BI Norwegian Business School

Master Thesis

- The Dark Side of Engagement -

A study of the curvilinear relationship between work engagement and burnout, and the moderating impact of the motivational climate.

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Content

Summary

This study explores the curvilinear relationship between work engagement and burnout. In addition the study examines whether the perceived psychological motivational climate has an impact on this relationship.

The results from our study indicate that there is curvilinear relationship between work engagement and burnout. In addition to finding a linear relationship that goes from negative to positive, our results indicate that there is a curvilinear pattern leading back to negative again.

Our study facilitates broader understanding of the important role of the motivational climate in organizations. Our results indicate that mastery climate might act as a positive "buffer" against burnout, however, performance climate may act as a reinforcer of burnout.

Our study contributes to a greater understanding of the work engagement concept as well as the relationship between work engagement and burnout. We suggest that managers should encouraging a healthy balance between work and free time by restricting the amount of overtime working. We also call for additional research on the subject that may further clarify the exact tipping point between work engagement and burnout.

1.0 Introduction

Having engaged employees has been considered as an advantage amongst managers. This might be because the literature on work engagement usually depicts having engaged employees as a win-win situation for everyone (George, 2011). Work engagement is usually conceptualized as a three-factor model, comprised of vigor, dedication and absorption (Schaufeli, Salanova, Gonzalez-Roma & Bakker, 2002). Some of the benefits that are suggested to be a result of having engaged employees are higher shareholder return, profitability, productivity, quality, and customer satisfaction as well as lower absenteeism and turnover (Crawford, LePine & Rich, 2010).

Recently, researchers have suggested that there might be a "dark side of engagement" (e.g., Bakker, Albrecht & Leiter, 2011a,b; Maslach, 2011; George, 2011; Sonnentag, 2011), and that further research is needed on this subject. Highly engaged employees might sacrifice other aspects of their lives, like family, friends, and health, by working overtime and by doing more than it is expected of them (George, 2011; Maslach, 2011). Thus individuals may experience an increase in job demands over time, which might result in the individual becoming burned-out. Burnout is a particular type of stress, where a certain degree of emotional exhaustion, cynicism and reduced professional efficacy (strain) is present as a result of a range of work demands (stressors) (Cordes & Dougherty, 1993).

Burned-out employees have become a relevant concern for managers. Having burned-out employees is very costly for the organization, as they have to replace these employees in an indefinite period of time. Several researchers have investigated the relationship between work engagement and burnout, but while some suggests that the two constructs are the opposite of a continuum (e.g. Maslach & Leiter, 1997; Cole, Walter, Bedeian & O'Boyle, 2012), others (e.g., Schaufeli & Salanova, 2007; Demerouti, Mostert & Bakker, 2010) have defined and operationalized engagement in its own right. What these studies have in common is that they have investigated a linear relationship between the two respective concepts (e.g. Crawford et al., 2010; Demerouti et al., 2010; Schaufeli & Bakker, 2004). The suggested dark side of engagement raises the question whether the linear relationship between work engagement and burnout tell the

whole truth about the two constructs' relationship. Maslach (2011) suggested that there might be a curvilinear pattern between the two, in addition to the linear relationship. The first aim of this research is therefore to investigate whether there exists a curvilinear relationship between work engagement and burnout. By investigating the possibility of a curvilinear relationship this study intends to contribute to a greater understanding of the relationship between the two. A greater understanding of their relationship might facilitate valuable information whether being highly engaged is always positive, and whether being too engaged can have negative consequences for both individuals and organizations.

However, both work engagement and burnout theory argues that the environment in the organization may affect employee outcomes (Cooper, Dewe, & O'Driscoll, 2001; Hackman & Oldham, 1976; Rich, Lepine & Crawford, 2010; Schultz, Greenley and Brown, 1995). Additionally, recent studies argue that the motivational climate in the organization influence the level of motivation and burnout (e.g., Ntoumanis, Taylor & Thøgersen-Ntoumani, 2012; Nerstad, Roberts & Richardsen, in press; Nerstad, 2012; Smith, Gustafsson & Hassmén, 2010). From an achievement goal theory (AGT) perspective the motivational climate refers to the extant criteria of success and failure in the work environment (Nerstad et al., in press). Schneider & Reichers (1983) differentiate between psychological climates (individual perceptions) and organizational climates (employees shared perceptions), which both affect the behavior of employees at work. The focus of our study will be on the psychological motivational climate since we are interested in how the individual's perception may impact the curvilinear relationship between work engagement and burnout (Parker et al., 2003).

There are two distinct perceptions of motivational climates; a mastery and a performance perception of motivational climate (Ntoumanis & Biddle, 1999). A mastery climate has been found to foster adaptive cognitive, affective and behavioral patterns (Ntoumanis & Biddle 1999; Jagacinski & Nicholls, 1984), in addition to increase work engagement and decrease burnout (Ntoumanis et al., 2012; Nerstad, 2012). In contrary, a performance climate has been found to foster more maladaptive outcomes (Ntoumanis & Biddle, 1999; Jagacinski & Nicholls, 1984), and further, an increase in burnout over time (Smith et al., 2010;

Ntoumanis et al., 2012; Nerstad, 2012). Therefore, the motivational climate is an interesting concept to include in this study as it might play an important role when it comes to whether or not highly engaged individuals in the organization might become more or less prone to burn out. The second important aim of our study is therefore to investigate the influence of the motivational climate on the possibly curvilinear relationship between work engagement and burnout.

The intended contribution of our study is two folded; we intend to facilitate a greater understanding of firstly, the relationship between work engagement and burnout, and secondly, the impact of the motivational climate on the curvilinear relationship between work engagement and burnout. A greater understanding of both the relationship between work engagement and burnout and the relevance of the motivational climate in the relationship between work engagement and burnout is important both for theory on engagement and burnout as well as for individuals and organizations, as it can impact the current theoretical and practical view we have of work engagement as a win-win situation for everyone (George, 2011). Further, the possible moderating role of the motivational climate might change managers' view when it comes to which tools or methods should be used in order to maximize employees' and the organization's performance.

2.0 Theory

2.1 Work Engagement

Kahn (1990) was the first scholar to propose the work engagement concept. He proposed that engaged individuals are the ones who invest their personal selves into the work they are performing, furthermore they invest their personal energy and they have an emotional connection with their work (Kahn, 1990). According to Kahn's (1990) conceptualization of engagement, this construct is not referring to an attitude toward characteristics of the organization or the job itself but rather toward psychological connection with the work tasks performance. Further, work engagement does not represent the investment of a single aspect of the self, but a cohesion of physical, emotional, and cognitive energies that individuals invest in their work roles (Christian, Garza & Slaughter, 2011).

Maslach and Leiter (1997) are taking a different stand when defining the work engagement construct. They are stating that work engagement is the antipode of a burnout construct. In their point of view work engagement is characterized by the direct opposites of burnout dimensions, by energy, involvement, and efficacy. Work engagement is most often defined as a distinct, independent construct from burnout, and is operationalized and defined as "a positive, fulfilling, work related state of mind that is characterized by vigor, dedication, and absorption" (Schaufeli et al., 2002, p. 74). This conceptualization of work engagement explains how employees are experiencing their work. Vigor explain to what extent employees feel stimulated and energized at work, and how willing they are to invest their energy and effort in their work. Dedication concerns how significant and meaningful work is to the employees, and is characterized by feelings such as significance, enthusiasm, pride, inspiration and challenge. Absorption is characterized by feelings of being fully occupied and gripped with one's work, so that time passes quickly, and one has difficulties with detaching oneself from work (Schaufeli & Bakker, 2010). Both academic conceptualizations of work engagement agree that it entails emotional (dedication), behavioral-energetic (vigor), and cognitive (absorption) components (Schaufeli & Bakker, 2010). Even though there exists an agreement that work engagement consists of these three factors, it appears that they are closely related as the correlations between the three observed factors are usually above .65, while the correlations between the latent factors range from about .80 to about .90 (e.g., Schaufeli et al. 2002; Schaufeli & Bakker, 2004) (Schaufeli & Bakker, 2010). Due to this high inter-correlation some researchers (e.g., Schaufeli, Bakker & Salanova, 2006) have suggested that it would be more appropriate to apply the total score on the UWES as an indicator of work engagement (Schaufeli & Bakker, 2010), and therefore to assess work engagement as a one-factor model.

