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The dynamic interplay between goal orientations and perceived motivational climate as antecedents to burnout

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Abstract

The purpose of this study is to explore the relationship between goal orientations and motivational climates on one hand, and burnout on the other hand. The former two can be seen as what constitutes the achievement goal theory (AGT), and the interplay between these aspects will be analyzed as possible antecedents to burnout. Hypotheses are developed, and it will be proposed that the perceived motivational climate moderates the relationship between employees' goal orientation and the occurrence of burnout. A cross-sectional survey among 8282 technologists and engineers in different organizations in Norway show that the relationship between goal orientations and burnout is indeed moderated by the perceived motivational climate. Both mastery and performance climates are supported as moderators, particularly revealing that a performance climate has a negative influence on burnout, while mastery climate has a positive influence. Implications for practice and directions for future research are discussed. The theoretical contribution of this study is that it extends previous research on both AGT and burnout, in that it considers the interplay between the person and the situation, and that it focuses on employee ill-being, rather than productivity, which has typically been the focus area in the past.

Keywords: goal orientation; motivational climate; burnout

1.0 Introduction

Today's organizations face several challenges. The markets are continuously changing, companies need to adapt to the outcomes of globalization, and there is a constant need for efficiency. In addition to these factors, companies also need to stay competitive through the ongoing financial crisis (Marianetti & Passmore, 2010; Stixrud, 2012). These trends challenge employee health and well-being, as there is a constant pressure to perform. The costs of employees' ill-health are a significant drain on companies' resources (Marianetti & Passmore, 2010). This study will focus on a severe and extremely costly type of ill-health, namely burnout. Burnout has a high occurrence in many organizations today (Halbesleben & Bowler, 2007), and research on the topic is therefore important. Employee burnout has negative consequences in terms of turnover and turnover intention, reduced performance, and absenteeism, among other things (Maslach, Schaufeli, & Leiter, 2001; Swider & Zimmerman, 2010). Hence, a need for greater investigations on the topic of burnout has been called for, especially when it comes to understanding the possible antecedents of its occurrence (Cooper, Dewe, & O'Driscoll, 2001; Jawahar, Stone, & Kisamore, 2007; Ten Brummelhuis, Ter Hoeven, Bakker, & Peper, 2011).

Burnout can be viewed as a result of the dynamic interaction between the environment and the individual (Cooper et al., 2001). This means that both individual dispositions and situational factors may contribute to the occurrence of burnout, which represents an extreme form of occupational stress (Cooper et al., 2001). The theory that was chosen in this study, which does indeed take into account both the personal and the situational aspect, is the achievement goal theory (AGT). According to this theory, goal orientations (personal aspect) and perceptions of the motivational climate (situational aspect) interact to affect behavior in various achievement settings, such as the workplace (Treasure & Roberts, 1998). Goal orientations can be viewed as individuals' approach to an achievement situation, whereas the motivational climate constitutes individuals' perceptions about the criteria of success and failure in an achievement situation (Chen & Mathieu, 2008; Nerstad, Roberts, & Richardsen, in press). It has been reported that people who have a tendency to burn out also tend to show a strong commitment to the pursuit of goals (Roberts, Treasure, & Conroy, 2007). This is relevant because a person's goal orientation may therefore have an influence on

their propensity to burn out. Research has also revealed that an individual's goal orientation and the motivational climate influence the feeling of fatigue and burnout (e.g., Lemyre, Hall, & Roberts, 2008; Smith, Gustavsson, & Hassmén, 2010; Van Yperen & Janssen, 2002).

Goal orientations can be divided into mastery goal orientations, where focus is on growth and personal development, and performance goal orientations, where focus is on outperforming and competing with others (Ames & Archer, 1988; Treasure & Roberts, 1998). Previous studies have shown that mastery goal orientations typically lead to adaptive response patterns, whereas performance goal orientations typically lead to maladaptive response patterns (Button, Mathieu, & Zajac, 1996; VandeWalle, Brown, Cron, & Slocum, 1999; Van Yperen & Janssen, 2002). Furthermore, performance-oriented people have been found to have a greater risk of developing symptoms of burnout than mastery-oriented people (Roberts et al., 2007).

However, goal orientation is only one part of AGT, and one needs to consider the perceived motivational climate as well (Treasure & Roberts, 1998). In fact, situational and organizational factors have been stated to play a bigger role than individual factors when trying to alleviate burnout (Maslach, 1998). This study will therefore examine the perceived motivational climate, or more specifically the perceived motivational psychological climate, and its influence on the relationship between goal orientation and burnout. A psychological climate can be seen as individuals' perceptions of their work environment, and is at the individual level (Parker, Baltes, Young, Huff, Altmann, Lacost, & Roberts, 2003). Research has found that a psychological climate has significant relationships with various work outcomes, such as employees' work attitudes, motivation and performance (Parker et al., 2003). Therefore, a motivational psychological climate, hereafter referred to only as motivational climate, is interesting to study in regards to various outcomes that are important for any organization. Roberts (2012) argues that a person can change his or hers initial goal orientation as a result of contextual factors, thus making climate an interesting variable to look at. A meta-analytic study indicated that there is a relationship between individuals' perceptions of the work climate and their feeling of well-being (Parker et al., 2003). Other researchers have also noted the importance of the environment and

context as a possible factors for explaining the prevalence of burnout, and have stated a need to include this variable in future studies (Roberts, 2012; Swider & Zimmerman, 2010; Zellars, Perrewé, & Hochwarter, 2000).

Several researchers claim that it may be counterproductive to view the person (goal orientations) and the situation (motivational climate) as separate constructs, and that one should rather consider the interplay between the two (DeShon & Gillespie, 2005; Dweck & Leggett, 1988; Roberts, 2012). Yet, much previous research on AGT has considered these two constructs separately (Chen & Mathieu, 2008; DeShon & Gillespie, 2005; Roberts, 2012). Interestingly, much previous research on burnout has also considered personal characteristics and situational characteristics in isolation (Fernet, Gagné, & Austin, 2010). Studies have typically focused on the connections between the environment and burnout, or personality and burnout, but less often considered the interplay between the two (e.g. Alarcon, Eschleman, & Bowling 2009; Bakker, Van Der Zee, Lewig, & Dollard, 2006; Lee & Akhtar, 2011; Smith et al., 2010). Both personal dispositions and situational factors may influence the prevalence of burnout, but, regrettably, the two aspects are rarely combined to provide a more complex and holistic picture on the occurrence of burnout (Fernet et al., 2010). This study therefore adds to previous research in that it considers the *dynamic interplay* between the two dimensions of AGT, namely goal orientations and motivational climate, as possible antecedents to burnout. More specifically, the motivational climate will be analyzed as a moderator of the goal orientations and burnout relationship, in order to see what influence the motivational climate has.

In theoretical terms, the intended contribution of our study is threefold. First, this study aims to answer the call from other researchers (e.g. DeShon and Gillespie, 2005; Roberts, 2012) in that one should consider the dynamic interplay between goal orientations and the motivational climate when studying AGT, rather than treating these as two separate constructs. As this study is conducted among engineers and technologists in a professional work setting, it also extends research on AGT that has traditionally been conducted in the field of sport psychology and educational settings (e.g. Abrahamsen, Roberts, & Pensgaard, 2008; Meece, Anderman & Anderman, 2006; Roberts, 2012). Secondly, research on AGT has typically focused on the relationship between goal orientations and organizational

productivity rather than outcomes for the person and employee well-being (DeShon & Gillespie, 2005). Therefore, this study adds to research on AGT in that it considers goal orientations and the motivational climate up against employee health, measured by burnout, rather than focusing on organizational productivity. Finally, this study will likewise consider the interplay between the person and the situation and its influence on the occurrence of burnout, thus extending theory and research on burnout that typically considers the two in isolation (Fernet et al., 2010). In practical terms, the intended contribution is that this study will add to the understanding of climate, and particularly emphasize the positive impact of a mastery climate. The study will challenge the salience placed on competitive behavior and performance goals in businesses today (Heidemeier & Bittner, 2012), as it will be hypothesized that such a focus may have a detrimental impact on employee health, which again may lead to high organizational costs.

2.0 Theory and hypotheses

2.1 Burnout

The concept of burnout has been given widespread attention in recent years due to its harmful consequences for both the individual and the organization in terms of personal ill-health, absenteeism, turnover and reduced productivity (Cooper et al., 2001). Burnout can be defined as an extreme state of psychological strain, which can be seen as a reaction to prolonged exposure to stressors that exceed a person's resources to cope (Cooper et al., 2001; González-Romá, Schaufeli, Bakker, & Lloret, 2006). Burnout has been conceptualized as having three main components: emotional exhaustion, cynicism and reduced personal efficacy (Maslach et al., 2001). However, it has been argued that emotional exhaustion and cynicism are the two main dimensions of burnout (Bakker, Demerouti, & Verbeke, 2004; González-Romá et al., 2006), and these dimensions will thus be the focus of this study. Emotional exhaustion is said to represent the basic individual stress dimension of burnout, and refers to feelings of being overextended and depleted of one's energy and resources (Cooper et al., 2001; Maslach et al., 2001). Cynicism represents the interpersonal context dimension of burnout, and refers to a negative or detached attitude towards various aspects of the job (Cooper et al., 2001; Maslach et al., 2001).

Much recent research on burnout has focused on the importance of social support and a healthy work environment to mitigate the effects of burnout (e.g. Cooper et al., 2001; Fernet et al., 2010; Jawahar et al., 2007). It has been suggested that social support can be seen as a job resource that will lead people to report less strain, as it helps employees to cope with stress in a more efficient way (Jawahar et al., 2007). For example, one study found that perceived organizational support was negatively related to both emotional exhaustion and cynicism. The same study found that high levels of support had a buffering effect between role conflict and burnout, in that social support mitigated the negative effects on this relationship (Jawahar et al., 2007). Another study found that a supportive environment among employees led to more engagement and motivation among employees, as opposed to job demands, which led to more reported burnout (Nahrgang, Morgeson, & Hofmann, 2011). A recent longitudinal study found that high-quality relationships among co-workers resulted in less experienced burnout over time (Fernet et al., 2010). The results of this study also suggested that poor interpersonal relationships between coworkers could make people more vulnerable to experience emotional exhaustion and cynicism over time (Fernet et al., 2010). Overall, these studies suggest that in a working climate where cooperation is emphasized, and there is a high level of social support, the occurrence of burnout can be mitigated.

As already stated in the introduction, much research on burnout to date considers dispositional characteristics and situational characteristics in isolation (Fernet et al., 2010). However, one important exception is "fit theory", and particularly P-E fit (Person-Environment fit). This theory posits that a misfit between the person and the environment can lead to various types of strain (Rubino, Luksyte, Perry, & Volpone 2009; Edwards & Van Harrison, 1993). Research has shown that when there is a lack of congruence between a person's values and the organization's values, it may lead to more reported burnout (Siegall & McDonald, 2004). On the basis of these findings, it has been argued that it may be beneficial for a company to hire people that fit with the organizational values in order to prevent burnout (Siegall & McDonald, 2004). Even though the P-E fit theory considers both personal and situational aspects, it considers the match between the two, whereas the present study will consider the interaction between the two.

