketing Quarterly*, 36(3): 210-225.
- Meier, K. J., Mastracci, S. H., & Wilson, K. 2006. Gender and emotional labor in public organizations: An empirical examination of the link to performance. *Public Administration Review*, 66(6): 899-909.

- Meijman, T. 2000. The theory of the stop-emotion: On the functionality of fatigue. *Ergonomics and safety for global business quality and production*: 45-50.
- Michielsen, H. J., De Vries, J., & Van Heck, G. L. 2003. Psychometric qualities of a brief self-rated fatigue measure: The Fatigue Assessment Scale. *Journal of psychosomatic research*, 54(4): 345-352.
- Mintzberg, H. 1997. The manager's job: Folklore and fact. *Leadership: Understanding the dynamics of power and influence in organizations*: 35-53.
- Miyake, A., Friedman, N. P., Emerson, M. J., Witzki, A. H., Howerter, A., & Wager, T. D. 2000. The unity and diversity of executive functions and their contributions to complex "frontal lobe" tasks: A latent variable analysis. *Cognitive psychology*, 41(1): 49-100.
- Moore, J. E. 2000. One road to turnover: An examination of work exhaustion in technology professionals. *Mis Quarterly*: 141-168.
- Morris, J. A. & Feldman, D. C. 1996. The dimensions, antecedents, and consequences of emotional labor. *Academy of management review*, 21(4): 986-1010.
- Mulki, J. P., Jaramillo, F., & Locander, W. B. 2006. Emotional exhaustion and organizational deviance: Can the right job and a leader's style make a difference? *Journal of Business Research*,

59(12): 1222-1230.

- Nemanich, L., Keller, R. T., Vera, D., & Chin, W. W. 2010. Absorptive capacity in R&D project teams: A conceptualization and empirical test. *Engineering Management, IEEE Transactions on*, 57(4): 674-688.
- Netemeyer, R. G., Boles, J. S., & McMurrian, R. 1996. Development and validation of work–family conflict and family–work conflict scales. *Journal of applied psychology*, 81(4): 400.
- Nguyen, H., Groth, M., & Johnson, A. 2013. When the Going Gets Tough, the Tough Keep Working: Impact of Emotional Labor on Absenteeism. *Journal of Management*.
- Norman, D. & Shallice, T. 1986. Attention to action: Willed and automatic control of behavior: In RJ Davidson, GE Schwartz, & D. Shapiro (Eds.), *Consciousness and self-regulation* (Vol. 4; pp. 1-18): New York: Plenum.
- Norman, D. A. & Verganti, R. 2014. Incremental and radical innovation: Design research vs. technology and meaning change. *Design issues*, 30(1): 78-96.
- Oh, I.-S., Kim, S., & Van Iddekinge, C. H. 2015. Taking it to another level: Do personality-based human capital resources matter to firm performance? *Journal of Applied Psychology*, 100(3): 935.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P.

2003. Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of applied psychology*, 88(5): 879.
- Preacher, K. J. & Hayes, A. F. 2008. Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior research methods*, 40(3): 879-891.
- Pugh, S. D., Groth, M., & Hennig-Thurau, T. 2011. Willing and able to fake emotions: a closer examination of the link between emotional dissonance and employee well-being. *J Appl Psychol*, 96(2): 377-390.
- Rafaeli, A. & Sutton, R. I. 1987. Expression of emotion as part of the work role. *Academy of management review*, 12(1): 23-37.
- Ranson, S., Hinings, B., & Greenwood, R. 1980. The structuring of organizational structures. *Administrative science quarterly*: 1-17.
- Rathi, N. 2014. Impact of Emotional Intelligence and Emotional Labor on Organizational Outcomes in Service Organizations: A Conceptual Model [dagger]. *South Asian Journal of Management*, 21(4): 54.
- Richards, J. M. & Gross, J. J. 2000. Emotion regulation and memory: the cognitive costs of keeping one's cool. *Journal of personality and social psychology*, 79(3): 410.
- Robert, G. & Hockey, J. 1997. Compensatory control in the regulation