Another important aspect when defining work engagement, as suggested by Christian et al. (2011), is the "state" versus "trait" conceptualization. A number of researches have shown that work engagement is a relatively stable personality variable that varies among individuals (e.g., Schaufeli et al, 2002). However, most recent research shows that engagement is subject to fluctuations during the day within the person and also varies between persons (Thoresen, Kaplan, Barsky, Warren & de Chermont, 2003). We will therefore take a more state like

perspective of work engagement in our study, which is also reflected in the definition presented above.

2.1.1 Discriminant Validity

Because work engagement is a relatively new construct people often compare it to other constructs that are alike, and further on, critique that this construct is putting "old wine in new bottles" (Maslach, 2011). This is a very important question that concerns whether engagement is a distinct construct from other similar constructs such as organizational commitment and job satisfaction (Christian et al., 2011). One example of a construct that has been suggested to be similar to work engagement is organizational commitment (Christian et al., 2011). Organizational commitment represents an emotional attachment and identification that is resulting from shared values and principles as well as interests that individuals have with their organizations (Christian et al., 2011). Work engagement, on the other hand, is defined as a construct that is concerned with the individuals being involved in the work itself (Schaufeli & Bakker, 2010). Another example is job satisfaction, which is most commonly defined as a positive and pleasurable emotion resulting from the appraisals of the job itself. It is suggested that there is probably more cognitive underpinning behind job satisfaction, because the focus is more on attitudes about and toward work itself, while work engagement focuses on the employee's mood at work (Schaufeli & Bakker, 2010).

2.1.2 Antecedents and Consequences of Work Engagement

In order to propose support for theoretical relevance of the work engagement construct, it is important to confirm the relationship between its antecedents and consequences (Christian et al., 2011). It has been argued that there are some intrinsically motivating aspects of work that are able to affect individual willingness to invest effort and their personal energy in work tasks (Christian et al., 2011). According to the job characteristic theory characteristics of the work setting, such as autonomy, task variety, task significance, feedback, problem solving, and job complexity, facilitate motivation (Hackman & Oldham, 1976). Other suggested antecedents of engagement are social support, value congruence, perceived organizational support, core self-evaluations (Hackman & Oldham, 1976; Rich et al., 2010), and job resources (Schaufeli, Bakker & Van Rhenen,

2009; Rich et al., 2010; Korunka, Kubicek, Schaufeli, & Hoonakker, 2009). Job resources refer to all those available aspects of the job, which are reducing job demands and are useful and helpful in achieving work goals and personal growth of the employees' resources (e.g., job control, performance feedback, and social support) (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). Further, it has been argued that dispositional characteristics are accountable for individual's tendencies toward work engagement (Kahn, 1990). These personal dispositions, which are leading towards work engagement, are conscientiousness, positive affectivity, and proactive personality (Christian et al., 2011).

Some of the suggested consequences of work engagement are; task performance, which mirrors how well employees perform on the tasks prescribed by the job, contextual performance that represents individual investment of their energy in to their work roles, and organizational citizenship behavior, which involves contributing in other aspects, like socially, than the formally defined job tasks (Christian et al., 2011; Rich et al., 2010). These consequences characterize individual's tendency to behave in ways that facilitate the organization (Christian et al., 2011; Rich et al., 2010).

2.2 The Dark Side of Work Engagement

Work engagement has been associated with positive organizational outcomes in the literature over the years. However, a number of scholars have raised concern about the "dark side" of work engagement. Pines (1993, p. 41) has stated that "In order to burn out, one has to first be "on fire"", suggesting that it is possible that the positive affect and enthusiasm that engaged employees experience will turn into negative affect and strain. It has been suggested that individuals, who are emotionally involved and motivated, often find meaning and identify with their work. However, when they experience failure at work they are most likely to be burned-out (Schaufeli, Maslach, & Marek, 1993). The absorption component of work engagement is probably the one that is causing unhealthy behavior (Bakker & Leiter, 2010). It may be that employees become so absorbed in their work that they neglect their personal life, and, furthermore, that high levels of work engagement may lead to workaholism, where individuals experience an inner

drive to work hard even when they do not enjoy working hard any more (Bakker & Leiter, 2010).

Sonnentag (2011) has provided evidence for negative outcomes of work engagement. In a longitudinal study, it was observed that highly engaged employees experienced an increase in job demands over time (Sonnentag, 2011). There are two possible explanations for why this happens. Firstly, it may be that the supervisors prefer to assign work tasks to the employees who are engaged in their work. Secondly, it is possible that engaged employees are so enthusiastic about their work that they take on additional tasks on their own and, thus work overtime (Maslach, 2011; Sonnentag, 2011). Further, when these highly engaged individuals accomplish even more than expected, their supervisors and managers consider it to be a positive outcome rather than a negative one (Maslach, 2011). For supervisors and corporate leaders engagement is a way to motivate people without money (Maslach, 2011), which is of course viewed as positively in today's economic crisis. However, this may not be in line with the understanding that work engagement is the construct that is leading to more personal happiness and well being as well as to other positive outcomes. A consequence of this is that job demands will increase over time, which in turn may lead to poor health and exhaustion in the long run (Sonnentag, 2011).

George (2011) raised another issue regarding the "dark side" of work engagement: In situations where employees are facing increasing working hours and pressure, high levels of work engagement may even make this situation worse. In such situations highly engaged employees will have less time and energy in their disposal to spend with their families and they will make sacrifices in this part of their lives. Further, some situations, for example loosing their job, might be particularly difficult for highly engaged employees compared to those who were not engaged in their work (George, 2011; George, 2010). Loosing their job may be particularly distressing for highly engaged individuals because they might have developed a self-identity that can be strongly linked to their work (George, 2011; Schaufeli et al., 1993). Furthermore, consequences of engagement have been explored in situations where employees need to perform an unpleasant work task, such as when doctors need to impose pain on their patients during necessary medical procedures, when police officer have to arrest citizens and

force them to leave their homes, or when manager have to lay off their subordinates (George, 2011; Schaufeli et al., 1993). While performing the unpleasant tasks, highly engaged individuals reported that they were experiencing pro-social emotions and also reported they were feeling "bad", "awful", and "sad" (George, 2011).

Maslach (2011) proposed that the engagement construct is a continuum that goes from negative to positive, but also that there may be a curvilinear pattern that is leading back to negative again. There are also assumptions about the fluctuation or variation nature of the engagement in that continuum, so that even very highly engaged employees can have low levels of engagement, or "bad days" (Maslach, 2011). An important question that Maslach (2011) raised is how much engagement is an optimal amount? And further, is it possible that too much engagement can lead to a dark side (George, 2011; Schaufeli et al., 1993; Sonnentag, 2011)? These are critical questions for both individuals and organizations, and illustrate the necessity of bringing research on engagement and burnout closer together (Maslach, 2011).

2.3 Burnout

The concept of burnout was first mentioned in 1969 by Bradley (as cited in Cooper et al., 2001, p. 79), but Herbert Freudenberger (1974, as cited in Schaufeli & Buunk, 1996, p. 312) is the one who is generally considered as the founder of the burnout syndrome (Schaufeli & Buunk, 1996). Christina Maslach found interest in the syndrome at almost the same time as Freudenberger, and she also adopted the term burnout (Schaufeli & Buunk, 1996). After Freudenberger and Maslach introduced the concept, burnout became a topic that received increasingly attention amongst researchers (Schaufeli & Buunk, 1996). Burnout was first believed to be a social problem primarily found amongst workers in the human services, like health care, social work, psychotherapy, legal services, and police (Schaufeli & Buunk, 1996). This view, however, changed during the 1980s, and researchers and practitioners were acknowledging that burnout could also occur outside the human services work (Leiter, Maslach & Schaufeli, 2009).