2.2 AGT

AGT posits that goal orientations and perceptions of climate interact to affect behavior in various achievement settings (Treasure & Roberts, 1998). The next two sections will consider the two dimensions of AGT along with the proposed hypotheses.

2.2.1 Goal orientation

Goal orientations represent different ways of approaching an achievement situation (Chen & Mathieu, 2008). The goals that individuals pursue will create different mental frameworks, and these mental frameworks create the foundation in which people interpret and react to achievement situations (Dweck & Leggett, 1988). Researchers and theorists disagree in terms of whether goal orientations should be viewed as a goal, trait, quasi-trait, mental framework or belief (DeShon & Gillespie, 2005). However, Roberts and colleagues (2007) argue that goal orientations should not be viewed as traits or states, but rather cognitive schemas that are relatively stable and enduring over time, but still subject to change. One contextual factor that may "change" individuals' goal orientations is their perceptions of the motivational climate.

Goal orientations are typically divided into two main types: performance goal orientations and mastery goal orientations. A performance goal orientation is concerned with being judged able and competent, where importance is placed on competing with and outperforming others, and generally demonstrating success with minimal effort (Ames & Archer, 1988). With a mastery goal orientation on the other hand, one is concerned with developing oneself and one's skills, and importance is placed on effort and persistence (Ames & Archer, 1988). It should be noted that the two goal orientations are said to be orthogonal (Roberts, 2012), meaning that a person can score high or low on both orientations at the same time.

There have been debates concerning whether or not performance goal orientation and mastery goal orientation should be further divided into approach and avoidance. Some theorists argue that the concepts of mastery orientation and performance orientation should be sufficient, whereas Elliot (1999) argues that performance orientation should be further divided into performance-approach and performance-avoidance, and perhaps even dividing mastery orientation in the

same matter. This has been referred to as the hierarchical model of AGT (Roberts, 2012). Performance-approach goals focus on "the attainment of normative competence" whereas performance-avoidance goal focuses on "the avoidance of normative incompetence" (Elliot 1999, p.174). Yet, Roberts (2012) argues that even though Elliot's hierarchical model can give insights to understand motivation, it should not be viewed as an extension of the traditional AGT, but rather as a different theory all together. He also argues that one should keep constructs as simple as possible, referring to parsimony in science, rather than making things more complex than they need to be (Roberts, 2012). Based on these arguments, this study will apply the traditional AGT perspective, where goal orientations are only divided into mastery goal orientation and performance goal orientation.

As already stated, it is suggested that the tendency to respond adaptively or maladaptively in achievement situations depend on people's goal orientation (Ames & Archer, 1988; Meece et al., 2006; Van Yperen & Janssen, 2002). This means that a person's goal orientation should have an impact on how that person responds to an achievement situation. A study by Van Yperen and Janssen (2002) showed that mastery goals were associated with adaptive behavior among employees. They examined the relationship between goal orientations and fatigue, and although they found that both mastery and performance goal orientations were positively related to fatigue, they interestingly noted that a mastery goal orientation was positively related to job satisfaction. This may be explained by mastery oriented people's focus on persistence and effort, and the fact that they view job demands as challenging task-demands rather than competitive and threatening demands (Van Yperen & Janssen, 2002). This can be said to be an adaptive response pattern, and supports the notion that mastery oriented people respond adaptively in achievement situations. Contrastingly, a study from the sport psychology field showed that performance goals were closely associated with reported burnout among athletes, thus representing a maladaptive response pattern (Gustafsson, Hassmén, Kenttä, & Johansson, 2008).

Research done in educational settings has also studied the relationship between goal orientation and burnout. Retelsdorf, Butler, Streblow, and Schiefele (2010) investigated the relationship between teachers' goal orientation and their level of

burnout. The results revealed that teachers who had a mastery goal orientation were associated with lower levels of burnout. It was also stated that a teacher's goal orientation influenced students' goal orientations. Teachers with a mastery goal orientation were not only associated with a "good" instructional practice within the classroom, but also influenced how the teachers created goals for their students that supported a mastery orientation. Moreover, this study points to the aspect of contextual influence and states that both teacher and students' goal orientation are susceptible to influence from the context, and encourages facilitation of a mastery goal orientation for both teachers and students (Retelsdorf et al., 2010).

2.2.2 Perceived motivational climate as a moderator

Roberts (2012) argues that one of the strongest aspects of AGT is that it not only looks at people's individual goal orientations, but also takes into consideration the importance of climate. Ntoumanis and Biddle (1999) claim that climate is a critical factor to address if one wishes to understand motivational investment. A motivational climate can be viewed as employees' perceptions of the extant criteria of success and failure at work (Nerstad et al., in press). These criteria can for example be expressed through policies, practices, and procedures in the employees' work environment (Nerstad et al., in press). The motivational climate is further divided into performance climate and mastery climate.

A performance climate refers to a context where social comparison and evaluation is encouraged, there is a high level of competition between group members, and mistakes are typically punished in some way (Smith et al., 2010). It has generally been suggested that a performance climate, like performance goal orientation, is associated with maladaptive response patterns and maladaptive consequences, such as anxiety (Braithwaite, Spray, & Warburton, 2011; Ntoumanis & Biddle, 1999; Roberts, 2012; Van Yperen, 2003; Van Yperen & Janssen, 2002). For example, research within the sports psychology field has found that intra-team conflict, which is a component of performance climate, was associated with higher levels of burnout (Smith et al., 2010). Furthermore, Van Yperen (2003) found that goal orientations were influenced by situational and contextual factors, as he investigated the effect of compensation systems and leadership styles on employees' goal orientations. He found that in those organizations that used a

performance-based compensation system, employees had a higher performance goal orientation than employees who were working in organizations that had a job-based compensation system where the salary was fixed. This may suggest that organizations that encourage a performance climate, where competition and high performance is emphasized, may influence employees to be more performance oriented. If climate is indeed a salient factor, it seems fair to argue that even when employees initially have a mastery goal orientation, they will be influenced by a performance climate in a negative manner, which should lead them to report more burnout. Thus, the following hypotheses are presented:

Hypothesis 1a: The relationship between mastery goal orientation and emotional exhaustion is moderated by performance climate; the higher the level of performance climate, the more positive the relationship.

Hypothesis 1b: The relationship between mastery goal orientation and cynicism is moderated by performance climate; the higher the level of performance climate, the more positive the relationship.

In line with previous research, it seems likely that being performance oriented, while at the same time having a perceived performance climate, may lead to maladaptive response patterns and unfortunate organizational outcomes, such as burnout. The following is therefore hypothesized:

Hypothesis 2a: The relationship between performance goal orientation and emotional exhaustion is moderated by performance climate; the higher the level of performance climate, the more positive the relationship.

Hypothesis 2b: The relationship between performance goal orientation and cynicism is moderated by performance climate; the higher the level of performance climate, the more positive the relationship.

A mastery climate on the other hand, refers to a context that emphasizes effort and cooperation rather than competition, and there is a strong focus on learning and development (Smith et al., 2010). Contrary to a performance climate, it has generally been suggested that mastery climates are associated with adaptive

response patterns (Braithwaite et al., 2011; Ntoumanis & Biddle, 1999; Roberts, 2012; Van Yperen, 2003; Van Yperen & Janssen, 2002). Previous research on burnout has identified social support and good relationships among coworkers as important resources that can mitigate the effects of burnout (e.g. Fernet et al., 2010; Jawahar et al., 2007). It thus seems fair to argue that a mastery climate, which does indeed emphasize cooperation among employees, can mitigate the occurrence of burnout. A study within the field of sports psychology found that climates that were characterized by task-involving components (mastery climate) were associated with lower levels of burnout (Smith et al., 2010). Research done in organizational settings has also found that learning opportunities at work directly decreased emotional exhaustion (Ruysseveldt, Verboon, & Smulders, 2011). It has been suggested that when employees are offered opportunities to learn and have the chance to experience personal growth at work, they will be better able to handle stressful situations and deal with threatening circumstances. It is also suggested that learning opportunities will help employees cope more effectively with job demands (Ruysseveldt et al., 2011). Such a focus on learning and personal development can be seen as crucial aspects of what constitutes a mastery climate.

Based on the presented theory and previous empirical findings, it is hypothesized that a mastery climate will mitigate the occurrence of burnout due to focus on cooperation, learning and development. If people who are initially performance oriented experience a high level of mastery climate, the mastery climate may be salient enough for employees to report less burnout, and the following is thus hypothesized:

Hypothesis 3a: The relationship between performance goal orientation and emotional exhaustion is moderated by mastery climate; the higher the level of mastery climate, the more negative the relationship.

Hypothesis 3b: The relationship between performance goal orientation and cynicism is moderated by mastery climate; the higher the level of mastery climate, the more negative the relationship.

In line with previous research, it seems likely that when people have a mastery goal orientation, and perceive a mastery climate at work, it will generally lead to more adaptive response patterns, which may result in less reported burnout:

Hypothesis 4a: The relationship between mastery goal orientation and emotional exhaustion is moderated by mastery climate; the higher the level of mastery climate, the more negative the relationship.

Hypothesis 4b: The relationship between mastery goal orientation and cynicism is moderated by mastery climate; the higher the level of mastery climate, the more negative the relationship.

3.0 Methodology

3.1 Sample and procedure

This study is part of a larger research project, and data for the project was obtained by a survey that was sent through a web-based tool called QuestBack. It was sent to 33275 Norwegian engineers and technologists that represented different work domains (research and development, health, safety and the environment (HSE), information technology (IT), consultancy, laboratory, human resource management (HRM), logistics, production, building and reconstruction, sales and marketing, service and economics). These participants were members of a union, and the union was responsible for distributing the survey. 8282 responses were obtained, representing a response rate of approximately 25%. To ensure that the respondents were representative of the total union population, demographic variables from our sample were compared to the statistics of the union. The total number of union members was approximately 66.000, and the union constantly updates the demographic statistics of its members. The demographic statistics that were checked for was age, gender and work sector. For the total population of the union members, the mean age was 46.8; gender was split between 75 % men and 25 % women; 58 % worked within the private sector and 32 % worked within the public sector. In our sample, the mean age was 45 years; gender was split between 75 % men and 25 % women, and 53 % worked within the private sector and 32 % in the public sector. Thus, the sample was considered to be representative compared to the total union population. Furthermore, 85 % of the respondents had a university degree, the mean number of working hours was 40.45 (SD = 6.06)

and the mean number of years that the respondents had been in their current position was 3.35 (SD = 0.89).