- of human performance under stress and high workload: A cognitive-energetical framework. *Biological psychology*, 45(1): 73-93.
- Rosenstreich, E. 2016. Mindfulness and False-Memories: The Impact of Mindfulness Practice on the DRM Paradigm. *J Psychol*, 150(1): 58-71.
- Salovey, P. & Mayer, J. D. 1990. Emotional intelligence. *Imagination, cognition and personality*, 9(3): 185-211.
- Sanders, A. F. & Sanders, A. 2013. *Elements of human performance: Reaction processes and attention in human skill*: Psychology Press.
- Santos, A., Mustafa, M. J., & Gwi, T. C. 2015. Trait emotional intelligence, emotional labour, and burnout among Malaysian HR professionals. *Management Research Review*, 38(1): 67-88.
- Schaubroeck, J. & Jones, J. R. 2000. Antecedents of workplace emotional labor dimensions and moderators of their effects on physical symptoms. *Journal of Organizational Behavior*, 21: 163.
- Scott, B. A., Barnes, C. M., & Wagner, D. T. 2011. Chameleonic or Consistent? A Multilevel Investigation of Emotional Labor Variability and Self-Monitoring. *Academy of Management Journal*, 55(4): 905-926.
- Seli, P., Cheyne, J. A., Xu, M., Purdon, C., & Smilek, D. 2015.

- Motivation, intentionality, and mind wandering: Implications for assessments of task-unrelated thought. *J Exp Psychol Learn Mem Cogn*, 41(5): 1417-1425.
- Shih, S.-P., Jiang, J. J., Klein, G., & Wang, E. 2013. Job burnout of the information technology worker: Work exhaustion, depersonalization, and personal accomplishment. *Information & Management*, 50(7): 582-589.
- Simon, H. A. 2013. *Administrative behavior*: Simon and Schuster.
- Singer, J. A. 1990. Affective Responses to Autobiographical Memories and Their Relationship to Long-Term Goals. *Journal of Personality*, 58(3): 535-563.
- Singer, J. A. & Salovey, P. 1993. The remembered self: New York: Free Press.
- Smith, C. A., Haynes, K. N., Lazarus, R. S., & Pope, L. K. 1993. In search of the "hot" cognitions: attributions, appraisals, and their relation to emotion. *Journal of personality and social psychology*, 65(5): 916.
- Sobel, M. E. 1982. Asymptotic confidence intervals for indirect effects in structural equation models. *Sociological methodology*, 13: 290-312.
- Spencer, S. & Rupp, D. E. 2009. Angry, guilty, and conflicted: injustice toward coworkers heightens emotional labor through cognitive and emotional mechanisms. *Journal of Applied*

Psychology, 94(2): 429.

- Strickland, S. & Towler, A. 2011. Correlates of creative behaviour: The role of leadership and personal factors. *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration*, 28(1): 41-51.
- Subramaniam, M. & Youndt, M. A. 2005. The influence of intellectual capital on the types of innovative capabilities. *Academy of Management journal*, 48(3): 450-463.
- Sullivan, S. E. & Bhagat, R. S. 1992. Organizational stress, job satisfaction and job performance: where do we go from here? *Journal of Management*, 18(2): 353-374.
- Sutton, R. I. & Rafaeli, A. 1988. Untangling the relationship between displayed emotions and organizational sales: The case of convenience stores. *Academy of Management journal*, 31(3): 461-487.
- Tang, Y.-Y., Ma, Y., Wang, J., Fan, Y., Feng, S., Lu, Q., Yu, Q., Sui, D., Rothbart, M. K., & Fan, M. 2007. Short-term meditation training improves attention and self-regulation. *Proceedings of the National Academy of Sciences*, 104(43): 17152-17156.
- Tierney, P. & Farmer, S. M. 2002. Creative self-efficacy: Its potential antecedents and relationship to creative performance. *Academy of Management journal*, 45(6): 1137-1148.