Later, Maslach and her colleges developed a definition that moved beyond workers in the human services, in addition, cynicism replaced depersonalization and professional efficacy replaced personal accomplishment: "a state of exhaustion in which one is cynical about the value of one's occupation and doubtful of one's capacity to perform" (Maslach, Jackson, & Leiter, 1996, p. 4). Emotional exhaustion involves depletion of emotional energy, thus not having enough resources to efficiently handle the situation. Cynicism involves feelings of indifference toward work generally. Reduced professional efficacy involves perceiving one's behavior and performance negatively. This three-component model is the most widely accepted model of burnout, and are also the dimensions measured in the Maslach Burnout Inventory (MBI), which is the most commonly used measurement tool of burnout (Cooper et al., 2001). However, studies indicate that reduced professional efficacy plays a divergent role as compared to emotional exhaustion and cynicism (e.g., Lee & Ashford, 1996; Leiter & Schaufeli, 1996), arguing that emotional exhaustion and cynicism are the core dimensions of burnout (Demerouti et al., 2001; Schaufeli et al., 2009).

2.3.1 The Development and the Antecedents of Burnout

In the 1960s the "cultural revolution" affected the prestige of many occupations, like nurses, teachers, social workers and police officers that were diminished. Additionally, demands and expectations from the recipients increased, as a consequence both the technical and emotional demands of professional work intensified (Leiter et al., 2009). Likewise, workers experienced lack of reciprocity, as they did not perceive that the rewards and recognition they received were sufficient in relation to the professional efforts they made (Leiter et al., 2009), which has been found to foster burnout (Schaufeli, 2006). The reasons mentioned above are more or less specific for the human services; still, there also seem to be other socio-cultural developments that have contributed to the emergence of burnout. Community support has decreased as well as individualism has increased, further, the transformation from an industrial society into a service economy has also contributed to the fostering of burnout (Leiter et al., 2009).

It has been suggested that there are two contributors to burnout in the modern world, first is an imbalance between demands and available resources to meet

these demands (Bakker & Demerouti, 2007). This is also the perspective of the Job Demands-Resources model (Demerouti et al, 2001). Secondly, as a result of people being more individualistic, employees are more skeptical to the missions, visions and values of the organization, and might hold personal values that are different from those of the company (Hemingway & Maclagan, 2004).

Nowadays the concept of burnout has spread throughout the world, and it seems like the interest has spread in line with the economic development of the countries involved (Leiter et al., 2009). This has been explained by suggesting that globalization, privatization, and liberalization cause rapid changes in modern working life, like increased demands of learning new skills, working methods and tasks, increased productivity and quality, which might contribute to generate burnout (Kulkarni, 2006, as cited in Leiter et al., 2009, p. 210). Further, not having sufficient time to rest and regenerate their energy enhances the impact of demand/resource imbalances (Leiter et al., 2009).

2.4 The Relationship between Work Engagement and Burnout

The contradicting studies of the relationship between work engagement and burnout makes further investigation important with the purpose of establishing a common understanding of their relationship (Maslach & Leiter, 1997; Schaufeli & Salanova, 2007). The possibility of a "dark side" of engagement further underpins the need for additional investigation of the relationship between the two respective constructs. A number of studies have provided evidence that a moderate level of work engagement will result in positive organizational outcomes (Christian et al., 2011; Rich et al., 2010; Schaufeli et al., 2009); yet, there are indications that too much engagement may lead to negative outcomes and even burnout (Maslach, 2011). As mentioned, former studies have to a great extent investigated a linear relationship between work engagement and burnout, but recent evidence has revealed more negative effects of work engagement, like increased job demands, which is closely related to burnout (e.g., Sonnentag, 2011; Maslach, 2011; George, 2011). These findings indicate that the relationship between work engagement and burnout is not purely a linear pattern that goes from negative to positive, but that it might be, like Maslach (2011) proposed, a curvilinear pattern that is leading back to negative again. Investigating a

curvilinear relationship between work engagement and burnout might therefore facilitate a greater understanding of their relationship, which is why we have come to the following hypothesis:

Hypothesis 1*: Work Engagement is curvilinearly related to burnout (in an u-shaped form).*

2.5 Motivational Climate as a Moderator

The term motivational climate was adopted within AGT, and can, extended to the work domain, be identified as "employees' perceptions of the extant criteria of success and failure emphasized through the policies, practices, and procedures of the work environment" (Nerstad et al., in press). AGT was initially developed within the education and sport domains (Ames, 1992; Nicholls, 1984), but recent studies indicate that this is also relevant within the organizational context. This because employees' perception of what behavior that leads to success and favored pay offs (i.e. salary, recognition) influence the employees' behavior (Schneider & Reichers, 1983; Nerstad, 2012).

The perceived motivational climate is represented by two different climates: a mastery climate and a performance climate (Ames & Archer, 1987; Ames & Archer, 1988). In a mastery climate, ability is judged either as high or low depending on one's personal development and learning compared to one's former performance (Ames & Archer, 1988). Accordingly, in a mastery climate self-improvement is the main focus (Nicholls, 1984; Ntoumanis & Biddle, 1999; Ames and Archer, 1987). In a performance climate, on the other hand, ability is judged as either high or low depending on the individual's capacity compared to the capacity of others (Nicholls, 1984). In a performance climate, mastery alone does not imply high ability; in order to demonstrate high ability you have to achieve more than others with the same amount of effort or to make less effort than others in achieving equal performance (Nicholls, 1984; Ames & Archer, 1987).

The perception individuals have of the motivational climate foster different patterns when it comes to learning strategies, preference for challenging tasks,

attitude toward the environment, and belief about the sources of success and failure (Ames & Archer, 1988). Individuals may experience a mastery climate when work structures that support effort, sharing, cooperation and improvement are being praised, and when new learning strategies are being encouraged (Ntoumanis & Biddle, 1999; Ames, 1992). Therefore, self-development and building competence are the focus, and it is likely that the leader will give private feedback of the employees' performance (Nerstad et al., in press). A performance climate, on the other hand, is characterized by evaluating employees based on interpersonal comparison and normative standards, and further, grouping them based on their ability (Ntoumanis & Biddle, 1999). Consequently, the leader will most likely emphasize achieving outcomes, and give public recognition of performance (e.g., Ames & Archer, 1988).

Overall results show that participants are exhibiting more adaptive cognitive, affective and behavioral patterns when a mastery motivational climate is perceived (e.g. increased perceived competence, self-efficacy, task goal orientation, satisfaction, pride and effort) (Ntoumanis & Biddle 1999; Jagacinski & Nicholls, 1984). Furthermore, individuals experiencing a mastery climate are more likely to use effective learning strategies, prefer more challenging tasks, are more satisfied with their group/class, and believe that effort and success co-vary (Ames & Archer, 1988). In more recent studies it was found that when individuals experience a mastery climate, work engagement increased over time, while emotional exhaustion and cynicism (i.e., burnout) decreased, a mastery climate may therefore serve as a buffer against feelings of burnout (Ntoumanis et al., 2012; Nerstad, 2012).

On the other hand, when individuals perceive a performance climate and when performance instructions are given, individuals have been found to exhibit maladaptive behavioral, cognitive and affective patterns (e.g. increased anxiety, focus on ability, an ego goal orientation, lower feelings of competence, embarrassment, guilt and less pride) (Ntoumanis & Biddle, 1999; Jagacinski & Nicholls, 1984). Moreover, it has also been found that perceptions of a performance climate, facilitates an increase in burnout over time (Smith et al., 2010; Ntoumanis et al., 2012; Nerstad, 2012). Additionally, incases when job demands are high, a mastery climate might serve as a buffer against negative

affective consequences, such as fatigue and lack of job satisfaction (Nerstad, 2012).

