INFERIOR OR SUPERIOR

Social Comparison in Dutch and Spanish

Organizations

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To my family

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CONTENTS

CHAPTER 1

General Introduction

In daily life, people make comparisons to obtain more information about themselves. When an individual says that he or she is for instance, attractive or unattractive, slim or fat, he or she is making evaluations in relation to some specific standard. As it often happens, this standard is based on other individuals. Since Festinger (1954) assumed that individuals compare themselves with others especially when no objective standards are accessible much research has had an interest in this issue. In fact, 962 scientific publications are cited when social comparison is written as key-word in PsycInfo database. Social comparison has been studied with respect to a wide variety of issues, including satisfaction in romantic relationships (Buunk & Ybema, 2003), the quality of life among cancer patients (Wood, Taylor, & Lichtman, 2003), social phobia (Antony, Rowa, Liss, Swallow, & Swinson, 2005), and smoking cessation (Gerrard, Gibbons, Lane, & Stock, 2005). Recent research has applied social comparison theory even as a way of understanding aspects of the well-known work of Van Gogh, by analyzing his network of social and professional encounters that influenced his development as a creative artist (Brower, 2005).

Social comparisons may be especially manifest in situations in which success is highly appreciated and underperformance is not accepted. Indeed, the academic and work spheres are major areas of life in which individuals may attain prestige, recognition, and self-esteem. Therefore, in the present dissertation we examine the importance of social comparison to understand the positive and negative consequences of the way individuals compare themselves with others. We focus on social comparison from the perspective of the identification-contrast model (Buunk & Ybema, 1997), which Assumes that upward (better-off comparison) as well as downward comparison (worse-off comparison) may be interpreted in a positive or negative way, depending on whether individuals contrast or identify themselves with others.

In the present chapter, we first define social comparison and discuss classic social comparison research. Second, we describe the identification-contrast model as the framework of the present dissertation. Third, we address how social comparison as conceptualized in the identification-contrast model is positively and negatively related to specific psychological processes in a variety of contexts. Fourth, we describe how social comparison responses are related to self-efficacy in the academic context. More specifically, we examine how goal orientation may influence social comparison and self-efficacy. Fifth, we address how social comparison responses and coping may have an independent impact on burnout over time. Finally, we examine how social comparison responses may influence identification with and attachment to the organization in two European countries with different features, The Netherlands and Spain. Moreover, we address the issue that individuals may interpret social comparison in a different way in two cultures. We assume that differences in individuals' self-construal may not only explain cultural, but also context and gender differences in basic aspects of social comparison, including comparison direction, comparison dimensions and comparison choice.

Social comparison

"Judgments of adequacy involve social comparison processes" (Bandura, 1997, pp. 360).

Since Festinger (1954) postulated his assumption that in humans there exists a drive to evaluate his opinions and abilities by comparison with the opinions and abilities of others, much theoretical and empirical research has been done with consistent as well as contradictory findings. In particular, social comparison refers to relating one's own characteristics to those of other similar individuals (e.g. Wood, 1989). By doing so individuals gain information that they can use to evaluate, enhance, verify, and improve themselves (see Taylor & Lobel, 1989).

   Classic research on social comparison has generally shown that individuals tend to prefer comparisons with others who are thought to be slightly better off (e.g., Miller & Suls, 1977). In particular, when a motive for self-improvement is activated, individuals tend to prefer to engage in comparisons with others who are doing better, assumedly because they

may learn from such others (Brickman & Bulman, 1977; Buunk, Collins, Taylor, Van Yperen, & Dakof, 1990; Lockwood & Kunda, 1997; Lockwood, Dolderman, Sadler, & Gerchak, 2004). However, when individuals are threatened on a particular dimension, they may prefer to compare themselves with others who are thought to be worse than themselves on that dimension, presumably to feel better about themselves (Buunk & Ybema, 2003; Gibbons, et al., 2002; Hakmiller, 1966; Wills, 1981).

Furthermore, expanding the scope of social comparison research, the identification-contrast model proposed by Buunk and Ybema (1997) assumes that upward as well as downward comparisons may be interpreted in a positive or negative way, depending on whether one contrasts or identifies oneself with the comparison target. In the case of upward identification, individuals focus on the similarities between themselves and better-off others, recognize themselves in the others and perceive the other's situation as attainable for themselves. For instance, among cancer patients upward identification has been positively related to direct coping strategies (Van der Zee, Buunk, Sanderman, Botke, & Van den Bergh, 2000), and among elderly people it has been positively related to life satisfaction (Frieswijk, Buunk, & Steverink, 2004). In the case of upward contrast, individuals view the other as a sort of competitor who has beaten them, which will generate negative feelings by reminding them that they are inferior. Indeed, upward contrast has been positively related to palliative coping strategies among cancer patients (Van der Zee, et al., 2000), and negatively related to treatment adherence among individuals with HIV (Bogart, Gray-Bernhardt, & Catz, 2002). In the case of downward comparison, identification may imply that individuals view themselves as similar to others who are functioning in a worse way, or that they view the situation of worse-off others as a possible future for oneself, which will generally induce negative feelings. Presumably as a result of identification, negative affect from downward comparison has been found to be related to burnout (Buunk, Ybema, Gibbons, & Ipenburg, 2001). In addition, downward identification has been found to be positively related to low performance among students (Buunk, Kuyper, & Van der Zee, 2005). In the case of downward contrast, one may distance oneself from a worse-off other, by viewing the other's position as avoidable, or by viewing the other as someone who one has been beaten. This will generally evoke a positive, though not always socially desirable,

response (e.g. Brickman & Bulman, 1977). For instance, downward contrast has been positively related to judgments of the quality of life among elderly people (Beaumont & Kenealy, 2004) and positively related to self-esteem among students (Aspinwall & Taylor, 1993).

Although previous research has found some indirect evidence for the occurrence in identification and contrast in social comparison, little research has examined these processes directly from the identification-contrast model (Buunk & Ybema, 1997). On the basis of this model, four scales were developed in a study among cancer patients as indicators of the four social comparison strategies i.e., upward identification and contrast, downward identification and contrast (Van der Zee, et al., 2000). In the present dissertation, we use adaptations of these scales to examine how identification and contrast in upward and downward comparison are related to positive and negative self-perception processes in the academic and work areas.

Self-efficacy

"Self-belief does not necessarily ensure success, but self-disbelief assuredly spawns failure" (Bandura, 1997)

How many times has one asked the question "Can I really do it?" We believe that how self-confident an individual perceives himself or herself in a specific area may help to achieve a specific task or performance. Self-efficacy is described as "people's judgment of their capabilities to organize and execute courses of action required to attain designated types of performances" (Bandura, 1986, p. 345). Individuals with high self-efficacy in a specific domain set personal goals that they estimate they can reach, are more likely to attain the goals they aim for achieving success, approach difficult tasks as challenges to be mastered rather than as threats to be avoided, set themselves challenging goals, maintain a strong commitment to those goals, and persist in their efforts in the case of a failure. Such individuals quickly recover their sense of efficacy after failures or setbacks and attribute failure to insufficient effort or to deficient knowledge and skills that are acquirable (Bandura, 1977, 1982, 1997; Bandura & Schunk, 1981; Bandura & Locke, 2003; Brown & Inouye, 1978; Schunk, 1981; Moritz, Feltz, Fahrbach, & Mack, 2000). Through which sources do many individuals achieve a high self-efficacy?

According to Bandura (1986), self-efficacy is based upon information from four main sources: mastery experiences (personal performance accomplishments), vicarious experiences (the observation of other people's performance attainments), social persuasion (the support one receives from significant others for engaging in particular activities) and physiological and affective states (emotional and physical reactions to personal experiences).

In chapter 2, we focus on social comparison as a type of vicarious experience that is related to self-efficacy and subsequently to performance. We assumed that through social comparison (e.g., Wood, 1989) individuals may focus on positive (upward comparison) and negative (downward comparison) role models who may influence their self-views when they engage in identification and contrast processes. However, we assumed that the salience of specific goal may also influence self-efficacy. According to regulatory focus theory (Higgins, 1997) two kinds of goal orientation are distinguished: (1) a focus on aspirations and accomplishments (i.e., promotion focus) and (2) a focus on responsibilities and safety (i.e., prevention focus). These two foci are assumed to develop since childhood and to underlie individuals' perspectives about what they consider significant in their lives. In particular, previous research has demonstrated that promotion-focused individuals are most inspired by positive role models, who highlight strategies for achieving success, and that prevention-focused individuals are most motivated by negative role models, who highlight strategies for avoiding failure (Lockwood, Jordan & Kunda, 2002). Therefore, in chapter 2, we address whether each of the social comparison strategies mediates the relationship between goal orientation and self-efficacy, and whether this affects performance.

Burnout

"The reason burned out people find it so hard to be happy is that they always see the past better than it was, the present worse than it is, and the future less resolved than it will be" (Marcel Pagnol, 1895-1974)

Burnout is a phenomenon that occurs in different groups of the population regardless of occupation, income or educational level. Burnout could affect every area of life, family, work and friend relationships. One may lose interest in everyone and everything. There simply is not enough

energy available for others or for activities beyond those required for survival. Summarizing several well-known definitions of burnout (Buunk & Schaufeli, 1993; Freudenberger, 1980; Maslach, 1982; Veninga & Spradley, 1981) we define burnout charateristics as a debilitating psychological condition brought by unrelieved work stress, resulting in a depletion of energy, emotional exhaustion, lower resistance to illness, an increased depersonalization in interpersonal relationships, increased dissatisfaction and pessimism, and an increased absenteeism and work inefficiency. Burnout may occur among workers from many different professions; however it is more prominent among professions that involve taking care of others such as nurses, doctors, teachers, and social workers. In Chapter 3, we examine the relationship between burnout and social comparison among teachers. Several studies have shown that approximately 60% to 70% of all teachers repeatedly show symptoms of stress, and a minimum of 30% of all educators show distinct symptoms of burnout (Antoniou, Polychroni, & Walters, 2000; Borg & Falzon, 1989; Capel, 1992; Kyriacou, 1980; Lale, 2001; Rudow, 1999). Therefore, burnout may be considered as a societal factor, which affects teachers' well-being and subjective health across Europe (Verhoeven, Maes, & Kraaij, 2003). However, few studies have focused on whether the perception of one's performance as a teacher may influence the development of burnout. In particular, we assume that individuals' performance perceptions are developed in relation to the perception of other individuals' performance. Indeed, it has been shown that the feelings evoked by social comparisons are related to burnout (Buunk, Schaufeli, & Ybema, 1994; Buunk, Ybema, Gibbons, et al., 2001; Buunk, Ybema, Van der Zee, Schaufeli, & Gibbons, 2001). However the specific processes of social comparison, considered here, i.e., identification and contrast, have not been directly studied in this context. In addition, no longitudinal research has examined the relationship between social comparison processes and burnout over time. Therefore, in Chapter 3, we examine in a sample of teachers the relationship between identification and contrast in social comparison and burnout over time. Furthermore, we examine how identification and contrast are related to coping. Coping has been defined as the ways that individuals cognitively and behaviorally manage environmental demands in their lives (Lazarus & Folkman, 1984), and it has been suggested that differences in "the extent and strength of individual's coping resources

may mitigate the strain produced by occupational stress" (Pithers, 1995; pp. 390). Numerous studies have shown that differences in the way individuals cope with stressful situations are associated with occupational stress and burnout (Pithers, 1995; Whitehead & Ryba, 1995). For example, recent studies have found that emotion-focused coping is associated with higher burnout and more somatic complaints, whereas problem-focused coping is positively associated to personal accomplishment and well-being (e.g., Ben-Zur, & Yagil, 2005; Pomaki, & Anagnostopoulou, 2003). The major reason to examine the role of coping was that it has been suggested that social comparison may be a form of coping with stressful situations (Wills, 1987; Taylor, Buunk & Aspinwall, 1990; Van der Zee, et al., 2000). Therefore, we examine the relationship between social comparison processes and coping styles over time in relation to burnout.

Organizational commitment and identification

"You're not obligated to win. You're obligated to keep trying to do the best you can every day" (Marian Wright Edelman, 1992)

During the past 30 years, organizational identification and commitment have been examined as relevant factors related to workers' attitudes to the organization. Organizational identification and commitment are related, but distinct concepts (Ashforth & Mael, 1989). In general terms, organizational commitment is defined as 'a strong belief in and acceptance of the organization's goals and values, a willingness to exert considerable effort on behalf of the organization, and a definite desire to maintain organizational membership' (Porter, Steers, Mowday, & Boulian 1974, p. 604). On the other hand, in line with Social Identity Theory (Tajfel & Turner, 1986), organizational identification can be viewed as a specific form of social identification, i.e. as the 'reflection of the perceptions of oneness with or belongingness to an organization, where the individual defines him or herself in terms of the organization in which he or she is a member' (Mael & Asforth, 1992; p. 104). Organizational identification is described as self-referential, that is as perceiving organizational characteristics as one's own characteristics, whereas organizational commitment is described as more attitudinal and stable (see Gautam, Van Dick, & Wagner, 2004). Therefore, in Chapter 4 we examine organizational

commitment and identification as two separated but related concepts.
Overall, previous research has shown a positive relationship between
organizational commitment and performance (e.g., Angle & Lawson, 1994;
Meyer, Paunonen, Gellatly, Goffin, & Jackson, 1989; Riketta, 2002), and
between organizational identification and performance (Benkhoff, 1997).
We assume that when individuals compare their performance with other
colleagues they may acquire positive or negative self-information which
may affect their self-views and may influence their levels of attachment to
the organization. That is, upward identification and downward contrast
would be positively related and downward identification and upward
contrast would be negatively related to organizational commitment and
identification. However, we expected culture differences in the
relationship between social comparison and organizational commitment
and identification. Therefore, in Chapter 4, we examine the differences in
identification and contrast in social comparison between two countries,
The Netherland and Spain, and we study the relationship between these
social comparison processes and organizational commitment and
identification. In addition, we examine whether country differences might
moderate the relationship between social comparison processes and
organizational commitment and identification.

Social comparison: culture, context and gender differences
"By nature, men are nearly alike; by practice, they get to be wide apart"
(Confucius, 500 BC)

Previous research has shown that there are different ways of
conceptualizing the self. For instance, according to Markus & Kitayama
(1991), individuals may have a more salient independent or an
interdependent self-construal. In Chapter 5, we assume that different
cultural backgrounds, context and gender may be viewed as characterized
by different self-construals which may influence one's cognitions,
emotions and relationships with the social world. We address the question
whether there are cultural, context and gender differences in three basic
aspects of social comparison as direction (upward and downward),
dimensions of comparison (inputs and outcomes), and target choice
comparison (men and women).

Culture

Among individuals with an independent self-construal, one's thoughts, feelings, goals, and behaviors are seen as distinct from that of others, and among individuals with an interdependent self-construal, one's thoughts, feelings, goals, and behaviors overlap with that of others. We assume that different cultural backgrounds may be viewed as characterized by different self-construals (see Aron, Aron, & Tudor, 1991; Brewer, 1991; Markus & Kitayama, 1991; Stapel & Koomen, 2001; Trafimow, Triandis, & Goto, 1991; Triandis, 1989; Turner, 1987), which may influence one's cognitions, emotions and relationships with the social world. There is evidence that collectivistic countries in areas as Asia, Africa, East and Southern Europe, and South America sustain the development of an interdependent self (Bond, Leung, & Wan; De Vos, 1985; Leung, 1997), whereas individualistic countries in areas as North America, North and Western Europe, and Australia sustain a more independent self (Bellah, Madsen, Sullivan, Swidler, & Tipton, 1985; Cahoone, 1996; Lewis, 1995; Triandis, 1995; Triandis & Suh, 2002). In particular, Dutch culture ranks worldwide as the one of the most individualistic countries (Hofstede, 1980; House, Hanges, Javidan, Dorfman & Gupta, 2004) characterized by a self-confident attitude and relatively loose bonds between individuals. Compared to Dutch culture, Spanish culture falls in the medium range on the individualism dimension, and scores lower in individualism than Dutch culture (Hofstede, 1980). According to Fiske (1992) the Spanish are collectivistic in that they tend to establish harmony in their interpersonal relationships as a sense of belonging to a social group.

Organizational context
We assume that also the organizational context may influence the way individuals perceive themselves in relation with others at work. One type of organizational context that has been previously investigated is whether an organization based on its characteristics is included in the private or public sector (Rawls, Ulrich, & Nelson, 1975; Solomon, 1986). Organizations in the private sector operate in a competitive and dynamic environment, in which profitability is the ultimate criterion of success; these organizations are responsive to the market and to customer demands. We assume that in private organizations the more prominent

aspects as competition, autonomy and self-attributes reliance might favor the salience of an independent self. In contrast, in the public sector, organizations are more focused on maintaining constituencies, seeking multiple and cooperative goals, and obtaining funding through a process which is susceptible to political influences (Porter & Van Maanen, 1970; Solomon, 1986). We assume that in public organizations aspects as cooperation, dependency and ability to adjust and maintain harmony are more appreciated and might favor the salience of an interdependent self.

Gender

Research has shown that men describe themselves as more independent than women do, whereas women describe themselves as more interdependent than men do (Cross & Madson, 1997; Kemmelmeier & Oyserman, 2001). That is, women view themselves more in terms of their relationships and connectedness with others and strive to develop self-defining relationships and to maintain connectedness, interdependent-self. In contrast, men tend to be characterized more by an independent self-construal. That is, men view themselves more as separated from others and strive to maintain a sense of autonomy. Men are in general characterized as more agentic, i.e. as independent, assertive, initiating, and as following their own wishes and desires, whereas women are characterized as more communal, i.e. as caring, emotionally expressive, responsive to others, and as seeking harmonious relationships (Deaux & LaFrance, 1998).

Social comparison direction

Recent research has shown differences in social comparison between cultures. White and Lehman (2005) found that students from collectivistic cultures engaged more often in upward comparison than students from individualistic cultures, reflecting an interdependent self, and indicating a stronger motivation for adjusting the self to the context resulting in a self-improvement motive. In contrast, students from individualistic cultures engaged more often in downward comparison, reflecting an independent self, and indicating a stronger motivation for validating their internal attributes. We therefore expected that the Dutch will compare themselves

downward more often than the Spanish, and that the Spanish will compare themselves upward more often than the Dutch.

In addition, regarding organizational context, we assume that in private organizations the more prominent aspects as competition, autonomy and self-attributes reliance might favor the salience of an independent self, which may induce a downward comparison process. In public organizations aspects as cooperation, dependency and ability to adjust and maintain harmony are more appreciated might favor the salience of an interdependent self, which may induce an upward comparison process.

Regarding gender, we expect that men, who have a more salient independent-self, may compare themselves more often downward, and that women, who have a more interdependent-self, may compare themselves more often upward.

Social comparison dimensions

In Chapter 5, we examine the work dimensions on which individuals may compare themselves more often with others. In particular, according to Tornow's conceptualization (1971), work dimensions are described as 'inputs', that is, factors that individuals believe to make a contribution to the job, e.g., work effort and performance; and 'outcomes' described as factors that individuals believe that derive from the situation and are perceived as worthy, e.g., salary and career opportunities.

We assume that the Dutch may, given their more independent self, compare more frequently their inputs (performance, social skills and capacities) than their outcomes (salary, work conditions, and career opportunities) in order to validate their internal attributes and to show that they contribute more to the organization than other colleagues. In contrast, the Spanish may, given their more interdependent self, compare more frequently their outcomes (i.e., salary, work conditions and career opportunities) than their inputs (performance, social skills and capacities) in order to perceive the communal similarities with other better-off colleagues' organizational conditions.

In a similar vein, we assume that individuals from different organizational contexts as private and public organizations may differ in the work dimensions they frequently prefer to compare themselves at. That is, for workers in public organizations, given their more

interdependent self, an important consideration will be to obtain a relatively stable income and job position; therefore they may be more focused on outcomes than on inputs. In contrast, workers in private organizations will, given their more independent self, pay more attention to inputs as they will be more oriented towards competition. That is, they will be more oriented towards performing, and they will therefore tend to compare more frequently on what they contribute to their job. Regarding gender, we expect that women will focus more on outcome comparison than men, and that men will focus more on input comparison than women.

Target choice comparison
We also examine the choice of comparison target among men and women. In line with Festinger's assumption (1954) there is a preference for comparison with similar others on relevant dimensions, an assumption that has garnered considerable empirical support (e.g., Gastorf & Suls, 1978; Tyler, Kramer, & John, 1999). In particular, there is evidence for a preference for comparisons with others of the same gender over others of the opposite gender (e.g., Feldman & Ruble, 1981; Miller, 1984). Additional research has extended these findings indicating that females compare themselves more often with female than with male targets, and that females identify themselves more with a female than with a male successful target (Buunk & Van der Laan, 2002). Therefore, we expect that compared to men, women will compare themselves more often with women, and compared to women, men will compare themselves more often with men. However, individuals' cultural background may influence whether individuals compare themselves with women and/or men. Although no previous research has specifically examined this question, research on culture and gender role attitudes has shown a tendency to more liberal gender role attitudes or sex-role ideology in countries that emphasized individualism and de-emphasized authoritarian power structures (Williams & Best, 1990). Furthermore, collectivistic cultures tend to held more traditional gender attitudes than individualistic cultures. Therefore, we expected that compared to the Spanish, the Dutch will compare themselves more often with women, and compared to the Dutch, the Spanish will compare themselves more often with men. Regarding dimensions of comparison, we did not formulate

specific hypotheses.

Overview of the chapters

To summarize, in the present dissertation we investigate identification and contrast derived from social comparison among students and workers. An additional issue of this dissertation was the examination of culture, context and gender differences in the way individuals compare themselves to others. A brief summary of each chapter is described as follows.

Chapter 2: In this chapter we examine whether social comparison strategies are related to the development of burnout over time, and how these processes are related to coping.

Chapter 3: This chapter investigates the relationship between goal orientation, social comparison processes, self-efficacy and the subsequent academic performance.

Chapter 4: This chapter focuses on the question whether social comparison strategies may affect organizational commitment and identification, and whether this relationship might differ between Spanish and Dutch workers.

Chapter 5: This chapter addresses the question if there are cultural, contextual and gender differences in three basic aspects of social comparison as direction (upward and downward), dimensions of comparison (inputs and outcomes), and target choice comparison (men and women).

Chapter 6: This chapter integrates and discusses the main findings of every chapter in this dissertation. More precisely, theoretical and research contributions are addressed as well as the practical implications of the studies.

CHAPTER 2

The Relationship between Goal orientation, Social Comparison Responses, Self-efficacy and Performance[1]

Abstract

The present study examined whether social comparison responses (identification and contrast in social comparison) mediate the relationship between goal orientation (promotion and prevention) and self-efficacy, and whether the developed self-efficacy may lead to performance. As expected, results showed that promotion-oriented individuals - who are focused on achieving success - had higher self-efficacy than prevention-oriented individuals - who are focused on avoiding failure. In addition, support for mediation was confirmed. Namely, the tendency to contrast oneself with others who were doing better mediated the relationship between prevention goal orientation and self-efficacy, and next, self-efficacy was related to performance.