- Tomkovick, C. & Miller, C. 2000. Perspective—riding the wind: managing new product development in an age of change. *Journal of Product Innovation Management*, 17(6): 413-423.
- Tushman, M. L. & Anderson, P. 1986. Technological discontinuities and organizational environments. *Administrative science quarterly*: 439-465.
- Unsworth, K. 2001. Unpacking creativity. *Academy of management review*, 26(2): 289-297.
- Van de Ven, A. H. 1986. Central problems in the management of innovation. *Management science*, 32(5): 590-607.
- van der Linden, D., Frese, M., & Meijman, T. F. 2003. Mental fatigue and the control of cognitive processes: effects on perseveration and planning. *Acta Psychologica*, 113(1): 45-65.
- VanLehn, K. 1988. Problem solving and cognitive skill acquisition: DTIC Document.
- Vlachos, P. A., Panagopoulos, N. G., & Rapp, A. A. 2013. Feeling good by doing good: Employee CSR-induced attributions, job satisfaction, and the role of charismatic leadership. *Journal of business ethics*, 118(3): 577-588.
- Watkins, P. C., Cruz, L., Holben, H., & Kolts, R. L. 2008. Taking care of business? Grateful processing of unpleasant memories. *The Journal of Positive Psychology*, 3(2): 87-99.
- Webster, D. M., Richter, L., & Kruglanski, A. W. 1996. On leaping

- to conclusions when feeling tired: Mental fatigue effects on impressional primacy. *Journal of Experimental Social Psychology*, 32(2): 181-195.
- Wells, A. & Roussis, P. 2014. Refraining from intrusive thoughts is strategy dependent: a comment on Sugiura, et al. And a preliminary informal test of detached mindfulness, acceptance, and other strategies. *Psychol Rep*, 115(2): 541-544.
- Wharton, A. S. & Erickson, R. J. 1995. The Consequences of Caring. *The Sociological Quarterly*, 36(2): 273-296.
- Wilk, S. L. & Moynihan, L. M. 2005. Display rule "regulators": the relationship between supervisors and worker emotional exhaustion. *J Appl Psychol*, 90(5): 917-927.
- Wolfe, R. A. 1994. Organizational innovation: Review, critique and suggested research directions. *Journal of management studies*, 31(3): 405-431.
- Wolpin, J., Burke, R. J., & Greenglass, E. R. 1991. Is job satisfaction an antecedent or a consequence of psychological burnout? *Human relations*, 44(2): 193-209.
- Wright, T. A. & Cropanzano, R. 1998. Emotional exhaustion as a predictor of job performance and voluntary turnover. *Journal of applied psychology*, 83(3): 486.
- Yang, S. B. & Guy, M. E. 2014. Gender Effects on Emotional Labor in Seoul Metropolitan Area. *Public Personnel Management*,

44(1): 3-24.

Zhou, J. 2003. When the presence of creative coworkers is related to creativity: role of supervisor close monitoring, developmental feedback, and creative personality. *Journal of applied psychology*, 88(3): 413.

Zhou, K. Z. & Wu, F. 2010. Technological capability, strategic flexibility, and product innovation. *Strategic Management Journal*, 31(5): 547-561.

경영자의 감정, 인지 자원 소진이 혁신적 성과에 미치는 영향

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본 연구는 경영자의 감정노동이 혁신적 성과를 저해하는 매커니즘에 관한 것으로 감정노동이 감정 자원의 소진을 유발한다는 기존연구에서 더 나아가 인지자원의 고갈 또한 야기함을 규명하였다. 감정노동은 비자발적인 침투적 사고의 발현으로 새로운 정보에 대한 인지적 폐쇄 효과로 이어져 점진적 혁신보다 급진적 혁신에 부정적 효과를 미쳤다. 본 연구는 또한 표면행위보다 심층행위가 감정노동의 부정적 영향을 완화시키는데 효과적인 감정 조절 전략임을 발견하였다. 이는 심층행위는 긍정적 초점 변경과 재평가를 통해 자신의 본래 감정을 요구되는 감정과 일치시키려는 노력을 수반하기 때문이다. 이러한 연구 결과는 조직은 경영자들의 혁신 능력을 최대한으로 활용하기 위하여 의사 결정자들의 감정노동 정도에 주의를 기울여야 함을 시사한다.

주요어 : 감정노동, 표면행위, 심층행위, 급진적 혁신, 점진적 혁신, 경영자 의사결정, 정보처리
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