3.2 Measures

Measures that have been validated in prior studies were used for each construct. As permission from both the journal and the author is required to report items in any given measure, these will not be provided here. However, a few example items will be given when describing the measures below.

3.2.1 Burnout

Burnout was assessed with the Norwegian version (Richardsen & Martinussen, 2004) of the Maslach Burnout Inventory – General Survey (MBI-GS) (Maslach, Jackson, & Leiter, 1996). www.mindgarden.com provided the permission to apply this scale. Five different items measured emotional exhaustion (e.g., "I feel tired when I get up in the morning and have to face another day on the job"), and five items measured cynicism (e.g., "I have become more cynical about whether my work contributes anything"). They were rated on a Likert-type scale ranging from "never in the past year" (0) to "every day" (6).

3.2.2 Goal orientation

When measuring the respondents' goal orientation, nine items were adapted from Dysvik and Kuvaas' (2010) Norwegian version of the work domain goal-orientation scale, which is validated by Vandewalle (1997). Five items measured mastery goal orientation (e.g., "I enjoy challenging and difficult tasks where I can learn new skills") and four items measured performance goal orientation (e.g., "I am concerned with showing that I can perform better than my co-workers"). A 7-point Likert scale was the basis for scoring, ranging from "strongly disagree" (1) to "strongly agree" (7).

3.2.3 Motivational climate

To measure the perceived motivational climate, the Motivational Climate at Work Questionnaire (MCWQ), which has been developed and validated Nerstad and colleagues (in press), was used. The scale has 14 items, six that measures the perception of mastery climate (e.g. "In my department/work group, each individual's learning and development is emphasized") and eight that measures

perceptions of performance climate (e.g. "In my department/work group, it is important to achieve better than others"). The scoring of the items was based on a 5-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (5).

3.2.4 Control variables

Age, gender, work domain and work hours per week were included as control variables. Firstly, previous research has found that older employees tend to experience less burnout than younger employees (Brewer & Shapard, 2004; Maslach et al., 2001) and age was thus included as a control variable. This measure was assessed by self-reported years in age. Secondly, some research has suggested that women are more influenced by a poor working climate than men, which is important to consider since the moderator in this study is motivational climate (Houkes, Winants, & Twellaar, 2008). It has also been found that the occurrence of burnout is gender related, as women tend to score higher on emotional exhaustion, whereas men score significantly higher on cynicism (Maslach et al., 2001). Gender was thus included as a control variable. The measure was based on a dichotomous variable where '1' represented men and '2' represented women. Thirdly, burnout has been reported in different occupational domains (Cooper et al., 2001), and the control variable of work domain was therefore also included. The respondents' work domain was reported on a 11-item scale were '1' represented research and development, '2' represented HSE, '3' represented IT, '4' represented consultancy, '5' represented laboratory, '6' represented HRM, '7' represented logistics, '8' represented production, '9' represented building and reconstruction, '10' represented sales and marketing, and '11' represented service and economy. Finally, it has been found that work overload may lead to burnout across countries (Jamal, 2010). Work overload may be related to the measure of work hours per week, if employees work many hours over the normal limit, and this was therefore also included as a control variable. The measure of "work hours per week" was assessed by the self-reported total number of weekly work hours.

3.3 Statistical analyses

In order to test the hypotheses, analyses were conducted in version 19 of SPSS. Before conducting these analyses, the dataset was screened for missing values and outliers, as recommended (Hair, Black, Babin & Anderson, 2010). 15 outliers

were detected in the categories of age and work hours per week. As these 15 items influenced the mean score, they were either replaced with the means of their respective categories, or corrected to the appropriate score, when it was obviously a data entry error due to typing (Hair et al., 2010). As part of detecting outliers, normality was also assessed.

3.3.1 Exploratory factor analysis (EFA)

EFA (principal component analysis) was performed on the 35 items with promax rotation. This was done in order to establish discriminant and convergent validity, thus assessing that the items measured what they were in fact meant to measure (Farrell, 2010). Relatively strict criteria were set in regards to item retention, and it was decided to retain only items with a factor loading of 0.50 or higher (Nunnally & Bernstein, 1994), and a cross-loading of 0.35 or less (Kiffin-Petersen & Cordery, 2003). It was also decided that only factors with an eigenvalue of one or higher would be retained (Ford, MacCallum, & Tait, 1986). When testing for reliability, Cronbach's alpha was the chosen measure to assess the consistency of the scales (Hair et al., 2010). It is generally agreed that the lower limit for this measure is 0.70, and analyses were thus performed to see if the data met this criterion.

3.3.2 Descriptive statistics

Correlation analysis was performed to see if there were associations among variables and to check for multicollinearity. If high correlations (generally 0.90 and higher) are present, it indicates substantial collinearity (Hair et al., 2010). Other measures for assessing multicollinearity are tolerance and variance inflation factor (VIF). A tolerance of less than 0.10 and a VIF of 10 and above indicates a multicollinearity problem (Hair et al., 2010).

3.3.3. Hierarchical moderated regression

Hierarchical moderated regression was performed to test the hypotheses. As interaction terms may cause multicollinearity problems due to their correlations with main effects, this had to be dealt with. Interaction terms were thus computed by centering the mean scores for motivational climate (performance climate and mastery climate) and goal orientation (performance orientation and mastery

orientation), before multiplying them with each other (Cohen, Cohen, West, & Aiken, 2003). The two dimensions of burnout were regressed onto the control variables in the first step, and then regressed on to the control variables, motivational climate and goal orientation in the second step. Finally, in the third step, the interaction terms were entered.

4.0 Results

4.1 EFA

The EFA revealed the presence of six factors with eigenvalues exceeding 1, explaining 58.2 % of the variance. One of the items measuring cynicism (Cyn3) did not fit the inclusion criteria, and based on recommendations of Farrell (2010) this item was deleted from further analyses. All the other items loaded on a single scale without cross-loadings and contained factor loadings ranging from 0.49 to 0.93. Even though one item had a factor loading of 0.49 (MO4) it was decided to keep this item in further analyses because it was very close to the cut-off criterion. The results are presented in Appendix A. All items, except for Cyn3, were combined to form six variables, by summarizing the mean values for each item.

4.2 Descriptive statistics

Means, standard deviations, bivariate correlations and Cronbach's alpha for all multiple item scales are reported in Table 1. Cronbach's alpha for all scales demonstrated acceptable reliability estimates, with the lowest Cronbach's alpha being 0.76, and the highest 0.87. To identify possible multicollinearity conditions, the correlation matrix was examined, which shows that there are no high correlations among the variables. None of the independent variables correlated above 0.70, which is a critical value (Meyers, Gamst, & Guarino, 2006). In support of this, the lowest tolerance value was 0.80, and the VIF only showed scores that were well below 10. Thus, the analyses show no indication of collinearity.

Table 1

Descriptive Statistics, Correlations and Scale Reliabilities

		Mean	SD	1	2	3	4	5	6	7	8	9	10
1.	Age	44.57	10.88	-									
2.	Gender	1.25	0.44	-.14**	-								
3.	Work Domain	6.60	3.25	.08**	-.11**	-							
4.	Work Hours	40.39	6.66	-.05**	-.18**	.08**	-						
5.	Mastery Orientation	5.20	0.97	-.08**	-.05**	-03*	.16**	(.82)					
6.	Performance Orientation	4.07	1.14	-.14**	.00	-.05**	.04**	.29**	(.76)				
7.	Performance Climate	1.98	0.68	.04**	-.07**	.04**	.08**	.04**	.28**	(.83)			
8.	Mastery Climate	3.56	0.78	.06**	.03*	.01	.04**	.19**	-.05**	-.24**	(.85)		
9.	Emotional Exhaustion	2.62	1.20	-.06**	.06**	-.01	.02	-.13**	.13**	.26**	-.31**	(.87)	
10.	Cynicism	2.22	1.21	-.04**	-.03**	.00	-.03**	-.17**	.10**	.26**	-.43**	.53**	(.82)

Note. N = 8282.

Cronbach's alphas are displayed in parentheses on the diagonal.

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

4.3 Hierarchical moderated regression

Results from the hierarchical moderated regression are presented in Table 2. The first step shows that three of the control variables are significant (age, gender and work hours per week), but the beta values are very low. The second step shows that performance orientation (PO), mastery orientation (MO), performance climate (PC) and mastery climate (MC) are significantly related to emotional exhaustion (PO: $\beta = 0.09$, *p < 0.001*; MO: $\beta = -0.12$, *p < 0.001*; PC: $\beta = 0.19$, *p < 0.001*; MC: $\beta = -0.24$ *p < 0.001*) and cynicism (PO: $\beta = 0.07$, *p < 0.001*; MO: $\beta = -0.13$, *p < 0.001*; PC: $\beta = 0.16$, *p < 0.001*; MC: $\beta = -0.36$ *p < 0.001*). Results from the second step thus reveal that the motivational climate variables account for more of the variance than goal orientations when explaining emotional exhaustion and cynicism. The third step in the regression analysis represents the results of the moderation hypotheses, revealing five significant interaction terms, with significant ΔR^2. However, even though the ΔR^2 values are significant, it should be noted that they are quite low. The significant interaction terms suggest that performance climate is a central moderator. Performance climate is suggested to moderate the relationship between mastery goal orientation and burnout (represented by emotional exhaustion and cynicism) as well as the relationship between performance goal orientation and burnout (represented by emotional exhaustion and cynicism). The significant interactions terms also suggest that mastery climate moderates the relationship between performance goal orientation and cynicism.
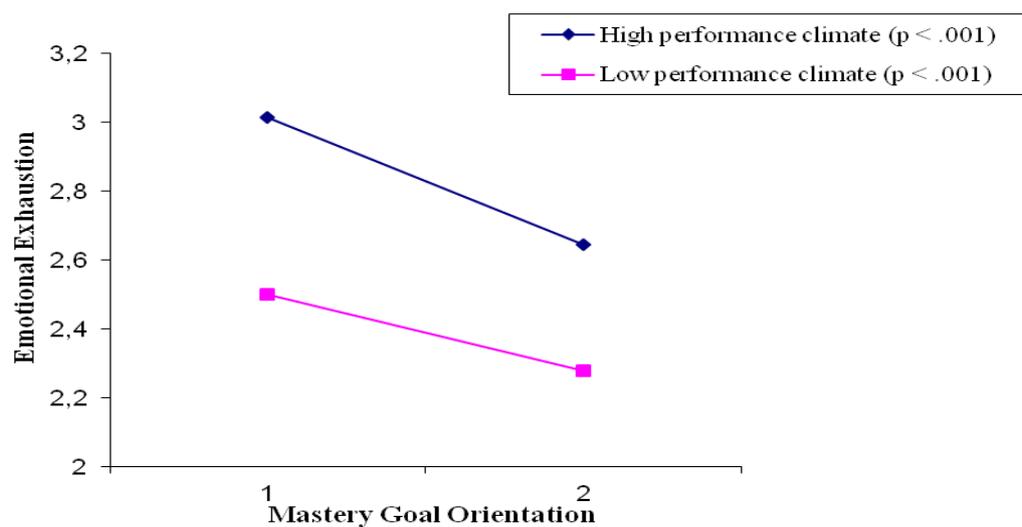
Table 2

Results of the Hierarchical Regression Analysis

Variables	Emotional exhaustion			Cynicism		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Age	-.05***	-.04***	-.04***	-.05***	-.03***	-.03***
Gender	.06***	.08***	.08***	-.05***	-.02*	-.02*
Work Domain	.00	.00	.00	.01	.00	.00
Work Hours	.03*	.04***	.04***	-.04***	.00	-.01
Performance Orientation (PO)		.09***	.09***		.07***	.08***
Mastery Orientation (MO)		-.12***	-.12***		-.13***	-.14***
Performance Climate (PC)		.19***	.18***		.16***	.16***
Mastery Climate (MC)		-.24***	-.24***		-.36***	-.36***
MOxMC			-.00			.00
POxMC			-.01			-.02*
MOxPC			-.03**			-.04***
POxPC			.03**			.04***
Adjusted R²	.007	.157	.158	.004	.224	.227
ΔR²	.007***	.151***	.001**	.005***	.220***	.003***
F	14.58***	193.44***	130.13***	9.87***	299.80***	203.11***
ΔF	14.58***	369.70***	3.115**	9.87***	586.93***	7.78***

Note. N = 8282.