Several studies indicate that the environment in the organization affects employees, and furthermore, that the motivational climate affects the level of motivation and burnout (e.g., Ntoumanis et al., 2012; Nerstad et al., in press; Nerstad, 2012; Smith et al., 2010). Recent studies indicate that a motivational climate might serve as a buffer against burnout, while a performance climate, on the other hand, might enhance burnout (Ntoumanis et al., 2012; Nerstad, 2012; Smith et al., 2010). Therefore, the motivational climate in an organization might have a significant impact on the curvilinear relationship between work engagement and burnout: A mastery climate might reduce the risk of burning out, while a performance climate might enhance the risk. Based on these arguments we have come to the following hypotheses:

Hypothesis 2: *A mastery climate moderates the u-shaped curvilinear relationship between work engagement and burnout.*

Hypothesis 3: *A performance climate moderates the u-shaped curvilinear relationship between work engagement and burnout.*

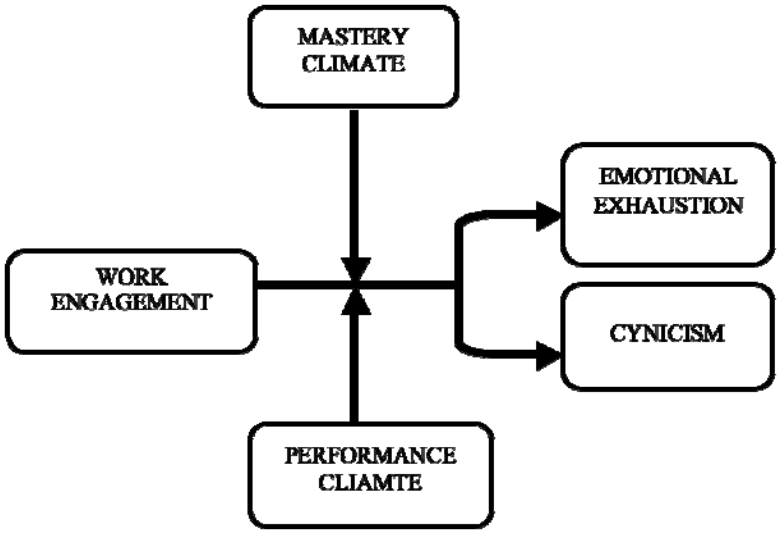

Figure 1

The Curvilinear Relationship between Work Engagement and Emotional Exhaustion and Cynicism, and the Moderation Effect of Mastery Climate and Performance Climate.

3.0 Method.

3.1 Participants and Procedures

With the objective to make sure that ethical standards were met, the Norwegian Social Science Data Services (NSD) evaluated and approved information concerning the study's design, planned sample and procedure and the questionnaires. The survey was distributed by using a web-based tool (Questback). The survey was sent to approximately 33.275 Norwegian engineers and technologists representing different occupational division (research and development, health, safety and the environment (HSE), information technology (IT), consultancy, laboratory, human resource management (HRM), logistics, production, building and reconstructing, sales and marketing, services and economics and various organizations located all over Norway. All of the respondents were members of a union, and it was the union that distributed the questionnaire. 8282 completed the survey, which represents a response rate of approximately 25 per cent. In order to establish that our respondents were representative of the total sample, we compared the demographic variables of our sample with the union's demographic members statistics. The union's statistics

are constantly being updated. According to these statistics the union has approximately 66,000 members, where 78 per cent are men, about 32 per cent work in the public sector, around 58 per cent work in the private sector and the mean age is 46,8 years old. In our sample 75 per cent were men, the mean age was 44,56, 53 per cent worked within the private sector, and 34 per cent worked in the public sector. Further, 80 per cent were married or had a life partner, 92 per cent had a university degree, the mean of working hours per week was 39,18 (SD = 8,39), and the mean number of years the employee had been in his/her current position was 3,34 (SD = 0,89). These demographic variables are quite similar to those of the union, which makes our participants representative of the entire population of the union.

3.2 Measures

3.2.1 Work Engagement.

To measure work engagement, the Norwegian version (Nerstad, Richardsen & Martiniussen, 2010) of the Utrecht Work Engagement Scale (UWES-9; Schaufeli et al., 2006) was applied. The scale measures nine items that are scored on a seven-point Likert-type scale ranging from never (0) to always/every day (6). The nine items are grouped into three subscales that represent the three underlying dimensions of work engagement: Vigor (VI, three items, e.g., "At my work, I feel bursting with energy"), Dedication (DE, three items, e.g., "My job inspires me"), and Absorption (AB, three items, e.g., "When I am working, I forget everything around me").

3.2.2 Burnout.

To measure burnout, the Norwegian version (Richardsen & Martiniussen, 2004) of the Maslach Burnout Inventory – General Survey (MBI-GS) (Maslach et al, 1996) was applied. Permission to apply the scale was obtained through www.mindgarden.com. We assessed the two subscales emotional exhaustion (nine items, e.g., "I feel emotionally drained from my work") and cynicism (five items, e.g., "I have become less enthusiastic about my work") as these are suggested to be the core dimensions of burnout (Demerouti et al, 2001; Schaufeli

et al., 2009). The items were scored on a seven-point Likert-type scale ranging from never in the past year (0) to every day (6).

3.2.3 Motivational Climate.

The participants' perceived motivational climate was measured by using the Motivational Climate at Work Questionnaire (MCWQ, Nerstad et al., in press), measuring 14 items. Six items measured perceptions of mastery climate (e.g., "In my department/work group, everybody has an important and clear task throughout the work process") and eight items measured perceptions of performance climate (e.g., "In my department/work group, internal competition is encouraged to attain the best possible results"). The items were scored on a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5).

3.2.4 Control Variables.

It has been argued that individual demographic characteristics present important influences when it comes to motivational processes, which is why we included age (in years) and gender (1 = male; 2 = female), and education (five categories ranging from high school to, three different higher educations and the last was other) as control variables (Payne, Youngcourt, & Beaubien, 2007; Abrahamsen, Roberts, & Pensgaard, 2008). We also controlled for working hours (hours per week) because studies show that the numbers of worked hours may affect burnout (Cooper et al., 2001).

3.3 Statistical Analysis

We started the data analysis process by searching for outliers (total number = 524). We retained all of them, as they were representative of the observations in the observed population, and did not affect the mean to a great extent (Hair Jr., Black, Babin, & Anderson, 2010). We also performed descriptive analyses, including calculating means, standard deviations, reliability and correlations. Next, in order to establish whether the variables showed acceptable levels of both convergent and discriminant validity, we performed an exploratory factor analysis (EFA) of all multiple-scale items using an oblique (promax) rotation in order to determine item retention. Items with a strong loading above .50 and cross-

loadings below .35 on other included factors were retained (Nunnally & Bernstein, 1994).

In order to test the hypotheses, we used SPSS 19.0. to perform a hierarchical regression analysis (Cohen, Cohen, West & Aiken, 2003). To avoid the possibility of multicollinearity of the interaction terms due to their correlations with the main effects, we centered the variables by subtracting the mean from each variable as suggested by Cohen et al. (2003). Researchers have recently argued that the lack of confirmatory findings concerning moderators might be mostly because of the low statistical power when several predictors are included in a single regression equation (Dionne, Yammarion, Atwater & James, 2002; Villa, Howell, Dorfmann & Daniel, 2003). As a result of this we have followed Villa et al. (2003) approach by including work engagement and a single moderator (i.e., mastery or performance climate) in each regression equation, as shown in the polynominal regression equation below. When it comes to the curvilinear relationship between work engagement and burnout we applied the approach suggested by Aiken & West (1991) and Cohen et al. (2003).