According to Bandura's social cognitive theory (1986), self-efficacy is a key factor in achieving success. Self-efficacy is described as "people's judgment of their capabilities to organize and execute courses of action required to attain designated types of performances" (p. 345). Self-efficacy perceptions influence the goals individuals set themselves: individuals do not set personal goals of which they estimate they cannot reach them, and those high in self-efficacy are relatively more likely to attain the goals they aim for (Bandura, 1977, 1982; Bandura & Schunk, 1981; Brown & Inouye, 1978; Schunk, 1981; Weinberg, Gould & Jackson, 1979). In particular, previous research has shown that individuals high in self-efficacy approach difficult tasks as challenges to be mastered rather than as threats to be avoided, set themselves challenging goals, maintain strong commitment to these goals, and persist in their efforts in the case of a failure. Such individuals quickly recover their sense of efficacy after failures or setbacks and attribute failure to insufficient effort or to deficient knowledge and skills that are acquirable

(Bandura, 1997). In addition, numerous studies have shown the importance of self-efficacy and performance, for instance for work-related performance in both the laboratory and the field (Sadri & Robertson, 1993; Stajkovic & Luthans, 1998); psychosocial functioning of children and adolescents (Holden, Moncher, Schinke, & Barker, 1990); academic achievement and persistence (Multon, Brown, & Lent, 1991); health-related outcomes (Holden, 1991); athletic performance (Gernigon & Delloye, 2003); and perceived collective efficacy in group functioning (Gully, Incalcaterra, Joshi, & Beaubien, 2002).

   According to Bandura (1986), self-efficacy is constructed based on information provided by four main sources: mastery experiences (personal performance accomplishments), vicarious experiences (observation of other people's performance attainments), social persuasion (support or not support one receives from significant others for engaging in particular activities) and physiological and affective states (emotional and physical reactions to personal experiences). In the present research, we focused on social comparison as a particular type of vicarious experience, i.e., a concept that refers to relating one's own characteristics to those of other similar individuals (e.g., Wood, 1989).

   Individuals may engage in *upward comparisons* with colleagues who are performing in a more competent and adequate way than they do, and they may engage in *downward comparisons* with colleagues who are performing in a less competent and more inadequate way than they do. For instance, previous research has shown that downward comparisons contribute to an individual's well-being (Gibbons & Gerrard, 1991) and promote relatively good functioning (Affleck, Tennen, Pfeiffer, & Fifield, 1987; Vrugt, 1994). Expanding social comparison theory, the Identification-Contrast model proposed by Buunk and Ybema (1997) assumes that upward as well as downward comparisons may be interpreted in a positive or negative way, depending on whether one contrasts or identifies oneself with the comparison target. Identification has been defined in various ways, for example as closeness to the target (Tesser, 1988), as forming a bond with the target (e.g., Miller, Turnbull, & McFarland, 1988), or as being similar in personality to the target (Wills, 1991). In the present model, identification refers to viewing the situation

of the target as a similar potential future for oneself (Buunk & Ybema, 1997; Van der Zee, Buunk, Sanderman, Botke, & Van den Berg, 2000).

Therefore, we assumed that individuals who engage in upward identification, i.e., identification with successful others, will assume that it is possible to reach the position of such others which may raise their self-efficacy and performance. Research on modeling has shown that exposure to the successful attainments of others may increase one's self-efficacy (Bandura, Reese, & Adams, 1982; Brown & Inouye, 1978; Kazdin, 1979; Schunk, 1986). This is in line with Lockwood and Kunda's (1997) finding that individuals are motivated and inspired even by targets that perform extremely well – so-called "superstars" - when they believe that they also can attain comparable success. In contrast, those who engage in downward identification will have a lower self-efficacy, i.e., they will identify with unsuccessful others and will assume that the situation of these others represents a possible self for themselves that will also relate to a poorer performance (Buunk, Collins, Taylor, Van Yperen, & Dakof, 1990; Buunk, Ybema, Gibbons, & Ipenburg, 2001). Indeed, observing similar others fail may lower observers' judgments of their own efficacy and may undermine their efforts (Vrugt & Koenis, 2002; Vrugt, Oort, & Zeeberg, 2002).

Comparing oneself to others from a contrast perspective means that one takes an antagonistic stance, and views the other as a competitor. This process implies that one responds with frustration and resentment when one perceives a successful other (upward contrast). This will be associated with a lower self-efficacy and performance. In general, there is evidence that strong competitive focus will hinder successful performance as individuals focus on the fact that they are not as good as others, rather than on how to improve their own performance (e.g., Van Yperen & Janssen, 2002). According to Collins (1996), upward comparison may be perceived as threatening, and may influence an individual's self-evaluation unfavourably when the comparing individual feels he or she is clearly inferior to the comparison target. Vice versa, contrasting oneself with an unsuccessful other (downward contrast) may induce feelings of pride and satisfaction. Indeed, feeling superior to those who are doing worse will result in a more favorable evaluation of the actual self, will boost the self-esteem and will induce a positive future self. Thus, downward contrast may be positively related to self-efficacy and

performnace. In line with our reasoning, there is evidence that downward identification and upward contrast are positively related to individuals' well-being, for example to burnout among teachers (Carmona, Buunk, Peiró, Rodríguez, & Bravo, 2006), and to depression among people with spinal cord injury (Buunk, Zurriaga, & Gonzalez, in press). Therefore, we expected that those individuals who engage in upward identification or downward contrast will have higher self-efficacy and performance (hypothesis 1) and those who engage in downward identification or upward contrast will have lower self-efficacy and performance (hypothesis 2).

Regarding goals, we assumed that the salience of a particular goal orientation (promotion and prevention) will be associated with specific identification and contrast processes in social comparison. According to regulatory focus theory (Higgins, 1997), two kinds of regulatory goals are distinguished: (1) a focus on aspirations and accomplishments (i.e., promotion focus) and (2) a focus on responsibilities and safety (i.e., prevention focus). These two foci are assumed to develop since childhood and may underlie people's perspectives about what they consider significant in their lives. Individuals with a strong promotion focus are strategically inclined to approach matches to what they consider their ideal self, i.e., the way they want to be, whereas individuals with a strong prevention focus are strategically inclined to avoid mismatches to what they consider their ought self, i.e., they way they should be (Shah, Higgins, & Friedman, 1998). In particular, previous research has demonstrated that promotion-focused individuals are most inspired by positive role models, who highlight strategies for achieving success, and that prevention-focused individuals are most motivated by negative role models, who highlight strategies for avoiding failure (Lockwood, Jordan, & Kunda, 2002). Thus, we expect that individuals with a promotion focus will engage more strongly in upward identification and downward contrast (hypothesis 3). Indeed, such individuals will be directed towards attaining success, and will therefore identify more with others who are doing better, and thus perceive themselves as capable of acting as those others. Given their focus on success, they will also tend to contrast themselves with others who are doing worse, and thus perceive themselves as capable of doing better. Therefore, we expected that individuals with a prevention focus will be directed towards avoiding

failure, in part as a result of identification with others who are doing worse, and of contrast with others who are doing better (hypothesis 4). Indeed, they will experience negative feelings from perceiving oneself as inferior to successful others, and be concerned about becoming like unsuccessful others (cf. Lockwood, Jordan, & Kunda, 2002).

In addition, we expected that individuals characterized by a promotion orientation will have higher self-efficacy perceptions (hypothesis 5), and those characterized by a prevention orientation will have lower self-efficacy (hypothesis 6). That is, a high self-efficacy implies viewing difficult tasks as challenges to be mastered rather than as threats to be avoided, whereas a low self-efficacy implies the lack of confidence that one may attain challenging goals, which will be associated with a tendency to avoid failure rather than seek success. Finally, we expected that social comparison strategies will mediate the relationship between goal orientation and self-efficacy. In particular, we expected that downward identification and upward contrast would mediate the relationship between prevention goal orientation and self-efficacy (hypothesis 7), and upward identification and downward contrast would mediate the relationship between promotion goal orientation and self-efficacy (hypothesis 8). In addition, we expected another two mediation effects. That is, self-efficacy would mediate the relationship between both upward identification and downward contrast, and performance (hypothesis 9), and between both upward contrast and downward identification, and performance (hypothesis 10). Finally, we expected that this self-efficacy will be associated with academic performance (hypothesis 11).

In sum, we expected that different types of goal orientation will lead to specific social comparison responses, and that these specific social comparison responses will lead to self-efficacy, which will lead to performance. The expected relationships for the hypothesized model are shown in Figure 1.
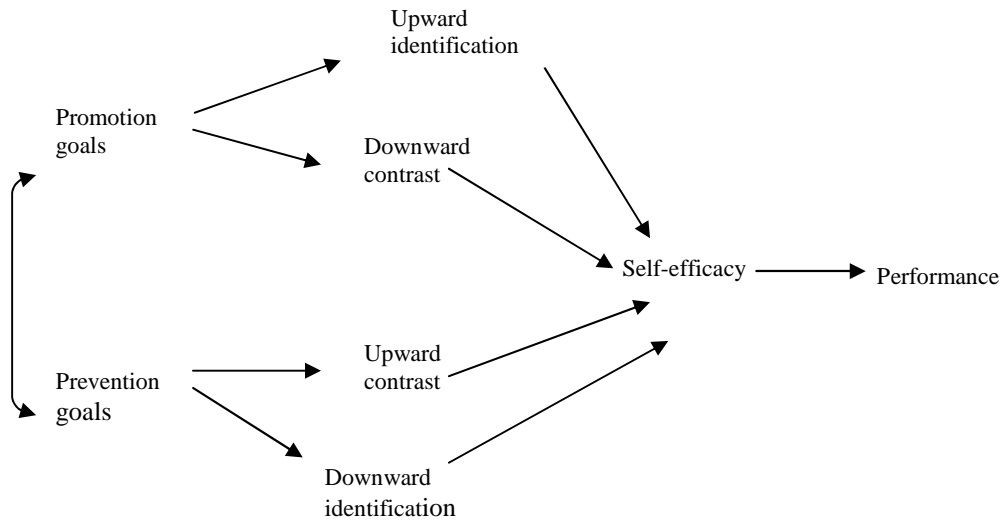
Figure 1. *Path diagram of expected relations between the research study variables.*

Method

Participants and Procedure

One hundred and twenty Dutch university students (62 men and 58 women) participated in this study. The ages of the participants ranged from 19 to 30 years, and the mean age was 22.23 years ($SD = 2.15$ years). All participants were asked to fill in the questionnaire and were paid five euros for their participation.

Measures

    Self-efficacy. Self-efficacy belief in academic success was measured with an adapted version of the self-efficacy subscale included in the Motivated Strategies for Learning Questionnaire (MSLQ; Pintrich & De Groot, 1990). Students indicated their capability for performing successfully indicating their level of agreement to nine statements using a 7-point Likert scale. Participants were asked to rate the items in terms of their general success behavior in the studies, such as "I am sure I can do

an excellent job on the class assignments and homework". Cronbach's alpha for this scale was .89. In addition, the data were examined using Confirmatory Factor Analysis (CFA) based on the correlation matrix and maximum likelihood estimation (LISREL8, Jöreskog & Sörbom, 1996). Results showed a good fit model for all the items. The χ^2 goodness of fit statistic was significant (33.64, $df = 23$, $p = 0.07$) and the Goodness of Fit Index (GFI) = .94 indicating both that the hypothesized model did fit the data. In addition, other relative goodness-of-fit indices were computed (Bentler, 1990). Results for the Root Mean Square Error of Approximation (RMSEA), the Standardized Root Mean Square of Error (SRMR), the Adjusted Goodness of Fit Index (AGFI), the Normed Fit Index (NFI), the Non-Normed Fit Index (NNFI), and the Comparative Fit Index (CFI) were 0.06, 0.05, 0.88, 0.97, 0.98, and 0.99, respectively indicating a good fit of the model.

Social Comparison Responses. To assess upward and downward comparison responses, students answered an adapted version of the Identification-Contrast Scale (Van der Zee, Buunk, Sanderman, Botke, & Van den Bergh, 2000) that were used to assess retrospectively how individuals respond to comparisons with better-off and worse-off others. These scales, based on the identification-contrast model (Buunk & Ybema, 1997), reflect that feelings and cognitions in response to social comparison are the result of either an identification or a contrast process. The internal consistency and stability of this scale has previously been shown to be high (Van der Zee, et al., 2000; Van der Zee, Buunk, Sanderman, Botke, & Van den Bergt, 1999). In addition, these scales have been used recently in various contexts and have been found to be relevant in theoretically meaningful ways related to variables such as burnout, coping styles, life satisfaction and subjective well-being (Brenninkmeijer, Van Yperen, & Buunk, 2001; Carmona et al., 2006; Frieswijk, Buunk, Steverink, & Slaets, 2004a, 2004b).

This scale contains 12 items grouped in four scales. The reliability for the scales was for downward identification (3 items, α= .75), for upward contrast (3 items, α= .83), for upward identification (3 items, α= .86) and, for downward contrast (3 items, α= .76). The respondents answered on a 5-point scale running from "I strongly disagree" (1) to "I strongly agree" (5). As an item of downward contrast, respondents were for example asked, "When I see students who experience more difficulties than I do, I

am happy that I am doing so well myself". Downward identification was for example measured by asking the students "When I see students who are doing worse, I experience fear that my future will be similar". As upward contrast item "When I see students who are doing better than I am, I feel frustrated about my own situation". In addition, for upward identification "When I see students who are doing better that I am, I realize that it is possible to improve". Additionally, the data were examined using Confirmatory Factor Analysis (CFA) based on the correlation matrix and maximum likelihood estimation (LISREL8, Jöreskog & Sörbom, 1996). Results showed a good fit model for the four factors. The χ^2 goodness of fit statistic was significant (53.33, $df = 46$, $p = 0.21$) and the Goodness of Fit Index (GFI) = .93 indicating both that the hypothesized model did fit the data. In addition, other relative goodness-of-fit indices were computed (Bentler, 1990). Results for the Root Mean Square Error of Approximation (RMSEA), the Standardized Root-Mean-Square-of-Error (SRMR), the Adjusted Goodness of Fit Index (AGFI), the Normed Fit Index (NFI), the Non-Normed Fit Index (NNFI), and the Comparative Fit Index (CFI) were 0.04, 0.06, 0.88, 0.90, 0.98, and 0.98, respectively indicating a good fit of the model.

Goal orientation. In order to measure promotion and prevention focus, a brief version of the Regulatory Focus Questionnaire was used. The original questionnaire consists of two subscales, promotion $\alpha = .81$, and prevention $\alpha = .75$ (Lockwood, Jordan, & Kunda, 2002). For promotion goals (five items) as "I typically focus on the success I hope to achieve in the future" and concerning prevention goals (five items) as "I frequently think about how I can prevent failures in my life". For prevention goals, Cronbach's $\alpha = .59$ and for promotion goals, Cronbach's $\alpha = .61$. All items were rated on a 7-point scale with endpoints labeled 1 (not at all true of me) and 7 (very true of me). An additional Confirmatory Factor Analysis (CFA) was performed with data from a correlation matrix and with maximum likelihood estimation (LISREL8, Jöreskog & Sörbom, 1996). Results showed a good fit model for the two factors. The χ^2 goodness of fit statistic was significant (40.81, $df = 28$, $p = 0.06$) and the Goodness of Fit Index (GFI) = .93 indicating both that the hypothesized model did fit the data. In addition, other relative goodness of fit indices were computed (Bentler, 1990). Results for the Root Mean Square Error of Approximation (RMSEA), the Standardized Root Mean Square of Error

(SRMR), the Adjusted Goodness-of-Fit Index (AGFI), the Normed Fit Index (NFI), the Non-Normed Fit Index (NNFI), and the Comparative Fit Index (CFI) were 0.06, 0.08, 0.87, 0.81, 0.87, and 0.92, respectively indicating for most of the indices a good fit of the model.

In addition, an additional Confirmatory Factor Analysis (CFA) was conducted to determine the plausability of the independent factors: self-efficacy, promotion and prevention goal orientation, that may be in fact conceptually related. The CFA did show three independent factors. The χ^2 goodness of fit statistic was nearly non significant (164.62, df = 132, p = 0.03) and the Goodness of Fit Index (GFI) was 0.87, indicating that our model did in part fit the data. In addition, other relative goodness of fit indices (Bentler, 1990) were performed. Results for the Root Mean Square Error of Approximation (RMSEA), the Standardized Root Mean Square of Error (SRMR), the Adjusted Goodnes of Fit Index (AGFI), the Normed Fit Index (NFI), the Non-Normed Fit Index (NNFI), and the Comparative Fit Index (CFI) were 0.04, 0.07, 0.81, 0.90, 0.96, and 0.97, respectively. The results showed provided in general good support for the independent operationalization of the factors. First, there was not any overlap between the self-efficacy and promotion goal orientation factors, indicating that these two concepts are conceptually independent. Second, although one item had a loading on the self-efficacy as well as on the prevention goal orientation factor, and on the promotion as well as on the prevention goal orientation factor, these loadings were not higher on the non-hypothesized factor than on the hypothesized factor.

Academic performance. The mean grade on the second trimester was used as a measure for academic performance. In the Dutch grading system, grades are given on a 10-point scale with 10 representing the higher grade.

Results

Means, standard deviations, and the univariate relations between goal orientation, social comparison, self-efficacy, and performance are shown in Table 1.

Table 1. *Descriptive Statistics and Intercorrelations between Subscales*

	M	SD	2	3	4	5	6	7	8
1. DI	1.67	0.79	-.01	.01	.35**	.06	.38**	-.16	-.13
2. DC	3.86	0.83	–	.05	.19*	.03	.18	-.04	.03
3. UI	2.55	1.00		–	-.21*	.19*	.02	.17	.00
4. UC	2.66	1.13			–	-.05	.45**	-.35**	-.20*
5. PRO	4.83	.85				–	.09	.42**	.16
6. PRE	3.88	1.10					–	-.29**	-.06
7. SEF	4.92	1.02						–	.55**
8. AP	6.65	1.08							-

Note. DI = downward identification; DC= downward contrast; UP = upward identification; UC = upward comparison; PRO = promotion goals; PRE = prevention goals; SEF = self-efficacy; AP = academic performance. *$p < .05$. **$p < .01$.

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[2]The results for Model 2 showed that the χ^2 goodness of fit statistic was significant (57.3, df = 14, p = 0.00) as well as the Goodness of Fit Index (GFI) = 0.89, indicating that the hypothesized model did not fit the data. In addition, we computed other relative goodness-of-fit indices (Bentler, 1990). Results for the Root Mean Square Error of Approximation (RMSEA), the Standardized Root-Mean-Square-of-Error (SRMR), the Adjusted Goodness-of-Fit Index (AGFI), the Normed Fit Index (NFI), the Non-Normed Fit Index (NNFI), and the Comparative Fit Index (CFI) were 0.17, 0.10, 0.71, 0.59, 0.22, and 0.61, respectively. In addition, the results for Model 3 showed that χ^2 goodness of fit statistic was significant (46.3, df = 14, p = 0.00) and the Goodness of Fit Index (GFI) = .90 indicating that the hypothesized model did not fit the data. Moreover, other relative goodness-of-fit indices were computed (Bentler, 1990). Results for the Root Mean Square Error of Approximation (RMSEA), the Standardized Root-Mean-Square-of-Error (SRMR), the Adjusted Goodness-of-Fit Index (AGFI), the Normed Fit Index (NFI), the Non-Normed Fit Index (NNFI), and the Comparative Fit Index (CFI) were 0.14, 0.10, 0.75, 0.65, 0.31, and 0.68, respectively, indicating also a poor fit of the model. Thus, these results suggest that the hypothesized model does fit the data better than the alternative models.

Some correlations are of special interest. The results show that three of the six correlations between the four measures of social comparison are not significant while the remaining three correlations range from $r = -.21$ to $r = .35$. This underscores the relative independence of the social comparison measures. Furthermore, as expected on theoretical grounds, the correlation between self-efficacy and promotion goals was significant and positive ($r = .42$), while the correlation with prevention goals was significant and negative ($r = -.29$). Lastly, promotion goals were hardly related to the social comparison measures while prevention goals were related positively to downward identification ($r = .38$) and upward contrast ($r = .45$). All these relations are in theoretical meaningful directions.

Next, a structural equation model was estimated using the computer software Linear Structural Relations 8.5 (LISREL8, Jöreskog & Sörbom, 1996) to fit the path model to the data. A maximum likelihood method (MLS) with data from covariance matrix was employed, and the goodness-of-fit of the models was evaluated using absolute and relative indices. The results for the hypothesized model 1 showed that the χ^2 goodness of fit statistic was not significant (14.6, $df = 14$, $p = 0.41$) and the Goodness of Fit Index (GFI) = .97 indicating both that the hypothesized model did fit the data. In addition, we computed other relative goodness-of-fit indices (Bentler, 1990). Results for the Root Mean Square Error of Approximation (RMSEA), the Standardized Root Mean Square of-Error (SRMR), the Adjusted Goodness of Fit Index (AGFI), the Normed Fit Index (NFI), the Non-Normed Fit Index (NNFI), and the Comparative Fit Index (CFI) were 0.06, 0.05, 0.92, 0.90, 0.99, and 0.99, respectively. All the relative fit-indices values indicated a good fit (Hoyle, 1995). Therefore, we conclude that the results provided support for the model. The relationships between these variables are shown in the path model by regression coefficients (Figure 2).

In addition, because causality can not be specified with the former analysis and results, we decided to test two alternative structural equation models. In Model 2, we examined whether self-efficacy did affect the positive or negative social comparison responses (upward identification, downward contrast, upward contrast and downward identification), whether these responses affected promotion and prevention goal orientation, and whether in turn, goal orientations affected performance.

In Model 3, we examined whether self-efficacy did affect promotion and prevention goal orientation, whether these orientations affected the social comparison responses, and finally whether these responses affected performance. The results showed that both the alternative Model 2 and the alternative Model 3 had a poorer fit than the hypothesized Model 1². Next, we tested the potential confounding effect of the social comparison responses on both goal orientation and self-efficacy. The results for this model showed that the χ^2 goodness of fit statistic was non significant (21.64, df = 3, p = 0.00) and the Goodness of Fit Index (GFI) = 0.95 indicating that the hypothesized model did not fit the data. In addition, relative goodness of fit indices (Bentler, 1990) were performed. The results for the Root Mean Square Error of Approximation (RMSEA), the Standardized Root-Mean Square of Error (SRMR), the Adjusted Goodness-of-Fit Index (AGFI), the Normed Fit Index (NFI), the Non-Normed Fit Index (NNFI), and the Comparative Fit Index (CFI) were 0.23, 0.07, 0.52, 0.77, - 0.77, and 0.75, respectively. The results for the confounding model did not fit the data. Thus, we can assume that our findings are not due to this specific confounding effect.

In Figure 2, the different estimated structural coefficients between the variables according to the hypothesized Model 1 are shown. We expected that the stronger individuals engage in upward identification or downward contrast, the higher their self-efficacy and performance will be (hypothesis 1). However, this hypothesis could not be confirmed. Next, we expected that the stronger individuals engage in downward identification or upward contrast, the lower their self-efficacy and performance will be (hypothesis 2). This hypothesis was partially confirmed. That is the more individuals contrasted themselves with others who were doing better, the lower self-efficacy they perceived and the lower performance they obtained. Next, it was expected that the stronger individuals set promotion goals, the more they will engage in upward identification and downward contrast (hypothesis 3). The first relation was verified: stronger promotion goals were related to upward identification. In addition, it was expected that stronger individuals set prevention goals, the more they will engage in downward identification and upward contrast (hypothesis 4). Both relations were verified. Next, we expected that the stronger individuals set promotion goals, the higher their self-efficacy will be (hypothesis 5) and the stronger individuals set

prevention goals, the lower their self-efficacy will be (hypothesis 6). Both hypotheses were verified.

Regarding mediation analyses, according to Mackinnon, Lockwood, Hoffman, West, and Sheets (2002) we tested our mediation expectations[3]. Specifically, we expected that upward identification and downward contrast would mediate the relationship between promotion goal orientation and self-efficacy (hypothesis 7). However, this hypothesis wast not confirmed; and that downward identification and upward contrast would mediate the relationship between prevention goal orientation and self-efficacy (hypothesis 8). As can be seen in Figure 2, this hypothesis was partially confirmed. Upward contrast, but not downward identification, mediated the relationship between prevention goal orientation and self-efficacy. Next, it was expected that self-efficacy would mediate the relationship between both upward identification and downward contrast, and performance (hypothesis 9). However, results did not confirm this hypothesis. Moreover, it was expected that self-efficacy would mediate the relationship between both upward contrast and downward identification, and performance (hypothesis 10). The results confirmed in part our hypothesis. That is, self-efficacy mediated the relationship between upward contrast and academic performance. Lastly, as expected (hypothesis 11), self-efficacy was related to academic performance.