*p < .05. **p < .01. ***p < .001.

The plot displayed in Figure 1 illustrates that there is a negative relationship between mastery goal orientation and emotional exhaustion with both high and low levels of performance climate. The higher the level of performance climate, the more emotional exhaustion. Following Aiken and West's (1991) recommendations, simple effects tests were performed in order to determine whether the slopes differed significantly from zero. The tests indicated that the slope for high levels of performance climate was significantly different from zero ($t = 15.21$, $p < 0.001$), and the slope for low levels of performance climate was also significantly different from zero ($t = 11.67$, $p < 0.001$). In addition, the results of the t-test between the slopes of high and low levels of performance climate indicated that they were significantly different from each other ($t = 5.50$, $p < 0.001$). Thus, Hypothesis 1a, which predicted that the relationship between mastery goal orientation and emotional exhaustion was moderated by performance climate, was supported.
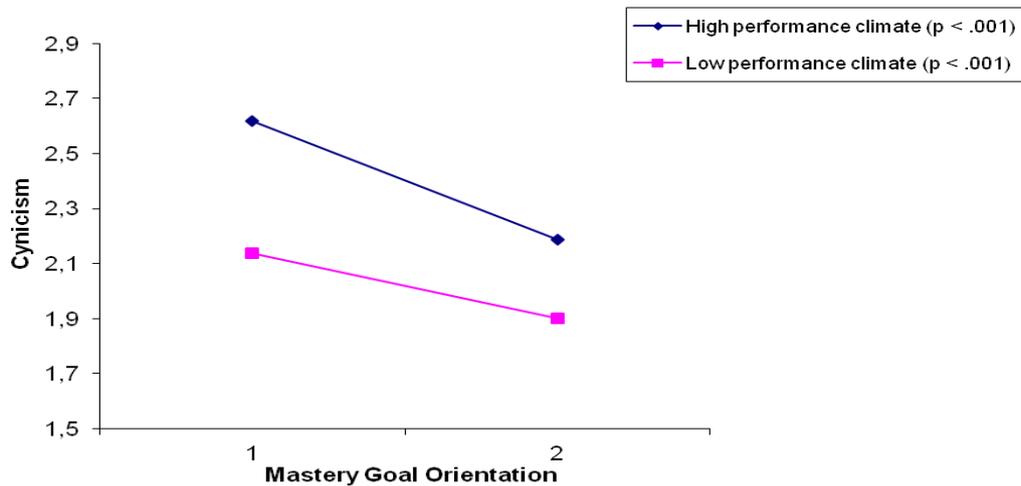

Note: N = 8282; 1 = -1 standard deviation; 2 = +1 standard deviation.

Figure 1. The moderating role of performance climate on the relationship between mastery goal orientation and emotional exhaustion.

In Figure 2, one can see that the plot illustrates a negative relationship between mastery orientation and cynicism, with both high and low levels of performance climate. However, the higher the performance climate, the more cynicism is reported. The simple effects tests indicated that the slope for high levels of performance climate was significantly different from zero ($t = 17.35$, $p < 0.001$), and the slope for low levels of performance climate was also significantly
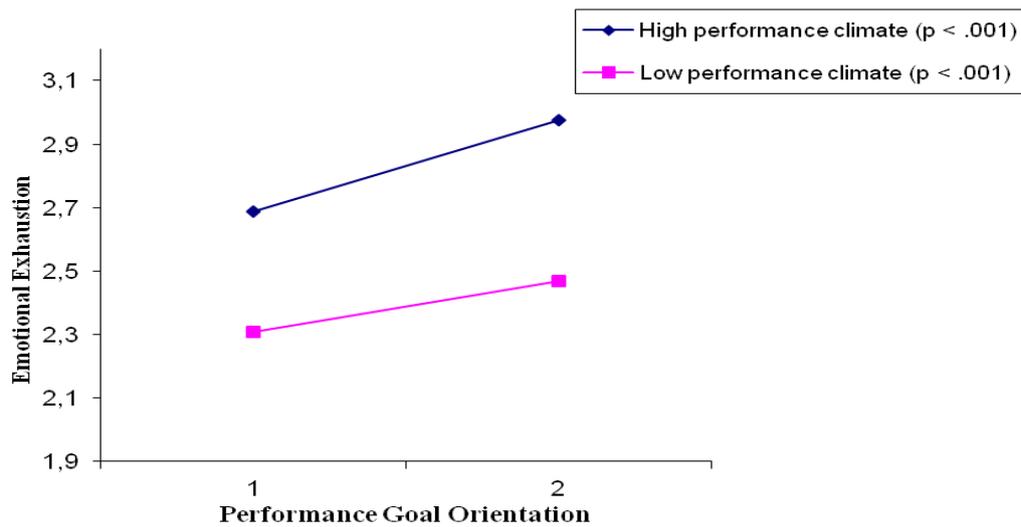
different from zero ($t = 13.24$, $p < 0.001$). In addition, the results of the t-test between the slopes of high and low levels of performance climate indicated that they were significantly different from each other ($t = 7.30$, $p < 0.001$). Thus, Hypothesis 1b, which predicted that the relationship between mastery goal orientation and cynicism was moderated by performance climate, was supported.

Note: N = 8282; 1 = -1 standard deviation; 2 = +1 standard deviation.

Figure 2. The moderating role of performance climate on the relationship between mastery goal orientation and cynicism.
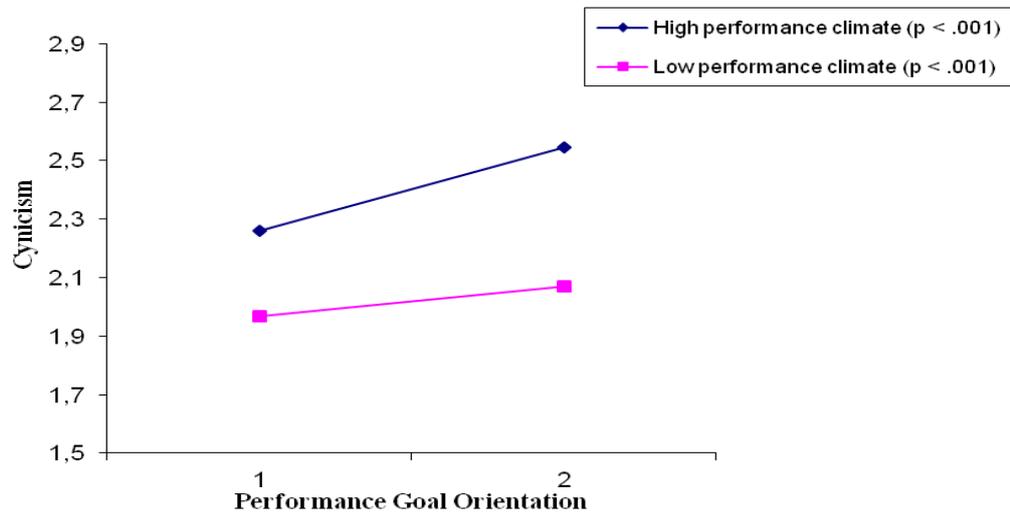
In Figure 3, the plot demonstrates that there is a positive relationship between performance goal orientation and emotional exhaustion with both high and low levels of performance climate. Once again, the higher the level of performance climate, the more emotional exhaustion is also reported. The simple effects tests indicated that the slope for high levels of performance climate was significantly different from zero ($t = 9.80$, $p < 0.001$), and the slope for low levels of performance climate was also significantly different from zero ($t = 7.54$, $p < 0.001$). In addition, the results of the t-test between the slopes of high and low levels of performance climate indicated that they were significantly different from each other ($t = 4.10$, $p < 0.001$). Thus, Hypothesis 2a, which predicted that the relationship between performance goal orientation and emotional exhaustion was moderated by performance climate, was supported.

Note: N = 8282; 1 = -1 standard deviation; 2 = +1 standard deviation.

Figure 3. The moderating role of performance climate on the relationship between performance goal orientation and emotional exhaustion.
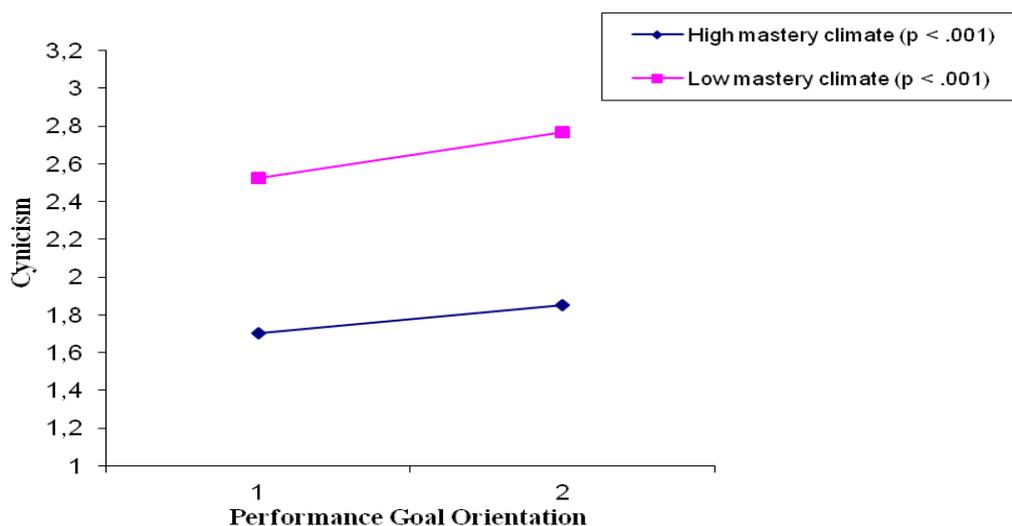
In Figure 4, the plot demonstrates that there is positive relationship between performance goal orientation and cynicism, with both high and low levels of performance climate. The higher the level of performance climate, the more cynicism is reported. The simple effects tests indicated that the slope for high levels of performance climate was significantly different from zero ($t = 9.77$, $p < 0.001$), and the slope for low levels of performance climate was also significantly different from zero ($t = 4.82$, $p < 0.001$). In addition, the results of the t-test between the slopes of high and low levels of performance climate indicated that they were significantly different from each other ($t = 5.80$, $p < 0.001$). Thus, Hypothesis 2b, which predicted that the relationship between a performance goal orientation and cynicism was moderated by a performance climate, was supported.