The X^2 represent the curvilinear term of work engagement, the product term (XZ) represent the linear interaction by either the mastery or performance climate, assessing whether the simple slope regression curves of Y on X would be parallel for all values of the moderator (Z). The product term of X^2Z assesses whether the shape of the simple regressions of Y and X would be constant across values of Z (Cohen et al, 2003).

$Y=\beta0+\beta1X+\beta2X^2+\beta3Z+\beta4XZ+\beta5X^2Z+e.$

Where Y=dependent variable; X=independent variable; Z=moderating variable; e=random disturbance.

4.0 Results

The results from the EFA indicate five factors with an eigenvalue above 1.0 representing 59 per cent of the variance, as shown in Appendix 1. Out of the 33 items 1 item (CY5) was cross loading with another factor (work engagement). Therefore we removed it from any further analysis (see Appendix 1). The remaining 32 items loaded on their corresponding constructs (the factor loadings

range from 0.52 to 0.95), demonstrating a satisfactory structure with five distinct factors, hence support for discriminant validity is also demonstrated (Nunally & Bernstein, 1993).

A reliability test was performed in order to ensure the internal consistency of the measured items, as shown in Table 1. The Cronbach's alpha values showed acceptable values above 0.70 (ranging from 0.82 to 0.93), which is argued as the lowest acceptable value (Hair Jr. et al., 2010), indicating that reasonable internal consistencies were established.

Further, before performing the moderation analysis, we examined the Pearson correlations between the variables in the analysis to identify possible cases of multicollinearity (Hair Jr. et al., 2010). Multicollinearity did not seem be a problem as all of the correlations showed a value well below 0.70, which is the critical value (Hair Jr. et al., 2010). We also examined the tolerance and the variance inflation factor (VIF), which showed tolerance values well above the cutoff threshold of .10 (the highest value being 0.99), corresponding to a VIF value of 10 (Hair Jr. et al., 2010).

Table 1

Means, Standard Deviations, Reliabilities, and Correlations among variables.

Variable	M	SD	1	2	3	4	5	6	7	8	9
1. Age	44.56	10.88	-								
2. Gender	1.25	0.44	-.14***	-							
3. Hours per week	39.20	8.51	-.01	-.15***	-						
4. Education	3.03	0.50	-.07**	.07**	.10	-					
5. Emotional Exhaustion	2.62	1.20	-.06**	.06**	.02	.02	**(.88)**				
6. Cynicism	3.02	0.97	-.02**	-.00	.02	.00	.48**	**(.82)**			
7. Work Engagement	5.07	1.10	.09**	.00	.06**	.02	-.42**	-.42***	**(.93)**		
8. Performance Climate	1.98	0.68	.04**	-.07*	.07**	.00	.26**	-24**	-.12**	**(.83)**	
9. Mastery Climate	3.56	0.78	.06**	.03**	.01	.00	-.31**	-.37**	-.44**	-.24**	**(.85)**

Note. Cronbach's alphas are displayed on the diagonal. N = 8282

*p < .05, **p < .01

4.1 Hypothesis Testing

In our first hypothesis we suggest that there is a curvilinear relationship between work engagement and burnout. To test this hypothesis we performed the hierarchical regression analysis where we in step 1 entered the control variables (age, gender, education and working hours per week). In step 2 work engagement was entered, and in step 3 the quadratic (squared) term of work engagement was entered. The results, as presented in Table 2, indicate that work engagement has a significant and negative linear impact on a) emotional exhaustion ($\beta = -.47$; $p < .001$), and b) cynicism ($\beta = -.37$; $p < .001$). In contrary, the squared term has a significant but curvilinear association with a) emotional exhaustion ($\beta = .05$; $p < 0.01$), and b) cynicism ($\beta = .07$; $p < 0.01$), indicating that there is a significant curvilinear relationship between work engagement and burnout (Aiken & West, 1991). Further, the positive coefficients of the squared terms indicate that the curvilinear relationship forms a U pattern (Hair Jr. et al., 2010). Additionally, all of the R^2 -change variables were significant, as shown in Table 2, supporting that a curvilinear influence is present (Hair Jr. et al., 2010).

Table 2

Hierarchical Multiple Regression Testing the Curvilinear and Moderation Models

	Emotional Exhaustion					Cynicism				
Variable	Step 1	Step 2	Step 3	Step 4	Step 5	Step 1	Step 2	Step 3	Step 4	Step 5
Age	-.01***	-.00	-.00	-.00	-.00*	-.00	.00**	.00**	.00***	.00
Hours per week	.00*	.01***	.01***	.01***	.01***	.00	.01***	.01***	.01***	.00**
Gender	.15***	.18***	.17***	.18***	.20***	-.01	.02	.01	.02	.03
Education	.03	.06*	.05*	.05*	.05*	.02	.04*	.04	.03	.03
WENG		-.47***	-.43***	-.36***	-.40***		-.37***	-.33***	-.25***	-.30***
$WENG^2$			.05***	.04***	.05***			.07***	.05***	.07***
Mastery Climate (MA)				-.24***					-.31***	
WENGxMC				-.00					.08***	
$WENG^2$xMC				-.00					.02**	
Performance Climate (PC)					.37***					.30***
WENGxPC					-.05**					-.06***
$WENG^2$xPC					.00					-.02*

Adjusted R^2	.007***	.187***	.191***	.211***	.237***	.000	.177***	.189***	.234***	.227***
ΔR^2	.007***	.180***	.004***	.020***	.047***	.001	.177***	.012***	.046***	.038***

Note. N = 8282. Standard regression coefficients are shown in each equation. WENG = work engagement, MC = mastery climate, PC = performance climate

*p<0.05, **p<0.01, ***p<0.001*

To further investigate the forms of the hypothesized curvilinear relationships, we followed Aiken and West's (1991) procedure and plotted the graphs, as depicted in Figures 2 and 3. As a result of the limited findings it is difficult to identify a curvilinear patter looking at the graphs. The results, however, indicate that there is a u-shaped curvilinear relationship between work engagement and burnout, thus supporting Hypothesis 1 that work engagement is curvilinearly related to burnout (in a u-shaped form).

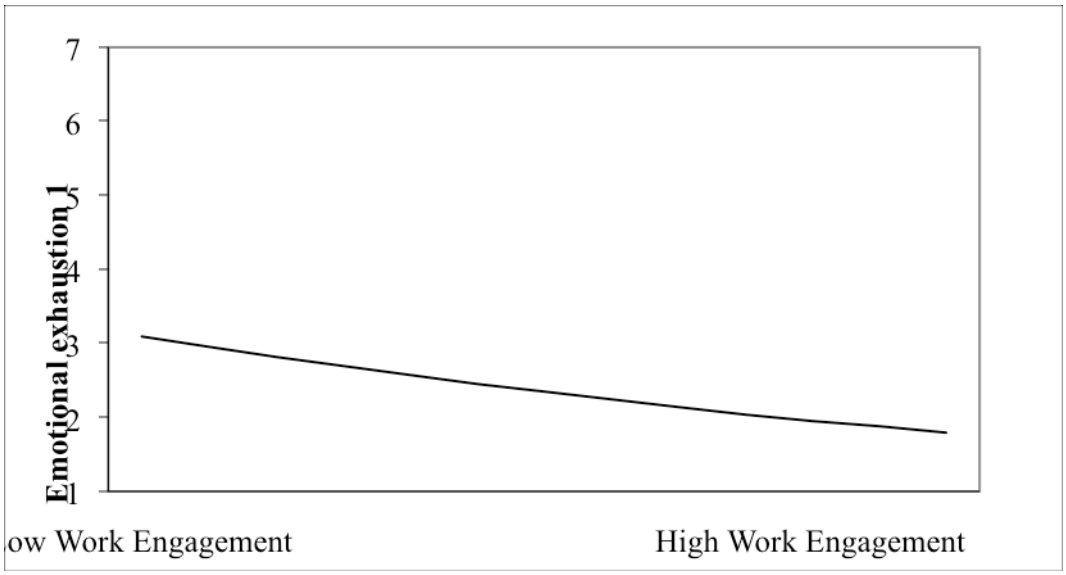

Figure 2

The Curvilinear Relationship between Work Engagement and Emotional Exhaustion.