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[3]Because of the multiple-mediation nature of our model, as suggested by Mackinnon (2000), and Mackinnon, Lockwood, Hoffman, West, & Sheets (2002) we performed   two tests of mediation with products of coefficients. In the first mediation analysis that we tested, the relationship between a prevention goal orientation (a) and self-efficacy (c) was non significant, $c'=-.14$ (.08), $p>.05$. In addition, the mediated effect was significant, $ab=-.11$ (.043), $z =-2.51$, $p<.05$, indicating that upward contrast (b) significantly mediated the relationship between a prevention goal orientation (a) and self-efficacy (c). Next, in the second mediation analysis that we tested, the relationship between upward contrast (a) and performance (c) was non significant, $c' = -.02$ (.08), $p> .05$. Moreover, the mediated effect was significant, $ab= .15$, $z = -2.83$, $p < .01$, indicating that self-efficacy (b) mediated the relationship between upward contrast (a) and performance (c).
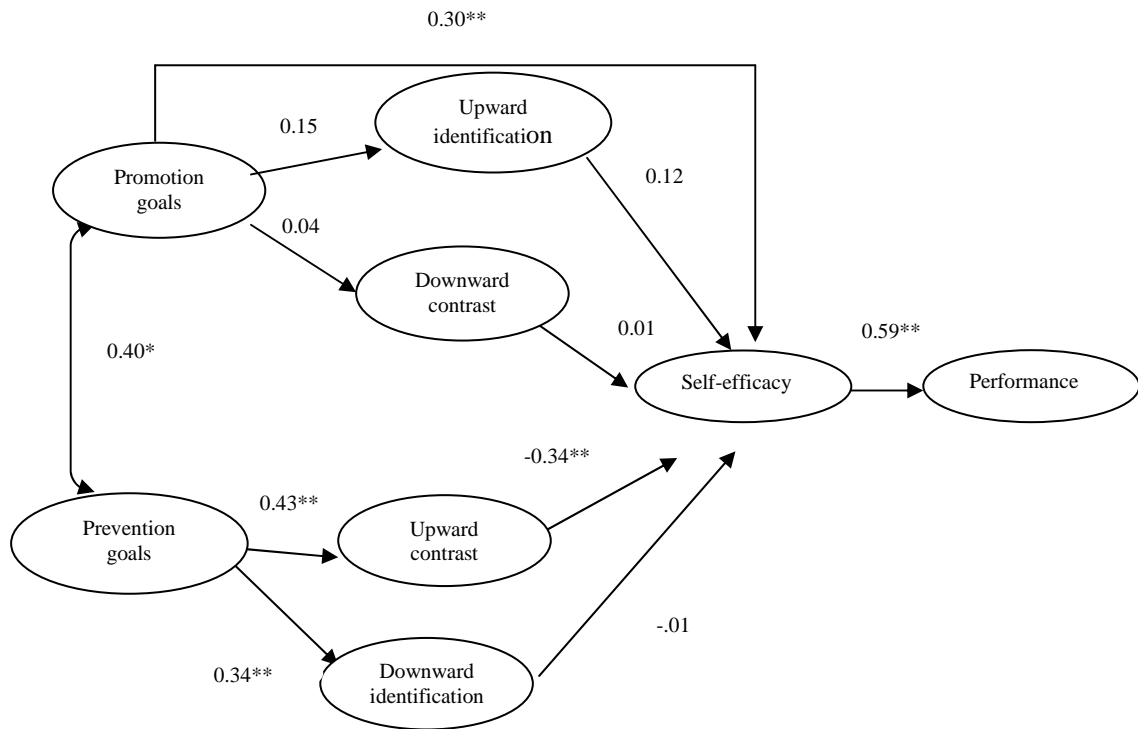
Figure 2. *Path diagram of the relations between research variables with standardized parameter estimates.* Note. p* <.05, p** < .01

Discussion

The purpose of this study was to examine the relationships between goal orientation, social comparison strategies, self-efficacy, and academic performance. We assumed that the way individuals compare themselves with successful and unsuccessful others will be related to their self-efficacy perceptions, and that this process would mediate the relationship between goal orientation (i.e. the focus on promotion of success versus the prevention of failure) and self-efficacy. The results showed that of the four measures of social comparison, only upward contrasting was related to

self-efficacy. That is, the stronger individuals focused on dissimilarities from others who were doing better (upward contrast), the lower their self-efficacy was. This special position of upward contrasting among the social comparison measures was underscored by the correlations: only upward contrast correlated significantly with the other three social comparison measures, with self-efficacy and performance.

Apparently, students who viewed academically successful others as a more threatening competitors for themselves had low self-efficacy. It seems that specifically upward contrasting provides relevant vicarious information for self-efficacy and performance. This finding is in line with previous research that particularly shows that upward contrast is also related to indices of low well-being such as burnout and depression (Carmona et al., 2006; Buunk et al., in press). Especially individuals with a stronger prevention goal orientation engaged in upward contrasting; the more they tried to prevent failures, the stronger they focussed on dissimilarities from others who were doing better and the worse they felt.

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[3] Two additional tests for mediation were conducted following procedures described by Baron and Kenny (1986). First, we showed that upward contrast mediated the relationship between prevention goal orientation and self-efficacy. The requirements for this mediation were met. The independent variable predicted the dependent variable ($\beta = -.19$, $p < .05$); the independent variable predicted the mediator ($\beta = .40$, $p < .01$), the mediator predicted the dependent variable ($\beta = -.24$, $p < .05$); and when the mediator was included in the model with the independent variable, the relation between the independent variable and the dependent variable was substantially reduced and non significant ($\beta = -.06$, $p >.05$). Second, we showed that self-efficacy mediated the relationship between upward contrast and performance. The requirements for this mediation were met. The independent variable predicted the dependent variable ($\beta = -.21$, $p < .05$); the independent variable predicted the mediator ($\beta = -.24$, $p < .01$), the mediator predicted the dependent variable ($\beta = .53$, $p < .05$); and when the mediator was included in the model with the independent variable, the relation between the independent variable and the dependent variable was substantially reduced and non significant ($\beta = -.03$, $p > .05$).

Similarly, the more they tried to prevent failures, the stronger they focussed on similarities with others who were doing worse and the worse they felt. This suggests that individuals high in prevention goal orientation are more vulnerable to social comparison information because they process this information in a non-constructive way. In contrast, promotion goal orientation was only weakly related to upward identification; the stronger individuals set themselves promotion goals, the more they benefited from focusing on those who were doing better. In sum, prevention goal orientation was clearly related to non-constructive social comparison processes while promotion goal orientation was only weakly related to constructive social comparison processing.

One significant path in our model stood out: the path from prevention goal orientation, upward contrast, self-efficacy and performance. In a "causal interpretation", this chain might mean that a stronger focus on preventing failures makes people compare themselves to others in a negative way, which decreases their self-efficacy which, in turn, undermines their performance. However, several limitations deserve attention. First, the size of the sample was too small to include all the items instead of composite scores to test the overall model. Second, the results are based on correlations, therefore we need to be cautious with making causal interpretations. Of course, we did find a better fit for our model than for various alternative models. Nevertheless, unequivocal causal links cannot be assumed on the basis of correlational studies, and it might be relevant to replicate the present in studies using experimental methods. Our results may provide a series of interesting hypotheses to examine in sun studies. It might be relevant to pay attention to what models in this study had and did not have a good fit. Third, since the subject population used in this study was only students, caution should be taken in attempting to generalize the findings to other samples. However, previous research has shown evidence for the relationship between social comparison, goals and self-efficacy in a work context. In particular, among academic staff members perceived self-efficacy and goals have been found to predict scientific productivity (Vrugt & Koenis, 2002). Fourth, the results do not show that the social comparison responses and self-efficacy mediated the relationship between goals and performance. In fact, what our data suggest is a psychological sequence from goals to performance through two mediation effects that may be interpreted as an indirect

mediation effect. In addition, we do not suggest that self-efficacy has a one-directional effect on performance. In fact, previous performance may also influence self-efficacy perceptions. In particular, according to self-efficacy theory (Bandura, 1977), self-efficacy perceptions develop mainly from four sources, (one of those sources is mastery experiences —personal performance accomplishments), and both factors develop in a process of reciprocal influence. That is, the higher in self-efficacy the better performance individuals may have, and vice versa, the better performance the higher self-efficacy individuals may perceive Finally, the reliability of the goal orientation scales were rather low. However, the Confimatory Factor Analysis (CFA) showed a good fit of the model for the two goal orientaiton factors.

To conclude, the present research is the first to explicitly address how goal orientation and identification and contrast from social comparison may be related to academic self-efficacy and performance. Thus refining the notion of Bandura (1977), we have shown that vicarious experiences are one of the major factors affecting the development of self-efficacy and the subsequent performance. Although of a correlational nature, the present research may contribute to illuminating how such experiences may, and may not, enhance self-efficacy. The present findings do not offer unambiguous evidence for the direction of causality between the variables, and future studies are required to address causality. In general though, we have provided some initial evidence for the association between the salient goal orientation individuals have developed during lifetime, the way they compare themselves with others, and how self-confident they feel for achieving success.

CHAPTER 3

Do Social Comparison and Coping Styles Play a Role in the Development of Burnout? Cross-sectional and Longitudinal Findings[1]

Abstract

The present longitudinal research among 558 teachers focused on the role of upward comparisons (with others performing better), downward comparisons (with others performing worse), and coping styles in relation to burnout. Assessed were identification (recognizing oneself in the other) and contrast (seeing the other as a competitor) in upward and downward comparison. Cross-sectionally, downward identification and upward contrast were positively related to burnout and negatively to a direct coping style, whereas upward identification was negatively related to burnout and positively to a direct coping style. Downward identification was positively related to a palliative coping style. Direct and palliative coping styles were independent predictors of burnout: those who reported using a direct coping style had lower levels of burnout, and those who reported using a palliative coping style had higher levels of burnout. Longitudinally, the use of a direct coping style was associated with a decrease, and downward identification with an increase of burnout over time.

Professional burnout can be a result of chronic stress in the work situation, and is generally considered as a syndrome consisting of three aspects (Maslach & Jackson, 1981). The first and most central aspect is emotional exhaustion (Shirom, 1989). Individuals in a state of burnout experience a depletion of emotional resources and feel 'empty' or 'worn out'. The second aspect of burnout is depersonalization, a negative, cynical attitude toward one's work or the recipients of one's care (e.g., pupils or clients), and the third aspect is reduced personal accomplishment; the tendency to evaluate one's accomplishments at work negatively. Despite all the research on burnout, it has often been neglected that burnout develops primarily in a social context (Schaufeli & Buunk, 2003).

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According to Buunk and Schaufeli (1993), processes such as comparisons with one's colleagues may play an important role in the development of burnout. The present research examined how the responses to comparisons with colleagues are related to coping styles and burnout, and how social comparisons and coping styles are related to the development of burnout over time.

The study was conducted among teachers in primary and at secondary schools, a population in which stress and burnout are widespread. In Europe, it is estimated that 60% to 70% of the teachers experience frequent stress and that roughly 30% of the teachers show signs of burnout (e.g., Boyle, Borg, Falzon & Baglioni, 1995; Capel, 1991; Friesen, Prokop, & Sarros, 1988; Friesen & Sarros, 1989; Rudow, 1999). Numerous work-related factors have been found to be associated with burnout among teachers, including excessive time pressure, poor relationships with colleagues, large classes, lack of resources, fear of violence, behavioral problems of pupils, role ambiguity and role conflict, poor opportunities for promotion, lack of support, and lack of participation in decision-making (e.g., Abel & Sewell, 1999; Fimian and Blanton, 1987; Friedman, 1991; Wolpin, Burke and Greenglass, 1991). A major reason to examine the role of social comparison processes with respect to burnout in this population was that such processes may play an important role among teachers. Indeed, teachers are always surrounded by colleagues who provide ample opportunity for social comparison. In the staff room, for instance, teachers exchange information about their lessons and students, thereby revealing information about their functioning which may often induce social comparisons.

Identification and contrast in social comparison
Social comparison refers to relating one's own characteristics to those of other similar individuals (e.g., Wood, 1989). Individuals may engage in *upward comparisons* with colleagues who are performing in a more competent and adequate way than they do, and they may engage in *downward comparisons* with colleagues who are performing in a less competent and inadequate way than they do. Expanding social comparison theory, the Identification-Contrast model proposed by Buunk & Ybema (1997) assumes that upward as well as downward comparisons may be interpreted in a positive or negative way,

depending on whether one contrasts or identifies oneself with the comparison target. In the case of upward identification, people focus on the similarities between themselves and better-off others, try to recognize themselves in the others, and perceive the other's situation as attainable for themselves. This may foster positive feelings and a sense of self-worth. In the case of upward contrast, individuals will view the other as a sort of competitor who has outbeaten them, which will generate negative feelings by reminding them that they are inferior, and by evoking envy and frustration. In the case of downward comparison, identification may imply that an individual views oneself as similar to others who are functioning in a worse way, or that one views the situation of worse-off others as a possible future for oneself, which will generally induce negative feelings (see also Lockwood, 2002). In the case of downward contrast, one may distance oneself from worse-off others, by viewing the other's position as avoidable, or by viewing the other as someone who one has outbeaten. This will generally evoke a positive - though not always socially desirable - response (e.g., Brickman & Bulman, 1977).

While it has been shown that the feelings evoked by social comparisons may depend on burnout (Buunk, Ybema, Gibbons & Ypenburg, 2001; Buunk, Schaufeli & Ybema, 1994; Buunk, Ybema, Van der Zee, Schaufeli & Gibbons, 2001), identification and contrast processes in social comparison have not been directly studied in this context. Moreover, no longitudinal research has been published examining the relation between burnout and social comparison over time. In the present study, it was expected that burnout will be accompanied by more negative interpretations of social comparisons, i.e. by upward contrast and downward identification, and such negative interpretations will also be associated with an increase of burnout over time. Individuals high in burnout do not function any longer as they did before, and will experience envy and frustration in confrontation with better-off others. In turn, such negative responses may undermine motivation and result in poorer performance. Engaging in downward identification, i.e. seeing similarities in worse-off others and viewing the situation of such others as a 'feared self' (Lockwood, 2002) may also be typical for those experiencing burnout and subsequently enhance burnout in a sort of self-fulfilling prophecy.

In a similar vein, it was expected that burnout will be accompanied by less positive interpretations of social comparisons, i.e. by less upward identification and downward contrast, and that such positive interpretations may be associated with a decrease of burnout over time. Contrast effects from downward comparisons under stress may temporarily restore one's mood, and may thus function as part of an emotion oriented coping style (for reviews, see Gibbons & Gerrard, 1991; Tennen, McKee & Affleck, 2000). Particularly upward identification, i.e. interpreting the fact that others function better than oneself in a positive way by viewing actual or potential similarities between the other and oneself, may help in reducing burnout over time, as better performing others are used as a source of inspiration, learning, and self-improvement (e.g., Collins, 1996; Lockwood & Kunda, 2000).

Coping styles as related to burnout

In the present research, we also examined whether social comparison responses are part of broader coping styles. Coping has been defined as the cognitive and behavioral efforts to master, reduce or tolerate the demands that are created as a consequence of a stressful transaction (Lazarus & Launier, 1978; Folkman & Lazarus, 1980). Coping is a dynamic process that varies on a day-to-day basis. However, we focus here not on this process, but on coping *styles* as the predisposition to use certain coping behaviors (see e.g. Watson & Hubbard, 1996). Despite the fact that there is no consensus on how to classify coping styles, many distinct coping inventories have been devised (for reviews see Latack & Havlovic, 1992; Folkman & Moskowitz, 2004). In the present research, based on Dewe's classification (1985), we made a distinction between a *direct coping style* and a *palliative coping style*. A direct coping style was defined as characterized by problem-solving behavior through rational and task-oriented strategies, whereas a palliative coping style was defined as characterized by dealing with the emotional distress through strategies as ignoring or riding the situation (cf. Carver, Scheier, & Weintraub, 1989; Endler & Parker, 1990). In general, there is evidence that an active coping style is negatively related to burnout, and that a palliative coping style is positively related to burnout (e.g. Cunningham, 1983; Griva & Joekes 2003; Latack, 1986; Parkes, 1990; Semmer, 2003; Verhoeven, Kraaij, Joekes & Maes, 2003). For example, Leiter (1991) demonstrated

among workers from a mental hospital, that coping focused on problem-solving was negatively related to burnout, and that escapist or avoidance coping was positively related to burnout.

Despite the correlational evidence for the association between coping styles and burnout, there is no clear evidence that specific coping styles are related to the development of burnout over time. For instance, in a longitudinal study among teachers, problem-solving and emotion coping styles did not affect the development of stress over a period of a year (Brenner, Sörbom & Wallius, 1985). Therefore, in the present research we examined not only how coping styles are related to burnout, but also how they may predict the increase or decrease of burnout over time. It was expected that burnout will be accompanied by a less direct coping style; that such direct coping will be associated with a decrease of burnout over time; that burnout will be accompanied by a more palliative coping style; and that such a palliative coping style will be related to an increase of burnout over time.

Coping styles and social comparison
A number of authors have argued that social comparison may function as part of coping styles. Wills (1997) suggested that downward comparison may represent an active coping mechanism, and is part of a broader cognitive coping style. Taylor and Lobel (1989) examined explicitly the link between downward and upward comparison and coping among cancer patients. What they referred to as downward evaluation (which is similar to what we refer to as downward contrast), was supposed to regulate emotions by making the person feel better in comparison with worse-off others, and thus to reflect a palliative coping style. Upward comparisons, however, may according to Taylor and Lobel (1989) simultaneously improve direct coping by providing a person with information valuable for potential survival and successful coping, and improve palliative coping by providing hope, motivation and inspiration. From the perspective of the Identification-Contrast Model, this would only occur in the case that such upward comparisons induce identification (Buunk & Ybema, 1997). There is some support for a link between identification and contrast in social comparison on the one hand and coping styles on the other hand. Van der Zee, Buunk, Sanderman, Botke, and Van der Bergh (2000) found

in a study among cancer patients that the positive interpretations of social comparison, i.e. downward contrast and upward identification, were associated with more direct coping styles such as a tendency to focus on the positive side of things, and by engaging in direct strategies to solve the problem. The negative interpretations of social comparison, i.e. downward identification and upward contrast, appeared to reflect a pessimistic tendency to focus on the negative side of things by engaging in palliative strategies mainly aimed at decreasing the emotional distress. In a similar vein, we expected that a direct coping style would be associated with upward identification and downward contrast, and that a palliative coping style would be associated with downward identification and upward contrast.

Summary of issues

To summarize, it was expected that cross-sectionally and longitudinally (1) downward identification and upward contrast would be positively related to burnout, and upward identification and downward contrast would be negatively related to burnout; (2) a direct coping style would be negatively, and a palliative coping style positively related to burnout; (3) a direct coping style would be positively related to upward identification and downward contrast, whereas a palliative coping style would be positively related to downward identification and upward contrast.

Method

Sample and Procedure

The questionnaires were administrated in the context of a larger research project on stress and life quality in schools. Participants were teachers working in primary and secondary schools in the province of Valencia, Spain. At Time 1, 675 teachers received the questionnaires, and 659 respondents returned the questionnaire (97.63% response rate). At Time 2, 558 out of 659 teachers returned the questionnaire, giving an 84.67% response rate. The measurement points at Time 1 and 2 were the first term and the third term of the academic year respectively, with an interval of five-six months. Time 1-Time 2 respondents consisted of 219 male (39.5%) and 336 female (60.5%) teachers, three participants did not fill in the

gender question. Of the participants; 89 (17%) participants were 21-36 years old; 387 (73.7%) were 37-55; and 49 (9.3%) were older than 55 years.

A total of 103 centers were selected at random to participate in the research. A letter was sent to the centers with information about the need to do this research and with the request to collaborate. Next, the school was contacted by telephone to make an appointment. Teachers were selected at random from a list that contained all teachers in the school. It was emphasized that participation was voluntary, that full anonymity would be guaranteed, and that one could opt out at any time. Participants marked their questionnaire with a code chosen by themselves. This code was the reference key to combine the first questionnaire with the one administered 5-6 months later. As De Jonge et al. (2001) did, we examined if there was selective attrition of participants. There were no significant differences between those who did and those who did not participate in the second measurement with respect to age, gender, work experience, years in the present school, social comparison, coping styles and burnout.

Measures

Burnout. Burnout was assessed with the Spanish version of the widely used Maslach Burnout Inventory-General Survey (MBI-GS, Schaufeli, Leiter, Maslach & Jackson, 1996). This instrument consists of a reduced and adapted version of the original questionnaire (Maslach & Jackson, 1981, 1986), and contains 16 items that are scored on a 7-point scale, ranging from 'never' (0) to 'everyday' (6). Because our primary interest concerned the effects of burnout in general, and not those of the separate dimensions of burnout, we summed all the items of the MBI to a single burnout measure (see, Brenninkmeijer & Van Yperen, 2003). Cronbach's alpha for this total scale was .84. We did additional analyses to test whether the burnout scale could indeed be considered to measure a unidimensional construct. When items of a Likert type are used, ordinal type answers are usually obtained to the questions. Therefore, a Weighted Least Squares (WLS) method (Browne, 1984) with data from asymptotic covariance matrices was employed, and the goodness-of-fit of the models was evaluated using absolute and relative indices. Although the χ^2 goodness of fit statistic was significant (506.13, *df* = 101, p = 0.001) indicating that the hypothesized model did not fit the data, this index is very sensitive to sample size. Therefore, the probability of rejecting a

hypothesized model increases as sample size increases. To overcome this problem, the computation of relative goodness-of-fit indices is strongly recommended (Bentler, 1990). These relative indices did support the hypothesized model. Results for the Root Mean Square Error of Approximation (RMSEA), the Adjusted Goodness-of-Fit Index (AGFI), the Normed Fit Index (NFI), the Non-Normed Fit Index (NNFI), and the Comparative Fit Index (CFI) were 0.09, 0.96, 0.94, 0.95, and 0.96, respectively. For all three relative fit-indices, as a rule of thumb, values greater than 0.90 are considered as indicating a good fit (Hoyle, 1995). Therefore, we conclude that results showed a good model fit with the data and provided support for burnout as a unidimensional construct.

Identification-Contrast. To assess the interpretation of upward and downward comparisons, participants answered a translated and adapted Spanish version of the Identification-Contrast Scale developed by Van der Zee, et al. (2000). The reliability of these original scales has been found to be satisfactory in samples of cancer patients (Van der Zee et al., 1999; 2000) and of senior citizens (Frieswijk et al., 2004). The respondents answered the items on a 5-point scale running from 'I strongly disagree' (1) to 'I strongly agree' (5). This scale contains 12 items grouped in four scales, i.e. downward identification (3 items, α = .87), upward contrast (3 items, α = .75), upward identification (3 items, α = .87), and downward contrast (3 items, α = .85). Examples of items are for *downward contrast* "When I see colleagues who experience more difficulties than I do, I am happy that I am doing so well myself", for *downward identification* "When I see colleagues who are doing worse, I experience fear that my future will be similar", for *upward contrast* is "When I see colleagues who are doing better than I am, I feel frustrated about my own situation", and for *upward identification* "When I see colleagues who are doing better that I am, I realize that it is possible to improve".