Note: N = 8282; 1 = -1 standard deviation; 2 = +1 standard deviation.

Figure 4. The moderating role of performance climate on the relationship between performance goal orientation and cynicism.

Finally, the plot displayed in Figure 5 illustrates that there is a positive relationship between performance orientation and cynicism, with both high and low levels of mastery climate. One can see that the higher the level of mastery climate, the less cynicism is reported. The simple effects tests indicated that the slope for high levels of mastery climate was significantly different from zero ($t =$ 5.48, $p <$ 0.001), and the slope for low levels of mastery climate was also significantly different from zero ($t =$ 8.90, $p <$ 0.001). In addition, the results of the t-test between the slopes of high and low levels of mastery climate indicated that they were significantly different from each other ($t =$ 2.60, $p <$ 0.009). Thus, Hypothesis 3b, which predicted that the relationship between a performance goal orientation and cynicism was moderated by a mastery climate, was supported. Hypotheses 3a, 4a, and 4b were not supported.

Note: N = 8282; 1 = -1 standard deviation; 2 = +1 standard deviation.

Figure 5. The moderating role of mastery climate on the relationship between performance goal orientation and cynicism.

5.0 Discussion

The purpose of this study was to apply the AGT perspective, where one considers the interplay between individual goal orientations and the motivational climate, to the study of burnout. The results indicate that the motivational climate is indeed a salient factor when it comes to explaining the prevalence of burnout, and the supported hypotheses also suggest that the interplay between goal orientations and the motivational climate is crucial. This study represents a contribution toward the person-situation perspective, in both AGT and burnout research. It answers the call from previous researchers to study the dynamic interplay between the two, rather than considering the person and the situation in isolation (DeShon & Gillespie, 2005; Fernet et al., 2010; Roberts, 2012). Additionally, this study extends previous research within AGT by focusing on individual ill-being as an outcome, rather than organizational productivity, which has typically been the focus area in the past (DeShon & Gillespie, 2005).

Previous research has generally found that performance goal orientation and performance climates are associated with maladaptive response patterns (e.g. Gustafsson et al., 2008; Braithwaite et al., 2011). For example, Gustafsson and colleagues (2008) found that performance oriented goals were associated with burnout, and Braithwaite and colleagues (2011) found that performance climate

conditions were associated with maladaptive response patterns such as anxiety. Our findings are in line with this research, as the results indicate that a performance goal orientation and a performance climate are associated with maladaptive response patterns in terms of burnout. However, the results in our study are interesting beyond this, because they also suggest that people who initially hold a mastery goal orientation, which is associated with adaptive response patterns (Meece et al., 2006), can be influenced in a negative manner by a performance climate. Our results therefore indicate that climate can indeed lessen or strengthen the relationship between goal orientations and burnout. This adds to the debate on whether the person (goal orientation) or the situation (motivational climate) accounts for most of the variance when explaining burnout, as our results show that even when people had a mastery orientation to begin with, they reported more burnout when facing a performance climate. Furthermore, people reported less cynicism when they perceived a mastery climate, even though they had a performance orientation to begin with. These results exemplify the importance of considering goal orientations *and* employees' perceptions of their climate (Roberts, 2012), as they both seem to interact to influence the occurrence of burnout. The application of a person-situation perspective in our study has thus revealed interesting results, as the perceived motivational climate was found to interact in a significant way with the relationship between goal orientations and burnout.

Even though people have goal orientations that predispose them to adopt particular response patterns in achievement situations, these can be influenced by the situation people find themselves in (Button et al., 1996; Goudas & Biddle, 1994; Treasure & Roberts, 1998; Van Yperen, 2003). For example, Button and colleagues (1996) found that situational characteristics influenced people's goal orientation and caused them to adopt a different response pattern. Thus, the motivational climate may be salient enough to influence people's goal orientations, so that they adopt a different response pattern. However, a change in goal orientation may depend on the strength of the situational cues (Treasure & Roberts, 1998). For example, if a performance climate or mastery climate is very strong, employees' goal orientations may be changed in a performance-direction or mastery-direction, respectively. If this is the case, the results in this study may be explained by employees' goal orientations being influenced by their

perceptions of climate. If the employees that initially held a mastery goal orientation were influenced by what they perceived as a high level of performance climate (strong cues), it may have led them to change their goal orientations in a performance-oriented direction, and thus leading them to report more burnout. This is impossible to say for sure, due to issues of causality and lack of a longitudinal design in this study, which could have revealed a change in goal orientations over time. However, Nerstad, Richardsen and Roberts (in Nerstad, 2012) conducted a longitudinal study, and their results revealed that the motivational climate indeed influenced employees' goal orientations over time. In similar fashion, several experimental studies (Chen & Mathieu, 2008; Kozlowski & Bell, 2006; Koslowski, Gully, Brown, Salas, Smith, & Nason, 2001) have manipulated goal orientation where performance- or mastery goal orientation has been induced among the participants. Results of these experiments illustrated that cues which focused on demonstrating competence, ability being fixed and error avoidance, induced a performance orientation, whereas cues that emphasized self-referenced improvement, ability being malleable and errors being a learning opportunity encouraged a mastery orientation. More importantly, participants that received these instructions were in fact influenced in the intended direction (Chen & Mathieu, 2008; Kozlowski & Bell, 2006; Koslowski et al., 2001). Another study found that employees who worked in an organization that focused on performance-based compensation systems led them to alter their goal orientation and report higher performance goal orientation (Van Yperen, 2003). Contrastingly, in organizations with job-based compensation systems where the salary was fixed, employees reported lower levels of performance goal orientation (Van Yperen, 2003). Finally, an experiment was able to demonstrate that when participants were induced by mastery goal orientation cues, the level of anxiety decreased significantly (Martocchio, 1994). Even though anxiety is not equal to burnout, it shows that individuals can be influenced in a preferred direction that can yield beneficial outcomes in terms of improved well-being (Martocchio, 1994).

Even if one cannot conclude that the motivational climate influenced employees' goal orientations in this study, it should still have become evident that climate matters. In fact, climate explained much more of the variance in burnout than goal orientation (See Table 2 and 3). Even though this is not part of the initial

hypotheses, it is an interesting finding that is worth noting. Performance climate has a positive and significant relationship with burnout, whereas mastery climate has a negative and significant relationship with burnout. These findings are in line with previous studies and empirical findings (Braithwaite et al., 2011; Ntoumanis & Biddle, 1999; Roberts, 2012; Smith et al., 2010; Van Yperen, 2003; Van Yperen & Janssen, 2002). Research conducted in other achievement settings found that a mastery climate helped people cope with anxiety in a better way, whereas performance criteria caused performance worries and concentration disruptions (Abrahamsen et al., 2008). Smith and colleagues (2010) underline the importance of climate as a condition that may cultivate or mitigate burnout, and found that a feature of performance climate (intra-team conflict) was positively associated with burnout, whereas features of mastery climate were negatively associated with burnout.

It should have become evident that the results in our study suggest that a performance climate is particularly unfortunate, as employees reported more burnout when they experienced such a climate. However, some researchers insist that performance oriented employees are necessary in an organization (Button et al., 1996) and having a performance climate is inevitable (DeShon & Gillespie, 2005). It has been argued that in order for organizations to be successful, employees must contend with performance standards, production schedules and deadlines (Button et al., 1996). It has also been stated that there are currently too many ambiguities with the concept of goal orientation to claim that a mastery orientation is "good" and a performance orientation is "bad" (DeShon & Gillespie, 2005). These arguments represent a realistic view of the reality that organizations face today, and they are worthwhile to take into consideration. Nevertheless, the results of this study indicate that a perceived performance climate led to more reported burnout, which is extremely costly for organizations (Marianetti & Passmore, 2010). Furthermore, previous research has also found that a mastery climate is beneficial in numerous ways, and it has been suggested that a mastery climate can mitigate burnout perceptions (Abrahamsen et al., 2008; Poortvliet, Anseel, Janssen, Van Yperen, & Van de Vliert, 2012; Retelsdorf et al., 2010; Smith et al., 2010; Treasure & Roberts, 1998; Van Yperen, 2003). Therefore, even though some researchers have claimed that performance-oriented people are necessary in an organization, our findings suggest that such a view can

have unfortunate outcomes for employee health. Fostering a performance climate may result in detrimental consequences, if it leads employees to report more burnout. Interestingly, research that has concluded with a need for performance-oriented people, have focused on productivity (Button et al., 1996) rather than ill-being. The focus on burnout in this study is therefore important, as it highlights an aspect that has been understudied in the past. Not only does it have important consequences for the individual, but organizations will also suffer from the costs that follow from employee ill-being and burnout.

It should also be noted that the present study differs from research that focuses on the theory of P-E fit (e.g. Rubino et al., 2009). Research on P-E fit has suggested that it may be beneficial for companies to hire people who fit with the organizational values, in order to avoid a misfit between an employee's values and the companies values, which may again lead to strain and burnout (Siegall & McDonald, 2004). This suggestion contradicts the purpose of our study, as our study has focused on the influence of climate, rather than finding employees with the "right" goal orientations. Instead of investigating the impact of a possible "misfit" between employees' goal orientations and the motivational climate, this study has explored the impact of climate, and whether or not climate decreased or increased the relationship between employees' goal orientations and the occurrence of burnout. This study can therefore be seen as an extension to the scarce research on burnout that considers *both* the person and the situation, but with a different focus than the theory of P-E fit.

Even research that has focused on individual factors as antecedents to burnout has called for more research on climate, and in particular climate's effect on personal dispositions (Swider & Zimmerman, 2010). Our findings contribute to burnout research by illustrating that the situation matters and that personal dispositions and climate do interact. These results are supported by previous studies where it has been noted that the context and environment is of crucial importance when studying burnout, and various climate dimensions are indeed related to burnout in a significant way (Grayson & Alvarez, 2008; Lee & Akhtar, 2011). It is also emphasized that such findings on climate can have important implications for managers, as the climate can be said to be more amenable to intervention than individual characteristics (Grayson & Alvarez, 2008).

