Challenge at work: a matter of give and take
Preenen, P.T.Y.

Citation for published version (APA):

General rights
It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations
If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: http://uba.uva.nl/en/contact, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

UvA-DARE is a service provided by the library of the University of Amsterdam (http://dare.uva.nl)
CHAPTER THREE
TO SHRIVEL OR TO THRIVE ON LOW OR HIGH
CHALLENGING TASKS: THE INFLUENCE OF GOAL
ORIENTATION

Various theories and studies in the field of organizational psychology have emphasized the beneficial effects of job challenge. The literature on career success, for example, considers the performance of challenging assignments early in the career to be an important determinant of performance later in the career (e.g., Berlew & Hall, 1966; Bray, Campbell, & Grant, 1974; Campbell & Ilgen, 1976; Kaufman, 1974). Furthermore, the management development literature proposes that challenging assignments stimulate managerial development (e.g., DeReu & Wellman, 2009; Dragoni, Tesluk, Russell, & Oh, 2009; Lyness & Thompson, 1997, 2000; McCauley, Ruderman, Ohlott & Morrow, 1994). Other research suggests that job challenge is positively related to positive job attitudes (e.g., Buchanan, 1974; Dixon, Cunningham, Wallace, Turner, & Kent, 2005; James & Jones, 1980; Kirk-Brown & Wallace, 2004), and positive motivational states (e.g., Csikszentmihalyi, 1990; Massimini & Carli, 1988).

Despite these positive outcomes, it has also been noted that challenging assignments increase the risk of job failure, which could have a negative psychological effect on employees, such as fear of failure, stress, and lower motivation (e.g., Taylor, 1981). Indeed, some employees react negatively to job challenge (Katz, 1978) or prefer low challenging rather than high challenging assignments (De Pater, Van Vianen, Fischer, & Van Ginkel, 2009). Actually, both high and low challenging assignments could have their pros and cons: high challenging tasks offer opportunities for learning but may be stressful; low challenging tasks are comfortable (as long as job demands are not too low) but may lead to deactivation and lower effort. Given that organizations provide their employees with low and high challenging assignments, it is important to examine factors that influence the psychological outcomes of these assignments.

We propose that people’s responses to high and low challenging assignments are affected by the type of goals that people adopt and pursue in achievement situations, namely individuals’ goal orientations (Dweck, 1986; Dweck & Leggett, 1988). Goal orientations create different perceptual-cognitive frameworks for how to approach, interpret, and respond to achievement situations (e.g., Barron & Harackiewicz, 2000; Duda, 2001; Dweck, 1999; Pintrich, 2000; Van Yperen, 2003a). Goal orientation theory argues that people pursue different types of goals and traditionally distinguishes between two types of goal orientations: a mastery or learning orientation and a performance orientation (e.g., Dweck, 1986; Dweck & Leggett, 1988). Mastery oriented people aim to develop competence by acquiring new skills.
and mastering new situations, whereas performance oriented people aim to demonstrate and validate their competence by seeking favorable judgments and avoiding negative judgments.

A mastery orientation seems to fit high challenging assignments, because these assignments involve new situations and the development of new skills. A performance orientation seems to fit low challenging assignments, because these assignments secure competence validation.

In this study, we examine whether and how individuals’ goal orientation while performing an assigned high or low challenging task influences their affective responses and task motivation. Regarding one’s affective responses, we distinguish between positive and negative activating mood states, because challenge is associated with positive moods such as being active and alert (e.g., Lazarus & Folkman, 1984; Meyer and Allen, 1988) as well as with negative moods such as feeling nervous, tensed, and stressed (Boswell, Olson-Buchanan, & Le Pine, 2004; McCauley et al., 1994).

To date, research on factors that influence people’s affective and motivational reactions to high and low challenging work assignments is scarce. With this study, we aim to fill this void in the job challenge literature. Extant job challenge research has mainly focused on the mere consequences of job challenge for individual outcomes. Furthermore, extant studies were predominantly conducted in a field-setting (e.g., Campbell & Ilgen, 2000; De Pater, Van Vianen, Bechtoldt et al., 2009; McCauley et al., 1994), which limits the possibility of investigating directions of causality. We, therefore, employed an experimental setting to test our propositions. At the same time, we took care to use realistic assignments in order to improve the ecological validity of our findings.

Theory and Hypotheses

Job Challenge

Job challenge has been conceptualized as “having to meet performance expectations that are reasonably high” (Berlew & Hall, 1966, p. 209), as “level of difficulty and stimulation” (Taylor, 1981, p. 255), as “the extent to which a job gives the individual a chance to use his skills or abilities” (Walsh, Taber, & Beehr, 1980, p. 255), and as “being in dynamic settings with problems to solve and choices to make under conditions of risk and uncertainty” (McCauley et al., p. 4). Moreover, people are challenged if they are faced with an activity that is demanding, stimulating, new, and calls on their ability and determination (De Pater, Van Vianen, Humphrey et al., 2009, p. 565). More concrete, challenging activities: (a) are new and ask for non-routine skills and behaviors, (b) test one’s abilities or resources, (c) give an individual the freedom to determine how to accomplish the task, and (d) involve a higher level of responsibility and visibility (Van Vianen, De Pater, & Preenen, 2008).

Job challenge has been associated with several positive outcomes such as learning and development (Dragoni, Tesluk, Russell, & Oh, 2009; Lyness & Thompson, 1997, 2000; McCauley et al., 1994), career opportunities (e.g., De Pater, Van Vianen, Bechtoldt et al., 2009), future performance (e.g., Berlew & Hall, 1966; Bray et al., 1974; Campbell & Ilgen,
1976; Kaufman, 1974), and has been found to be related to job satisfaction (e.g., Judge, Bono, & Locke, 2000, Kirk-Brown & Wallace, 2004), organizational commitment (e.g., Buchanan, 1974; Dixon, et al., 2005), and higher intrinsic work motivation (e.g., Csikszentmihalyi, 1990). Together, these findings suggest that organizations should provide their employees with challenging assignments and avoid providing them with non-challenging assignments. Although this conclusion seems plausible, we believe that further investigation on the effects of task assignments is needed.