To examine whether the comparison responses were indeed independent responses and whether there was any overlap between the social comparison and burnout measures, a confirmatory factor analysis was carried out testing if the five measures reflected distinct constructs. For the same reason as outlined above, a Weighted Least Squares (WLS) method (Browne, 1984) with data from asymptotic covariance matrices was employed. The goodness-of-fit of the models was evaluated using absolute and relative indices. The results showed that the χ^2 goodness of

fit statistic was significant (3065.81, *df* = 340, p = .001) indicating that the hypothesized model did not fit the data. However, the relative goodness-of-fit indices (Bentler, 1990) showed a good fit of the hypothesized model. Results for Root Mean Square Error of Approximation (RMSEA), the Adjusted Goodness-of-Fit Index (AGFI), the Normed Fit Index (NFI), the Non-Normed Fit Index (NNFI), and the Comparative Fit Index (CFI) were 0.12, 0.97, 0.97, 0.97, and 0.97, respectively. In general, the relative findings indicated a good model fit with the data and provided support for the social comparison styles and burnout as separate measures.

   Coping styles. Coping styles were assessed with the Spanish version of the Coping-Scale of the Occupational Stress Indicator (OSI, Cooper, Sloan & Williams, 1988). This is a standardized questionnaire consisting of 28 items. The items are scored on 6-point scales, ranging from 'frequently' (1) to 'never' (6). In the original scale, six coping styles were assessed, but in the Spanish version, the items were on the basis of a factor analysis and in line with Dewe's classification (1985), regrouped in two scales. *Direct coping style*, this dimension includes strategies that describe rational task-oriented behavior (8 items, α = 0.81). An example of this type of coping is: "Plan ahead". *Palliative coping style* includes strategies categorized as ignoring or riding the situation, utilizing colleague support, rationalizing the situation, becoming less involved and avoidance (11 items, α = 0.72). An example is: "Resort to hobbies and pastimes".

Results

Preliminary analyses

 The mean values, standard deviations and correlations between the variables at T1 and T2 are shown in Table 1.

In line with the Identification-Contrast model, the negative interpretations of social comparison, i.e. downward identification and upward contrast, were positively correlated, and the positive interpretations, i.e. upward identification and downward contrast were also positively correlated. Remarkably, there was also a positive correlation between upward contrast and downward contrast. Although the correlation was quite low, it suggests that some teachers tended to have a generally competitive attitude to other teachers, making them contrast themselves with worse-off as well as well as with better-off others. Furthermore, as Table 1 shows, the temporal stability of the social comparison strategies was low. This

suggests that, although individuals may be dispositionally oriented to engage in specific interpretations of social comparisons, situational factors also seem to play a role in this regard. This is in line with what social comparison theory would suggest (cf. Wood, 1989).

Social comparison and burnout.

It was expected that, cross-sectionally and longitudinally, downward identification and upward contrast would be positively related to burnout, and upward identification and downward contrast would be negatively related to burnout. Because the social comparison strategies are correlated with each other, regression analyses were done to assess the independent effects of these strategies. For the cross-sectional analysis, a hierarchical regression was conducted with burnout at T1 as dependent variable controlling in the first step[2] for gender and age. This was done because many studies have shown differences between males and females, and between younger and older individuals (Greenglass, Burke, & Konarski, 1998; Van Horn, Schaufeli, Greenglass, & Burke, 1997). As Table 2 shows, and as expected, cross-sectionally, downward identification and upward contrast had independent positive relations with burnout, and upward identification had an independent negative relation with burnout. Downward contrast was not independently related to burnout. For the longitudinal analysis, burnout at T2 was the dependent variable, with first entering burnout at T1 in the regression. In this way, changes in burnout from T1 to T2 can be examined. As Table 2 shows, downward identification had a significant longitudinal effect, indicating that those who at T1 identified themselves with others doing poorly, became more burned out at the end of the academic year.

Coping styles and burnout

It was expected that, cross-sectionally and longitudinally, a direct coping style would be positively, and a palliative coping style negatively related to burnout. Given the substantial correlation between both coping styles, this was examined in a similar set of regressions as those presented above. In these analyses, both coping styles were entered simultaneously. As Table 3 shows, and as predicted, cross-sectionally, the use of a direct coping style was negatively related to burnout, and the use of a palliative coping style was positively related to burnout. Longitudinally, there was a significant effect of the use of a direct coping style on a change in burnout.

That is, those who engaged in coping through rational and task-oriented strategies became less burned out over time.

Table 2. *Summary of Regression Analyses for Social Comparison at T1 Predicting Burnout at T1 and at T2.*

T1 Predictors	β T1	β T2
Step 1		
Gender	-.07	.04
Age	.11*	.02
Burnout	--	.74***
R^2	.02	.54
Step 2		
Downward identification	.10*	.08*
Downward contrast	.00	-.03
Upward identification	-.22***	-.01
Upward contrast	.25***	.01
R^2	.21	.55
R^2ch	.19	.01

Note *$\rho<.05$, ** $\rho<.01$, *** $\rho<.001$. In Step 1 gender and age were controlled for, and in the analysis for T2, burnout at T1 was also controlled for.

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[2] Additional regression analyses without controlling for gender and age were conducted. Results did not change the relationship between social comparison, coping styles and burnout over time.

Table 1. Descriptive statistics and correlations between the variables

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
TIME 1															
1. DI	2.43	1.12	–												
2. UC	4.30	.77	.35**	–											
3. DC	3.39	1.08	.03	.23**	–										
4. UI	4.30	.77	-.18**	.01	.20**	–									
5. DIC	4.57	.70	-.14**	-.18**	.01	.19**	–								
6. PAC	4.00	.67	.09	-.01	.09*	.07	.44**	–							
7. BO	1.90	.89	.25**	.33**	-.00	-.29**	-.38**	.00	–						
TIME 2															
8. DI	2.58	1.12	.46**	.30**	.00	-.04	-.14**	-.03	.28**	–					
9. UC	3.00	.92	.28**	.54**	.15**	-.01	-.16**	-.07	.35**	.49**	–				
10. DC	3.32	1.05	.01	.15**	.50**	.12**	.07	.13**	.06	.14**	.31**	–			
11. UI	4.25	.75	-.13**	-.02	.07	.42**	.19**	.03	-.30**	-.12**	-.03	.13**	–		
12. DIC	4.48	.70	-.12**	-.21**	.02	.22**	.66**	.28**	-.37**	-.17**	-.23**	.03	.21**	–	
13. PAC	3.96	.66	.05	-.06	.11*	.12**	.36**	.57**	-.07	-.06	-.05	.17**	.12**	.51**	–
14. BO	1.99	.93	.26**	.27**	-.02	-.24**	-.33**	.04	.73**	.34**	.37**	.00	-.32**	.03	-.12**

Note. DI = downward identification; UC = upward contrast; DC= downward contrast; UI = upward identification; DIC = direct coping;
PAC = palliative coping; BO = burnout *p < .05. **p < .01

Table 3. *Summary of Regression Analysis for Coping Styles at T1 Predicting Burnout at T1 and at T2.*

T1 Predictors	ß T1	ß T2
Direct coping	-.35***	-.07 *
Palliative coping	.18***	.04
R^2	.30	.55
R^2ch	.09	.00

Note. *$\rho < .05$, *** $\rho < .001$ (one-tailed). Gender and age were controlled for, and in the analysis for T2 also burnout at T1 was controlled for.

Social comparison and coping styles

It was expected that, cross-sectionally and longitudinally, the use of a direct coping style would be positively related to upward identification and downward contrast, whereas the use of a palliative coping style would be positively related to downward identification and upward contrast. To test the predicted cross-sectional effects, four regression analyses were conducted with the comparison responses at T1 as dependent variables and the two coping styles at T1 as predictors. The longitudinal effects were examined with a similar set of four regression analyses with the social comparison responses at T2 as dependent variables, controlling for the social comparison responses at T1. As Table 4 shows, both longitudinally and cross-sectionally, more direct coping was associated with less downward identification and upward contrast, and, as expected, with more upward identification. Unexpectedly, direct coping did not have a relationship with downward contrast. Palliative coping was only associated with downward identification at T1, and the expected longitudinal relationship was not evident. However, palliative coping did predict subsequent downward contrast.

Table 4. *Summary of Regression Analyses for Coping Styles at T1 Predicting Social Comparison at T1 and T2.*

| | Downward | | | | Upward | | | |
| | Identification | | Contrast | | Identification | | Contrast | |
	T1	T2	T1	T2	T1	T2	T1	T2
Direct Coping	-.21***	-.08*	.00	.01	.19***	.12**	-.20***	-.10*
Palliative coping	.08*	-.02	.07	.09*	.00	.01	.05	.07
R^2	.04	.22	.00	.25	.04	.19	.05	.31
R^2ch	.02	.01	.00	.00	.03	.01	.03	.01

Note *$\rho<.05$, ** $\rho<.01$, *** $\rho<.001$. Gender and age were controlled for, and in the analysis for T2 also the social comparison strategies at T1 were controlled for.

Discussion

The present study examined the cross-sectional and longitudinal relations between coping styles, social comparison and burnout. It was expected that downward identification and upward contrast would be positively related to burnout, and that upward identification and downward contrast would be negatively related to burnout. The cross-sectional findings were largely in line with the predictions. Teachers who identified themselves with others who were doing worse and contrasted themselves with others who were doing better, experienced relatively more burnout, whereas teachers who identified themselves with others who were doing better experienced relatively less burnout. Therefore, the present research substantiates the results of previous cross-sectional studies that positively interpreted upward comparisons are related with lower burnout levels, and that negatively interpreted downward comparisons are associated with higher burnout levels (Brenninkmeijer, Van Yperen, & Buunk, 2001; Buunk, Ybema, Gibbons, et al., 2001). The longitudinal findings were, as

might be expected, less strong, but nevertheless, downward identification at T1 predicted a significant increase in burnout at T2. Thus, it seems that individuals, who focus on the similarities with those who are not doing so well, may become more burned out over time. This result can be explained as a self-fulfilling prophecy (Rosenthal & Jacobson, 1968). That is, those who felt already similar to colleagues who were doing poorly may have viewed these colleagues as representing a 'feared self' (Lockwood, 2002). This may have undermined their motivation and may have lowered their expectations, which may eventually have resulted in such a 'feared self' becoming reality.

The second prediction that a direct coping style would be negatively, and a palliative coping style positively related to burnout, was confirmed cross-sectionally. The results showed that teachers who used a direct coping style had lower levels of burnout, and that teachers who used a palliative coping style had higher levels of burnout. In addition, longitudinally, individuals who used a direct coping style had lower levels of burnout. The present research is one of the few to find a longitudinal, albeit weak, effect of a direct coping style on burnout, and underlines the general notion in the coping literature that directly dealing with the problem, rather than primarily trying to alleviate the emotional distress through palliative coping, may be the most effective way of dealing with stress. Indeed, the present research confirms that, if anything, a palliative coping style is associated with higher levels of stress, including burnout (e.g., Greenglass & Burke, 2000; Griva & Joekes 2003; Leiter, 1991; Olff, Brosschot & Godaert, 1993; Riolli & Savicki, 2003; Sears, Urizar, & Evans, 2000).

The third prediction was that a direct coping style would be positively related to upward identification and downward contrast, whereas a palliative coping style would be positively related to downward identification and upward contrast. In line with this prediction, the results showed that engaging in more direct coping was cross-sectionally related to more upward identification, and less upward contrast (and also to less downward identification). More importantly, a direct coping style was over time associated with a decrease in downward identification, an increase in upward identification, and a decrease in upward contrast. That is, the use of a direct coping style seems to induce a perception of oneself as more similar to well-functioning others, and as

less similar to poorly functioning others (cf. Lockwood, Jordan & Kunda, 2002; Lockwood & Kunda, 1997). According to Dewe (1985), individuals will tend to use more direct coping when they experience more control over their situation, and probably, this sense of control makes it easier to identify oneself with others who are performing well, and not to feel threatened by such others. In addition, longitudinally, the use of a palliative coping style was associated with an increase in the use of downward contrast. This result may be explained on the basis of Wills' (1997) argument that downward contrast is engaged in primarily when instrumental action is not possible and functions primarily as a strategy aimed at reducing negative emotions. In general, the present findings suggest that the responses to social comparison are related to coping styles, and may be influenced by coping styles, underlining the important role of social comparison with respect to health issues (Buunk & Gibbons, 1997; Frieswijk et al., 2004).

There are a number of limitations of the present research. First, the period to study how burnout develops over time was more or less arbitrarily chosen, and different periods could be examined in future research. Second, we considered burnout as a unidimensional variable, whereas many authors have emphasized the multidimensional nature of burnout. However, our analyses showed that burnout could indeed be viewed as a unidimensional construct. We would like to argue that burnout should be considered as a syndrome, and that using a measure covering the various symptoms that are considered part of this syndrome will generate findings with more robustness and a higher external validity. Third, it may be argued that the variance explained longitudinally is rather small. However, Rosenthal and Rubin (1979) have shown that explained variance can be a deceptive measure, by giving an example of a fictitious experiment (N = 100) in which a variable has important effects (30 vs. 70% survival following treatment), but accounts only for 16% explained variance. Fourth, although we did find several longitudinal effects on changes in burnout, such effects do not necessarily reflect causal relations. That is, demonstrating that one might *predict* a change in variable Y over time on the basis of variable X measured at T1 does not imply that variable X causes variable Y. Finally, there may be alternative interpretations for our findings. For example, downward identification may reflect low self-esteem and depression, and upward

identification may reflect high self-esteem or a high level of optimism (cf. Gibbons, Blanton, Gerrard, Buunk, & Eggleston, 2000). Indeed, future research would certainly have to examine this possibility. But even if our findings can be in part explained by self-esteem or optimism, it still might be the case that individuals with these characteristics achieve the benefits demonstrated in the present study at least in part through engaging in particular forms of social comparison.

Considering the practical implications of the present findings, the results suggest that individuals who feel threatened when seeing their colleagues performing worse seem to become worse off themselves over time. However, it may be relevant to consider that also a lack of upward identification as well as the occurrence of upward contrast was related to burnout. In interventions attention could be given to dysfunctional and functional social comparison processes. People who are engaging in upward contrast and downward identification may be trained to interpret social comparisons in a different way, and to engage in upward identification and downward contrast. In conclusion, the present findings extend the literature on social comparison and occupational health. First, this study contributes to the literature on professional burnout by showing the role that identification with others who are doing well or poorly, may play in the development of burnout over time. As work is very important for individuals' well-being, information about the effects of social comparison in work settings may be relevant for a better understanding of the factors contributing to a healthy work environment. Widespread feelings of burnout and stress within an organization may be detrimental for motivation and commitment and foster absenteeism, disability and turnover. The present research may contribute to the development of counseling interventions in which individuals are taught not to focus too much on how they are performing their duties in comparison with others, but rather to focus on how they themselves can perform their work as well as possible.

CHAPTER 4

The Influence of Culture on the Relationship between Social Comparison and Organizational Commitment and Identification[1]

Abstract

The present study among 404 Dutch and Spanish workers examined the relationship between social comparison responses and organizational commitment and identification. The results showed that compared to the Dutch, the Spanish who were more focused on similarities with others had higher organizational commitment and identification when they compared with successful colleagues. In contrast, compared to the Spanish, the Dutch who were more focused on distances with others had lower organizational commitment when they compared with successful colleagues. Therefore, the present results showed that the way individuals compare themselves with others may have a relationship with the levels of commitment to and identification with the organization. However, cultural background is needed to examine the way individuals compare themselves with others and their attachment to the organization.

Social comparison has long been a construct of considerable interest for understanding perceptions of inequality among individuals in different contexts. In particular, research has shown that such perceptions are also relevant at work. Especially inequality of salary and status have shown to influence individuals' attachment to the organization (Schaubroeck, 1996). In the present research, we assume that inequality perceptions of performance may also influence individuals' attachment to the organization. That is, others' attainments may induce individuals to compare themselves with their colleagues at the workplace. Therefore, one purpose of this study is to examine how social comparison responses are related to identification with and commitment to the organization, and how these social comparison responses differ in different cultures, in particular between Dutch and Spanish employees.

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Social comparison responses

The direction of the comparison, i.e. whether the comparison concerns someone who is better off or worse off than oneself has been a central concept in social comparison research (Hakmiller, 1966; Suls & Miller, 1977; Suls & Wills, 1991; Suls & Wheeler, 2000. In particular, this direction of comparison is known to have an impact on outcomes such as affect, well-being and self-esteem (e.g. Aspinwall & Taylor, 1993; Gerts, Buunk, & Schaufeli, 1994; Gibbons & Gerrard, 1989; Morse & Gergen, 1970). Expanding social comparison theory, the Identification-Contrast model proposed by Buunk & Ybema (1997) assumes that upward as well as downward comparisons may be interpreted in a positive or negative way, depending on whether an individual contrasts or identifies oneself with the comparison target. In the case of upward identification, people focus on the similarities between themselves and better-off others, try to recognize themselves in the others, and perceive the other's situation as attainable for themselves. This may foster positive feelings and a sense of self-worth. In the case of upward contrast, individuals will view the other as a sort of competitor who has outbeaten them, which will generate negative feelings by reminding them that they are inferior, and by evoking envy and frustration. In the case of downward comparison, identification may imply that an individual views oneself as similar to others who are functioning in a worse way, or that one views the situation of worse-off others as a possible future for oneself, which will generally induce negative feelings (see also Lockwood & Kunda, 1997). In the case of downward contrast, one may distance oneself from a worse-off others, by viewing the other's position as avoidable, or by viewing the other as someone who one has outbeaten. This will generally evoke a positive - though not always socially desirable - response (e.g., Brickman & Bulman, 1977). However, is there a preference among individuals for engaging in different social comparison responses?

Given that social comparison relates the self to others, research has shown that the self may take different forms: individuals may have an independent or an interdependent self-construal (Markus & Kitayama, 1991). That is, "the individuated" or

"independent" self represents a self-concept that differentiates the self from others, which has been associated predominantly with people of individualistic cultures, whereas the "relational or interdependent" self represents a self-concept that reflects integration and inclusion of the self in the social world, which has been associated predominantly with people of collectivistic cultures (Singelis & Brown, 1995). In particular, Dutch culture is more individualistic than collectivistic and Spanish culture is more collectivistic than individualistic (Gelfand, Bhawuk, Nishii, & Bechtold, 2004; Gouveia, Clemente, & Espinosa, 2003; Hofstede, 1980; O'Connell & Prieto, 1998; Triandis, 1989), Therefore, we assume that compared to the Dutch, the Spanish may have a more salient interdependent self, and compared to the Spanish, the Dutch may have a more independent self. In addition, there is evidence that activating independent or interdependent self-related cognitions may differentially affect the way information about others is processed (cf. Brewer & Gardner, 1996) even when the activated self is different from the actual self (Gardner, Gabriel, & Lee, 1999). These differences in the self-activation may accentuate differences from others when an independent self is activated and similarities to others when an interdependent self is activated (see Abelson, Dasgupta, Park, & Banaji, 1998; Aron, Aron, & Tudor, 1991). Moreover, research in social comparison has shown that, in general, contrast processes occur when personal self-construals are accessible, and assimilation processes occur when social self-construals are activated (Stapel & Koomen, 2001). Therefore, we expected that the Spanish will show more identification in social comparison (hypothesis 1), whereas the Dutch will show more contrast in social comparison (hypothesis 2).

Social comparison responses at work
Cues from the social context may influence employees' work-related perceptions, attitudes and behaviours (Brass, 1981; Ferris & Gilmore, 1984; Griffin, 1983; Griffin, Bateman, Wayne, & Head, 1987; Kelloway & Barling, 1991). Employees' perceptions are constructed through social interaction with other employees and feedback from other employees, rather than being determined either by individual worker characteristics or by objective job characteristics (Salancik & Pfeffer, 1978). We therefore suggest that

these interactions may involve a social comparison process through which individuals may evaluate and asses their own performance with others' performance at work. These evaluations may evoke positive and negative feelings when they identify or contrast themselves with better-off and worse-off co-workers. As previous research has shown, these affective consequences from social comparison at work are related to aspects that concern individuals' subjective well-being. For instance, individuals with burnout respond less favourably to upward comparisons (Buunk, Schaufeli, & Ybema, 1994; Carmona, Buunk, Peiró, Bravo, & Rodríguez, 2006), individuals with low self-esteem respond more negatively to upward comparisons (Wheeler, 2000), and after a job loss, individuals show an increase degree of negative affect after confrontation with a downward comparison target (Ybema, Buunk, & Heesink, 1996). Individuals who interpret social comparisons in a positive way perceive the social climate as more cooperative (Buunk, Zurriaga, Peiró, Nauta, & Gosalvez, 2005).

On the basis of these previous findings, we expect that the way individuals identify or contrast their performance with others who are doing better or worse may have an impact on the level of identification and commitment individuals have with respect to their organization. However, although it is recognized that identification and commitment are closely related aspects of employees' psychological attachment to the organization, conceptual and empirical differences between organizational commitment and identification have been found in previous research (Ashforth & Mael, 1989; Gautam, Van Dick, & Wagner, 2004). In the present study, we therefore distinguished these two concepts and examined the relationship between social comparison responses and organizational commitment and identification. In general terms, organizational commitment is "a strong belief in and acceptance of the organization's goals and values, a willingness to exert considerable effort on behalf of the organization, and a definite desire to maintain organizational membership" (Porter, Steers, Mowday, & Boulian, 1974, p. 604). Overall, previous research has shown a positive relationship between commitment and performance (e.g., Angle & Lawson, 1994; Meyer, Paunonen, Gellatly, Goffin, & Jackson, 1989; Riketta, 2002) and between organizational identification and organizational performance (Benkhoff, 1997). For instance, an individual who identifies with the

organization tends to work harder to benefit the organization (Ouchi, 1980), to cooperate more with others (Ashforth & Mael, 1989) and to have stronger intention to remain a member of the organization (O'Reilly & Chatman, 1986; Benkhoff, 1997). According to Mael and Ashforth (1995), organizational identification may be self-referential or self-definitional, whereas commitment may be not. That is, organizational commitment is conceptualized as a general orientation (to a set of organizational goals or values) whereas organizational identification involves psychological attachment to a specific company. Organizational identification is defined as a 'reflection of the perceptions of oneness with or belongingness to an organization, where the individual defines him or herself in terms of the organization in which he or she is a member' (pp. 104).

In the present research, we examined the relationship between social comparison responses and organizational commitment and identification. That is, according to the Identification-contrast model (Buunk & Ybema, 1997), individuals may identify or contrast their performance with others. Therefore, we expected that upward identification and downward contrast as positive social comparison responses will be positively related to organizational commitment and identification (hypothesis 3). Moreover, we expected that downward identification and upward contrast as negative social comparison strategies will be negatively related to organizational commitment and identification. However, country differences are expected to affect the relationship between social comparison responses and organizational commitment and identification.

Culture, social comparison responses and organizational commitment and identification

Research on organizational commitment and identification has shown cultural differences in their predictors. Mostly, values as freedom and achievement (idiocentric values) might be important predictors of commitment in individualistic societies, whereas values as respect, tradition, devotion and seniority (allocentric values) might be important predictors of commitment in collectivistic societies (Abrams, Ando, & Hinkle, 1998; Bae & Chung, 1997; Glazer, Daniel, & Short, 2004; Pearson & Chong, 1997). However, scarce research has examined whether the way individuals compare themselves to others differs in different cultures

(White & Lehman, 2005), and no previous studies have examined whether culture may influence the relationship between the way individuals compare their performance to others and organizational commitment and identification. On the basis of independent and interdependent self-construal (Markus & Kitayama, 1991) it has been demonstrated that assimilation and contrast processes are evoked by activating an independent or interdependent mind-self (Stapel & Koomen, 2001). We therefore expected on the one hand that identification processes, seeing the other better-off or worse-off as similar to oneself, are related to organizational identification and commitment especially among the Spanish (hypothesis 5), who are more focused on generating relationships and belonging to a group than the Dutch. And on the other hand, we expected that contrast processes, seeing the other better-off or worse-off different to oneself, are related to organizational identification and commitment, especially among the Dutch (hypothesis 6) who are more focused on self-enhancement and validating their internal attributes than the Spanish.