6.0 Practical implications

Most discussions concerning interventions to alleviate burnout focus largely on individual-centered solutions, but it has been argued that in order to lessen the experience of burnout, individual coping efforts are not enough (Cooper et al., 2001; Maslach et al., 2001). For alleviation of burnout to be effective and long-term, it might be necessary to do fundamental changes in the organization (Cooper et al., 2001). Such changes are typically initiated by leaders, and the implications of this study are therefore particularly interesting for managers or other agents responsible for organizational change. It has been proposed that management processes can play a role in either generating or alleviating burnout among employees (Schulz, Greenley & Brown, 1995 as cited in Cooper et al., 2001 p.106). It has also long been acknowledged that leadership has a key role in shaping climate perceptions by emphasizing a particular achievement focus (Dragoni, 2005; Van Yperen & Janssen 2002; Zohar & Luria, 2004) and leaders are identified as the primary designers of climate (Naumann & Bennett, 2000).

The findings of this study emphasize that organizations should pay more attention to the motivational climate in the organization, rather than simply focusing on individual differences among employees. Some researchers have advocated that organizations should screen applicants in a selection process on the basis of people's goal orientations (Cellar, Stuhlmacher, Young, Fisher, Adair, Haynes, Twichell, Arnold, Royer, Denning, & Riester, 2011; VandeWalle et al., 1999). However, other scholars have argued that it is easier and more practical to change the climate perceptions than changing the goal orientation for several individuals (Abrahamsen et al., 2008). The climate dimension is therefore seen as most crucial in this study, and practical implications will be based on this.

There is little evidence regarding how to implement and encourage a mastery climate in an organizational setting (DeShon & Gillespie, 2005). However, Ames (1992 as cited in Roberts, 2012 p. 45) has presented a framework where she proposes that different structures can be manipulated to make adoption of a mastery- or performance climate more likely. She defined this framework in line with Epstein's (1988, 1989 as cited in Roberts, 2012 p. 45) work on achievement structures, and formed the acronym "TARGET" to represent task, authority,

recognition, grouping, evaluation and timing structures (See Table 4). These structural features are seen as interdependent, and together they define the motivational climate of a context (Roberts, 2012). It is recommended that leaders follow the structures of the TARGET framework when fostering a mastery climate. Research has shown that the use of TARGET strategies to favor a mastery climate has had positive effects in terms of affective, behavioral and cognitive outcomes (Braithwaite et al., 2011).

The first feature is *task,* which refers to what the employee is asked to do, and how important that task is to the employee. Designing meaningful tasks that include variety, diversity, challenges and control are seen as vital (Blumenfeld, 1992 as cited in Roberts, 2012 p. 45). By designing such tasks, employees can develop a sense of their own ability where social comparison is not a factor, and they can find intrinsic motivation in the task. The second feature refers to *authority structure*. The significant aspect here is whether the employee has the autonomy to decide how and when to do a task. Thirdly, *recognition* is based on the use of rewards and incentives. These must be based on applied effort, being creative, sharing ideas, and learning from mistakes. Rewards and incentives should not be perceived as more important than the task itself. Furthermore, *grouping* refers to cooperative learning and peer interaction. The criteria for grouping should be based on the area of interest, and diversity among employees is encouraged (Ames, 1992 as cited in Roberts, 2012 p. 46; Epstein, 1988 as cited in Roberts, 2012 p. 46). *Evaluation* of employees should be based on their own progress, mastery, creativity and effort. Evaluation ought to be self-referenced and based on personal improvement, progress towards individual goals, and participation (Cury, Biddle, Sarrazin, & Famose, 1997). Finally, *timing* is linked to time management and employees having the opportunity to do the work in their own pace. Some employees might need more time to develop the necessary skills to complete a task, and this should be respected (Roberts, 2012). Based on these specific steps toward fostering a mastery climate, TARGET should be a useful tool for leaders. It can provide them with guidance on specific environmental structures that they can emphasize in order to achieve a mastery climate within their organization (Braithwaite et al., 2011).

Table 4

Descriptions of Mastery and Performance Climates in Accordance with TARGET Structures (Ames, 1992, as cited in Ntoumanis & Biddle, 1999 p.644)

TARGET structure	Mastery climate	Performance climate
Task	Challenging and diverse	Absence of variety and challenge
Authority	Employees are given choices and leadership roles	Employees do not take part in the decision making processes
Recognition	Private and based on individual progress	Public and based on social comparison
Grouping	Promotion of cooperative learning and peer interaction	Groups are formed on the basis of ability
Evaluation	Based on mastery of tasks and on individual improvement	Based in winning or out-performing others
Time	Time requirements are adjusted to personal capabilities	The allocated for learning is uniform to all employees

Finally, it should be noted that even though changing the motivational climate in an organization may lead to beneficial outcomes in terms of lower levels of burnout among employees, such interventions may be challenging to implement. It is often complex because it requires high levels of collaboration from all parts of the organization, as well as involving substantial investment of time, money and effort (Maslach et al., 2001). It may therefore be useful to encourage a mastery climate as part of the organizations human resource (HR) practices. More specifically, the features of the TARGET framework can resemble the aspects of commitment-based HR. Commitment-based HR practices is characterized by employee involvement in decision making, tasks being broadly defined, learning and growth being in focus, and investment in employees' skills and competence (Arthur, 1994; Pfeffer & Veiga, 1999; Verburg, Den Hartog, & Koopman, 2007). Previous research has explicitly found that by promoting and stimulating learning

through jobs that are autonomous, varied and cognitively demanding, a decrease in emotional exhaustion can occur (Ruysseveldt et al., 2011). Based on this, leaders may benefit from incorporating the TARGET framework as part of the organizations' commitment-based HR practices, if they wish to foster a mastery climate.

7.0 Limitations and future research

As all other studies, this study has its limitations. Some of the limitations also present possibilities for better or different ways of conducting research on the topic in the future, and these suggestions will be presented along with the limitations.

This study was based on a cross-sectional design, as data was collected at only one single point in time. It is thus impossible to draw causal inferences or rule out the possibility of reverse causality. No statistical test can unmistakably differentiate one causal sequence from another, so future researchers may want to choose experimental- or longitudinal designs, as these are needed to justify the sequence of effects (Mathieu & Taylor, 2006). Beyond conducting an experiment or a longitudinal study on the same topic as the present study, an interesting opportunity for future research could also be to test other moderators in the relationship between goal orientation and burnout. Previous research has found that leadership can have an influence on the experience of burnout, and that certain leadership styles might mitigate burnout in employees (De Hoogh & Den Hartog 2009; Cooper et al., 2001).

A second limitation relates to the characteristics of the sample. Even though the sample size was large, the sample only included technologists and engineers in Norway, which may undermine the generalizability of the findings. It is important to note that relationships and findings on this topic may differ across industries and countries. Consequently, to strengthen the external validity of the findings, more extensive research is needed where organizations within other work domains are included.

Furthermore, to be able to account for an organizational climate, where climate perceptions are shared, measures of psychological motivational climate should be aggregated to the organizational level. However, because this study was conducted through a union, and the respondents were spread over various organizations from different parts of Norway, it is impossible to examine whether or not climate perceptions were shared amongst the respondents. Future research can thus benefit from focusing on particular organizations and their organizational motivational climates, in order to be better able to predict employee outcomes such as burnout.

Another limitation may be that data was collected through self-report measures, and such a measure has the potential of being influenced by common method variance (CMV). Many researchers believe that CMV is a serious problem in organizational research (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) while others have questioned whether this belief is correct (Spector, 2006; Conway & Lance, 2010). Self-report ratings have been said to be associated with higher correlations as a result of CMV. However, the correlations in the correlation matrix in Table 1 ranged from 0.01 to 0.53, which is not uncharacteristically high, and it can therefore be argued that CMV is not a severe problem. Also, using self-report to measure the different variables in this study might in fact be the most accurate and valid measurement method. As the variables of interest are based on the respondents' perceptions of a given aspect, it would be faulty to use other-reports such as peer-ratings or supervisor-ratings. In addition, there is no guarantee that other-reports are less biased than self-report (Conway & Lance, 2010). Moreover, to control for CMV, all respondents received a thorough information letter stating that their personal confidentiality would be assured, which is in line with the guidelines of the Norwegian Social Science Services. Respondents were also informed that there were no right or wrong answers, and they were encouraged to answer the survey as honest as possible, as recommended by Podsakoff and colleagues (2003).

It should also be noted that there may be limitations in regard to the study's sample size. When a sample size exceeds 400 respondents, it can make statistical tests overly sensitive (Hair et al. 2010). As the sample size in this study was 8282

respondents, achieving significant results, despite of low beta coefficients, may have been a consequence of the large sample size. When beta coefficients are as low as they were (see Table 2 and 3), one can question the "practical" significance of the values. To account for this limitation, all findings were examined to ensure they could be said to have a practical significance, due to the increased statistical power from the sample size (Hair et al. 2010).

Finally, even though we reported significant ΔR^2 for the five supported hypotheses, these values were very low, and results should therefore be interpreted with caution. However, it has been argued that even though the value of ΔR^2 is low, it may have more predictive power than one may initially assume based on results in a multiple regression analysis (LeBreton, Hargis, Griepentrog. Oswald, & Ployhart, 2007; Tonidandel & LeBreton, 2011). Future research may therefore choose to include relative importance analyses as a supplement to the primary analyses in order to find the real predictive power of ΔR^2 (LeBreton et al., 2007; Tonidandel & LeBreton, 2011).

8.0 Conclusion

The results of this study have underlined the importance of considering the interaction between the person and the situation when studying AGT and burnout. The most important finding has been that the motivational climate in a work setting is of crucial importance, and may work as a buffer between employees' initial goal orientations and the occurrence of burnout. Managers and organizations can benefit from these findings, as they can choose to alter the climate in a direction that might mitigate the effects of burnout. However, finding a balance between meeting performance goals and fostering a mastery climate is undoubtedly complex, and there is no easy solution toward alleviating burnout in organizations. Yet, the interactionist perspective used in this study may contribute towards a greater understanding on the occurrence of burnout, and it will hopefully be recognized that neither individual characteristics nor the work climate should be studied in isolation.

9.0 References

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Appendix A: Exploratory factor analysis

			Factors			
Items	PC	MC	EE	MO	Cyn	PO
PC7	.81					
PC4	.74					
PC2	.73					
PC8	.70					
PC3	.70					
PC6	.62					
PC5	.61					
PC1	.52					
MC3		.81				
MC5		.74				
MC1		.73				
MC2		.70				
MC4		.70				
MC6		.62				
EE2			.93			
EE1			.85			
EE3			.76			
EE5			.74			
EE4			.71			
MO3				.90		
MO1				.85		
MO5				.81		
MO2				.78		
MO4				.49		
Cyn5					.83	
Cyn4					.82	
Cyn1					.76	
Cyn2					.73	
PO4						.83
PO3						.82

PO2						.76
PO1						.73
Cyn3						
Eigenvalues	7.03	4.08	2.55	2.40	1.74	1.34
% of Variance	21.30	12.37	7.74	7.28	5.28	4.07

Note. Factor loadings below .40 are not shown.