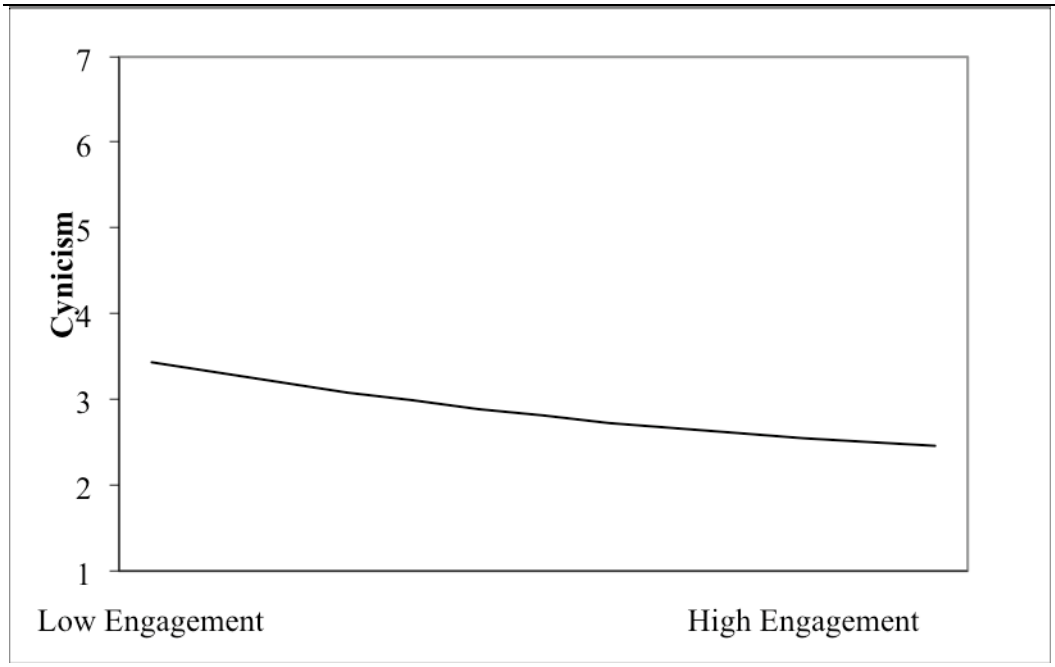

Figure 3

The Curvilinear Relationship between Work Engagement and Cynicism.

Next, we investigated the moderating hypothesis (H2 and H3), where we hypothesized that mastery and performance climate would moderate the curvilinear relationship between work engagement and burnout. To investigate these hypotheses we included a fourth and a fifth step in the hierarchical regression analysis where performance climate and mastery climate and their interaction term with both work engagement and the squared term of work engagement were added, as depicted in Table 2. When it comes to mastery climate the results indicate a significant negative relationship to both emotional exhaustion (β = -.24; $p < .001$), and cynicism (β = -.31; $p < .001$). Its interaction term with work engagement, however, was not significantly related to emotional exhaustion (β = -.00; $p > .05$), but positively related to cynicism (β = .08; $p < .001$). Further, its interaction term with the squared term of work engagement is not significantly related to emotional exhaustion (β = -.01; $p > .05$), but significantly and curvilinearly related to cynicism (β = .02; $p < .01$). The graphs of the moderating influence of mastery climate on the curvilinear relationship between work engagement and emotional exhaustion was not plotted, as the results showed no significant moderating influence. Nevertheless, to further inspect the moderating role of mastery climate on the relationship between work engagement and cynicism, the curvilinear graph were plotted, as illustrated in Figure 4. The graph indicates that when there is a high mastery climate, the

intercepts of the curvilinear relationship between work engagement and cynicism are lower than it is for a low mastery climate. Thus, Hypothesis 2, that a mastery climate moderates the u-shaped curvilinear relationship between work engagement and burnout, was partially supported.

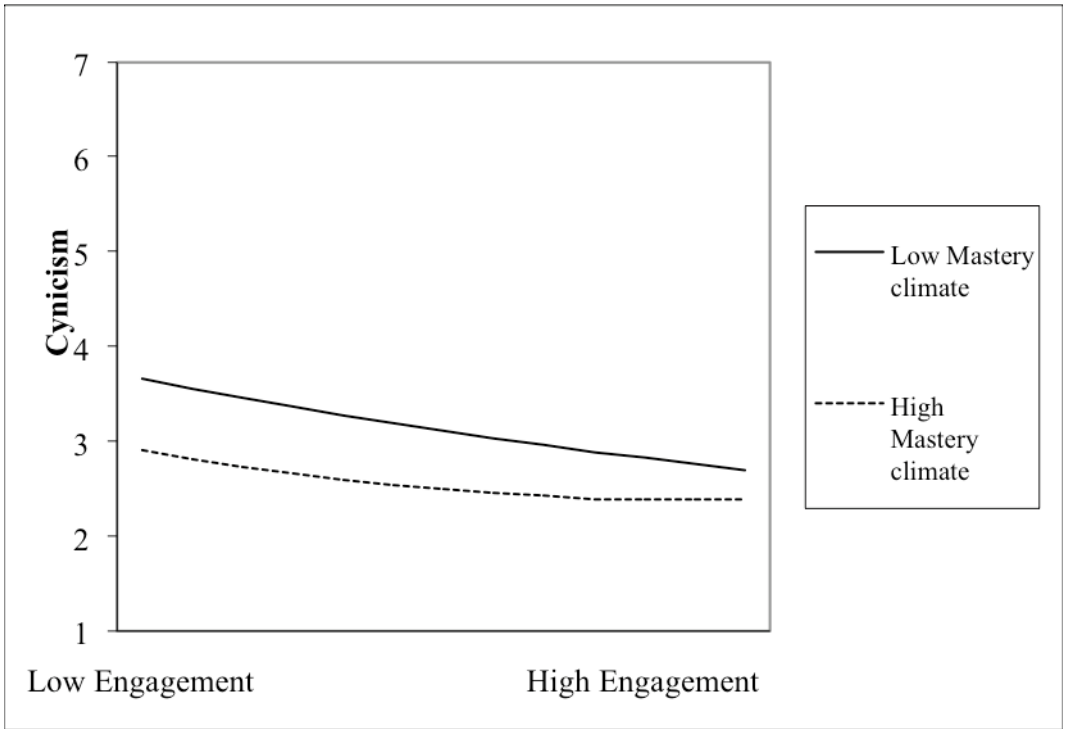

Figure 4

The Moderating Role of Mastery Climate on the Curvilinear Relationship between Work Engagement and Cynicism

The results for performance climate indicate a significant and positive relationship to both emotional exhaustion (β = .37; *p* < *.001*), and cynicism (β = .30; *p* <*.001*). Its interaction terms with work engagement, however, show a negative relationship to both emotional exhaustion (β = -.05; *p* < *.01*), and cynicism (β = -.06; *p* < *.001*). Further, its interaction term with the squared term of work engagement was not significantly related to emotional exhaustion (β = .00; *p* > *.05*), but significantly and curvilinearly related to cynicism (β = -.02; *p* < *.05*). To further inspect the moderating role of performance climate on the relationship between work engagement and emotional exhaustion and cynicism, the curvilinear graphs were plotted, as illustrated in Figures 5 and 6. The graph in Figure 6 indicate that when there is a high performance climate, the intercepts of the curvilinear relationship between work engagement and cynicism are higher

than for a low performance climate. Thus, Hypothesis 3, that a performance climate moderates the u-shaped curvilinear relationship between work engagement and burnout, was partially supported.