Method

Participants

Four hundred and four workers from private organizations (57.4% Spanish and 42.6% Dutch) and from public organizations (53% Spanish and 47% Dutch) participated voluntarily in the study. Both private organizations were multinational manufactory companies, from the automobile sector and from the appliance sector. And the public organizations were libraries in both cultures. In the private organizations, the Spanish sample was composed of 101 workers (75.3% males and 24.7% females) and the Dutch sample consisted of 75 workers (62.2% males and 37.8% females). In the public organizations, the Spanish sample was composed by 121 workers (25.6% males and 74.4% females) and 107 workers in the Dutch sample (12.1% males and 87.9% females). Of the Spanish participants, the 0.4% was younger than 21 years, the 27.4% was between 21-36 years, the 58.4% was between 37-55, and the 13.3 % was older than 55 years old. In the Dutch sample, the 0.5% was younger than 21 years, the 23% was between 21-36, the 65.6% was between 37-55, and the 10.9% was older than 55 years old. Overall, the access to the organizations that participated in the survey was arranged by their

respective human resources sections. All the employees completed the survey administered by a researcher and without the presence of managerial personnel. Employees were told that the questionnaires would be kept completely anonymous and that the management would not be able to identify the individual respondents.

Measures

Social comparison responses. To assess the identification and contrast processes of upward and downward social comparison, participants answered a translated Spanish and Dutch version of the Identification-Contrast Scale developed by Van der Zee, Buunk, Sanderman, Botke, & Van den Bergh, (2000). Although the reliability of these scales has been found to be satisfactory in Dutch samples such as cancer patients (Van der Zee, Buunk, Sanderman, Botke, & Van den Bergh, 1999; Van der Zee, et al., 2000) and senior citizens (Frieswijk, Buunk, & Steverink, 2004), and in Spanish samples such as nurses (Buunk, Zurriaga, Gonzalez-Roma, & Subirats, 2003), physicians (Buunk, et al., 2005) and teachers (Carmona et al., 2006), we performed an additional confirmatory factor analysis using the computer software Linear Structural Relations 8.5 (LISREL 8, Jöreskog & Sörbom, 1996) to assess whether the four social comparison factors were found in these two samples. Multiple indices were used to assess model fit. Although the Chi-Square goodness of fit statistic was significant in both samples (χ^2Dutch = 86.96, *df* = 48, *p* < .000; χ^2 Spanish = 85.23, *df* = 48, *p* < .000) indicating that the hypothesized model did not fit the data, this index is very sensitive to sample size and therefore the probability of rejecting a hypothesized model increases as sample size increases. To overcome this problem, the computation of relative goodness-of-fit indices is strongly recommended (Bentler, 1990). These relative indices did support the hypothesized model. For the Dutch sample, results for the Root Mean Square Error of Approximation (RMSEA), the Goodness-of-Fit Index (GFI), the Normed Fit Index (NFI), the Non-Normed Fit Index (NNFI), and the Comparative Fit Index (CFI) were 0.062, 0.94, 0.94, 0.96, and 0.97, respectively, and for Spanish sample, results including the previous indices were 0.061, 0.094, 0.94, 0.96, and 0.97, respectively. Thus, we conclude that results showed a good model fit with the data and provided support for the four social comparison factors in the two samples. The respondents answered the

items on a 5-point scale running from 1 (*I strongly disagree*) to 5 (*I strongly agree*). This scale contains 12 items grouped in four scales, i.e. downward identification (3 items, Spanish α = .88; Dutch α = .79), upward contrast (3 items, Spanish α = .72; Dutch α = .87), upward identification (3 items, Spanish α = .87; Dutch α = .89), and downward contrast (3 items, Spanish α = .87; Dutch α = .87). Examples of items are for *downward contrast* "When I see colleagues who experience more difficulties than I do, I am happy that I am doing so well myself", for *downward identification* "When I see colleagues who are doing worse, I experience fear that my future will be similar", for *upward contrast* " When I see colleagues who are doing better than I am, I feel frustrated about my own situation", and for *upward identification* "When I see colleagues who are doing better that I am, I realize that it is possible to improve".

Organizational commitment. The extent to which respondents experienced commitment to the organization was assessed by using the 9-item Organizational Commitment Questionnaire (Mowday, Steers, & Porter, 1979; Janssen, 2004). Items were scored on a 7-point Likert scale ranging from 1 (*totally disagree*) to 7 (*totally agree*). Sample items included: 'I talk about (the name of the organization) to my friends as a great organization to work for' and 'I really care about the fate of (the name of the organization). For Dutch and Spanish samples Cronbach alphas were respectively .84 and .83.

Organizational identification. To asses identification with the organization, we used the identification with the organization scale (Mael & Tetrick, 1992) with a 10-item Likert scale. The scale ranges from 1 (*I strongly disagree*) to 5 (*I strongly agree*). A sample item is "I have a number of qualities typical of (name of the organization)". The Alphas were .85 for the Spanish sample and .71 for the Dutch sample. An additional confirmatory factor analysis using the computer software Linear Structural Relations 8.5 (LISREL 8, Jöreskog & Sörbom, 1996) was performed to assess whether organizational commitment and organizational identification scales did indeed measure two different but related concepts in Dutch and Spanish samples. Multiple indices were used to assess model fit. The Chi-Square goodness of fit statistic was significant in both samples (χ^2 Dutch = 194.30, *df* = 126, *p* < .000; χ^2 Spanish = 186.70, *df* = 131, *p* < .000), and therefore the relative indices did support the hypothesized model. For the Dutch sample, results for the Root Mean

Square Error of Approximation (RMSEA), the Goodness-of-Fit Index (GFI), the Normed Fit Index (NFI), the Non-Normed Fit Index (NNFI), and the Comparative Fit Index (CFI) were 0.057, 0.88, 0.91, 0.95, and 0.96, respectively supporting the model, and for the Spanish sample, results including the previous indices were 0.045, 0.091, 0.97, 0.99, and 0.99, respectively supporting also the model.

Results

Descriptive statistics and correlations
As shown in Table 1, means, standard deviations and intercorrelations between the study variables were computed. The results showed positive relationships between demographic variables such as age, number of years in the organization, and organizational identification, and negative relationships between gender, type of organization and organizational identification. As expected, the more upward identification and downward contrast, the more organizational commitment and identification. In addition, there was a higher correlation between upward identification and organizational commitment and identification among the Spanish than among the Dutch.

Social comparison responses in The Netherlands and in Spain
To demonstrate the impact of nation on the four social comparison processes (hypothesis 1 and 2), a MANOVA was performed with organizational commitment and identification as dependent variables. The results showed a statistically significant effect of nation on upward identification, $F(1, 394) = 39.77$, $p < .001$. The Spanish engaged more in upward identification ($M = 3.68$, $SD = .91$) than the Dutch ($M = 3.13$, $SD = .78$).

Table 1. Descriptive statistics and correlations between the variables

Dutch / Spanish	M_{DU}	SD_{DU}	M_{SP}	SD_{SP}	1	2	3	4	5	6	7	8	9	10	11
1. Gender	1.67	.47	1.52	.50	-	-.16*	-.12	.23**	.52***	-.06	.17*	-.03	.12	-.02	-.03
2. Age	2.87	.59	2.85	.64	-.19**	-	-.05	.42***	.19**	-.22**	-.27***	.01	-.11	.00	-.05
3. ED	6.16	1.40	6.05	2.20	.19**	-.32***	-	-.14†	-.19**	-.01	-.06	-.13†	-.12	.13†	-.03
4. Years	3.12	1.38	3.64	1.35	-.31***	.63***	-.30***	-	.58***	-.12	-.02	.01	-.09	-.09	-.16
5. TO	1.59	.49	1.55	.50	.50***	-.21**	.49***	-.45***	-	-.19*	-.01	-.06	-.08	-.05	-.12
6. UI	3.13	.79	3.69	.90	.02	-.09	.07	-.07	-.07	-	.43***	.12	.08	.15*	.16*
7. DC	3.46	.83	3.25	1.04	.14*	-.07	-.05	-.11	-.05	.21**	-	.16*	.32***	.22**	.12
8. DI	2.02	.72	2.33	1.05	.06	-.03	-.19**	-.12†	-.01	.04	.32***	-	.40***	-.04	-.01
9. UC	2.24	.82	2.36	.87	-.06	.09	-.07	-.00	-.11	.16*	.15*	.37***	-	.00	-.12
10. OI	3.35	.52	3.24	.67	-.21**	.25***	-.02	.23***	-.31***	.26***	.07	-.07	.14*	-	.59***
11. OC	3.46	.52	3.45	.68	-.07	.13†	.00	.11†	-.18**	.32**	.08	-.10	.13*	.71***	-

Note. ED = education; TO = type of organization; CU = culture; DI = downward identification; UC = upward contrast; DC= downward contrast; UI = upward identification; OC = organizational commitment; OI = organizational identification. Gender was coded 1 = male, 2 = female. Age was coded 1 = < 21, 2 = 21-36, 3 = 37-55, 4 = > 55. Education was coded from 1 = Primary school dropouts to 9 = PhD. Years in the organization was coded from 1 = < 2 years to 5 = 21-30 years. Type of organization was coded 1 = private organization, 2 = public organization. † $p < .10$; *$p < .05$; **$p < .01$; ***$p < .001$.

In addition, there was an effect of nation on downward identification $F(1, 394) = 11.81$, $p < .01$. The Spanish engaged more in downward identification ($M = 2.33$, $SD = .90$) than the Dutch ($M = 2.01$, $SD = .70$). Thus, these findings were consistent with hypothesis 1; the identification processes (upward and downward) were indeed more prominent among the Spanish than among the Dutch. Furthermore, the results showed an effect of nation on downward contrast $F(1, 394) = 4.26$, $p < .05$. The Dutch engaged more in downward contrast ($M = 3.45$, $SD = .82$) than the Spanish ($M = 3.25$, $SD = .90$). There was no significant effect of culture on upward contrast. Thus, hypothesis 2 was partially confirmed. That is, downward contrast, characterized by self-enhancement, was more prominent among the Dutch than among the Spanish.

Social comparison on organizational commitment and identification
Because previous research has found that several worker and context characteristics such as age, years in the organization, education and type of sector (private vs public) are related to organizational commitment and relatively to organizational identification (Angle & Perry, 1981; Glisson & Durick, 1988; Morris & Steers, 1980; Steers, 1977; Stevens, Beyer, & Trice, 1978; Zeffane, 1994), we controlled for these worker characteristics on organizational commitment and identification. To test the main effect of social comparison responses on organizational identification and commitment (hypotheses 3 and 4), and to test the moderator effect of culture on the relationship between social comparison strategies and organizational identification and commitment (hypotheses 5 and 6), we performed hierarchical regression analyses (see Aiken & West, 1991). In the first step, gender, age, education, years in the organization, and type of organization were entered as control variables; in the second step one of the social comparison responses and culture were entered (main effects), and in the third step, the interaction effects of culture and one of the social comparison responses were entered. Table 2 shows the results of the hierarchical regression analyses predicting organization identification and commitment. In accordance with hypothesis 3, upward identification and downward contrast were positively related to organizational identification ($\beta = .24$, $p <$

.001; β = .16, *p* < .01) and organizational commitment (β = .27, *p* < .001; β = .10, *p* < .01). However, hypothesis 4 was only partially confirmed. Upward contrast was not related to organizational identification and commitment, and downward identification was negatively related to organizational identification (β = -.11, *p* < .05) but not to organizational commitment (β = -.07, *ns*).

Moderating effect of nation
As shown in Table 2, in the last step of the hierarchical regression analyses, three interaction effects were found. Nation moderated the relationship between upward identification and organizational identification (β = -.35, *p* < .001), and the relationship between upward identification and organizational commitment (β = .40, *p* < .05). In addition, nation moderated the relationship between upward contrast and organizational commitment (*β* = -.47, *p* < .05). To examine whether the interaction effects were in line with the direction predicted in Hypotheses 5 and 6, we depicted the two-way interactions in Figures 1, 2 and 3. Figure 1 reveals that in the Spanish sample, higher levels of upward identification were associated with more organizational identification, whereas in the Dutch sample higher levels of upward identification were associated with lower levels of organizational identification. Likewise, Figure 2 indicates that in the Spanish sample, lower levels of upward identification were associated with lower levels of organizational commitment, whereas in the Dutch sample there were no differences between low and high levels of upward identification. Figure 3 reveals that in the Spanish sample, higher levels of upward contrast were associated with higher levels of organizational commitment, whereas in the Dutch sample higher levels of upward contrast were associated with lower levels of organizational commitment. These findings indeed suggest that, in support of Hypothesis 5 and 6, the identification processes are more related among Spanish than among Dutch employees to organizational commitment and identification.

Table 2. *Hierarchical Regression Analyses of social comparison and culture on organizational identification and organizational commitment.*

	Organizational identification			Organizational commitment		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 2		.09	.01		.04	.01
DI	-.11*			-.07		
Nation	.14*			-.01		
Step 3		.09	.00		.04	.00
DI* nation	-.07			.17		
Step 2		.10	.02		.03	.00
UC	.08			.03		
Nation	.11*			.01		
Step 3		.10	.00		.05	.02
UC* nation	-.25			-.47*		
Step 2		.11	.03		.04	.01
DC	.16**			.10*		
Nation	.09†			-.01		
Step 3		.12	.01		.05	.00
DC* nation	.39			.27		
Step 2		.14	.06		.10	.06
UI	.24***			.27***		
Nation	.17***			.09†		
Step 3		.15	.01		.11	.01
UI* nation	-.35*			.40*		

Note. DI = downward identification; UC = upward contrast; DC= downward contrast; UI = upward identification. Overall analyses, in Step 1 we controlled for demographic variables as gender, age, education, years in the organization and type of organization. For organizational commitment, R^2= .08 for Step 1; for organizational identification, R^2 = .03 for Step 1. † $p < .10$; *$p < .05$; **$p < .01$; *** $p < .001$.

Figure 1. Interaction effect of upward identification and nation on organizational identification.
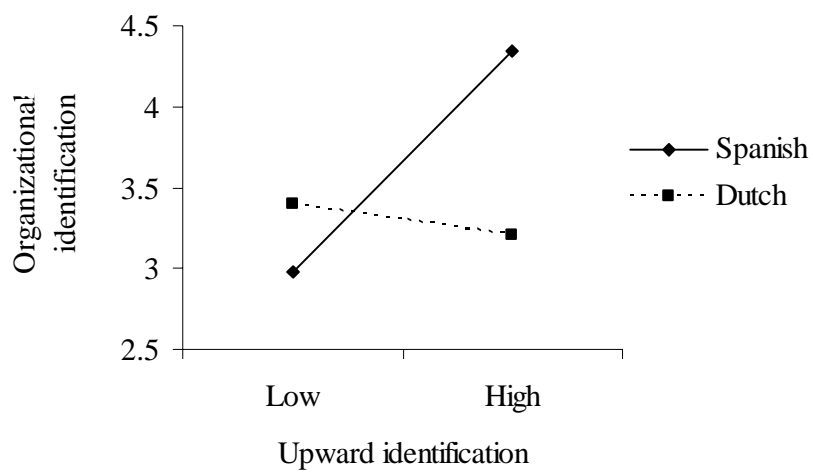

Figure 2. Interaction effect of upward identification and nation on organizational commitment.
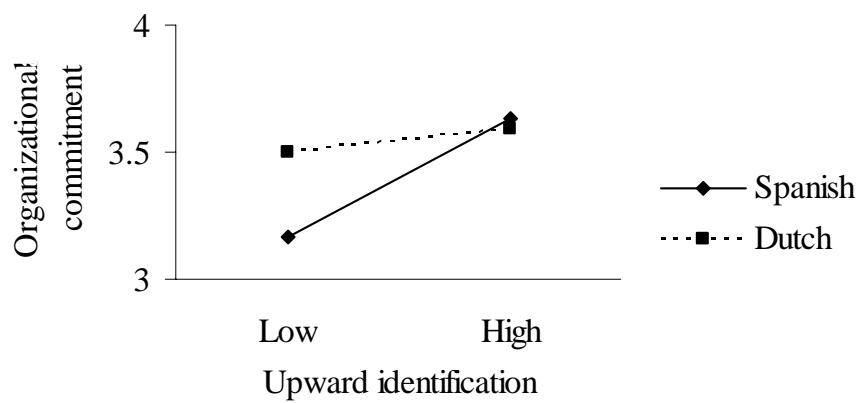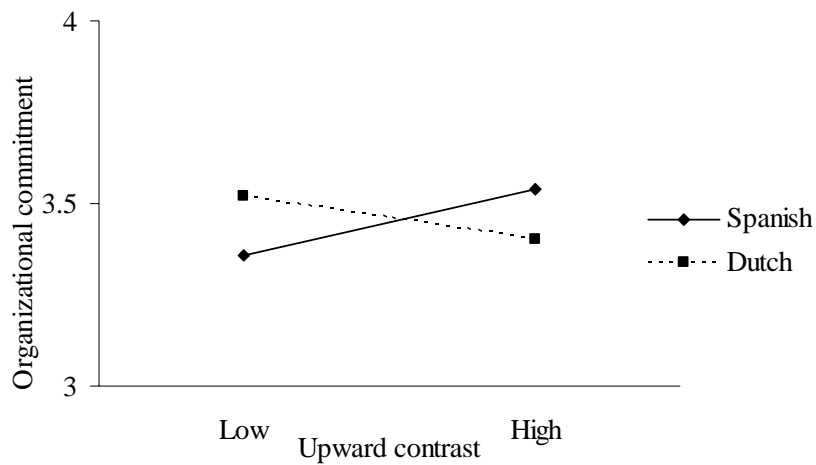
Figure 3. Interaction effect of upward contrast and nation on organizational commitment.

Discussion

In the present research we examined the relationship between social comparison responses and organizational identification and commitment. In addition, we examined whether this relationship differed between Spain and The Netherlands. Overall, we found partial but relevant support for our hypotheses. Specifically, as we hypothesized, there were differences between both countries in identification and contrast in social comparison. Upward and downward identification were more prominent among the Spanish than the Dutch, and viceversa downward contrast was more prominent among the Dutch; however no evidence was found for country differences in upward

contrast. In line with previous studies that found evidence for a relationship between independent and interdependent self-activation (i.e. "I" versus "We") and social comparison (Stapel & Koomen, 2001), our findings suggest differences in social comparison strategies between individuals from cultures that seem to differ in the type of salient self. We suggest that the Spanish because of their more interdependent self tend to focus more on their similarities with others. Conversely, we suggest that the Dutch because of their more independent self tend to focus more on their differences with others.

In addition, as expected, workers who focused on downward contrast and upward identification felt more committed and identified with their organization. In contrast, workers who focused on downward identification felt less identified with their organization, although no evidence was found for organizational commitment. These findings suggest that individuals who primarily perceive similarities with colleagues who are successful, identify themselves more with the organization and feel more committed to the organization. Moreover, individuals who distance themselves from unsuccessful colleagues identify more with the organization and feel more committed to the organizations. Furthermore, we expected differences between the Spanish and the Dutch in the relationship between social comparison strategies and organizational commitment and identification. The results suggest that there are indeed cultural differences in this respect. In particular, our findings provide evidence for the notion that upward identification is positively related to identification with and commitment to the organization among the Spanish. Notwithstanding, upward contrast was related to organizational commitment differently for the Spanish and the Dutch. Interestingly, upward contrast was negatively related to organizational commitment among Dutch workers, and positively related among Spanish workers. How can this be explained? White and Lehman's study (2005) showed that Asian Canadians perceived comparison with better-off others as a way of self-improvement. Likewise, we would like to argue that the Spanish perceive upward contrast as more positive than the Dutch. That is, the finding that the higher in upward contrast the more committed the Spanish felt, but not the Dutch, suggests that the Spanish derived some

benefit from this upward contrast. This reasoning would be supported if among the Spanish, but not among the Dutch, upward contrast would be positively correlated with upward identification. Indeed, this proved to be the case: the correlation among the Spanish was significant ($r = .16$), and among the Dutch it was not significant. Thus, it seems that the Spanish, while contrasting themselves, at the same time were inspired by better off others, in a way that positively affected their commitment to the organization. In contrast, the Dutch, given their individualistic attitude, may perceive better-off performing colleagues as competitors and different from themselves. Therefore, they seem to primarily derive negative feelings when they are confronted with them, negatively affecting their commitment to the organization. These findings may suggest that although confirmatory factor analysis has confirmed the four responses of social comparison in both samples, upward contrast is not interpreted equally among Dutch and Spanish. Therefore, it might be interesting for further studies to investigate the positive and negative consequences of upward contrast across cultures.

Previous research has already shown that social comparison responses are related to individuals' well-being factors and some personality traits. For instance, downward identification has been positively related to neuroticism, downward contrast has been positively related to extraversion (Van der Zee, et al., 1999), upward identification has been positively related to life satisfaction (Frieswijk, Buunk, & Steverink, 2004), and upward contrast and downward identification have been both positively related to burnout (Buunk & Ybema, 1997; Carmona et al., 2006). The present research expands these findings by showing the relationship between social comparison responses and individuals' attachment to the organization. These findings may have a number of practical implications for organizations. We suggest that in human resource interventions, attention could be given to these dysfunctional and functional processes which are related to social comparison responses. In particular, with a 360-degree feedback technique, social comparison information may be acquired and may reveal the levels of commitment and identification with the organization, providing crucial information from subordinates, peers and superordinates, as well as a self-

assessment in order to examine workers' occupational health in order to develop an effective strategic planning for the workers and the organization.

However, the present research has a number of limitations that need to be addressed in further studies. We need to measure and then examine more directly the relationship between independent and interdependent self and social comparison strategies in these two cultures. In addition, because employees also work in groups, future studies may investigate how the way individuals compare themselves with in-group and out-group members may affect individuals' commitment to and identification with their specific group and their organization.

Despite these limitations, this research is the first one to address and demonstrate that the way individuals compare themselves with others may have a relationship with the levels of commitment to and identification with the organization. Interestingly, the current research is also the first one to address country differences among Spanish and Dutch workers in social comparison responses. Thus, our findings underline the importance of studying cross-cultural differences in social comparison in the work-context.

In conclusion, because no previous research has been done in this area, the current research may contribute to expanding the Identification-contrast model (Buunk & Ybema, 1997) to commitment and identification with the organization. It may also contribute to highlight our understanding of how social comparison may be in different ways related to these variables in different cultures.

CHAPTER 5

Social Comparison at Work:
Culture, Type of Organization and Gender Differences[1]

Abstract
The present study examined the role of social comparison among workers in private and public organizations in The Netherlands and Spain. Social comparison involves positioning the self relative to other individuals on specific dimensions. The need for and the outcomes of social comparison may differ between individuals with independent and interdependent selves. Therefore, we expect differences in social comparison for people from more individualistic cultures (e.g., Dutch) and more collectivistic cultures (e.g., Spanish), between more competitive work contexts (e.g., private organizations) and more cooperative contexts (e.g., public organization), and between men and women. Aspects of social comparison such as direction (downward and upward), work dimensions (e.g., salary, performance), and specific target choices (e.g., men and women) were assessed in four field studies among 182 Dutch workers and 222 Spanish workers. Main results showed that the Spanish compared themselves more often upward than downward, individuals in private organizations compared themselves both upward and downward, and women in private organizations compared themselves more often with men than women in public organizations. These data suggest that the salience of an independent or interdependent self - as involved in different cultures, different work contexts and gender - is related to the social comparisons people make.