Some researchers have noted that challenging assignments may also have negative consequences, as they are likely to increase the incidences of job failure, which may produce feelings of fear and stress and lower work effort (e.g., Taylor, 1981; Van Vianen et al., 2008). Katz (1978), for example, has shown that new job entrants were insensitive or reacted negatively and less positive to challenging job characteristics. In the first evaluative stage of a job, employees want to perform well, are concerned about how they are evaluated, and how well they do as compared to their (more experienced) coworkers. This notion suggests that particularly employees who strongly adhere to proving their competencies toward others may react positively toward low challenging assignments and negatively toward high challenging assignments.

**Goal Orientation**

We propose that people’s goal orientation influences their affective and motivational reactions toward high and low challenging assignments. The goal orientation construct originates from goal orientation theory (Dweck, 1986; Elliott & Dweck, 1988) and refers to the underlying goals that people adopt and pursue in achievement situations (Dweck, 1986; Dweck & Leggett, 1988). Goal orientation has been used to predict a wide variety of outcomes, such as learning, anxiety, goal-setting, and performance behaviors (for an overview, see Elliot, 2005; Payne, Youngcourt, & Beaubien, 2007). People with a mastery goal orientation want to develop competence whereas people with a performance goal orientation want to demonstrate and validate their competence. Mastery oriented individuals are focused on development; they are eager to learn, to acquire new skills, to master new situations, and to improve themselves. People with a performance orientation are ability focused; they want to demonstrate their superior competence in relation to others (Dweck, 1999; Nicholls 1984) and they are motivated either to outperform others or to avoid looking incompetent (e.g., Elliot, 1999; Elliot & Covington, 2001).

Researchers have combined theories on achievement motives and goal orientation by distinguishing mastery and performance goal orientations into approach and avoidance versions (e.g., Elliot & McGregor, 2001). Individuals with mastery-approach goal orientations focus on the development of competence through task mastery and gaining new skills, which is largely in line with the conceptualization of the traditional mastery orientation. Individuals with mastery-avoidance goal orientations strive to avoid deterioration, losing their skill, or
leaving the task incomplete or unmastered. Likewise, performance-oriented individuals can be motivated either to demonstrate superior competence relative to others and obtain favorable judgments about their achievements (performance-approach goal orientation), or to avoid demonstrating inferior competence relative to others and receiving negative judgments about their achievements (performance-avoidance goal orientation) (e.g., Elliot, 1999; Elliot & Church, 1997; VandeWalle, 1997). In the present study, we will exclusively focus on the approach goal orientations, thus, mastery-approach and performance-approach orientations.

Extant research on goal orientation has treated goal orientations as a somewhat stable individual difference variable (quasi-trait) that may be influenced by situational characteristics (e.g., Button, Mathieu, Zajac, 1996; Dweck, 1989; Farr, Hoffmann, & Ringenbach, 1993), and as a state that can be influenced by situational characteristics (e.g., Barron, & Harackiewicz, 2001; Harackiewicz, Barron, Carter, Leto, & Elliot, 1997; Jagacinsky & Nicholls, 1984). The latter types of studies suggest that goal orientations can be instructed when assigning tasks to employees.

Research has shown that goal orientation predicts how people react to achievement situations (Dweck, 1986; Nichols, 1984; Poortvliet; Janssen, Van Yperen, & Van de Vliert, 2009). Van Yperen and Janssen (2002) found that employees’ perceptions of high job demands were negatively related to job satisfaction if they had a relatively strong performance orientation and a relatively weak mastery (-approach) orientation. Although high demanding jobs should not be equated with high challenging jobs (some demanding jobs are not challenging), similar effects may apply to employees who have to perform challenging tasks. Challenging jobs are particularly associated with positive feelings of activation, determination, and perceptions of learning (e.g., Lyness & Thompson, 2000). Yet, at the same time, they may involve feelings of fear of failure and nervousness.

In order to get a better insight into the overall consequences of high and low challenging assignments for individuals and organizations it is important to scrutinize the direct effects of these assignments together with people’s goal orientations.

**Mood**

The types of tasks people perform affect their mood (e.g., Fisher, 2002; Saavedra & Kwun, 2000). The mood literature recognizes two underlying dimensions of mood - hedonic tone (positive vs. negative) and activation (activating vs. deactivating) (e.g., Baas, De Dreu, Nijstad, 2008; De Dreu, Baas, & Nijstad, 2008). Mood states that are high in activation and positive in hedonic tone concern mood states such as happy, active, and alert. Activating mood states with a negative tone concern states such as nervous, irritated, and tensed. Deactivating mood states include mood states such as calm and relaxed (positive) or sad and depressed (negative).

Challenging assignments are conceptualized as being stimulating (Taylor, 1981), and can thus be expected to trigger positive activating moods. Positive activating mood states are
beneficial for task performance and individual outcomes. For instance, De Dreu and colleagues (2008) have recently shown that cognitive flexibility was enhanced when individuals were in a positive activating mood. This warrants the investigation of task factors that may stimulate or impair positive activating mood.

However, because challenging assignments involve new activities and conditions of risk and uncertainty (McCauley et al., 1994), these assignments are also likely to trigger negative activating moods, such as nervousness and tension. De Dreu and colleagues (2008) have shown that a certain amount of negative activating mood state leads to more persistence on a task. There is, however, abundant research that has shown that the tension levels in people’s jobs should not be too high, because this may lead to stress and burnout (Zellars, Hochwarter, Perrewé, Hoffman, & Ford, 2004). Moreover, high levels of negative arousal impair the processing and evaluation of information (e.g., Shapiro, MacInnis, & Park, 2002). Taken together, a certain level of negative activating mood will be beneficial for task performance (Baddeley, 1972; Cohen, 1980; Scott, 1966), but negative activating moods should not be that high that they exceed the positive ones. Given that low challenging assignments induce little negative activating mood and that high challenging assignments sometimes enhance too much negative activating mood, it is important to investigate what factors may influence the negative activating mood states when performing high and low challenging assignments.