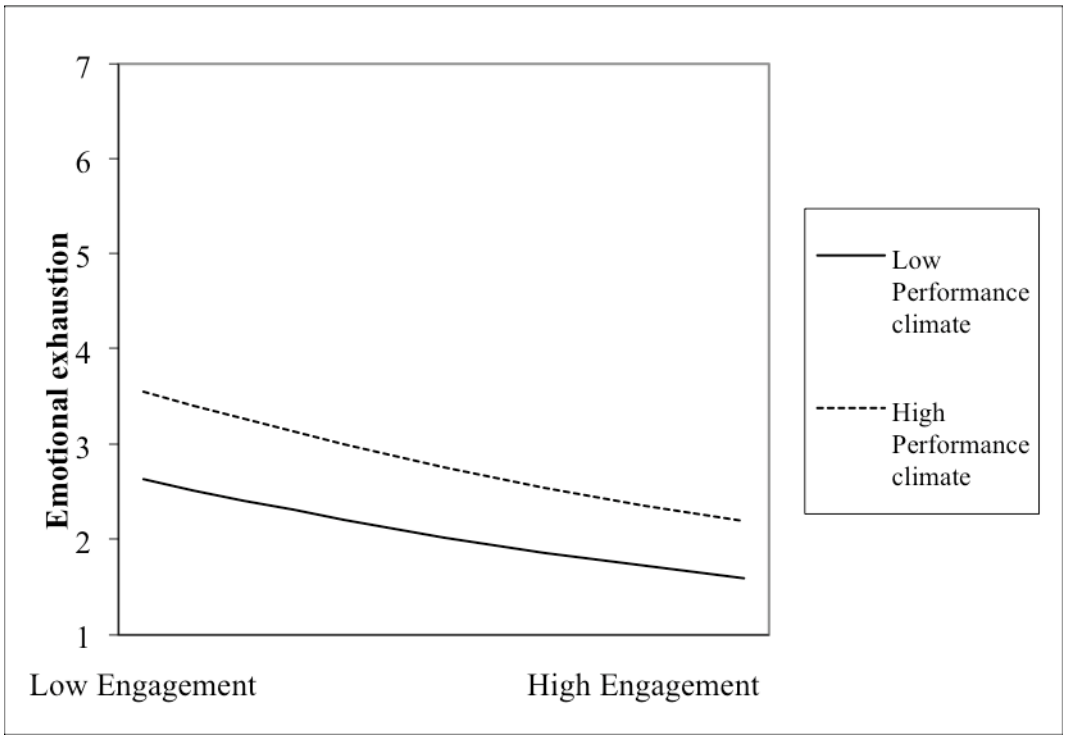

Figure 5

The Moderating Role of Performance Climate on the Curvilinear Relationship between Work Engagement and Emotional Exhaustion.

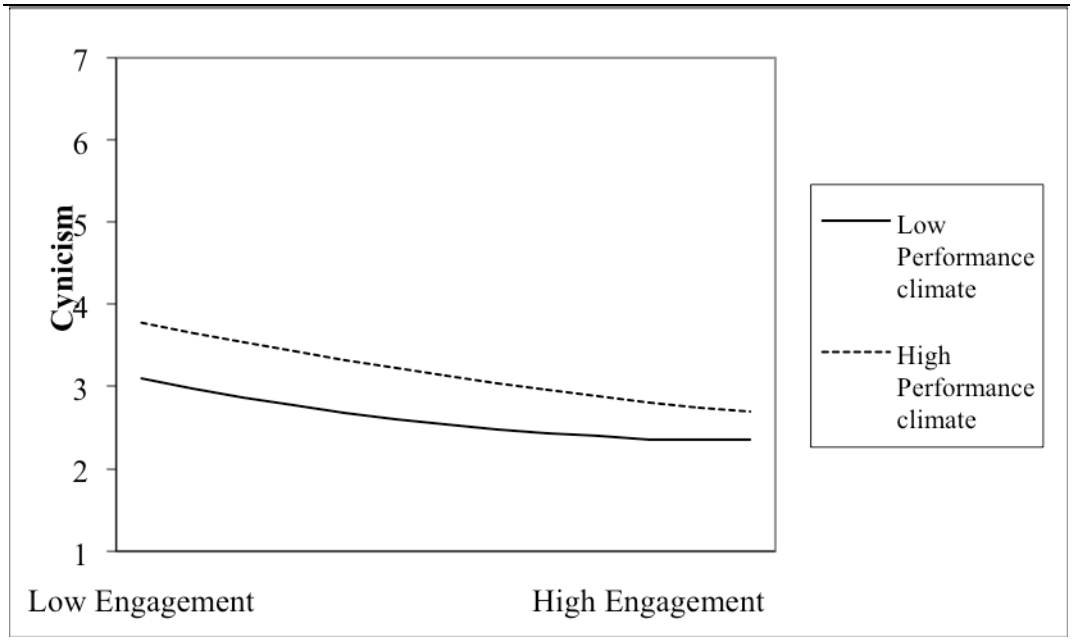

Figure 6

The Moderating Role of Performance Climate on the Curvilinear Relationship between Work Engagement and Cynicism.

5.0 Discussion

The purpose of this study was to investigate whether there exists a curvilinear relationship between work engagement and burnout. Another aim of our study was to examine whether the motivational climate in the organization, a mastery climate and/or a performance climate, had an impact on this curvilinear relationship.

Our study makes an important contribution to the work engagement literature by extending previous research on the relationship between work engagement and burnout through a curvilinear analysis. With this analysis we have found indications that the linear association between work engagement and burnout, which has been established in former studies (e.g. Crawford et al., 2010; Demerouti et al., 2010; Schaufeli & Bakker, 2004; Cole et al., 2012), does not fully capture the total complexity of the relationship between the two constructs. A common understanding is that being engaged is seen as solely positive, and is something managers want to maximize (George, 2011). Further, some researchers suggest that work engagement and burnout are the opposites on a continuum (e.g. Maslach & Leiter, 1997; Cole et al., 2012). For this reason, individuals who are highly engaged are not being in the risk of burning out. Our results indicate that

this perspective is not accurate as we find indications, though limited, of a curvilinear pattern that is leading back to negative again, in addition to the linear relationship that goes from negative to positive, like Maslach (2011) proposed. These findings are in line with suggested costs of being highly engaged, like diminished time and energy available for pursuing other interests outside work and less time for recovery (George, 2010). Our results are therefore rather novel because they indicate that being engaged may only be positive to a certain point. Our study therefore offers an alternative view of work engagement in general, both theoretically and practically.

Another important contribution of our study is that it presents a broader understanding of the important role of the motivational climate in the organization. Our study partially confirms that the motivational climate has an impact on the curvilinear relationship between work engagement and burnout. However, the moderating influence is more dominant for the linear association, than the curvilinear association. A high mastery climate does not moderate the curvilinear relationship between work engagement and emotional exhaustion. However, the results and graph indicate that a mastery climate moderates the curvilinear relationship between work engagement and cynicism, which is an important sub dimension of burnout (Lee & Ashford, 1996; Leiter & Schaufeli, 1996). The cynicism dimension of burnout is important as it represents that an employee is distancing him/herself from work in response to the exhausting, discouraging features of work (Leiter & Schaufeli, 1996). Cynicism about work is developed among employees in order to obtain a distance from its exhausting demands (Leiter & Schaufeli, 1996). Our findings imply that establishing a high mastery climate in the organization may contribute to reduce levels of cynicism, which further may contribute to employees approaching the exhausting demands and to view them as possibilities to learn and develop, rather than distancing themselves from them (Van Yperen & Janssen, 2002). Therefore, fewer employees may burn out when experiencing a high mastery climate than when experiencing a low mastery climate. In other words, a mastery climate might act as a positive "buffer" against cynicism, which supports former studies finding a direct relationship between mastery climate and an increase in work engagement and decreased levels of cynicism (e.g., Ntoumanis et al., 2012; Nerstad, 2012; Van Yperen & Janssen, 2002).