Individuals may compare themselves with others when they are with family, friends, or colleagues. They may make comparisons on characteristics such as intelligence, competence, and attractiveness; they may also make comparisons on other features such as salary, career opportunities, and

benefits. Social comparison refers to relating one's own characteristics to those of other similar others (Festinger, 1954; Wood, 1989), and it may provide individuals with information that they can use to evaluate, enhance, verify, and improve themselves (see Taylor & Lobel, 1989). Social comparisons may be especially manifest in work situations in which achieving success is highly appreciated and underperformance is not accepted. Indeed, the work sphere is a major area of life in which people may attain prestige, recognition, and self-esteem. Because the subjective assessment of such features is to an important extent based upon comparisons with others, employees may frequently engage in comparisons with their coworkers. However, individuals differ in the extent to which they engage in social comparison at work (e.g., Goodman, 1977). In the present research, we examined how social comparison processes within organizations may differ between Spain and the Netherlands, between private and public companies, and between men and women. We focused on three aspects of social comparison: the direction, the dimensions, and the choice of targets.

A basic assumption in the present research is that social comparison processes differ depending on the type of self that is salient in a particular context. Most researchers agree that social comparison refers to "the process of thinking about information about one or more other people in relation to the self" (Wood, 1996, pp. 520-521). However, the self may take different forms. According to Markus and Kitayama (1991), individuals may have an independent or an interdependent self-construal. Among individuals with an independent self-construal, one's thoughts, feelings, goals, and behaviours are seen as distinct from that of others. Among individuals with an interdependent self-construal, one's thoughts, feelings, goals, and behaviours overlap with that of others. That is, "the individuated or independent" self represents a self-concept that differentiates the self from others, whereas the "relational or interdependent" self represents a self-concept that reflects integration and inclusion of the self in the social world. Activating independent or interdependent self-related cognitions may differentially affect the way information about others is processed (cf. Brewer & Gardner, 1996). We assume that differences between the Dutch and the Spanish,

between private and public organizations, and between men and women, reflect in part differences in the type of self that is salient.

Cultural differences
Research shows that individuals of different cultural backgrounds may be characterized by different self-construals, which may influence their cognitions, emotions and relationships with other people (see Aron, Aron, & Tudor, 1991; Brewer, 1991; Markus & Kitayama, 1991; Stapel & Koomen, 2001; Trafimow, Triandis, & Goto, 1991; Triandis, 1989; Turner, 1987). There is evidence that people in collectivistic cultures tend to have a more interdependent self, whereas people in individualistic cultures tend to have a more independent self. Also, collectivistic cultures tend to value cooperation, whereas individualistic cultures tend to value competition (Triandis, 1995; Triandis & Suh, 2002). In particular, according to Hofstede's classic study (1980) as well as the GLOBE study of 62 societies (Gelfand, Bhawuk, Nishii, & Bechtold, 2004), Dutch culture is among the most individualistic in the world. Relative to people of many other cultures, Dutch people have higher self-confidence and looser bonds with others. Individual pride and respect are highly valued, and degrading another person is strongly disapproved. In addition, there is tolerance for a variety of opinions, a tendency to accept change easily and a moderate emphasis on following rules. Equality and opportunity for everyone are stressed, reflecting a low appreciation of differentiation.

Spanish culture differs in a number of aspects from Dutch culture. According to Hofstede (1980), Spanish culture falls around the middle on individualism, lower than Dutch culture. Recent research has shown that Spanish culture is more collectivist than individualistic (Gouveia, Clememte, & Espinosa, 2003). In particular, Spanish culture might be best described as a culture sharing Latin (i.e., hierarchical organizations) and European (i.e., equality at work) features. According to Fiske (1992), we assume that the Spanish have collectivistic features in that they tend to establish harmony in their interpersonal relationships as a sense of belonging to a social group. Both inequalities of power and wealth, as well as equality and opportunity are to a moderate degree accepted within the Spanish society (Hofstede,

1980). In particular, previous findings suggested that at work the Dutch value the 'Equality and Utilitarian involvement' dimension, and prefer coaching leaders; in contrast, the Spanish value the 'Hierarchy and Loyal Involvement' dimension and prefer directing leaders (Smith, 1997; Zander, 1997). To summarize, there are important differences between these two cultures. In particular, Spanish individuals seem to have a more interdependent self-construal, and Dutch individuals seem to have a more independent self-construal.

Differences between private and public organizations
Organizational context may also influence the way individuals perceive themselves in relation to others. One type of organizational context that has been previously investigated is whether an organization based on its characteristics is included in the private or public sector (Rawls, Ulrich, & Nelson, 1975; Solomon, 1986). Walmsley and Zald (1973) noted that one difference between private and public organizations may be due to the different patterns in ownership and funding. That is, organizations in the private sector operate in a competitive and dynamic environment, in which profitability is the ultimate criterion of success; they are responsive to the market and to customer demands. In the public sector, organizations are more focused on maintaining constituencies, seeking multiple and cooperative goals, and obtaining funding through a process which is susceptible to political influences (Porter & Van Maanen, 1970; Solomon, 1986). No previous studies have investigated whether differences between private and public organizations may influence ways in which individuals perceive themselves in relation to others at work. We assumed that in private organizations the more prominent aspects as competition, autonomy and self-attributes reliance are more appreciated and might favor the salience of an independent self, and in public organizations aspects as cooperation, dependency and ability to adjust and maintain harmony are more appreciated and might favor the salience of an interdependent self.

Gender differences

Previous research has shown that men describe themselves as more independent than women do, whereas women describe themselves as more interdependent than men do (Cross & Madson, 1997; Kemmelmeier & Oyserman, 2001b). That is, women view themselves more in terms of their relationships and connectedness with others and strive to develop self-defining relationships and to maintain connectedness. In contrast, men tend to be characterized more by an independent self-construal; that is men view themselves more as separated from others and strive to maintain a sense of autonomy. According to Cross and Madson (1997), these self-representations function "…. as lenses for the perception and interpretation of social information and social interactions" (p. 9). For example, women tend to make more references to close relationships than men when they are asked to describe themselves spontaneously (Rosenberg, 1989; Thoits, 1992), and women are more motivated to maintain relationships than are men (Cross & Madson, 1997). The literature on gender differences in *agency* and *communion* is also consistent with these notions. Men are in general characterized as more agentic, i.e. as independent, assertive, initiating, and as following their own wishes and desires, whereas women are characterized as more communal, i.e. as caring, emotionally expressive, responsive to others, and as seeking harmonious relationships (Deaux & LaFrance, 1998).

Social comparison direction

As described above, a common distinction between Dutch and Spanish culture, between private and public organizations, and between men and women may be the extent to which the independent or interdependent self is salient. Accordingly, we expected differences in social comparison tendencies between these groups.

Classic research on social comparison direction has generally shown that individuals tend to prefer comparisons with others who are thought to be slightly better off, consistent with Festinger´s notion of 'upward drive' (e.g., Miller & Suls, 1977). In particular, when a motive for self-improvement is activated, individuals tend to prefer to engage in comparisons with others who are doing better (i.e., upward comparison) to become inspired (Brickman

& Bulman, 1977; Buunk, Collins, Taylor, Van Yperen, & Dakof, 1990; Lockwood & Kunda, 1997). However, when individuals are threatened on a particular dimension, they may prefer to compare themselves with others who are thought to be worse than themselves on that dimension (i.e., downward comparison), presumably to feel better about themselves (Hakmiller, 1966; Wills, 1981). In the present research, we hypothesized that the preferred direction of comparison depends in part on the self that is salient (Kemmelmeier & Oyserman, 2001a), and therefore may differ according to culture, type of organization, and gender. Recent research has indeed shown differences in social comparison between cultures. White and Lehman (2005) found that students from collectivist cultures engaged more often in upward comparison than students from individualistic cultures, reflecting an interdependent self, and indicating a stronger motivation for adjusting the self to the context resulting in a self-improvement motive. In contrast, students from individualistic cultures engaged more often in downward comparison, reflecting an independent self, and indicating a stronger motivation for validating their internal attributes. We therefore expected that the Dutch will compare themselves downward more often than the Spanish (hypothesis 1) and that the Spanish will compare themselves upward more often than the Dutch (hypothesis 2).

Furthermore, we assume that the type of organizational context may affect the social comparison direction in a similar way. In particular, in a work-context in which social comparison might be daily relevant, some work-related aspects may be more prevalent than others. For instance, competition, autonomy, and self-attributes reliance may clearly be more valued aspects in private than in public organizations, whereas aspects as cooperation, dependency, ability to adjust, and maintain harmony may be more valued in public than in private organizations (Pradhan, Kumar, & Singh, 2004). We assume that in private organizations, where the independent self will be more salient, the salience of competition and being successful may induce individuals to demonstrate that they are doing better than their worse-off colleagues. In public organizations, however, where the interdependent self will be more salient, individuals may focus on self-improvement, paying more attention to others who are doing better than they are. Thus, we

expected that upward comparison will be more prominent among individuals in public than in private organizations (hypothesis 3) and downward comparison will be more prominent among individuals in private than in public organizations (hypothesis 4).

In addition, previous research has shown that men and women differ in how they define themselves regarding different aspects as autonomy and connectedness to others (Bakan, 1966; Cross & Madson, 1997; Gilligan, 1982; Helgeson, 1994; Lykes, 1985; Markus & Oyserman, 1989). Men with a more independent than interdependent salient self tend to focus on personal uniqueness, self-determination and personal agency. This focus may lead them to have a major tendency to self-enhance (Kemmelmeier & Oyserman, 2001b). Women with a more interdependent than independent salient self tend to focus on their relationships, on paying more attention to others, and being more responsive to others' feedback (Cross & Madson, 1997). Moreover, women may also concern with sharing standard and norms with others, and may therefore focus on self-improvement in order to not falling behind others rather than on self-enhancement. Thus, we expected that upward comparison will be more prominent among women than men (hypothesis 5) and downward comparison will be more prominent among men than women (hypothesis 6).

Comparison work dimensions

As previous research has shown, individuals' perceptions of which dimensions such as values, type of leadership, attitudes and goal-setting they more value at work may differ among individuals with different cultural backgrounds (for a review see Brodbeck et al., 2000; O'Connell & Prieto, 1998; Shenkar & Ronen, 1987; Smith, 1997; Smith, Dugan, & Trompenaars, 1996; Trompenaars, 1993). According to Tornow's conceptualization (1971), work dimensions may be described as 'inputs', that is, factors that individuals believe to make a contribution to the job, e.g., work effort and performance. and 'outcomes' described as factors that individuals believe that derive from the situation and are perceived as worthy, e.g., salary and career opportunities. We assume that individuals with different cultural backgrounds may compare different work aspects which may be related to

factors as outcomes and inputs. We assumed that the Dutch may, given their more independent self, compare more their inputs (performance, social skills and capacities) than their outcomes factors in order to validate their internal attributes and to self-enhance by showing that they contribute more to the organization than other colleagues. In contrast, the Spanish may, given their more interdependent self, compare more their outcomes (i.e., salary, work conditions and career opportunities) than their input factors in order to perceive the extent to which the organization is interested in the workers. Thus, we expected that the Dutch will compare inputs more often than the Spanish (hypothesis 7) and the Spanish will compare outcomes more often than the Dutch (hypothesis 8).

In a similar vein, we assume that individuals from different organizational context may differ in the work dimensions they prefer to compare themselves at. That is, for workers in public organizations, given their more interdependent self, an important consideration will be to obtain a relatively stable income and job position; therefore they may be more focused on outcomes than on inputs. In contrast, workers in private organizations will, given their more independent self, pay more attention to inputs as they will be more oriented towards competition. That is, they will be more oriented towards performing, and will therefore tend to compare what they contribute to their job. Thus, we expected that workers from public organizations will compare more their outcomes (hypothesis 9), whereas workers from private organizations will compare more their inputs (hypothesis 10).

Gender choice comparison
In line with Festinger's assumption (1954) there is a preference for comparison with similar others on relevant dimensions, an assumption that has garnered considerable empirical support (e.g., Gastorf & Suls, 1978; Tyler, Kramer, & John, 1999). In particular, there is evidence for a preference for comparisons with others of the same gender over others of the opposite gender (e.g., Feldman & Ruble, 1981; Miller, 1984). Further research has extended these findings indicating that females compare themselves more often with female than with male targets, identify themselves more with a

female than with a male successful target, perceive the situation of the female targets as more likely future for themselves, and experience more positive effect in response to female than to male successful targets (Buunk & Van der Laan, 2002). Therefore, we expected that compared to men, women will compare themselves more often with women (hypothesis 11), and compared to women, men will compare themselves more often with men (hypothesis 12).

However, culture may also influence whether individuals tend to compare with women and men. Although no previous research has specifically examined this question, research on culture and gender role attitudes has shown more liberal gender role attitudes or sex-role ideology in countries that emphasized individualism and de-emphasized authoritarian power structures (Williams & Best, 1990). Furthermore, collectivistic cultures tend to held more traditional gender attitudes than individualistic cultures. For instance, American women, characterized by a desire for independence and autonomy, tend to show more liberal attitudes about gender roles, and Ukranian women, characterized by interdependence features, tend to show more conventional male-female relations with an emphasis on traditional conceptions of men as "masculine" (i.e., strong, in charge) and women as "feminine" (i.e., passive, dependent), (Shafiro, Himelein, and Best, 2003). Applying this to the differences between Spain and The Netherlands, we expected that compared to the Spanish, the Dutch will compare more often with women (hypothesis 13), and compared to the Dutch, the Spanish will compare more with men (hypothesis 14). In addition, we expected differences among men and women in these two cultures. In the Dutch culture, there will be few or no differences between men and women in the frequency of comparison with other men or women targets (hypothesis 15), whereas in the Spanish culture, we expected that men and women will compare themselves more often with men (hypothesis 16).

Method
Participants
Four hundred and four workers from private organizations (57.4% Spanish and 42.6% Dutch) and from public organizations (53% Spanish and 47%

Dutch) participated voluntarily in the study. Both private organizations were multinational manufactory companies, from the automobile sector and from the appliance sector. And the public organizations were libraries in both cultures. In the private organizations, the Spanish sample was composed by 101 workers (75.3% males and 24.7% females) and the Dutch sample consisted of 75 workers (62.2% males and 37.8% females). In the public organizations, the Spanish sample was composed by 121 workers (25.6% males and 74.4% females) and 107 workers in the Dutch sample (12.1% males and 87.9% females). Of the Spanish participants, the 0.4% was younger than 21 years, the 27.4% was between 21-36 years, the 58.4% was between 37-55, and the 13.3 % was older than 55 years old. In the Dutch sample, the 0.5% was younger than 21 years, the 23% was between 21-36, the 65.6% was between 37-55, and the 10.9% was older than 55 years old. Overall, the access to the organizations that participated in the survey was arranged by their respective human resources sections. All the employees completed the survey administered by a researcher and without the presence of managerial personnel. Employees were told that the questionnaires would be kept completely anonymous and that the management would not be able to identify the individual respondents.

Measures

      Social comparison direction. To assess the frequency with which individuals compare themselves with others, we used a two-item measure that has been used in previous research (Buunk, Zurriaga, González-Romá, & Subirats, 2003). One question asked about upward comparisons: "How often do you compare yourself with others who are performing better than you are?" A second question asked about downward comparisons: "How often do you compare yourself with others who are performing worse than you are?" Responds were provided on 5-point scales, with points labelled *never* (1), s*eldom* (2), *sometimes* (3), *regularly* (4), and *often* (5).

      Work dimension comparisons. To measure the frequency with which individuals compare themselves with other on specific work-content dimensions, eight questions were formulated: "How often do you compare your (salary, work conditions, career opportunities, performance, social skills,

work effort and capacities) with other colleagues?" According to Tornow's classification (1971), these eight items were grouped in two factors, Inputs (related to the worker) and Outputs (related to the organization), through a factor analysis involving the eight items. Exploratory principal component analyses were conducted on the 8-items, and two factors were extracted in these analyses, one with an eigenvalue of 3.82 and the other with an eigenvalue of 1.16; these factors explained 54% and 16% of the variance, respectively. A varimax rotation was then performed. The first factor, comprising four items (performance, social skills, capacities, and work effort), was labelled "Inputs or related to the worker"; these items had a Cronbach's alpha of .86. The second factor, comprising three items (salary, career opportunities and work conditions), was labelled "Outcomes or related to the organization"; these items had a Cronbach's alpha of .80. The item regarding work effort had low loading and thus was deleted. Results showed that the items could be grouped in two factors as we had expected.

Target choice comparison. To measure the frequency with which individuals compare themselves with men and women, two questions were formulated: "How often do you compare yourself with men?" and "How often do you compare yourself with women? A 5-point scale was used, with points labelled (1) "never" to (5) "often".

Results

The intercorrelations between the study variables are shown in Table 1. In addition, to test the hypotheses, we performed Univariate Analyses of Variance (ANOVA) to examine the effects of nation, type of organization, and gender on the overall social comparison measures (direction, dimensions and choice comparison).

Table 1. *Intercorrelations between the Study Variables*

Variable	1	2	3	4	5	6	7	8
1 Sex	-							
2 Type of organization	.51***	-						
3 Nation	.15**	.04	-					
4 Upward comparison	-.09	-.17**	-.07	-				
5 Downward comparison	-.06	-.13**	-.08	.50***	-			
6 Outcomes comparison	-.04	-.11*	-.36***	.36***	.33***	-		
7 Inputs comparison	-.07	-.14**	.04	.53***	.45***	.53***	-	
8 Men comparison	-.11	-.22***	-.04	.36***	.46***	.43***	.53***	-
9 Women comparison	.12*	-.06	.12*	.37***	.41***	.34***	.53***	.66***

Note. *$p < .05$. **$p < .01$.***$p < .001$.

Social comparison direction

Regarding downward comparison, there were no main effects of nation and gender (hypothesis 1 and 6). In line with Hypothesis 4, workers in private organizations compared themselves more often downward ($M = 2.40$, $SD = .87$) than workers in public organizations ($M = 2.17$, $SD = .80$), $F(1, 379) = 4.27$, $p < .05$. That is, in private organizations, which are often more competitive than public organizations such as libraries, workers may tend to self-enhance to show they are better-off and boost their self-esteem.

As regards upward comparison, the results supported Hypothesis 2, $F(1, 376)$ = 4.95, $p < .05$. The Spanish tended to compare themselves upward more often

(M = 2.47, SD = .85) than the Dutch (M = 2.35, SD = .74). Thus, the Spanish tend to focus on others who are doing better to improve themselves at work. In addition, a main effect of type of organization on upward comparison was found, $F(1, 377)$ = 8.31, $p < .01$. However, it was not in the expected direction as specified by Hypothesis 3: Workers in private organizations compared themselves more often upward (M = 2.57, SD = .80) than workers in public organizations (M = 2.30, SD = .79). This finding suggests that workers in private organizations are involved in a more competitive context which leads them to pay more attention to successful others than workers in public organizations. Regarding Hypothesis 5, there was no main effect of gender on upward comparison. However, consistent with the hypotheses, two significant interaction effects were found. First, as shown in Figure 1, results showed an interaction effect between gender and nation, $F(1, 377)$ = 4.19, $p < .05$. Spanish women compared themselves upward more often (M = 2.48, SD = .82) than Dutch women did (M = 2.24, SD = .68). In contrast, Dutch men compared upward more often (M = 2.59, SD = .81) than Spanish men did (M = 2.46, SD = .89). Second, as shown in Figure 2, there was an interaction effect between gender and type of organization was found, $F(1, 377)$ = 4.39, $p < .05$. In private organizations, men engaged more frequently in upward comparison (M = 2.64, SD = .84) than women (M = 2.42, SD = .67), whereas in public organizations, women engaged more often in upward comparison (M = 2.34, SD = .78) than men (M = 2.13, SD = .83).

Work dimension comparison. We performed two ANOVA's to examine the effects of nation, gender, and type of organization on the two work dimensions of comparison: inputs and outcomes (Hypothesis 7-10). For the inputs dimension (i.e., performance comparison), we did not find any effect of nation (hypothesis 7). However, in line with hypothesis 10, a significant main effect of type of organization was found, $F(1, 398)$ = 6.78, $p < .01$. That is, workers from private organizations (M = 2.78, SD = .81) compared their inputs more often than workers from public organizations (M = 2.53, SD = .80).

For the outcomes dimension (i.e., salary comparison) our expectations were partially confirmed (hypothesis 8 and 10). Two significant main effects were found, one of nation, $F(1, 394)$ = 56.51, $p < .001$ and the other of type of

organization, $F(1, 394) = 5.42$, $p < .05$. That is, the Spanish focused more on outcome comparisons, ($M = 2.88$, $SD = .88$) than the Dutch ($M = 2.24$, $SD = .71$). Moreover, workers from private organizations focused also more on outcomes comparisons ($M = 2.71$, $SD = .90$) than workers from public organizations ($M = 2.51$, $SD = .84$). Unexpectedly, as shown in Figure 3, a three-way interaction effect between nation, type of organization and sex was found for outcomes dimension $F(1, 394) = 3.70$, $p < .05$. Spanish women in private organizations tended to compare most frequently the outcomes dimension at work.

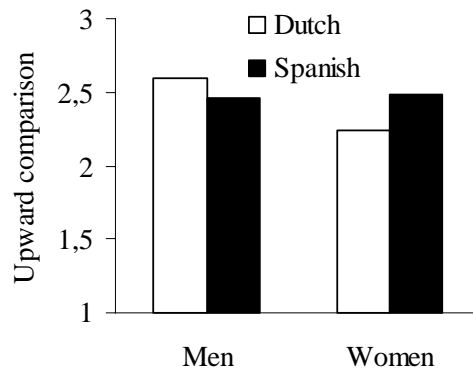*Figure 1. Interaction effect of gender and nation on upward comparison.*
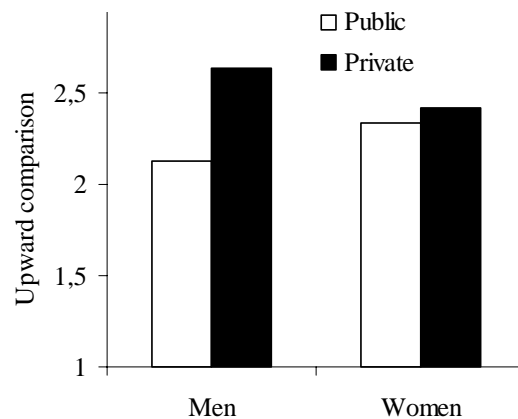

Figure 2. Interaction effect of gender and type of organization on upward comparison.

Target choice comparison

Social comparisons with women. Regarding comparisons with women, the results showed a significant main effect of gender as expected in Hypothesis 11. Women compared themselves more often with other women ($M = 2.19$, $SD = .92$) than men ($M = 1.96$, $SD = .86$), $F(1, 392) = 9.48$, $p < .01$. We did not find a main effect of culture on comparison with women. However, two interaction effects between gender and type of organization, and between culture and type of organization were found. As shown in Figure 4, compared to men in private and public organizations, women in private organizations compared themselves more often with women ($M = 2.58$, $SD = .95$) than women in public organizations ($M = 2.09$, $SD = .89$), $F(1, 392) = 4.23$, $p < .05$. Moreover, especially in public organizations the Dutch ($M = 2.24$, $SD = .89$) compared themselves more often with women than the Spanish ($M = 1.88$, $SD = .88$), $F(1.392)$, 5.53, $p < .05$ (see Figure 5).