We argue that people’s mood reactions depend on the types of goals they pursue during such assignments, as having a mastery-approach or performance-approach goal. Low challenging assignments are unlikely to fit a mastery-approach orientation because they are routine, and there is relatively little to learn during task performance. Inducing a mastery-approach orientation when assigning a low challenging task will, therefore, be of little value for people’s activating moods. Rather, people’s activating moods will be enhanced when low challenging tasks are assigned with a performance-approach orientation. A performance-approach orientation cues individuals to focus on their superior competence relative to others and obtain favorable judgments about their achievements (Elliot & McGregor, 2001). People are sensitive to the evaluation of others and want to preserve their self-image in comparison to others (e.g., Bond, 1982; Covington, 1992). The wish to impress and outperform others will cause higher levels of positive arousal, such as attention and determination. In addition, although individuals master a low challenging task, they yet run the risk to fail as compared to others. Hence, a performance-approach orientation may lead to higher levels of negative arousal as well. We propose the following hypothesis regarding the mood effects of performing a low challenging assignment as being dependent on people’s goal orientation:

*Hypothesis 1.* Performing a low challenging assignment with a performance-approach orientation will lead to higher positive activating mood (*Hypothesis 1a*) and higher
negative activating mood (Hypothesis 1b) than performing this assignment with a mastery-approach orientation.

Challenging assignments seem logically fit to a mastery-approach orientation because individuals are confronted with activities from which they can learn. Individuals with a mastery-approach orientation seek opportunities to learn and to improve themselves (Elliot & McGregor, 2001). Challenging assignments provide them with these opportunities. However, challenging assignments may also trigger a performance-approach orientation because people may feel that their performance on these types of assignments is often highly visible and compared to others (De Pater, Van Vianen, Bechtoldt et al., 2009; McCauley et al., 1999), which means greater vulnerability to the evaluations of others and a feeling that they have to show their best to others. In accordance with research that evidenced the general beneficial effects of a mastery goal orientation for job satisfaction (e.g., Elliot, 1999; Janssen & Van Yperen, 2004; Van Yperen & Janssen, 2002), we expect that performing a challenging assignment with a mastery-approach orientation will positively activate people while not causing high negative affect. A performance-approach orientation while performing a challenging assignment, however, will be less beneficial for people’s mood states. Individuals who are compared to others and have to perform better than others on a task that they have not fully mastered yet are likely to experience higher levels of tension and lower levels of positive activation due to the greater risk of failure in the eyes of others. We propose the following hypothesis:

Hypothesis 2. Performing a high challenging assignment with a mastery-approach orientation will lead to higher positive activating mood (Hypothesis 2a) and lower negative activating mood (Hypothesis 2b) than performing this assignment with a performance-approach orientation.

Motivation

Task motivation in this study is referred to as the amount of effort expended in work-related tasks (Campbell and Pritchard, 1976). Challenging assignments not only call on people’s ability, they also require much effort (Berlew & Hall, 1966). Generally, people put effort in a task if they perceive the task as valuable (Eccles, 2005). Subjective task value is high if engaging in the task activity provides enjoyment, immediate or long-term rewards, and is not costly. Challenging assignments generally are perceived of as attractive and enjoyable (Csikszentmihalyi, 1990) as they can be expected to lead to positive rewards, such as a higher self efficacy (Bandura, 1986), learning of new skills (McCauley et al., 1994) and positive promotability evaluations (De Pater, Van Vianen, Bechtoldt et al., 2009), but they can also be conceived of as risky and costly (Taylor, 1981; Van Vianen et al., 2008). Task engagement is risky and costly to the extent that one experiences fear of failure and loss of one’s positive
self-image. If engagement in a challenging assignment is perceived as costly, people will tend to avoid performing this task (Covington & Omelich, 1979). If avoidance is no option because the task is assigned to them, they may respond in two different ways. They can put more effort in the task in order to decrease the possibility of actual failure, or they can put less effort in the task so that task failure cannot be attributed to one’s lack of abilities but to suboptimal effort (Covington, 1992; Pyszczynski & Greenberg, 1983; Rhodewalt, 1994).

The amount of effort individuals put into an activity will be influenced by their goal orientation. A performance (-approach) orientation focuses people on the possible revelation of their inadequate abilities on tasks they have not fully mastered yet (VandeWalle, Brown, Cron, & Slocum, 1999). For this reason, they may report decreased interest in a challenging task and reduce their effort (VandeWalle et al., 1999). A mastery-approach orientation, on the other hand, focuses people on learning rather than success or failure. A challenging task is then viewed as an ideal opportunity to learn and develop new skills. People will, therefore, invest as much as they can in order to develop their knowledge, skills, and abilities. Hence, we propose that a mastery-approach orientation, as compared to a performance-approach orientation, will lead to higher motivation while performing a high challenging assignment.

With regard to the performance of low challenging assignments, we expect opposite motivational effects. Because low challenging assignments hardly provide employees with opportunities for learning, their mastery needs will remain unfulfilled. Moreover, low challenging assignments require relatively little effort for reaching a sufficient performance level. Hence, mastery-approach oriented individuals will be less motivated to execute this type of assignments. The same could be true for people with a performance-approach orientation. However, these individuals use other people instead of themselves as a reference of comparison. Thus, although the assignment does not challenge one’s abilities and requires only little effort, individuals may want to show their best performance on the task in order to outperform others. The only option then is to invest more effort in the task in order to improve the quality and/or quantity of their achievement. Consequently, a performance-approach orientation while performing a low challenging task will lead to higher motivation. This proposition resonates well with goal-setting theory and research that was most successfully tested with people who used high standards of performance for their routine tasks (e.g., Locke & Latham, 1990).

The reasoning as presented above reflects a cognitive approach toward the working of people’s goal orientations, that is, it assumes that people intentionally respond to their assignments. People may, however, also react in a more unconscious and less rational way. Steele-Johnson and colleagues (2000) argued that a performance orientation might interfere with the attentional resources that are needed for task performance. Challenging assignments require a lot of attentional resources in order to be performed well (Kanfer & Ackerman, 1989). People with a performance orientation may lose attentional resources as caused by their focus on external cues (Kanfer & Ackerman, 1989). This, in turn, may mentally block
them to put effort in the challenging assignment. In contrast, mastery-approach oriented people are less distracted by external cues. They are, thus, able to focus all the attentional resources to mastering the challenging assignment.