Furthermore, a perceived performance climate did only moderate the linear relationship between work engagement and emotional exhaustion, and not the curvature. Conversely, our results and graphs indicate that a high performance climate may influence the curvilinear relationship between work engagement and cynicism. This may imply that a performance climate may contribute to enhanced levels of cynicism. Therefore, employees experiencing a high performance climate may be more prone to become indifferent towards work in general (i.e., cynicism) than when experiencing a low performance climate. In other words, employees may become indifferent to whether they demonstrate high ability and achieve more than others. A performance climate might therefore act as a reinforcer of cynicism, which also supports former studies that found performance climate to predict cynicism (e.g., Smith et al., 2010; Ntoumanis et al., 2012; Nerstad, 2012). Organizations that put emphasis on creating a high mastery climate may therefore experience that fewer of their highly engaged employees become burned-out in a low performance climate compared to in an organization that rather facilitates a strong performance climate. These findings are in line with the current AGT perspective, which suggests that creating a mastery climate at work will provide beneficial outcomes such as increased perceived competence, self-efficacy, pride and effort in addition to prevent maladaptive outcomes such as increased anxiety, lower feelings of competence, embarrassment, guilt and less pride (Ntoumanis & Biddle 1999; Valentini & Rudisill, 2006; Braithwaite, Spray, & Warburton, 2011; Jagacinski & Nicholls, 1984). Furthermore, in an organization that focus on facilitating a strong mastery climate may have employees who feel fatigued at the end of the working day – but satisfied (Van Yperen & Janssen, 2002).

6.0 Limitations and Future Directions

The limitations of the current study should be noted. The study relies on self-reported measures, which leaves the results vulnerable to common-method variance (CMV). However, recommendations on how to avoid CMV were being followed (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) and therefore were the questionnaires carefully designed.

A second limitation is related to a large sample size. The large sample size may have resulted in some of the standardized beta coefficients to be significant but very low; therefore their meaningfulness may be in question (Hair Jr. et al., 2010). It is typical for a large sample size to result in significant coefficients representing the association between relevant variables, however it is up to the researcher to interpret their meaningfulness (Hair Jr. et al., 2010). Furthermore, a variable that explain a small percentage of the variance is evaluated as insignificant in multiple regression analysis significance (LeBreton, Hargis, Griepentrog, Oswald, & Ployhart, 2007). It has been suggested that this may not have to be the case, and even though the variable is explaining a small percentage of variance, the variable may provide practical significance (LeBreton, Hargis, Griepentrog, Oswald, & Ployhart, 2007). Therefore, future research should further investigate relative importance analyses such as dominance analysis and relative weight analysis as a supplement to multiple regression analyses (Tonidandel & LeBreton, 2011).

Also, while a cross-sectional view of work engagement up to now have mostly proposed positive outcomes of being engaged, it might be that longitudinal studies will give a different image (George, 2010). The results from our study were limited as both the beta values and R^2 changes are quite small; see Table 2 above, that more research, preferably longitudinal, should be done in order to get a more thorough establishment of these finding. Furthermore, future studies, should also try to establish where the turning-point between work engagement and burnout is in order to determine the optimal level of work engagement, and additionally, whether there are other factors that are essential to the process of crossing over the turning-point.

Additionally, as our study only found that the motivational climates moderate the curvilinear relationship between work engagement and cynicism, future research should have a closer look at these moderating influences, in order to establish which factors that are essential in either reducing or enhancing levels of cynicism.

A third possible limitation is the generalizability of the study. The sample included only engineers and technologist, which brings the external validity of our findings into question. Therefore future research should clarify further these

aspects among different occupational groups, in order to strengthen the external validity (Cook & Campbell, 1979) of our findings.

Whereas one of the aspects of our study was the psychological motivational climate, it should be noted that because this study was conducted through a union, the participants were spread over various organizations from different parts of Norway. This makes it impossible to examine whether or not climate perceptions were shared amongst the employees. Motivational climate within an organization is believed to be an important aspect of its psychological climate (Parker et al., 2003), hence we suggest that future organizational research might benefit from exploring the group level of the motivational climate, and the influence it may have on organizational outcomes.

7.0 Practical Implications

The results from our study indicate that there is a curvilinear relationship between burnout and work engagement. This implies that highly engaged individuals may be at risk of experiencing burnout at some point. Having engaged employees may result in positive organizational outcomes (Crawford et al., 2010; Christian et al., 2011), nevertheless, being engaged seems positive only to a certain point. In light of these results, managers could be well advised to get a more nuanced view on work engagement, encouraging a healthy balance between work and free time by restricting the amount of overtime working may be beneficial (Sonnentag, 2011, George, 2011, Maslach, 2011). It may also be of value for supervisors to identify those individuals who are highly engaged, so they could pay close attention and avoid assigning them too many additional tasks.

Another important finding from our study indicates that the perceived motivational climate at work has an impact on this curvilinear relationship. Mastery climate was found to have a "buffer effect" against cynicism, while a performance climate was found to reinforce cynicism. There is little evidence regarding the superior way in which to enforce a mastery climate in an organizational setting, however the leader may be an important figure in designing the organizational climate (Ames, 1992), as well as colleagues and organizational practices (Janssen & Van Yperen, 2004; Roberts, Treasure, & Conroy. 2007). Nevertheless, there are several suggestions that derive from sport and education

literature that may also be relevant to managers: a) designing interesting challenging and meaningful tasks; b) including every individual in decision making and deciding upon strategy for completing the task; c) avoiding rewards and recognition that are recognized as bribes or methods of control (Deci & Ryan, 2000). Further, d) treating everyone in a similar way in order to encourage the differences between individuals; e) evaluating everyone based on their progress, mastery, creativity effort and a private evaluation; and f) managing time in such a way that allows more time to those individuals who need it to develop the necessary skills to perform at a higher level (Ames, 1992; Roberts, 2012). Further, commitment based-HRM practices are found to represent relevant antecedents of a mastery climate (Nerstad, 2012). Therefore, we would suggest HRM practitioners to take commitment based HRM approach instead of control based HRM approach in their practices, in order to facilitate a mastery climate.

8.0 Conclusion

The results from our study indicate a u-shaped curvilinear relationship between work engagement and burnout, and further that the motivational climate moderates this relationship. The curvilinear association is limited as both the beta values and R^2 changes are quite small; see Table 2 above, suggesting that further research is needed. However, assuming that there does exist a curvilinear association, these findings are quite novel as they suggests that work engagement is only positive to a certain extent. Additionally, our findings provide both theoretical and practical implications for both researchers, organizations and managers, which have to adjust to a more nuanced view on work engagement, and furthermore to evaluate what type of motivational climate that should be established.

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Appendix

Appendix A

Exploratory Factor Analysis with Promax Rotation (T1; N: 8282)

	WENG	PC	MC	EE	CY
AB4	.88				
AB5	.86				
DE2	.82				
AB3	.82				
VI2	.80				
VI1	.79				
DE4	.79				
DE3	.77				
VI3	.66				
CY5	.49				
PC7		.81			
PC2		.75			
PC8		.74			
PC4		.71			
PC3		.67			
PC5		.62			
PC6		.61			
PC1		.52			
MC3			.83		
MC5			.80		
MC1			.78		
MC2			.77		
MC4			.76		
MC6			.61		
EE2				.95	
EE1				.86	
EE3				.73	
EE5				.72	
EE4				.69	
CY1					.79
CY2					.75
CY4					.70
CY3					.63

Note. WENG = work engagement, PC = performance climate, MC = mastery climate, EE = emotional exhaustion, CY = cynicism.