Figure 3. *Interaction effect of gender, type of organization and culture on outcomes dimension of comparison.*
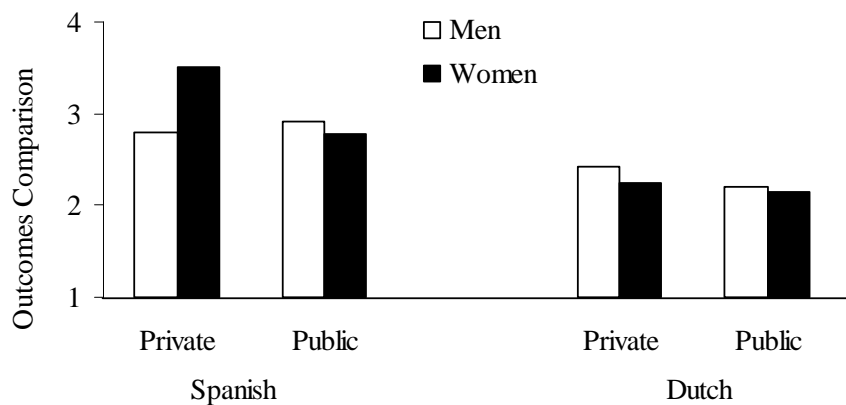
Figure 4. *Interaction effect of gender and type of organization on comparison with women.*
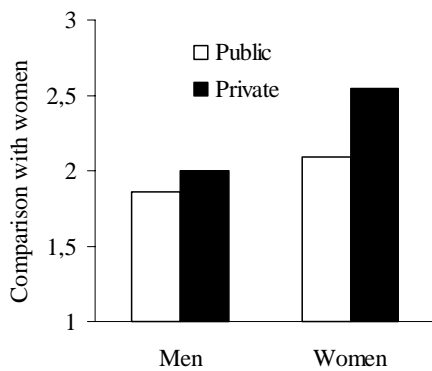

Figure 5. *Interaction effect of culture and type of organization on comparison with women.*
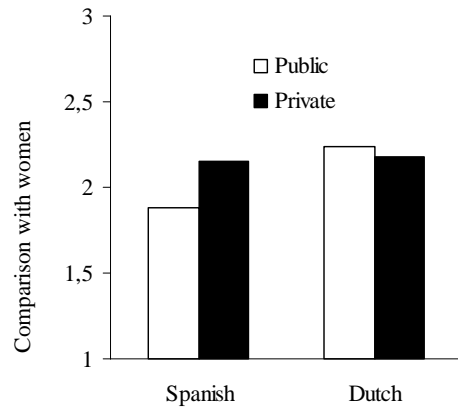

Figure 6. *Interaction effect of gender and culture on comparison with men.*
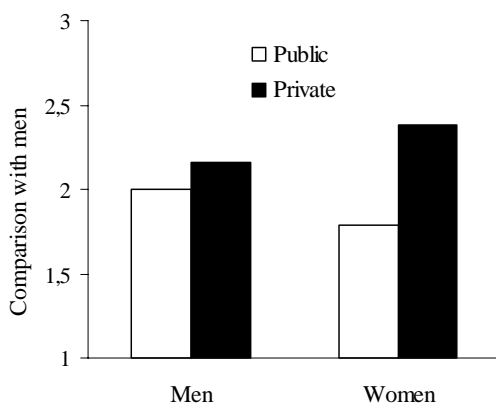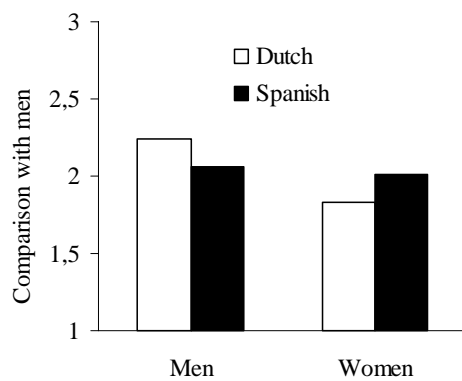

Figure 7. *Interaction effect of gender and type of organization on comparison with men.*

Social comparisons with men. There were no main effects of culture and sex on comparison with men, as it was expected in Hypothesis 12 and 14. Nevertheless, an interaction effect between gender and type of organization $F(1, 392) = 5.59$, $p <.01$, and between gender and culture, $F(1, 392) = 4.78$, $p <.01$ were found. As shown in Figure 6, women in private organizations compared themselves more often with men ($M = 2.41$, $SD = 1.04$) than women in public organizations ($M = 1.79$, $SD = .80$). In addition, as shown in Figure 7, in line with hypothesis 16, Spanish women compared themselves more often with men ($M = 2.02$, $SD = .97$) than Dutch women ($M = 1.83$, $SD = .81$).

Discussion

The present study examined the effects of nation, type of organization, and gender on specific aspects of social comparison such as direction, dimensions, and target choice comparison. Overall, we assumed that individuals may present differences in social comparison depending on which culture individuals live in, in which context they work and if they are a man or a woman. Regarding social comparison direction, our expectations were partially confirmed. First, the Spanish compared themselves more often upward (self-improvement orientation) than the Dutch (self-enhancement orientation). This finding is in line with a recent study in which Asian Canadians showed more upward than downward comparisons (White & Lehman, 2005). Second, workers in private organizations compared more often downward and upward than workers from public organizations. Individuals in private organizations are encouraged to compete showing both a need for self-improvement and for self-enhancement, this result may be partially in line with Stapel and Koomen (2005) who demonstrated that "… competition activates a differentiation mindset in which self-other differences are emphasized more—with contrast as the likely result" (p. 1036). Thus, a competitive mindset and context may lead individuals to self-enhance. Third, we found evidence that the impact of culture differs for women and men in the social comparison direction. Among the Spanish, women compared upward more often than men. In contrast, among the Dutch, men compared

upward more often than women. These findings may extend previous research on culture, gender, and social comparison direction (Kemmelmeier & Oyserman, 2001a, b; White & Lehman, 2005). Regarding gender and organizational context, our findings suggest that upward comparison is perceived differently by men and women. Men in private organizations engaged more frequently in upward comparison and women in public organizations engaged more often in upward comparison.

Regarding work comparison dimension, some evidence for the hypotheses was found. Workers in private organizations were the most focused on inputs and outcomes dimension comparison. Specifically, these findings suggest that in competitive contexts, the need for social comparison and for becoming successful is higher than in public contexts. Are these preferences for comparison different across cultures? First, results showed that compared to the Dutch, the Spanish compared more often their outcomes. This finding provides support for the interpretation that the Spanish prefer to compare aspects related to standard norms (i.e., salary) which benefit them than to validate their internal attributes. However, gender differences were found across these two cultures. In particular, results suggested that Spanish women in the private organization were the most focused on outcomes dimension comparison. This finding may reflect the actual Spanish society in which differences between women and men in aspects such as salary and career opportunities are prominent at work, especially in private organizations. Consistent with these findings, the results showed that women in private organizations compared themselves more often with men than women in public organizations, and that Spanish women compared themselves more often with men than Dutch women.

The present results are in line with the assumption that there is a strong influence of context and culture on which part of the self is salient (see also Markus & Kitayama. 1991; Turner, 1987). Therefore, future research might further examine the extent to which individuals' competition orientation and self-construal (independent and interdependent self) affect how individuals compare themselves with other colleagues at work. We suggest that self-construal salience might be an important determinant of

whether social comparison shows self-enhancement and self-improvement motives.

Considering the practical implications of the present findings, our results suggest that there are differences among individuals who feel threatened when seeing their colleagues performing worse and individuals who feel inspired when seeing other colleagues performing better. These differences might be taken into account in order to study further interventions concerning the relationship between positive and negative effects of social comparison and well-being in different cultures, organizations and between men and women.

CHAPTER 6

Discussion

The present dissertation addressed the role of social comparison from an identification-contrast perspective (Buunk & Ybema, 1997) with respect to relevant psychological factors in the academic and work areas. On the basis of this model, four types of social comparison responses were distinguished, i.e., upward identification, downward contrast, downward identification and upward contrast. On the one hand, we examined the relationship between these social comparison responses and self-efficacy, goal orientation, and performance in the academic area. On the other hand, we examined the relationship between the social comparison responses and coping styles, burnout, organizational commitment and organizational identification in the work area. In addition, we investigated the differences in these social comparison responses between the Dutch and the Spanish. Further, we examined cultural, context and gender differences in a number of basic aspects of social comparison, i.e., comparison direction, comparison dimensions and choice of comparison target. This chapter discusses and summarizes the main findings, presents a number of theoretical and practical implications, and ends with a general conclusion.

Summary of the Findings

In Chapter 2, we presented the results from a study among 120 university students in which we examined the relationship between goal orientation, social comparison and self-efficacy, and the relationship of these variables with academic performance. Furthermore, we investigated how the relationship between goal orientation and self-efficacy perceptions was mediated through the social comparison responses, and how, in turn, self-efficacy was related to academic performance. According to Bandura (1986), self-efficacy is determined by four sources. One of those sources is the vicarious experience provided by social models which is described as a learning process through which individuals perceive successful and

unsuccessful role models perform. That is, seeing people similar to oneself succeed by sustained effort may raise observers' beliefs that they also possess the capabilities master comparable activities to succeed. By the same token, observing similar others' fail despite high effort may lower observers' judgments of their own efficacy and undermine their efforts. The impact of modeling on perceived self-efficacy is strongly influenced by perceived similarity to the model. Therefore, social comparison can be conceptualized as a type of vicarious experience, through which individuals may learn how they are doing compared to other individuals. In particular, according to the identification-contrast model (Buunk & Ybema, 1997) when individuals compare themselves with others they may identify and contrast themselves downward and upward with others, and this may influence their self-efficacy perceptions. However, it might be that this relationship between social comparison and self-efficacy may be affected by the goal orientation individuals engaged in. In particular, according to with Higgins (1997), individuals may have two types of goal orientations: a promotion orientation, i.e., a focus on promoting success, and a prevention orientation, i.e., a focus on preventing failure. Therefore, we expected that these specific goal orientations would be related to the way individuals' compare themselves with others, and through this to their self-efficacy and subsequent performance.

The results showed partial support for the expected hypotheses. In particular, students who had a tendency to promote success felt similar to better-off students (i.e., upward identification), and perceived a higher self-efficacy. In contrast, students who had a tendency to prevent failures felt similar to worse-off students (i.e., engaged more in downward identification), dissimilar to better-off students (i.e., engaged more in upward contrast), and perceived less self-efficacy. Finally, the results showed that individuals who had a tendency to prevent failures, felt dissimilar to better-off students, and that this upward contrast mediated between a prevention orientation and self-efficacy perceptions and their subsequent academic performance. These findings suggest that a strong focus on preventing failures makes people compare themselves to better-off others in a negative way, which decreases their self-efficacy which, in turn, undermines their performance, and that a

stronger focus on promoting success enhances directly individuals self-efficacy perceptions.

In Chapter 3, we examined the independent role of the social comparison responses and coping styles in predicting burnout over the course of the academic year among 558 teachers. Previous research has shown evidence for the relationship between coping styles and burnout, and between burnout and social comparison (Brenninkmeijer, Van Yperen, & Buunk, 2001). However, the effects upon burnout of social comparison responses as conceptualized in the identification-contrast model have not been both directly examined over time, and have not been related to coping styles. We expected that, overall, the way individuals compare themselves with others and the coping styles they use in stressful situations may influence their development of burnout, and that the coping styles would be related to the four specific social comparison responses. The results revealed that teachers who felt similar to worse-off teachers (i.e., engaged in upward identification), who felt dissimilar to better-off teachers (i.e., engaged in upward contrast), and had a palliative coping style (i.e., tended to ignored the situation), reported a higher level of burnout. In contrast, teachers who felt similar to better-off teachers (i.e., engaged in upward identification) and had a direct coping style (i.e., focusing on solving the problem) reported a lower level of burnout.

The most important finding from this study was that teachers who at the beginning of the first term of the academic year identified with worse-off colleagues developed more burnout over time, and that this effect was independent of the effect of coping styles, which did not predict a change in burnout over time. However, over time a direct coping style was negatively related to downward identification and upward contrast, and positively related to upward identification. Thus, those who used a direct coping style felt, on the one hand, similar and inspired by better-off others, and on the other hand, not inferior to better-off others and dissimilar to worse-off others. In contrast, a prominent palliative coping style was positively related to downward identification, and over time to downward contrast. Thus, while those who used a palliative coping style tended to perceive similarities with worse-off others, over time they seemed to focus more on how dissimilar they

were to those worse-off. To conclude, we showed that social comparison in the sense of engaging in identification with others worse-off led to an increase of burnout over time, and that the coping styles were over time consistently related with the responses to social comparison.

Next, in Chapter 4 we examined the differences in identification and contrast in social comparison between 404 Dutch and Spanish workers. In addition, we investigated the relationship between these social comparison responses and organizational commitment and identification. Social comparison implies relating the self to others. However, the self may take different forms, and may involve a more independent or a more interdependent self-construal (Markus & Kitayama, 1991). As it has been documented that there are differences between cultures in the prominence of these two types of self-construal, there may also be differences between cultures in the responses to social comparison. We thus examined the differences in these responses between the Dutch and Spanish. In addition, we examined how these responses were related to identification with and commitment to the organization.

First, it was expected that contrast in social comparison would be more prominent among the Dutch, whereas identification in social comparison would be more prominent among the Spanish. In addition, it was expected that contrast responses would be more related to organizational commitment and identification among the Dutch, and that identification responses would be more related to organizational commitment and identification among the Spanish. The results supported in part the hypotheses. Upward and downward identification responses were indeed more prominent among the Spanish than among the Dutch, whereas downward contrast responses were indeed more prominent among the Dutch than among the Spanish. Moreover, as expected, culture influenced the relationship between the social comparison responses and organizational commitment and identification. In particular, the higher the Spanish but not the Dutch were in upward identification, the more commitment and identification they reported. Moreover, the higher individuals were in upward contrast the less organizational commitment the Dutch experienced, and the more organizational commitment the Spanish experienced.

To complement the issues examined in Chapter 4, in Chapter 5 we further examined cultural, context and gender differences in a number of basic aspects of social comparison, i.e., comparison direction, comparison dimensions and choice of comparison target in a work context. On the basis of theorizing about the independent-interdependent self (Markus & Kitayama, 1991), we assumed that an interdependent self would be more salient in a more collectivistic culture like the Spanish, in public organizations, and among women. In contrast, we assumed that an independent self would be more salient in a more individualistic culture like the Dutch, in private organizations, and among men. Overall, we expected that these differences in self-construal would affect whether individuals compare themselves more often upward or downward, on which dimensions individuals prefer to compare themselves, and whether they prefer to compare themselves with men and women.

The results showed that the Spanish compared themselves more often upward than the Dutch, and that workers in private organizations compared themselves more often downward as well as upward than workers from public organizations. In addition, among the Spanish, women compared themselves more often upward than men did. In contrast, among the Dutch, men compared themselves more often upward than women did. Furthermore, men in private organizations engaged more frequently in upward comparison, whereas women in public organizations engaged more often in upward comparison. The results for the social comparison dimensions showed that workers in private organizations were the most focused on both the inputs (e.g., performance) and outcomes (e.g., salary) dimension of comparison when comparing themselves with others. Specifically, these findings suggest that in the probably more competitive context of a private organization, individuals tend to focus more on how they are doing with respect to their outcomes as related to their inputs in comparison with others. In addition, compared to the Dutch, the Spanish compared more often their outcomes. However, not only culture and context influenced which dimensions individuals compared themselves more often at. Interestingly, our findings suggest that there were also gender differences in this respect. In particular, Spanish women in private organizations were in

their social comparisons the most focused on outcomes, suggesting that Spanish women with a more assumed interdependent self preferred to compared more often their outcomes than their inputs at work. Furthermore, women in private organizations compared themselves more often with men than women in public organizations, and Spanish women compared themselves more often with men than Dutch women. We will return to discuss this issue in the next below section.

In sum, we have shown that social comparison from the identification-contrast model is a relevant factor to take into account for many psychological processes that may influence out daily life.

Theoretical Implications

Social comparison theory is a theory of self-evaluation and postulates that people have a "drive" to evaluate their opinions and abilities. Decades of research have shown that people may compare themselves on many other personal characteristics, such as their income, attractiveness, and health, but the theory's original emphasis on opinions and

abilities is still quite relevant to a consideration of peer influences in a variety of different contexts (Suls & Miller, 1977; Suls & Wills, 1991; Wood, 1996). In the present dissertation, we show not only that social comparison is an important process in the academic and organizational realm, but we also provide evidence that social comparison preferences and the responses to social comparison may depend on gender, organizational context, and culture. Therefore, our results contribute to the literature on social comparison in a number of ways. In general terms, the studies contribute to understanding the role of identification and contrast in social comparison in relation to psychological processes such as goal orientation, self-efficacy and performance in the academic area, and psychological processes as coping styles, burnout, organizational identification and commitment in the work area. Further, the present dissertation contributes to highlighting the differences in social comparison between cultures, between different organizational contexts, and between men and women.

Social Comparison Responses in the Academic and Work Areas

Previous research on social comparison has generally shown that when a motive for self-improvement is activated, individuals tend to prefer to engage in comparisons with others who are doing better (Brickman & Bulman, 1977; Buunk, Collins, Taylor, Van Yperen, & Dakof, 1990; Lockwood & Kunda, 1997; Lockwood, Dolderman, Sadler, & Gerchak, 2004), whereas when individuals are threatened on a particular dimension, they may prefer to compare themselves with others who are thought to be worse than themselves on that dimension (Buunk & Ybema, 2003; Gibbons, et al., 2002; Hakmiller, 1966; Wills, 1981). In addition, the identification-contrast perspective (Buunk & Ybema, 1997), postulates that upward and downward comparisons may be interpreted in a positive or negative way, depending on whether individuals contrast or identify themselves with others. In the present dissertation, we showed that these responses to social comparison are related to a variety of psychological processes. Below we present a series of conclusions with respect to identification and contrast responses in social comparison.

The Identification-Contrast Responses and Self-efficacy

As shown in Chapter 2, we conclude that individuals who compared themselves with successful others and perceived themselves different from these better-off others (e.g., upward contrast) manifested lower self-efficacy perceptions. Previous research has shown that the exposure to the successful attainments of others may increase one's self-efficacy (Bandura, Reese, & Adams, 1982; Brown & Inouye, 1978; Kazdin, 1979; Schunk, 1986), and that observing similar others' fail may lower observers' judgments of their own efficacy and may undermine their efforts (Vrugt & Koenis, 2002; Vrugt, Oort & Zeeberg, 2002). Thus, our research suggests that feeling frustrated because of the superior performance of others, may undermine one's self-efficacy. Although the specific causal link between upward contrast and self-efficacy can not be ascertained with our correlational study, we assume that upward contrast may more likely lead to a low self-efficacy than the other way around. That is, in the case that individuals would have a low self-efficacy it would seem not very likely to be motivated by dissimilar better-off others

instead of by worse-off others, as individuals experiencing a low well-being would focus more on comparisons with worse-off others (e.g. Wills, 1981).

The Identification-Contrast Responses and Goal Orientation
Our results suggest that promotion and prevention goal orientation are in a meaningful way related to the way individuals identify or contrast themselves with better-off or worse-off others. In particular, individuals who focus on preventing failure tend to identify themselves with worse-off others and to contrast themselves with better-off others, which seems to affect negatively how these individuals evaluate their performance. Thus, those who are inclined to prevent failure tend to feel inferior to better-off individuals and similar to worse-off others. In contrast, individuals who focus on promoting success identify themselves with better-off others, which seems to affect positively how they evaluate their performance. Thus, those who promote success feel inspired and similar to better-off others. These findings are consistent with previous research that has shown that promotion-focused individuals find positive role models to be especially motivating, and that prevention-focused individuals find negative role models to be especially motivating (Lockwood et al., 2002).

Identification and Contrast Responses and Burnout
An important finding is that the way individuals identify or contrast themselves with better-off or worse-off others may play an important role in the development of burnout, especially the identification with worse-off others. Although previous research has found that lower levels of burnout are related to the positive interpretation of upward comparisons, and that higher levels of burnout are related to the negative interpretation of downward comparison (Brenninkmeijer, Van Yperen, & Buunk, 2001; Buunk, Ybema, & Gibbons, 2001), we extended these findings by showing that individuals who perceive similarities to worse-off others and dissimilarities to better-off others may develop negative feelings about themselves and show higher levels of burnout, whereas individuals who perceive similarities to better-off others may develop positive feelings about themselves and show lower levels of burnout. Interestingly, especially over time individuals who perceive similarities to worse-off others became the most burned-out.

Identification and Contrast Responses and Coping

In addition, the present dissertation provides a number of important findings on the relationship between coping styles and identification and contrast in social comparison. Former research has shown that social comparison may be interpreted as a way of coping with stressful situations (Bennenbroek, et al., 2003; Taylor & Lobel, 1989; Van der Zee, et al., 2000; Wills, 1997). However, no previous research has shown the relationship between identification and contrast responses and coping styles over time. Therefore, our findings extend the literature on social comparison and coping by showing that over time a direct coping style does predict a higher level of identification with better-off others, a lower level of identification with worse-off others, and a lower level of contrast with better-off others. That is, the use of a direct coping style seems to induce a perception of oneself as similar to well-functioning others, and as different from poorly functioning others (cf. Lockwood, Jordan & Kunda, 2002; Lockwood & Kunda, 1997). Moreover, our findings suggest that while individuals with a palliative coping style identify themselves with worse-off others, over time, the use of a palliative coping style seems only to lead to an increase in the use of downward contrast. This result is a nice demonstration of Wills' (1997) argument that downward contrast is engaged in primarily when instrumental action is not possible and functions primarily as a strategy aimed at reducing negative emotions.

To conclude, as social comparison responses were related to burnout, independently of coping styles, the present findings may extend the literature on social comparison and occupational health by showing the relevant role that in particular, identification or contrast with better-off or worse-off may play in the development of burnout over time.

Organizational Identification and Commitment

A next contribution to the literature constitutes our findings on how the responses to social may affect their commitment to and identification with the organization. Organizational attachment has been identified as a relevant key-factor for keeping workers in the organization, decreasing turnover intentions, and promoting a satisfying work environment (Ashforth & Mael, 1989; Benkhoff, 1997; Mael & Ashforth, 1995; O'Reilly & Chatman, 1986;

Ouchi, 1980). Although many factors have been related to attachment to the organization, no research has directly focused on examining how the way individuals compare their performance with others is related to their attachment to the organization. Our results suggest that individuals who feel similar to better-off or feel dissimilar to worse-off others may develop a positive view of themselves which may increase their commitment to, and identification with, the actual organization they work for. In contrast, individuals who feel similar to worse-off others may develop a negative view of themselves, which may affect negatively their organizational commitment and identification perceptions. Of course, these results are based on a correlational study, and therefore any inference about causality should be made with caution. In fact, our results may be also interpreted in the reverse direction. That is, individuals with high levels of commitment and identification with the organization may be motivated by focusing on identification with better-off others and contrast with worse-off others. In fact, as previously has been shown, assimilation in response to upward comparison, i.e. deriving positive affect from seeing one's colleagues performing better than oneself has been related to the perception of a cooperative climate at work (Buunk, Zurriaga, Peiró, Nauta, & Gosalvez, 2005).

Identification and Contrast Responses and Culture

We have provided evidence that there are cultural differences in the way individuals identify or contrast themselves with others. Compared to the Spanish, the Dutch contrasted themselves with worse-off others, and compared to the Dutch, the Spanish identified themselves more often with better-off and worse-off others. That is, the Spanish are more focused on feeling inspired by others better-off, as well as on feeling annoyed or threatened by others worse-off. In contrast, the Dutch seem to be more focused on feeling happy as a result of feeling superior to others worse-off. These findings are in part in line with research in the tradition of self-construal theory (Markus & Kitayama, 1991) that shows that an independent self may be more prominent in individualistic cultures, whereas an interdependent self may be more prominent in collectivistic cultures (Leung, 1997; Triandis & Suh, 2002). In addition, our findings are in part in line with

Stapel and Koomen findings (2001), which show that an independent self may activate contrast processes, and an interdependent self may activate assimilation processes.