Low challenging assignments, on the other hand, do not require much attention and, therefore, people may experience little stimulation from these types of assignments. By focusing on the evaluation of and comparison with others, available resources will be activated and effort will increase. Altogether, we propose the following hypotheses:

**Hypothesis 3.** Performing a low challenging assignment with a performance-approach orientation will lead to higher task motivation than performing this assignment with a mastery-approach orientation.

**Hypothesis 4.** Performing a high challenging assignment with a mastery-approach orientation will lead to higher task motivation than performing this assignment with a performance-approach orientation.

**Method**

**Participants and Design**

One hundred seventy-nine students (119 females, 60 males) of the University of Amsterdam participated in this study. Mean age was 21.20 years ($SD = 3.97$) and they were on average in the second year of their studies ($SD = 1.45$). Participants received either a monetary reward (7 Euros) or partial credit for fulfillment of a course requirement. A 2 (task challenge: low vs. high) x 3 (goal orientation: mastery-approach vs. performance-approach vs. no orientation) between subjects design was used. The no orientation (control) condition was included as the baseline against which the two experimental conditions can be judged. This offers the possibility to test the precise effects of the goal orientation manipulations. Subjects were randomly assigned to one of the six conditions.

**Procedure**

Upon arrival at the laboratory, participants were seated in a room where they received general information about the study and signed an informed consent form. Participants were then provided with either a low challenging or high challenging assignment in which they either received a mastery-approach orientation, performance-approach orientation, or no orientation instruction. After completion of the task, participants received a questionnaire in which they reported their perception of task challenge, the extent to which they were mastery-approach and performance-approach oriented during the task (manipulation checks), motivation during the task, current positive and negative activating mood, sex, age, and study year. They were then given their reward. The study lasted around 60 minutes.
Tasks

For our study, we developed a high challenging assignment and a low challenging assignment based on the types of assignments students are confronted with in their studies. Similar assignments were used in studies of De Pater, Van Vianen, Fisher et al. (2009). We designed the tasks to take 30 minutes, and to differ on multiple challenging aspects such as (1) being demanding and stimulating (2) being a test of one’s abilities, and (3) being new and ambiguous (McCauley et al., 1999).

The high challenging assignment consisted of an evaluative speaking task (Saab, Matthews, Stoney, & McDonald, 1989) in which participants prepared and gave a presentation in front of a video camera. Such a task can be expected to be highly challenging and demanding (Al’ Absi, Bongard, Buchanan, Pincomb, Licinio, & Lovallo, 1997; Egloff, Schmukle, Burns, & Schwerdtfeger, 2006). Participants were instructed to prepare a presentation about their opinion on the illegal downloading of music and on suggestions about how to deal with the illegal downloading of music. Participants were told that the experiment was part of an existing joint project of a record company, a government institute, and the University of Amsterdam. Their ideas could be viewed by the record company and government institute, and certain ideas would be used for future campaigns focused on the reduction of the illegal downloading of music. Furthermore, participants were informed that (a) they had about 30 minutes for completing the entire task, (b) the total length of the presentation should take no longer than 3 minutes, (c) they had to keep an eye on the time themselves, and (d) they had to indicate when they were ready to present. In preparation of the presentation, participants were asked to reflect on the illegal downloading of music by thinking of (a) reasons why people illegally download music, (b) positive and negative consequences of illegal downloading, and (c) suggestions for how to deal with illegal downloading. Papers and pencils were available. If the participant had not presented his or her ideas after 25 minutes, the experimenter would notify the participant to wrap things up. When the presentation was finished the experimenter thanked and debriefed the participant.

The low challenging assignment consisted of the alphabetically ordering of a long scientific reference list and checking the list for errors according to APA (American Psychological Association) –guidelines in a Word document. The list was not in alphabetical order and contained errors. Participants were told that they had 30 minutes for task completion. Participants were instructed to first read APA-guidelines regarding alphabetically ordering and displaying references. Thereafter, they could start with the alphabetically ordering of the list. If they finished this, they were asked to use the rest of the time to highlight errors in the list. Finally, the experimenter thanked and debriefed the participant.

All participants were told that those who had performed the task would participate in a lottery with three prices of 25 Euros to win.
Pretest: Scenario Study

To test whether our assignments could indeed be perceived as a low and high challenging assignment, we conducted a scenario study. Twenty-nine students (17 females, 12 males) with an average age of 24.20 \( (SD = 5.14) \) who were in their third study year \( (SD = 1.22) \), were randomly provided with a written description of the high challenging \( (N = 14) \) or low challenging \( (N = 15) \) assignment. Participants were asked to imagine that they performed the assignment. They then answered 10 items that assessed participants’ perception of task challenge (See Appendix B). Items were based on aspects of task challenge aspects that are distinguished in the literature (e.g., Preenen, De Pater, Van Vianen, 2008; Van Vianen et al., 2008). Participants answered on a 7-point scale varying from 1 \( (totally disagree) \) to 7 \( (totally agree) \). Cronbach’s alpha was .95. Perceived task challenge was low for the low challenging assignment \( (M = 2.05, SD = .81) \) and high for the high challenging assignment \( (M = 5.06, SD = .75) \). An independent sample \( t \)-test revealed that the difference between the means was significant, \( t(27) = 10.37, p < .001 \). Based on the absolute scores and the highly significant difference, we concluded that our assignments indeed can be perceived of as high and low challenging assignments.

Goal Orientation Manipulation

We manipulated participants’ goal orientation using first verbal, and then written task instructions that were both the same. Similar goal orientation manipulations have been used in earlier research (e.g., Barron & Harackiewicz, 2001; DeShon & Gillespie, 2005; Gist & Stevens, 1998). No specific goal orientation instruction was provided in the control condition.

Mastery-approach goal orientation. In the mastery-approach goal orientation condition, participants were instructed that they should focus on learning the task and developing their skills and abilities. Furthermore, they were told that they should focus on their own task performance.

Performance-approach goal orientation. In the performance-approach goal orientation condition participants were instructed to focus on showing their superior competence and skill to others, and to demonstrate what they were worth to others. Furthermore, they were instructed to perform better than others on the assignment.