PC = performance climate; MC = mastery climate; EE = emotional exhaustion; MO = mastery orientation; CYN =

cynicism; PO = performance orientation.

Appendix B: Preliminary thesis report

BI Norwegian Business School

Preliminary Thesis Report

The relationship between goal orientation and burnout moderated by perceived motivational climate

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Table of contents

Summary

The world of work is constantly changing and companies are under continuous pressure to perform. A related challenge that companies face today is burnout, which frequently occurs in organizational settings. This thesis will address the need to find possible cause and antecedents to burnout, by looking at employees' goal orientation and perceived motivational climate. This report contains a literature review, which shows the importance of goals and perceived motivational climate in various achievement settings. If further reviews issues related to burnout, and how goal orientations and motivational climate may be related to burnout. It has been argued that people who have a tendency to burnout also have a strong commitment to pursuit of goals, but this relationship has most frequently been investigated in sport and educational settings. In order to see if there is a relationship between goal orientations and burnout, moderated by perceived motivational climate, surveys were carried out, and responded to by Norwegian technologists and engineers.

1.0 Introduction to the research topic

Today's organizations face several challenges. The markets are continuously changing, companies need to adapt to the outcomes of globalization, and there is a constant need for efficiency. In addition to these factors, companies also need to stay competitive through the ongoing financial crisis (Marianetti and Passmore 2010). These trends challenge employee health and well-being, as there is a constant pressure to perform. The costs of employees' ill-health are a significant drain on companies' resources (Marianetti and Passmore 2010). This thesis will focus on a severe and extremely costly type of ill-health, namely burnout. Burnout has a high occurrence in many organizations today (Halbesleben and Bowler 2007), and research on the topic is therefore important. Employee burnout has negative consequences in terms of turnover and turnover intention, reduced performance and absenteeism, among other things (Maslach 1982 in Halbesleben and Bowler 2007). Hence, finding possible causes and antecedents to burnout is a topic that is important, and it is an issue that requires more research. Organizations should also value findings and possible implications of research on burnout, if it can help them prevent or mitigate its effects.

Burnout has been given extensive interest in recent years due to its detrimental consequences for both the individual and the organization, and a need for greater investigations of strategies to prevent the development of burnout has been called for (Cooper, Dewe and O'Driscoll 2001). Situational and organizational factors have been stated to play a bigger role than individual factors when trying to alleviate burnout (Maslach 1998) and several authors have tried to find antecedents that can explain the experience of burnout. A meta-analytic study indicated that there is a relationship between individual's perceptions of the work climate and their feeling of well-being (Parker et al. 2003) and research from other domains has also revealed that an individual's goal orientation and the motivational climate have an effect on the feeling of fatigue and burnout (Van Yperen and Janssen 2002; Smith, Gustavsson and Hassmén 2010; Lemyre, Hall and Roberts 2008 cited in Smith, Gustavsson and Hassmén 2010; Retelsdorf et al. 2010). However, there is a call for more examination on these associations (Parker et al. 2003).

There has been research on the relationship between burnout and the perceived motivational climate in sports sciences and educational settings (Smith, Gustafsson and Hassmén 2010 and Retelsdorf et al. 2010), but research on this topic lacks in organizational settings. A motivational climate at work is therefore interesting to look at in relation to burnout, as it has been reported that people who have a tendency to burnout, also tend to show a strong commitment to the pursuit of goals (Roberts, Treasure and Conroy 2007). Thus, people's goal orientations and motivation may affect the prevalence of burnout in an achievement setting.

2.0 Literature review

In this section, we will review research and existing theory on goal orientation, perceived motivational climate and burnout, and see how these may interact.

2.1 Goal orientation

As already stated, current trends show that companies are under extreme pressure to perform (Marianetti and Passmore 2010). It is likely that companies therefore also employ people that are performance-driven in their aspirations. Being performance-driven can be related to a person's achievement goal orientation, as goal orientations represent different ways of approaching an achievement situation (Ames 1992). Goal orientations are typically divided into two main types: a *performance goal orientation*, which was mentioned above, and a *mastery goal orientation*. Performance goal orientation concerns individuals "being judged able, and one shows evidence of ability by being successful, outperforming others, or by achieving success with little effort" (Ames and Archer 1988, 260). With a mastery goal orientation on the other hand, "importance is attached to developing new skills. The process of learning itself is valued, and the attainment of mastery is seen as dependent on effort" (Ames and Archer 1988, 260). It is suggested that the tendency to respond adaptively or maladaptively in achievement situations depend on people's goal orientation (Dweck 1986 and Nicholls 1984 in Van Yperen and Janssen 2002). This means that a person's goal orientation should have an impact on how that person responds to an achievement situation. Typically, performance goal orientations are associated with maladaptive response patterns, and mastery goal orientations are associated with more adaptive patterns. Thus, it would be interesting to investigate the relationship between employees' goal orientation, being either performance goal oriented or mastery goal oriented,

and the prevalence of burnout. It may be theorized that a performance goal orientation, typically leading to maladaptive response patterns, also may lead to more burnout.

There have been debates concerning whether or not performance orientation goals and mastery orientation goals should be further divided into approach and avoidance. Some theorists, such as Nicholls, argue that the concepts of mastery orientation and performance orientation should be sufficient, whereas Elliot and colleagues argue that performance orientation should be further divided into performance-approach and performance-avoidance, and perhaps even dividing mastery orientation in the same matter (Elliot 1999). Performance-approach goals focus on "the attainment of normative competence" whereas performance-avoidance goal focuses on "the avoidance of normative incompetence" (Elliot 1999, 174). Performance-approach goal and mastery goals can therefore be seen as having similarities as both these goal orientations involve striving to achieve positive possibilities (Elliot 1999). In 1989, Nicholls found that "items assessing strivings to demonstrate superior ability and strivings to avoid the demonstration of inferior ability loaded on the same factor…" (Retelsdorf et al. 2010, 31). This supports the argument of keeping performance orientation as a separate construct, and not divide it as Elliot has done. However, most subsequent research in the past years have followed Elliot and colleagues' approach of dividing performance goal orientation further into ability-approach and ability-avoidance, and report that these load on three distinct factors (Elliot and Church 1997, Middleton and Midgley 1997, Skaalvik 1997, Smith et al. 2002 in Retelsdorf, Butler, Streblow and Schiefele 2010). In this thesis, the traditional AGT perspective will be used, focusing on the two main types of mastery-orientation and climate, and performance-orientation and climate.

The construct of goal orientation has been debated, as researchers and theorists disagree in terms of whether it can be viewed as a goal, trait, quasi-trait, mental framework or belief (DeShon and Gillespie 2005). However, Roberts, Treasure and Conroy (2007) argue that goal orientations should not be viewed as traits or states, but rather cognitive schemas that are relatively stable and enduring over time, but still subject to change. One contextual factor that may "change"

individuals' goal orientations is their perceptions of the *motivational climate*. This will be discussed further in the next section.

2.2 Motivational climate and Achievement Goal Theory (AGT)

In order to understand the interplay between goal orientations and motivational climate, one can apply the theory of AGT. AGT proposes that the perceived motivational climate and individuals' goal orientations interact to affect behavior in various achievement settings (Treasure and Roberts 1998). Thus, individuals' goal orientations may affect perceptions of the motivational climate, or vice versa. Ntoumanis and Biddle (1999) claim that climate is a critical factor to address if one wishes to understand motivational investment. Thus, the climate should be an interesting moderator to look at, in terms of whether or not it has an influence on the motivational investment of employees, and whether or not their disposition towards one goal orientation can be strengthened or lessened, depending on the perceptions of the motivational climate.

It has already been proposed that people's goal orientations lead to different approaches to behavior, which should naturally also lead to different outcomes in an organizational setting. This thesis will therefore look closer at the effects of perceived motivational climate; or more specifically the motivational *psychological climate*. A psychological climate can be seen as individuals' perceptions of their work environment, and is thus at the individual level (Parker et al 2003). Research has found that such a psychological climate have significant relationships with various work outcomes, such as employees' work attitudes, motivation and performance. Therefore, a motivational psychological climate, hereafter referred to only as motivational climate, is interesting to study in regards to various outcomes that are important for any organization.

The motivational climate will be divided in the same matter as the goal orientations, and will be referred to as *performance climate* and *mastery climate*. A performance climate refers to a context that "involves reinforcement of social comparison and evaluation, within-group competition, and punishment of mistakes" (Smith, Gustafsson and Hassmén 2010, 454). A mastery climate on the other hand, refers to a context that is "characterized as emphasizing and rewarding effort and cooperation, focusing on learning, and self-referenced criteria for

success" (Smith, Gustafsson and Hassmén 2010, 454). In this thesis, the two different types of motivational climates will be investigated as possible contextual factors that can moderate the relationship between employees' goal orientations and burnout.

Ames has also made the distinction between performance and mastery perceptions of motivational climates. She defined this in line with Epstein's work on achievement structures, labeled "TARGET". These structures include design of tasks, authority in terms of location of decision-making, recognition in terms of distribution of rewards, the manner and frequency of grouping and time in terms of pace of learning (Ntoumanis and Biddle 1999). Ames (1992) has suggested that TARGET can be placed within an AGT framework, in that a teacher can manipulate each of these structures to make an adoption of a mastery or performance orientation more likely (in Roberts and Treasure 1995). Ames' notion would however depend on the fact that a climate is strong enough to influence peoples' goal orientations, if these can indeed be viewed as traits. The argument that a motivational climate may influence individuals' goal orientations will be discussed in the next section.

2.3 Motivational climate affecting employees' goal orientations

Van Yperen (2002 in Van Yperen and Janssen 2002) conducted a study where he concluded that even though people have individual goal orientations, this *can* be influenced by situational and contextual factors. Thus, the implication for organizations should be "that employees' perceptions of, and adaptive responses to, achievement situations can be influenced constructively by creating a psychological environment that encourages an adaptive response patterns among employees" (Van Yperen and Janssen 2002, 1169). It has generally been suggested that mastery climates are associated with adaptive response patterns, and performance climates are associated with maladaptive response patterns (Ntoumanis and Biddle 1999 and Van Yperen and Janssen 2002). Thus, even though individuals in an organization have different goal orientations to start with, an organization may be able to encourage adaptive response patterns by fostering a mastery climate. However, recent research suggests that such a contention may be too simplistic, and that based on research evidence, one cannot say that a mastery orientation is good and performance orientation is bad (DeShon and

Gillespie 2005). DeShon and Gillepsie (2005) conclude that there should not be an overemphasis on fostering a mastery climate. Their argument rests on the fact that organizations sometimes must focus on performance due to the realities they face, and that there are currently too many ambiguities with the concept of goal orientation to make any recommendations at all.