Besides, our results suggest that there are cultural differences in the relationship between identification and contrast in social comparison and organizational identification and commitment. We showed that compared to Dutch workers, the Spanish workers who identified themselves with better-off others had higher levels of organizational identification and commitment. Interestingly, upward contrast was differently related to organizational commitment for the Spanish and the Dutch. In particular, Dutch workers who contrasted themselves with better-off others had lower levels of organizational commitment, whereas Spanish workers who contrasted themselves with better-off others had higher levels of organizational commitment. Thus, it seems that the Spanish while contrasting themselves, at the same time are inspired by better off others, in a way that affects positively their commitment to the organization. In contrast, the Dutch seem, as a result of their individualistic attitude, to perceive better-off performing colleagues primarily as competitors. These findings may suggest that it is important to take into account culture as a possible factor which may influence the way individuals compare themselves with others and their attachment to the organization.

Social Comparison Direction and Culture

A next conclusion from our results is that culture may influence the preferred direction of social comparison. As shown by White and Lehman (2005), there are differences in social comparison direction between individuals with individualistic versus collectivistic backgrounds. Our results provide additional support for such differences. That is, the Spanish compared themselves more often upward than the Dutch, which seems to be related to differences between Spanish and Dutch culture in the degree of individualism versus collectivism. This upward preference among the Spanish may suggest a preference for the Spanish to be more critical about themselves, and as a result of this develop a motive for improvement. According to Markus and Kitayama (1991), interdependent and independent self-construal gives rise to differences in cognition, emotion and motivation.

One of the assumed differences in motivation is that people with independent selves are motivated to enhance one's self, while people with interdependent selves are more self-critical to one's self. Consistent with our findings, recent research has suggested that the purpose of social comparison in a collectivistic culture as Japan is not self-enhancement, but self criticism with respect to the group (Kitayama, Markus, Snibbe, & Suzuki, 2003).

Social Comparison Direction and Organizational Context
We showed that there are differences in social comparison direction depending on the organizational context.
In particular, compared to individuals in public organizations, individuals in private organizations compare more often upward as well as downward. These results may suggest that individuals in private organizations are more encouraged to compete by showing both a need for comparisons with better-off and worse-off other colleagues. In private organizations, aspects as being successful and promoting are more prominent than in public organizations. These insights are supported by Stapel and Koomen's findings (2005), "… competition activates a differentiation mindset in which self-other differences are emphasized more—with contrast as the likely result" (p. 1036). Our research provides additional support for this notion in an organizational context. However, it must be noted that is also possible that there is a selection in the sense that more competitive individuals are attracted to private organizations. That is, we cannot conclude with certainty whether there are the differences in the organizational context that make individuals compare themselves more or that there are individual characteristics in the tendency to compete that make individuals seek out jobs in private organizations.

Social Comparison Direction and Gender
In the Spanish culture, women, but not men, compared upward more often, whereas in the Dutch culture, men, but not women, compared upward more often. These findings suggest that the effect of culture on social comparison direction depends on gender (Kemmelmeier & Oyserman, 2001; White & Lehman, 2005). However, to really understand the meaning of these findings,

we suggest that we need to pay attention to two related factors, "competition", which may be a more prominent feature among men than among women, and "self-criticism" which may be a more prominent feature among women than among men. In accordance with these insights, previous research has shown that competition is considered normative in boys' but not in girls' friendships, that girls find competition unusual and incongruous with the norms of their groups, and that boys tend to expect competitive behavior in prospective friends and are not be upset by it (Hartup, 1992). However, our findings suggest that the cultural context may be also an important moderator of the effects of competition. That is, competition is often seen as a feature of societies where the achievement of individual goals is valued, and it is seen as inconsistent with collectivistic cultures that focus on group goals (e.g., Ryckman, van den Borne, & Syroit, 1992; Schneider, Woodburn, del Pilar Soteras del Toro, 2005).

In addition, previous research has shown that women may be more self-critical or less self-enhancing than men (Kitayama, Markus, Hazel, & Matsumoto, 1997). In fact, consistent with our findings, we suggest that holding a self-critical attitude vis-a-vis socially shared standards of excellence may be a symbolic act of affirming one's belongingness to the social unit, which may be a primary need for women and not for men in order to connect with others, as well as may be relevant for more collectivistic cultures than more individualistic cultures (Kitayama, et al., 1997). Thus, we suggest that Spanish women with a more prominent interdependent self may tend to compare themselves more often upward in order to be more "self-critical", whereas Dutch men with a more prominent independent self may tend to compare upward more often in order to be more "competitive".

In addition, in line with the previous reasoning, our results showed gender and context differences by showing that men in private organizations engaged more frequently in upward comparison and that women in public organizations engaged more often in upward comparison. In fact, these findings might suggest that men and women compare themselves upward or downward in different organizational for different motives that may be in part related to competition and self-criticism. Thus, we suggest that in our study, women in public organizations with a more prominent interdependent

self may tend to compare themselves more often upward in order to be more "self-critical", whereas that men in private organizations with a more prominent independent self may tend to compare upward more often in order to be more "competitive". In fact, further research is needed to examine the motivations among men and women for comparing themselves with better-off and worse-off others in private and public organizations as well as in different cultures.

Social Comparison and Work Dimensions

Workers in private organizations were the most focused on comparing both their inputs (e.g., performance) and outcomes (e.g., salary). Specifically, these findings may suggest that compared to public organizations, in more competitive contexts as private organizations, the need for becoming successful is really important and it is reflected in the workers behavior by comparing themselves more often in work aspects.

Interestingly, our results also show gender differences in the way individuals compare different work dimensions. Spanish women in private organization were the most focused on outcomes dimension comparison. This finding may reflect current Spanish society in which differences between women and men in aspects such as salary and career opportunities are rather unequally salient at work, especially in private organizations. In addition, consistent with these findings, the results showed unpredicted gender differences. That is, women in private organizations compared themselves more often with men than women in public organizations, and in particular, Spanish women compared themselves more often with men than Dutch women. These findings may suggest that although nowadays in the North and South of Europe gender differences are decreasing, still comparisons with one's own and the opposite gender may have different meanings for men and women. That is, comparisons with men may have an additional value in different cultures than comparisons with women, and this might be in particular relevant among Spanish women. Therefore, we suggest that in future research these findings may give relevant insights for taking into account how important the role of a man or woman is in that society considered in order to make preferences of comparison choice.

Overall, we conclude that our results are in line with the assumption that there is an influence of culture, context and gender on social comparison which seems to be related in part to the self that is salient (Markus & Kitayama. 1991; Turner, 1987).

Practical Implications

Given the fact that most individuals compare themselves with others to acquire information about themselves, the present dissertation may help to understand how identification and contrast in social comparison are related to processes that may influence individuals' daily life, in specific areas such as academic and work. In fact, one anecdote happened to me some days before handing the present dissertation. "A friend of mine told me that when she is at the gym she always tries to find out in her class who is doing well and then she tries to follow up that person". However, she also said, "I do this because I am a really competitive person". And then I thought, this is really a social comparison example.

The results of the present dissertation may have several practical implications. First, our findings suggest that role models are important sources of self-efficacy. Therefore, students may be in part influenced by perceiving their fellow students who have higher or lower degrees of academic talent. In that sense, one of the aspects that may be related to students' academic performance is how they perceive themselves in relation to those better-off or worse-off others. As described in Chapter 2, social comparison responses and goal orientation may play an important role in the academic area. In particular, because individuals with a promotion goal orientation perceive a higher self-efficacy than individuals with a prevention goal orientation, and because this tendency to prevent failure may lead individuals to make negative comparisons, which lead them to lower their self-efficacy and academic performance, we encourage to take into account these findings in order to develop intervention programs for increasing students' performance. In particular, we might include in an assessment tool that measures the strengths and weaknesses of the students, a specific part in which students can evaluate themselves with respect to others, and afterwards a specific training might be developed in which students may

learn how social comparison could benefit or obstruct their academic performance.

Second, regarding the work context, the results described in Chapter 3 suggest that more attention might be needed to pay to dysfunctional and functional social comparison responses in relation to burnout. In fact, a burnout research intervention program (Brake, Gorter, Hoogstraten, & Eijkmanhave, 2001) has shown that individuals who participated in individual meetings and workshops such as development of a professional perspective, vision on one's own practice, personal development, communication and action decreased their levels of burnout. As we have shown the relationship between the social comparison responses and burnout, we suggest to develop a specific workshop on social comparison interpretations as part of an intervention program to reduce burnout. The workshop could be based on classic cognitive-behavioral approaches described by Ellis (1962) and Beck (1967). The basic assumption would be that emotions and behavior are determined to a great extent by cognition, that is, by the way the individual views the world. When an event gives rise to irrational, unrealistic beliefs or distorted interpretations, the resulting emotions are intense and maladaptive and stress is experienced. Irrational cognitions are assumed to arise automatically as a response to environmental events and to represent dysfunctional assumptions. Thus, to reduce stress and burnout, basic assumptions about how individuals feel they are doing in comparison to others should be reassessed and need to be altered into more realistic and rational ones. The findings in Chapter 4 support the relationship between social comparison responses and organizational commitment and identification. That is, workers who focused on downward contrast and upward identification felt more committed and identified with their organization. In contrast, workers who focused on downward identification felt less identified with their organization, although no evidence was found for organizational commitment. These results may be valuable for organizations, and in particular for a human resources department which is responsible for managing the human resources and planning actions to enhance the commitment in the organizations. Specifically, with the 360-degree feedback technique which assesses performance information from

different sources, social comparison information on individuals' performance may be acquired. This information could be used as a primary measure that may reveal the positive and negative perceptions of comparing oneself with others in combination with the levels of commitment and identification with the organization. This may provide crucial information from subordinates, peers and superordinates, as well as a self-assessment to develop an effective strategic planning for increasing workers' attachment to the organization.

Considering the practical implications of Chapter 5, our results suggest that there are differences among individuals who feel threatened when seeing their colleagues performing worse and individuals who feel inspired when seeing other colleagues performing better. In addition, there are differences in the preferences of what dimensions individuals prefer to compare at, and between comparisons with men and women in private and public organizations. Therefore, we suggest that these differences might be taken into account as valuable information for the selection process in organizations. That is, individuals' preferences for comparing themselves with better-off and worse-off others may give relevant information through which men and women in private and public organizations may be accurately placed into specific jobs within those organizations.

Final Conclusion

The social comparison process has been widely studied in a variety of contexts. However, few studies have directly examined identification and contrast in social comparison in the academic and work areas by showing cultural, contextual and gender differences. The present dissertation evidences how identifying and contrasting oneself with better-off and worse-off others may influence positively and negatively our lives. For instance, among students contrasting oneself with better-off others may be highly negatively related to self-efficacy perceptions and subsequent academic performance. In addition, in the work area, identification and contrast with better-off and worse-off others may have positive and negative consequences in the development of burnout, organizational commitment and identification with the organization. Further, the present dissertation provides evidence for cross-cultural differences in identification and contrast in social comparison,

which may stimulate future research in this area. In addition, we show that not only culture may influence the way individuals compare themselves with others, but also gender and organizational context. Thus, these insights may provide an important extension on social comparison research by showing the influence of identification and contrast in social comparison with respect to relevant psychological processes that affect our daily life.

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SUMMARY

Social comparison is an automatic and daily process through which individuals acquire information about themselves. Since Festinger (1954) postulated his assumptions on social comparison, extensive research has focused on understanding and explaining the social comparison process. In particular, the motives for social comparison direction have been widely investigated by researchers. When a motive for self-improvement is activated, individuals tend to prefer to engage in comparisons with others who are doing better, assumedly because they may learn from such others. Nevertheless, when individuals are threatened on a particular dimension, they may prefer to compare themselves with others who are thought to be worse than themselves on that dimension, presumably to feel better about themselves. In addition, in line with the identification-contrast model, we assume that upward as well as downward comparisons may be interpreted in a positive or negative way, depending on whether an individual contrasts or identifies oneself with the comparison target.

The purpose of this dissertation was twofold: 1) to deepen our understanding of the relationship between social comparison from an identification-contrast perspective and specific psychological processes in the academic and work areas; and 2) to contribute to the literature exploring cultural differences in the identification and contrast processes, and expanding not only cultural, but also context and gender differences in basic aspects of social comparison including direction, dimensions and target choice of comparison.

In Chapter 2, in a study among university students, we examined how goal orientation, social comparison responses, self-efficacy and academic performance were related. In this chapter, the data were analyzed by employing structural equation modeling. The results showed that individuals with a promotion goal orientation had positive self-efficacy perceptions, whereas individuals with a prevention goal orientation had negative self-efficacy perceptions. In addition, individuals who contrasted themselves with better-off others

had negative self-efficacy perceptions. Finally, the results revealed that upward contrast was a mediator between prevention goal orientation and self-efficacy, and next, that self-efficacy was positively related to academic performance. These findings support the idea that goal prevention orientation may directly influence self-efficacy perceptions, and also indirectly through an upward contrast process, and next this may undermine academic performance.

In Chapter 3, we examined the independent role of social comparison responses and coping styles with respect to burnout over time. We conducted a longitudinal study among 558 teachers in primary and secondary schools. The results showed that identifying oneself with worse-off others and contrasting oneself with better-off others was positively related to burnout. Identification with worse-off was also associated with an increase in burnout over time. In addition, individuals with a more direct coping style experienced less burnout, whereas individuals with a palliative coping style experienced more burnout. Moreover, the results showed that a direct coping style was associated with more downward identification, more upward contrast, and less upward identification. These findings suggest that there is an independent relationship between social comparison responses and coping styles with respect to burnout.

In Chapter 4, we investigated among Dutch and Spanish workers the relationship between social comparison responses and organizational commitment and identification. Data were collected in private and public organizations with 404 respondents from The Netherlands and Spain. The results showed cultural differences in the social comparison responses. In particular, compared to the Dutch, the Spanish engaged more in upward and downward identification, whereas the Dutch engaged more in downward contrast. In addition, there was a relationship between social comparison responses and organization commitment and identification. However, culture moderated this relationship. That is, upward identification was related to organizational commitment and identification among the Spanish, but not among the Dutch. In addition, upward contrast was negatively

related to organizational commitment among the Dutch, and positively related to organizational commitment and identification among the Spanish.

In Chapter 5, we focused on studying not only cultural, but also organizational context and gender differences in basic aspects of social comparison such as direction, dimension and target choice. The results showed that the Spanish compared themselves more often upward than the Dutch, that workers in private organizations compared themselves more often downward and upward than workers from public organizations, that Spanish women compared themselves upward more often than men, and that Dutch men compared themselves upward more often than women. Men in private organizations engaged more frequently in upward comparison, whereas women in public organizations engaged more often in upward comparison. Regarding the social comparison dimensions, we found that workers in private organizations were the most focused on both inputs (e.g., performance) and outcomes (e.g., salary) dimensions of comparison, and that compared to the Dutch, the Spanish compared more often their outcomes than their inputs. Particularly, Spanish women in the private organization were the most focused on outcomes dimension of comparison. Finally, the results evidenced that women in private organizations compared themselves more often with men than women in public organizations, and that Spanish women compared themselves more often with men than Dutch women. Thus, these results support the idea that individuals may present differences in social comparison depending on which culture individuals live in, which context they work in and if they are men or women.

In the last chapter, we highlighted that identification and contrast responses in social comparison are relevant in the academic and work areas. After discussing the major weaknesses and strengths of the present dissertation, we conclude that we have shown how the positive and negative responses derived from identification and contrast are related to functional processes as self-efficacy, coping, organizational commitment and identification; and to dysfunctional

processes as burnout. Further, we suggest that the present dissertation contributes to the literature on social comparison by showing evidence for cultural, context and gender differences in the direction of social comparison, the dimensions of social comparison, and the choice of comparison targets. Finally, we conclude on the basis of the identification-contrast model, that social comparison is a relevant factor to explain individuals' interaction with the social world.

SAMENVATTING

Sociale vergelijking is een automatisch en dagelijks proces waarmee individuen informatie over zichzelf verkrijgen. Sinds Festinger (1954) zijn assumpties over sociale vergelijking bekendmaakte, heeft uitgebreid onderzoek zich gericht op het begrijpen en verklaren van het sociale-vergelijkingsproces. In het bijzonder zijn de motieven voor de richting van sociaal vergelijken onderzocht. Wanneer het motief voor zelfverbetering is geactiveerd, geven individuen er vaak de voorkeur aan om zich te vergelijken met betere anderen, waarschijnlijk omdat zij van die anderen kunnen leren. Wanneer individuen zich bedreigd voelen op een bepaalde dimensie, geven zij er vaak de voorkeur aan om zich te vergelijken met anderen die slechter scoren op die dimensie, waarschijnlijk om een beter gevoel over zichzelf te krijgen. In overeenstemming met het identificatie-contrast model veronderstellen we dat zowel opwaartse als neerwaartse vergelijkingen op een positieve of negatieve manier geïnterpreteerd kunnen worden, afhankelijk van of een individu zich contrasteert of identificeert met de vergelijkingstarget.

Het doel van dit proefschrift was tweeledig: 1) om een beter begrip te krijgen van de relatie tussen sociale vergelijking vanuit een identificatie-contrast perspectief en specifieke psychologische processen in de academische en werksfeer; en 2) om een bijdrage te leveren aan de literatuur over culturele verschillen in de identificatie- en contrastprocessen en niet alleen culturele, maar ook context- en sekseverschillen in basisaspecten van sociale vergelijking, zoals richting, dimensies en keuze van de vergelijkingstarget, te ontvouwen.

In hoofdstuk 2 onderzochten we in een studie onder universitaire studenten hoe doeloriëntatie, sociale vergelijkingsreacties, waarneming van de eigen effectiviteit en academische prestaties waren gerelateerd. In dit hoofdstuk zijn de gegevens geanalyseerd door middel van structural equation modeling. De resultaten toonden aan

dat individuen met een doelpromotie-oriëntatie positieve eigen-effectiviteitswaarnemingen hadden, terwijl individuen met een doelpreventie-oriëntatie negatieve eigen-effectiviteitswaarnemingen hadden. Bovendien hadden individuen die zich contrasteerden met betere anderen negatieve eigen-effectiviteitswaarnemingen. Ten slotte toonden de resultaten aan dat opwaarts contrast een mediator was tussen doelpreventie-oriëntatie en eigen-effectiviteit en dat eigen-effectiviteit positief was gerelateerd aan academische prestatie. Deze resultaten ondersteunen het idee dat doelpreventie-oriëntatie een rechtstreekse negatieve invloed zou hebben op eigen-effectiviteitswaarnemingen, maar ook een invloed via een opwaarts contrastproces en dit kan de academische prestatie ondermijnen.

In hoofdstuk 3 onderzochten we de onafhankelijke rol van sociale-vergelijkingsreacties en van de manier waarop mensen omgaan met situaties, dat wil zeggen hun coping stijl, met betrekking tot burnout enige tijd later. We voerden een longitudinale studie uit onder 558 onderwijzers op basis- en middelbare scholen. De resultaten toonden aan dat het zich identificeren met slechtere anderen en zich contrasteren met betere anderen positief was gerelateerd aan burnout. Identificatie met slechtere anderen was ook geassocieerd met een toename in burnout enige tijd later. Daarnaast ervaarden individuen met een meer directe coping stijl minder burnout, terwijl individuen met een palliatieve coping stijl meer burnout ervaarden. Bovendien toonden de resultaten aan dat een directe coping stijl was geassocieerd met meer neerwaartse identificatie, meer opwaarts contrast en minder opwaartse identificatie. Deze resultaten suggereren dat er een onafhankelijke relatie bestaat tussen sociale-vergelijkingsreacties en coping stijlen met betrekking tot burnout.

In hoofdstuk 4 onderzochten we onder Nederlandse en Spaanse werknemers de relatie tussen sociale-vergelijkingsreacties en betrokkenheid bij en identificatie met de organisatie. De gegevens van 404 respondenten uit Nederland en Spanje zijn verzameld in private en publieke organisaties. De resultaten toonden aan dat er culturele verschillen waren in de sociale-vergelijkingsreacties. De Spaanse

deelnemers rapporteerden meer opwaartse en neerwaartse identificatie vergeleken met de Nederlandse deelnemers, terwijl de Nederlandse deelnemers meer neerwaarts contrast rapporteerden. Daarnaast was er een relatie tussen sociale-vergelijkingsreacties en betrokkenheid bij en identificatie met de organisatie. Echter, cultuur modereerde deze relatie. Dat wil zeggen dat opwaartse identificatie van de Spaanse deelnemers, maar niet van de Nederlandse deelnemers, gerelateerd was aan betrokkenheid bij en identificatie met de organisatie. Bovendien was opwaarts contrast van de Nederlandse deelnemers negatief gerelateerd aan betrokkenheid bij de organisatie en van de Spaanse deelnemers positief gerelateerd aan betrokkenheid bij en identificatie met de organisatie.

In hoofdstuk 5 richtten we ons niet alleen op culturele verschillen, maar ook op organisatieomgevings- en sekseverschillen in de basisaspecten van sociale vergelijking, zoals richting, dimensie en keuze van de vergelijkingstarget. De resultaten toonden aan dat de Spaanse deelnemers zich vaker opwaarts vergeleken dan de Nederlandse deelnemers, dat werknemers in private organisaties zich vaker neerwaarts en opwaarts vergeleken dan werknemers in publieke organisaties, dat Spaanse vrouwen zich vaker opwaarts vergeleken dan Spaanse mannen en dat Nederlandse mannen zich vaker opwaarts vergeleken dan Nederlandse vrouwen. Mannen in private organisaties vergeleken zich vaker opwaarts, terwijl vrouwen in publieke organisaties zich vaker opwaarts vergeleken. Met betrekking tot de sociale-vergelijkingsdimensies vonden we dat werknemers in private organisaties het meest gericht waren op zowel invoer-vergelijkingsdimensies (bijvoorbeeld prestaties) als opbrengst-vergelijkingsdimensies (bijvoorbeeld salaris) en dat de Spaanse werknemers vergeleken met Nederlandse werknemers vaker hun opbrengsten vergeleken dan hun invoer. In het bijzonder vonden we dat Spaanse vrouwen in private organisaties het meest gericht waren op de opbrengst-vergelijkingsdimensie. Tot slot toonden de resultaten aan dat vrouwen in private organisaties zich vaker vergeleken met mannen dan vrouwen in publieke organisaties en dat Spaanse

vrouwen zich vaker vergeleken met mannen dan Nederlandse vrouwen. Samenvattend ondersteunen deze resultaten het idee dat individuen verschillen in hun sociale vergelijkingen afhankelijk van de cultuur waarin zij leven, de context waarin zij werken en of zij mannen of vrouwen zijn.

In het laatste hoofdstuk benadrukten we dat identificatie- en contrastreacties in sociale vergelijking relevant zijn in de academische en werksfeer. Na het bespreken van de voornaamste tekortkomingen en krachten van het huidige proefschrift, concludeerden we dat we hebben aangetoond hoe de positieve en negatieve reacties als gevolg van identificatie en contrast zijn gerelateerd aan functionele processen zoals eigen-effectiviteit, coping, betrokkenheid bij en identificatie met de organisatie, en aan disfunctionele processen zoals burnout. Vervolgens gaven we aan dat het huidige proefschrift bijdraagt aan de literatuur over sociale vergelijking door bewijs te leveren voor culturele, contextuele en sekseverschillen in de richting van sociale vergelijking, de dimensies van sociale vergelijking en de keuze van de vergelijkingstargets. Tot slot concludeerden we op basis van het identificatie-contrast model dat sociale vergelijking een relevante factor is bij het verklaren van de interactie van individuen met de sociale wereld.

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