Measures

Task challenge. For the manipulation check of task challenge, we used the same 10 perceived task challenge items (See Appendix B) as in our scenario study for our manipulation check of task challenge. Subjects answered on a 7-point scale varying from 1 \( (totally disagree) \) to 7 \( (totally agree) \). Cronbach’s alpha was .91.

Mastery-approach goal orientation. For the manipulation check of mastery-approach orientation, we used the following items: (1) “When performing the assignment, I
was focused on learning the task.”, and (2): “When performing the assignment, I was focused on my personal development on the task”. Cronbach’s alpha was .85.

**Performance-approach goal orientation.** For the manipulation check of performance-approach orientation, we used the following items: (1) “When performing the assignment, I was focused on showing my superior competence to others.”, and (2): “When performing the assignment, I was focused on performing better than others.”. Cronbach’s alpha was .52.

**Positive activating mood** was measured with the following discrete mood states: (1) interested, (2) determined, (3) attentive, (4) happy, and (5) active. Items were derived from the Positive Affect Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) and have been used in earlier studies to assess positive activating mood states (e.g., De Dreu, et al., 2008). Subjects were asked to rate the extent to which they were experiencing each mood state on a 5-point scale, varying from 1 (very slightly/ not at all) to 5 (extremely). Cronbach’s alpha of the scale was .85.

**Negative activating mood** was measured with the following 5 items: (1) nervous, (2), afraid, (3), scared, (4), jittery (5) stressed. Similar items have been used before to assess negative activating mood states (e.g., De Dreu et al., 2008). Subjects were asked to rate the extent to which they were experiencing each mood state on a 5-point scale, varying from 1 (very slightly/ not at all) to 5 (extremely). Cronbach’s alpha of the scale was .77.

**Task motivation** was assessed with three items: (1) I was motivated during the task, (2) I tried my best on the task, and (3) I put effort in the task (De Pater, Van Vianen, & Humphrey et al., 2009). Items were measured on a 7-point scale varying from 1 (totally disagree) to 7 (totally agree). Cronbach’s alpha was .81.

### Results

**Manipulation Checks**

**Task challenge.** A 2 (task challenge: low vs. high) x 3 (goal orientation: mastery-approach vs. performance-approach vs. no orientation) univariate analysis of variance on perceived task challenge showed that participants perceived the high challenging assignment ($M = 4.39, SD = .92$) as more challenging than the low challenging assignment ($M = 2.65, SD = .87$), $F(1, 173) = 172.01, p < .001, \eta^2_p = .50$. There was no significant effect of goal orientation, $F < 1$. However, the interaction effect of task challenge and goal orientation on perceived task challenge was significant, $F(2, 173) = 4.34, p = .014, \eta^2_p = .05$. Simple effect contrast analyses showed that in the low challenge condition task challenge was higher for the performance-approach orientation condition ($M = 2.90, SD = .81$), than for the no orientation condition ($M = 2.38, SD = .74$), $t(173) = 2.31, p < .022, r = .17$. No other contrasts were significant (all $t’s < 1.8, \text{n.s.}$). Altogether, we concluded that our manipulation of task challenge was successful.
**Mastery-approach goal orientation.** A 2 (task challenge: low vs. high) x 3 (goal orientation: mastery-approach vs. performance-approach vs. no orientation) univariate analysis of variance on the manipulation check of mastery-approach orientation revealed significant main effects for goal orientation, $F(2, 173) = 22.27, p < .001$, $\eta^2_p = .21$, and for task challenge, $F(1, 173) = 16.18, p < .001$, $\eta^2_p = .09$. The interaction effect was not significant, $F < 1.03$, n.s. Contrast analyses between the goal orientation conditions showed that participants in the mastery-approach condition ($M = 4.43, SD = 1.37$) were higher mastery-approach oriented than in the performance-approach condition ($M = 2.74, SD = 1.44$), $t(173) = 6.50, p < .001, r = .42$, and no orientation condition, ($M = 3.38, SD = 1.57$), $t(173) = 4.05, p < .001, r = .25$. In the performance-approach condition participants were significantly less mastery-approach oriented than in the no orientation condition, $t(173) = -2.50, p = .013, r = .20$. Task challenge induced a mastery-approach orientation, because participants in the high challenge condition were more mastery-approach oriented ($M = 3.93, SD = 1.38$) than those in the low challenge condition ($M = 3.06, SD = 1.62$).

**Performance-approach goal orientation.** A 2 (task challenge: low vs. high) x 3 (goal orientation: mastery-approach vs. performance-approach vs. no orientation) univariate analysis of the manipulation check of performance-approach orientation showed significant main effects for goal orientation, $F(2, 173) = 5.72, p = .004, \eta^2_p = .06$, and task challenge, $F(1, 173) = 20.80, p < .001, \eta^2_p = .11$. The interaction effect was not significant, $F < 1$, n.s. Contrast analyses between the goal orientation conditions showed that in the performance-approach condition ($M = 4.05, SD = 1.34$) participants were higher performance-approach oriented than in the mastery-approach condition ($M = 3.36, SD = 1.52$), $t(176) = -2.72, p = .007, r = .20$, and no orientation condition, ($M = 3.41, SD = 1.26$), $t(176) = 5.57, p = .011, r = .39$. No difference was found between the mastery-approach condition and the no orientation condition ($t < 1$, n.s.). Task challenge also induced a performance-approach orientation because participants in the high challenge condition were more performance-approach oriented ($M = 4.04, SD = 1.31$) than those in the low challenge condition ($M = 3.18, SD = 1.37$). All in all, we concluded that our manipulations of goal orientation were successful.