2.4 Burnout

AGT and research on motivational climates have in large part only been applied to sport- and educational settings to date. In recent years, researchers have also tried to link this theory to burnout, but this is also done in sport and education settings (see Smith, Gustafsson and Hassmén 2010 and Retelsdorf et al. 2010). We believe that much of this theory, concerning motivational climates and goal orientations, will be interesting to study in organizational settings as well, and relate this to the prevalence of burnout. As was stated in the introduction of this report, burnout is a major threat to both organizations and individuals today, and finding possible antecedents to why it occurs should be fruitful for many stakeholders. We therefore wish to see if individuals' goal orientations, and companies' motivational climates have an effect on burnout, and in this case, what the implications are.

The concept of burnout has been given widespread attention in recent years due to its detrimental consequences for both the individual and the organization in terms of personal ill-health, absenteeism, turnover and reduced productivity (Cooper, Dewe and O'Driscoll 2001). Burnout is an "extreme state of psychological strain and depletion of energy resources arising from prolonged exposure to stressors that exceed the person's resources to cope, particularly stressors associated with human resource professions, although it may also develop in other occupational groups" (Cooper, Dewe and O'Driscoll 2001). It is a result of the dynamic interaction between the environment and the individual and is a reaction to ongoing or chronic demands on the job (Cooper, Dewe and O'Driscoll 2001). Several theories of burnout have been proposed, however the most widely accepted model of burnout is Maslach's three-component conceptualization (Cooper, Dewe and O'Driscoll 2001). Maslach is the foremost contributor of burnout research and she conceptualizes burnout as having three main components: emotional exhaustion, cynicism and reduced personal efficacy

(Maslach 1982 cited in Cooper, Dewe and O'Driscoll 2001). Emotional exhaustion is characterized as a depletion of energy and a feeling that one's emotional resources are not capable to handle a specific situation. Cynicism represents "indifference or a "distant" attitude towards work generally" (Cooper, Dewe and O'Driscoll 2001, 83). Reduced personal efficacy refers to "feelings of incompetence and a lack of achievement and productivity at work" (Maslach, Schaufeli, and Leiter 2001, 399).

Due to the cross-sectional design of most previous research done in the field of burnout it is difficult to classify variables as either causes or outcomes of burnout. However, different variables have been found to correlate with burnout (Cooper, Dewe and O'Driscoll 2001). Correlates of burnout can be grouped into three main categories: individual, job, and organizational (Cordes and Dougherty 1993 in Cooper, Dewe and O'Driscoll 2001). In relation to our thesis, the organizational aspect will be highlighted. The influence of organizational factors in relation to burnout has received substantial interest from researchers (Cooper, Dewe and O'Driscoll 2001). Research has shown that there is a clear indication that organizational variables can influence the burnout level among employees. In organizational climates where collaboration and cohesion are fostered and employees are acknowledged for their effort it is less likely that employees will experience burnout (Cooper, Dewe and O'Driscoll 2001). These aspects can be seen as possible parallels to what constitutes a mastery climate. It has also been suggested that management processes can play a role in either generating or alleviating burnout among employees (Schulz, Greenley and Brown 1995 in Cooper, Dewe and O'Driscoll 2001). Decision making is also found to have an impact on experienced burnout. When employees are involved in decision making and have the opportunity to impact work processes it may be less likely for burnout to occur (Gaines and Jermier 1983 in Cooper, Dewe and O'Driscoll 2001). Influence processes used by managers have been seen as contributing to burnout (O'Driscoll and Schubert 1988 in Cooper, Dewe and O'Driscoll 2001) and it has been observed that organizations that possess a "clan" culture which is characterized by teamwork, participation and autonomy less burnout is displayed (Schultz et al 1995 in Cooper, Dewe and O'Driscoll 2001).

Research done by Van Yperen and Janssen (2002) looked at the relationship between employees' goal orientation and the experienced feeling of fatigue when faced with high job demands. This study was not aimed at burnout explicitly, but a prolonged feeling of fatigue can lead to burnout and the findings of this study may thus still be said to be relevant. Both people with mastery or a performance-approach goal orientation are willing to exert a great deal of effort to reach their goals, however the distinction is that their interest, satisfaction and enjoyment derived from their effort is viewed differently. Mastery oriented people direct their energy on the task itself as opposed to performance-approach people who view demands as competitive and direct their behavior and energy at the outcome such as looking smart or outperforming others. However, the similarity between these two orientations is that both mastery and performance-approach individuals are highly motivated to meet their goals. The results of the study revealed that goal orientation has an effect on individuals' feeling of fatigue. Regardless of whether an individual possesses mastery or a performance-approach goal orientation, job demands are positively related to fatigue. However, the authors point to the fact that individuals with a mastery orientation focus more on the job itself than the actual outcome and perceive demands as a challenge more than a threat. Mastery oriented people also direct the behavior at making an effort and working hard and therefore persist effectively in the face of obstacles, thus mastery oriented individuals tend to deal more adaptively with high job demands (Van Yperen and Janssen 2002).

This study also highlighted that goal orientation can be influenced by situational factors. Compensation systems or leadership style can evoke a mastery or performance orientation. In organizations that used performance-based compensation systems, the employees had a higher performance goal orientation, than employees working in organizations having a job-based compensation system where the salary was fixed (Van Yperen 2002 in Van Yperen and Janssen 2002). These results imply that organizations can influence their employees' goal orientation by creating an environment that encourages employees to an adaptive response to job demands, thus a mastery climate (Van Yperen and Janssen 2002). Based on the theoretical perspective of Ames (1992) and Nicholls (1984, 1989) research within the sports psychology field has found support for the relationship between perceived peer-created motivational climate and experienced burnout.
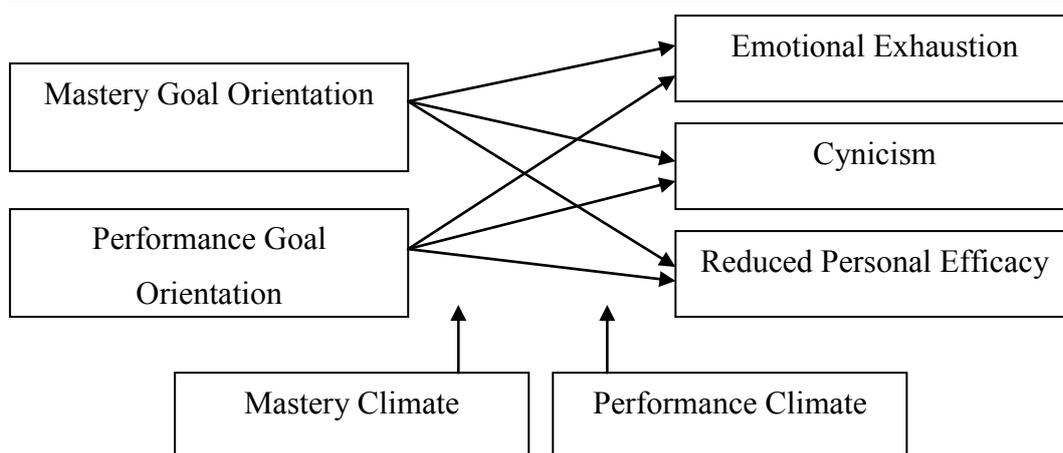
Climates that were characterized by task-involving components (mastery) were associated with lower levels of burnout whereas ego-involving components (performance) were associated with higher levels of burnout. (Smith, Gustavsson and Hassmén 2010). These results were also found in a study by Lemyre et al. 2008 (cited in Smith, Gustavsson and Hassmén 2010). Research done in educational settings has also studied the relationship between goal orientation and burnout. Retelsdorf et al. (2010) investigated the relationship between teachers' goal orientation and their level of burnout. The results revealed that teachers who had a goal orientation of mastery were associated with lower levels of burnout and a goals orientation of performance-avoidance was positively associated with burnout. It was also stated that a teacher's goal orientation had an effect on the students' goal orientation. Teachers with a mastery goal orientation was not only associated with a "good" instructional practice within the classroom but also affected how the teacher created goals for their students that supported a mastery orientation. Moreover, this study points to the aspect of contextual influence and states that both teacher and students' goal orientation are susceptible to influence from the context and encourages facilitation of a mastery goal orientation for both teachers and students.

Different interventions have been proposed to alleviate burnout among employees. It has been stated that to lessen the experience of burnout, individual coping efforts is not enough. For alleviation of burnout to be effective and long-term it might be necessary to do fundamental changes in the organization (Cooper, Dewe and O'Driscoll 2001). If we were to find through our study that motivational climate *does* have a relationship with burnout it this will be a starting point for organizations to facilitate a climate where burnout will be less likely.

3.0 The research question

Based on the reviewed theory and research, we will investigate the following research question: *Will the perceived motivational climate moderate the relationship between employees' goal orientation and burnout?*

Hypotheses will be formulated based on the model below:

4.0 Method

Based on responses to surveys, extended data analyses will be conducted. Surveys were sent to 33275 Norwegian engineers and technologists representing different occupational divisions (research and development, health, safety and the environment, information technology, consultancy, laboratory, human resource management, logistics, production, building and reconstruction, sales and marketing, service and economics). 8282 responses were received representing a response rate of approximately 25% (Nerstad 2012).

4.1 The different measures

In the following section, a brief outline on the measures used in the master thesis will be presented.

4.1.1 Motivational climate

To measure the perceived motivational climate, Motivational Climate at Work Questionnaire (MCWQ) was used. The scale had 14 items, six which measured the perception of mastery climate and eight which measured perceptions of performance climate. The scoring of the items were based on a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5) (Nerstad 2012).

4.1.2 Goal orientation

When measuring goal orientation, Dysvik and Kuvaas's (2010 cited in Nerstad 2012) Norwegian version of the work domain goal-orientation scale which is validated by Vandewalle (1997 cited in Nerstad 2012) was used. The participants answer nine items where they indicated when they perceived themselves as most successful at work. Five items measured mastery goal orientation and four

measured performance goal orientation. A 7-point Likert scale was the basis for scoring ranging from strongly disagree (1) to strongly agree (7) (Nerstad 2012).

4.1.3 Burnout

The Norwegian version (Richardsen and Martinussen 2004 cited in Nerstad 2012) of the Maslach Burnout Inventory – General Survey (MBI-GS) (Maslach, Jackson and Leiter 1996 cited in Nerstad 2012) was used to assess burnout. www.mindgarden.com provided the permission to apply this scale. All three sub-dimensions of burnout (emotional exhaustion, cynicism and reduced personal accomplishment) were measured by using a Likert-type scale ranging from newer in the past year (0) to every day (6) (Nerstad 2012).

5. Thesis progression

The next step will be to become more theoretically advanced on the subject matters presented in this report, as well as figuring out which methods and statistical tools that are most appropriate for data analysis.

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