**Primary Analyses**

The means and standard deviations of the dependent variables as a function of task challenge and goal orientation are summarized in Table 3.1.
Table 3.1  
*Means and Standard Deviations of Task Challenge as a Function of Goal Orientation*

<table>
<thead>
<tr>
<th>Task challenge</th>
<th>Dependent variable</th>
<th>Mastery-approach orientation</th>
<th>Performance-approach orientation</th>
<th>No orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>( \bar{M} )</td>
<td>SD</td>
<td>( \bar{M} )</td>
</tr>
<tr>
<td>Low</td>
<td>Positive activating mood</td>
<td>2.89&lt;sub&gt;a&lt;/sub&gt;</td>
<td>.82</td>
<td>3.42&lt;sub&gt;b&lt;/sub&gt;</td>
</tr>
<tr>
<td></td>
<td>Negative activating mood</td>
<td>1.21&lt;sub&gt;a&lt;/sub&gt;</td>
<td>.27</td>
<td>1.46&lt;sub&gt;b&lt;/sub&gt;</td>
</tr>
<tr>
<td></td>
<td>Task motivation</td>
<td>4.73&lt;sub&gt;a&lt;/sub&gt;</td>
<td>.89</td>
<td>5.32&lt;sub&gt;b&lt;/sub&gt;</td>
</tr>
<tr>
<td></td>
<td>( N )</td>
<td>27</td>
<td>32</td>
<td>31</td>
</tr>
<tr>
<td>High</td>
<td>Positive activating mood</td>
<td>3.58&lt;sub&gt;a&lt;/sub&gt;</td>
<td>.83</td>
<td>3.17&lt;sub&gt;b&lt;/sub&gt;</td>
</tr>
<tr>
<td></td>
<td>Negative activating mood</td>
<td>1.56&lt;sub&gt;a&lt;/sub&gt;</td>
<td>.68</td>
<td>1.36&lt;sub&gt;a&lt;/sub&gt;</td>
</tr>
<tr>
<td></td>
<td>Task motivation</td>
<td>5.28&lt;sub&gt;a&lt;/sub&gt;</td>
<td>1.02</td>
<td>4.51&lt;sub&gt;b&lt;/sub&gt;</td>
</tr>
<tr>
<td></td>
<td>( N )</td>
<td>30</td>
<td>29</td>
<td>30</td>
</tr>
</tbody>
</table>

*Note.* <sup>1</sup> Means within a row not sharing the same subscript differ significantly at \( p < .05 \). or if indicated with \( + \) at \( p < .10 \).

**Positive activating mood.** In the low challenging task condition, we expected that participants with a performance-approach orientation would show higher positive mood than those with a mastery-approach orientation (Hypothesis 1a). In the high challenging task condition, we expected that participants with a mastery-approach orientation would show higher positive mood than those with a performance-approach orientation (Hypothesis 2a). A 2 (task challenge: high vs. low) x 3 (goal orientation: mastery-approach vs. performance-approach vs. no orientation) univariate analysis of variance showed main effects for task challenge, \( F(1, 173) = 5.49, p = .020, \eta_p^2 = .03 \), and goal orientation, \( F(2, 173) = 7.62, p = .001, \eta_p^2 = .08 \). Participants’ positive mood was significantly higher in the high challenge condition (\( \bar{M} = 3.25, SD = .77 \)) than in the low challenge condition (\( \bar{M} = 2.99, SD = .81 \)). Furthermore, contrast analyses showed that participants in the no orientation condition reported lower positive mood (\( \bar{M} = 2.81, SD = .76 \)) than participants in the mastery-approach condition (\( \bar{M} = 3.25, SD = .89 \)), \( t(176) = 3.12, p = .002, r = .23 \), and performance-approach condition, (\( \bar{M} = 3.30, SD = .65 \)), \( t(176) = 3.53, p = .001, r = .26 \).
No main effect was found for goal orientation \((t < 1, \text{n.s.})\), but the interaction effect of task challenge and goal orientation on positive mood was significant, \(F(2, 173) = 6.028, p = .003, \eta^2_p = .07\). Contrast analyses were conducted to test Hypotheses 1a and 2a. In the low challenge condition, it was found that performance-approach oriented participants \((M = 3.42, SD = .63)\) reported higher positive mood than mastery-approach oriented participants \((M = 2.89, SD = .82)\), \(t(173) = -2.74, p = .007, r = .20\). This result confirms Hypothesis 1a. In addition, positive mood was higher in the performance-approach condition than in the no orientation condition \((M = 2.65, SD = .79)\), \(t(173) = 4.14, p < .001, r = .30\), whereas no difference between the mastery-approach and no orientation condition was found \((t < 1.3, \text{n.s.})\).

In the high challenge condition, mastery-approach oriented participants \((M = 3.58, SD = .83)\) reported higher positive mood than performance-approach oriented participants \((M = 3.17, SD = .67)\), \(t(173) = 2.11, p = .036, \eta^2_p = .16\). This result supports Hypothesis 2a. In addition, participants in the mastery-approach condition reported higher positive mood than those in the no orientation condition \((M = 2.98, SD = .70)\), \(t(173) = 3.14, p = .002, r = .23\), whereas no difference was found between the performance-approach and no orientation condition. The results regarding positive activating mood are graphically displayed in Figure 3.1.

*Figure 3.1. Effects of task challenge and goal orientation on positive activating mood*
**Negative activating mood.** In the low challenging task condition, we expected that participants with a performance-approach orientation would report higher negative mood than those with a mastery-approach orientation (Hypothesis 1b). In the high challenging task condition, we expected that participants with a mastery-approach orientation would report lower negative mood than those with a performance-approach orientation (Hypothesis 2a). A 2 (task challenge: high vs. low) x 3 (goal orientation: mastery-approach vs. performance-approach vs. no orientation) univariate analysis of variance showed a main effect for task challenge, $F(1, 173) = 5.38, p = .021, \eta_p^2 = .03$. Participants in the high challenge condition reported higher negative mood ($M = 1.48, SD = .60$) than those in the low challenge condition ($M = 1.31, SD = .43$). There was no main effect of goal orientation ($F < 1$, n.s.). However, the interaction of task challenge and goal orientation was significant, $F(2, 173) = 3.28, p = .040, \eta_p^2 = .04$.

Contrast analyses were conducted to test hypotheses 1b and 2b. In the low challenge condition, the negative mood of performance-approach oriented participants ($M = 1.46, SD = .55$) and mastery-approach oriented participants ($M = 1.21, SD = .27$) was not significantly different, $t(173) = -1.85, p = .067, r = .14$. Also no significant difference was found between performance-approach oriented participants and no orientation participants ($M = 1.24, SD = .37$), $t(173) = 1.67, p = .096, r = .13$, and between mastery-approach and no orientation participants ($t < 1$, n.s.). Although our results pointed in the proposed direction, Hypothesis 1b was rejected.

In the high challenge condition, the negative mood of mastery-approach oriented participants ($M = 1.56, SD = .68$) and performance-approach oriented participants ($M = 1.53, SD = .54$) was not significantly different, $t(173) = 1.46, p = .146, r = .11$. Also no differences were found between the other goal orientation conditions ($t's < 1.5$, n.s.). Therefore, Hypothesis 2b was rejected.

**Task motivation.** In the low challenging task condition, we hypothesized that participants with a performance-approach orientation would report higher task motivation than those with a mastery-approach orientation (Hypothesis 3). In the high challenging task condition, we hypothesized that participants with a mastery-approach orientation would report higher task motivation than those with a performance-approach orientation (Hypothesis 4). A 2 (task challenge: high vs. low) x 3 (goal orientation: mastery-approach vs. performance-approach vs. no orientation) univariate analysis of variance showed a significant main effect of goal orientation, $F(2, 173) = 8.81, p < .001, \eta_p^2 = .09$, but no main effect of task challenge ($F < 1$, n.s.). Participants in the no orientation condition were less motivated ($M = 4.31, SD = .94$) than participants in the mastery-approach condition ($M = 5.02, SD = .99$), $t(176) = 3.78, p < .001, r = .27$, and performance-approach condition ($M = 4.93, SD = 1.10$), $t(176) = 3.39, p = .001, r = .25$. There was no main effect of goal orientation ($t < 1$, n.s.).

The interaction effect of task challenge and goal orientation was significant, $F(2, 173) = 7.61, p = .001, \eta_p^2 = .08$. Contrast analyses were conducted to test our hypotheses. In the
low challenge condition, performance-approach oriented participants ($M = 5.73, SD = .89$) were more motivated than mastery-approach oriented participants ($M = 5.32, SD = .83$), $t(173) = -2.32, p = .021, r = .17$. This result supports Hypothesis 3. Furthermore, participants in the no orientation condition reported lower motivation ($M = 4.24, SD = 1.12$) than participants in the performance-approach condition, $t(173) = 4.38, p < .001, r = .32$. Motivation of participants in the no orientation condition was marginally lower than the motivation of participants in the mastery-approach condition, $t(173) = 1.89, p < .061, r = .14$.

In the high challenge condition, mastery-approach oriented participants reported higher motivation ($M = 5.28, SD = 1.02$) than performance-approach oriented participants ($M = 4.51, SD = 1.21$), $t(173) = 3.03, p < .003, r = .22$. This result supports Hypothesis 4. Mastery-approach oriented participants were also more motivated than participants in the no orientation condition ($M = 4.38, SD = .73$), $t(173) = 3.54, p < .001, r = .26$, whereas there was no difference between the performance-approach and no orientation condition ($t < 1$, n.s.). The results regarding task motivation are graphically displayed in Figure 3.2.

**Figure 3.2.** Effects of task challenge and goal orientation on task motivation

**Discussion**

It is generally expected that low challenging jobs undermine people’s motivation and work pleasure, whereas high challenging jobs will boost motivation, positive mood, and learning. In this study, we proposed that people’s task motivation and mood responses are affected by their goal orientation. We tested our propositions with an experimental design in
which participants were assigned a low or high challenging task and were provided with a
general or goal-oriented (performance-approach or mastery-approach) task instruction. This
design enabled us to test for causalities and to examine the precise effects of goal-oriented as
compared to general (no goal-oriented) task instructions.

We found that a high challenging task led to higher positive and negative activating
mood states. Individuals performing a high challenging task reported more interest and
happiness, but also more nervousness and fear than those performing a low challenging task.
Furthermore, on the high challenging task one’s positive mood was highest with a mastery-
approach orientation, whereas on the low challenging task one’s positive mood was highest
with a performance-approach orientation. Individuals’ performance-approach orientation did
not, however, affect one’s negative activating mood. Hence, higher negative activating mood
states seem a natural response to challenging tasks and seem not to be precluded by specific
task instructions.

Participants’ task motivation was not affected by the type of task they worked on but
by their goal orientation. As hypothesized, task motivation was higher when performing a
high challenging assignment with a mastery-approach orientation rather than a performance-
approach goal orientation. Opposite results were found for the low challenging assignment.
Task motivation in this assignment was highest with a performance-approach orientation.

To explore whether differences in positive mood and motivation could be mainly
attributed to the working of one of the two goal orientations, we compared the outcomes of
the two goal orientation conditions with those of the no goal orientation condition. Overall,
findings suggest that when performing a challenging task, individuals with a mastery-
approach orientation had a higher positive activating mood and were more motivated than
individuals with a performance-approach orientation or no orientation. There were no
differences in positive activating mood and motivation between individuals in the
performance-approach orientation condition and the no orientation condition. When
performing a low challenging task, individuals with a performance-approach orientation had a
higher positive activating mood and were more motivated than individuals with a mastery-
approach orientation or no orientation. There were no differences in positive activating mood
and motivation between individuals in the mastery-approach orientation and the no
orientation condition. This indicates that differences in activating mood and motivation in the
high challenging condition can mainly be attributed to the mastery-approach orientation and
that differences in activating mood and motivation in the low challenging condition can
mainly be attributed to the performance-approach orientation.

Note, however, that our manipulation check revealed that individuals who had worked
on the high challenging assignment reported higher levels of mastery-approach and
performance-approach orientation than those who had worked on the low challenging
assignment. This suggests that individuals tend to become more goal oriented when
performing a high challenging task.
Theoretical Implications

This study contributes to theories and research regarding job challenge as well as goal orientation. First, extant research on the relationship between job challenge and individual outcomes was mainly conducted in field-settings (e.g., Campbell & Ilgen, 2000; De Pater, Van Vianen, Bechtoldt et al., 2009; McCauley et al., 1994), which limits testing for causality and direction. The sparse experimental research that investigated effects of job challenge used memory tasks and puzzles (e.g., Taylor, 1981). We, however, aimed to examine the effects of task challenge as found in reality. Furthermore, previous studies did not include possible moderators of the relationship between job challenge and individual outcomes (e.g., De Pater, Van Vianen, Bechtoldt et al., 2009; Lyness & Thompson, 2000). They, for instance, neglected whether tasks were assigned to or chosen by individuals. Also, no attention was paid to the role of individuals’ goal orientations while these orientations were found to have a strong impact on people’s task performance in other research domains (for an overview, see Elliot, 2005; Payne et al., 2007).

This study convincingly shows that goal orientations affect individuals’ positive mood and motivation. A performance-approach orientation promotes positive activation and motivation when performing a low challenging assignment, probably because individuals are then concerned with showing their superior competence toward others. In contrast, a mastery-approach orientation promotes positive activation and motivation when performing a high challenging assignment. Although this type of assignments tends to increase both individuals’ mastery-approach and performance-approach orientations, an explicit mastery-approach instruction helps them to focus less on external cues, such as the opinion of others, that consume resources needed for task mastery (Kanfer & Ackerman, 1989). These findings corroborate prior research that suggested that the advantageous effects of a mastery orientation may be limited to tasks that are of higher complexity (Utman, 1997). They also resonate with studies that noted that mastery oriented employees tend to put more effort into their jobs when they are faced with obstacles (e.g., Dweck, 1999; Farr, Hofmann, & Ringenbach, 1993).

Our expectation that goal orientations would also affect negative activating mood was not confirmed. The high challenging assignment caused higher negative activating mood than the low challenging assignment, irrespective of individuals’ goal orientation. Apparently, performing a low challenging assignment with a performance-approach orientation does not raise feelings of fear and tension. A plausible explanation may be that individuals’ competence on the task was not seriously threatened by the behaviors of others. That is, the possible better performance of others does not automatically indicate that the individual him- or herself is incompetent. A performance-approach orientation, therefore, may only raise positive activating mood as one is stimulated to win, but may not affect negative activating mood as there is not so much to lose. Performing a high challenging assignment with a specific goal in mind did not affect negative mood either. As opposed to extant beliefs (e.g.,
Van de Walle et al., 1999; Van Yperen, 2003a), a mastery-approach orientation did not buffer against negative moods. Yet, the challenging task in this study was expected to evoke only modest feelings of uncertainty (Al’ Absi et al., 1997; Egloff et al., 2006) as too much negative arousal would indicate that the assignment was perceived of as a ‘mission impossible’ rather than a challenge. Indeed, participants’ modest levels of negative activating mood may suggest that they perceived the challenging assignment as demanding yet attainable. Hence, a modest level of negative activating mood not only contributes to flexibility and persistence on the task (Baas et al., 2008; De Dreu et al., 2008) but perhaps also to experiencing optimal challenge. All in all, goal orientations seem to affect one’s pleasure but not necessarily one’s pain.

This latter notion brings us to the contribution of this study to the goal orientation literature. Researchers in this domain have called on to include task characteristics in studies that examine the effects of people’s goal orientations. Typically, details about task characteristics are absent in most of these studies or task characteristics do not vary across studies (Payne et al., 2007). Actually, this is the only study that investigated the interaction of task characteristics and approach goal orientations. We have shown that a mastery-approach goal orientation does not necessarily lead to better outcomes than a performance-approach goal orientation as is often suggested in extant research (e.g., Payne & Huffman, 2007). The performance-approach goal orientation led to less beneficial outcomes in the high challenging condition only.

A performance-approach orientation in a less challenging assignment on the other hand seems to stimulate positive mood and motivation. Prior studies on the working of performance-approach goals have shown mixed results (Midgley, Kaplan, & Middleton, 2001). Some of these studies found positive (e.g., Linnenbrink, 2005; Linnenbrink & Pintrich, 2002) whereas others found negative (e.g., Kaplan & Maehr, 1999; Meyer, Turner, Spencer, 1997; Middleton & Midgley, 1997; Payne et al., 2007) effects of performance-approach goals for individuals’ mood states. These ambiguous findings are likely due to the type of tasks people worked on. Future studies could further investigate people’s goal orientations when performing different (challenging) tasks and how this affects performance behaviors.

Limitations

This study involved students and employed an experimental design which both may have limited the generalizability of our findings to realistic organizational settings. As noted above, we have opted for an experimental rather than field design in order to be able to test for causality and direction. Most extant research failed to control for variables that could have influenced the study findings. We used students but we gave them realistic, pilot-tested assignments. The distinction between laboratory and field research becomes smaller to the extent that the content of an experiment reflects reality (Kanfer, 1994). We are, therefore, confident that the results are applicable to actual work-settings. Yet, we encourage researchers
to replicate our findings with (controlled) field research in which challenging tasks are assigned to employees while influencing their goal orientations.

Another limitation is that we used participants’ self-reports to assess our dependent variables. Although similar measures have been used earlier (e.g., De Dreu et al., 2008), task motivation and activating mood states could be more objectively assessed with behavioral and physiological indicators. Therefore, future research could employ study designs that combine self-report with objective data.

**Practical Implications**

The findings of this study have implications for daily practices of organizations. As discussed above, job challenge contributes to employees’ learning and is highly important for individual and organizational development (De Pater, Van Vianen, Bechtoldt et al., 2009; McCauley et al., 1994). Supervisors should, therefore, assign challenging tasks to their employees. As this study shows, these assignments should be explicitly communicated as an opportunity to learn and to develop skills and abilities. However, if supervisors assign low challenging tasks, they could emphasize that their employees should show superior competence on these tasks. In addition, employees themselves determine the extent to which an assignment is perceived as a challenge, depending on their self-efficacy beliefs (Wofford, Goodwin, & Premack, 1992) and their personal goal orientations (DeShon & Gillespie, 2005). Therefore, supervisors should be careful whom to assign what types of tasks.

Employees’ mastery-approach orientation could be facilitated directly by supervisor communication but also indirectly by an HR system that emphasizes effort, personal improvement, skill development, and experimentation. A performance-approach orientation on the other hand could be facilitated by an HR system that offers performance-based compensation (Van Yperen, 2003b). In closing, both supervisors’ behaviors and HR systems determine whether employees will shrivel or thrive in their jobs.